The Brihan Mumbai Electric Supply & Transport Undertaking

(OF THE BRIHAN MUMBAI MAHANAGARPALIKA)

TELEPHONE : (022) 22856262
FAX : (022) 22851244
TELEX : 1185755 BEST IN
TELEGRAM : BEST, MUMBAI-400 001.

BEST BHAVAN,
BEST MARG,
POST BOX NO. 192.
MUMBAI - 400 001.

ADDRESS ALL COMMUNICATION BY TITLE NOT BY NAME

OUR REF. : R/CER/DCER/M-13/ 92 /2024

DATE : 20 DEC 2024

To,

The Secretary,
Maharashtra Electricity Regulatory Commission,
13th Floor, World Trade Centre, Centre No.1,
Cuffe Parade, Colaba, Mumbai - 400 005.

Sub:- BEST's replies to Data Gaps on BEST's Truing up & MYT Petition in Case No. 207/MY/2024.

Sir,

BEST has filed its Truing up & MYT Petition for approval of Final Truing up Petition for FY 2022-23, FY 2023-24 and Provisional Truing-up for FY 2024-25 under MERC (MYT) Regulations, 2019 and Aggregate Revenue Requirement (ARR) and Tariff Proposal for 5th Control Period from FY2025-26 to FY2029-30 as per MERC (MYT) Regulations, 2024 on 29.11.2024. Subsequently, the Commission has forwarded 75 nos. of data gap queries through email on 09.12.2024.

BEST is submitting herewith the enclosed replies to Data gaps for kind consideration of Hon'ble Commission. BEST is in the process of revising its MYT Petition considering the data gaps and same will be submitted shortly.

Thanking you,

Encl: As above.

Yours Faithfully,

(Dr. R. D. Patsute)
Chief Engineer Regulatory

Data Gaps on MYT Petition 2024 of BEST - Truing up for Aggregate Revenue Requirement (ARR) and Revenue for FY 2022-23, FY 2023-24, Provisional Truing up for FY 2024-25 and MYT Control period FY 2025-26 to FY 2029-30

Replies to Data Gaps

Utility : Brihanmumbai Electric Supply & Transport Undertaking (BEST)

Subject : BEST's MYT Petition for Truing-up for Aggregate Revenue Requirement (ARR) and Revenue for FY 2022-23, FY 2023-24, Provisional Truing-up for FY 2024-25 and MYT Control Period FY 2025-26 to FY 2029-30

Case No. : 207 of 2024

Reply to Data Gaps Set : Reply to Data Gap dated 09/12/2024

Sr. No.	Reference	Data Query
A.	**GENERAL**	
1.	**BEST License**	**The Distribution License issued to BEST by the Commission on 10 June 2003 will be expiring on 9 June 2028. In this context, BEST to provide the clarification towards the renewal of license, since it has proposed the Power Purchase, Capitalisation and Tariff for the period beyond the license period.**
Reply 1		BEST submits that the electricity distribution business is an ongoing business and BEST has assumed that its operations will continue uninterrupted. BEST shall approach the Hon'ble Commission at the appropriate juncture to seek renewal/issuance of distribution licence. This approach aligns with established precedent, as evidenced by Hon'ble Commission's decision to allow TPC-D to file its MYT Petition for the 2nd Control Period, and the Hon'ble Commission's MYT Order for TPC-D, even though TPC-D's licence was expiring in 2014.
2.	**Details of Review Petitions / Appeals against Tariff Orders in the past**	**BEST is requested to submit the current status of all appeals referred in petition along with the latest daily order, if any** **BEST to provide the expected financial impact of all cases pending before higher courts, if any.**
Reply		BEST submits the details of current status of all Appeals filed by BEST as **Annexure 1**

Sr. No.	Reference	Data Query
2		Further, BEST submits that the following Appeals/Petitions will have financial impact on BEST: • Appeal 9 of 2023 filed by MSETCL for capitalisation of Assets • Appeal 149 of 2020 FBSM bills of 405.094 Crore are under stay order dated 15.09.2020. These bills will become payable if the stay is revoked. • Case No. 130 of 2024 Review Petition in Case No. 73 of 2023 filed by SWPGL for compensation against change in Law (Impact on Variable cost) • Case No. 151 of 2024 filed by MSEDCL for revision of Transmission Charges • JITPL has filed Petition No.253/MP/2024 before Hon'ble CERC against BEST seeking payment of Late Payment Surcharge on account of delay by BEST in honouring the invoice(s) raised by JITPL towards claiming additional expenditure incurred by it on account of increase in Clean Energy Cess (CEC). The total Late Payment Surcharge claimed by JITPL is Rs. 3,96,60,645/- till 30.09.2024. These cases are currently pending in the APTEL/Higher Courts and the impact of the same will be considered based on the final Judgment.
3.	**Compliance of directives**	**BEST shall submit explicit details of compliance of all the Regulations and the Commission's Orders.**
Reply 3		BEST submits that to the best of its knowledge, BEST has complied with all the Regulations notified by the Hon'ble Commission and the directives given in the Hon'ble Commission's Orders. The compliance of directives given in the previous Tariff Order has already been submitted in the Directives Chapter of the present Petition.
4.	**List of Annexures**	**BEST to provide Page No. reference in the List of Annexures for easy read.**
Reply 4		BEST submits the revised list of Annexures with Page No. reference as **Annexure 2.** The updated list of Annexures with Page number reference shall also be incorporated in the Revised Petition to be submitted after the TVS.

<table>
<tr><th>Sr. No.</th><th>Reference</th><th>Data Query</th></tr>
<tr><td>5.</td><td>Annexure</td><td>BEST to provide the separate folder related to Annexure with excel files working wherever required.</td></tr>
<tr><td>Reply 5</td><td></td><td>BEST submits the separate folder related to Annexures with MS Excel files in soft copy along with the reply to the data gaps, wherever required.</td></tr>
<tr><td>6.</td><td>Compensation / Penalties</td><td>BEST should provide details of any compensation/penalties paid to any stakeholder on account of any event/Order of CGRF/Ombudsman, etc., for FY 2022-23, FY 2023-24 and till September 2024.
BEST should clarify whether such compensation/penalties have been claimed under any head in the ARR for FY 2022-23, FY 2023-24 and till September 2024.</td></tr>
<tr><td>Reply 6</td><td></td><td>BEST submits that it has paid compensation of Rs. 425 in the FY 2022-23. For FY 2023-24 and H1 of FY 2024-25, BEST has not paid any compensation/penalties to any stakeholders on account of any event/Order of CGRF/Ombudsman.
BEST submits that it has not claimed any compensation/penalties under any head in the ARR for FY 2022-23, FY 2023-24 and H1 of FY 2024-25.</td></tr>
<tr><td>7.</td><td>Delay Payment Charges</td><td>BEST to provide the details of any DPC receivable or payable for FY 2022-23 and FY 2023-24 and accounting for the same.</td></tr>
<tr><td>Reply 7</td><td></td><td>BEST submits the details of DPC receivable for FY 2022-23 and FY 2023-24 as shown in the Table below:
<table>
<tr><th>Particulars</th><th>FY 2022-23</th><th>FY 2023-24</th></tr>
<tr><td>DPC Receivable (Rs. Crore)</td><td>14.04</td><td>16.07</td></tr>
</table>
BEST submits that there is no DPC payable for FY 2022-23 and FY 2023-24.</td></tr>
<tr><td>8.</td><td>DF & DSM Regulations, 2024</td><td>The Commission has notified DF & DSM Regulation, 2024 on 19 November 2024. In the said Regulation the Commission has provided Demand Flexibility Portfolio Obligation (DFPO). BEST needs to factor in DFPO target while working out power purchase basket. As per Regulation 4(b) of DSM Regulations, Distribution Licensees are mandated to submit block estimates and budget to implement DF/DSM portfolio in MYT Petition. BEST to provide details of the same, if not given</td></tr>
<tr><td>Reply 8</td><td></td><td>MERC (Demand Flexibility and Demand Side Management – Implementation Framework, Cost-effectiveness Assessment; and Evaluation, Measurement and Verification) Regulations, 2024. As per Regulations, distribution licensees shall submit block estimates</td></tr>
</table>

Sr. No.	Reference	Data Query
		and budgets to implement DF/DSM portfolio with the MYT Petition and detailed DF/DSM portfolio and implementation plan submitted within first three months of notification of these Regulations to be approved by the Commission before 31 March 2025. Further, Hon'ble Commission in clause (c) of Regulation 4 of MERC DF & DSM Regulation, 2024 has mandated Demand Flexibility Portfolio Obligation (DFPO) which requires distribution licensees to demonstrate decrease in demand for at least one hour in a year at the time of maximum expected peak demand. The reduction should also lead to a corresponding increase in demand in the non-peak hours during a 24-hours period. The Demand Flexibility/Demand Response event would be required to be carried out once in a year that is coincidental with the top 10 days of the previous year's recorded peak demand. BEST submits that distribution licensees would need to formulate DF / DSM portfolio structure which would further require conducting load research and planning and designing DF / DSM programs. These programs would determine the span and timing of peak demand reduction required to meet DPFO target. Prior to conducting these activities, BEST would not be in a position to project quantum of demand reduction (to meet or exceed DFPO) as well its timing and duration of the intended demand reduction till FY 2029-30. As the Regulations have been notified quite recently (on 18th November, 2024), BEST has not initiated load research as well as formulating demand flexibility programs. Therefore, at this instant BEST would not be able to forecast change in demand profile to meet its DFPO. Further, as power procurement source mix provided as a part of Resource Adequacy (RA) plan is dependent on projected hourly/sub-hourly demand profile, therefore it would not be feasible to utilize DFPO target for re-working power purchase basket. BEST would like to submit that it would formulate DF / DSM portfolio structure and on basis of the same would determine quantum, timing and duration of required demand curtailing activity and corresponding load shift to non-peak period. The altered demand profile thereafter would be utilized to work out revised power purchase basket. BEST submits that it will implement the programme in due course.
9.	**Efficiency Parameter**	**As per Regulation 7.1 of the MERC MYT Regulations, 2024, the Commission, while approving the Multi-Year Tariff Petition, may stipulate a trajectory for the following variables:** **- Reliability Indices, System Average Interruption Frequency Index (SAIFI), System Average Interruption Duration Index (SAIDI) to monitor and report the supply availability and wires availability,** **- Aggregate Technical and Commercial Losses (AT&C Loss),** **- Collection efficiency, and** **- Payment efficiency.** **BEST to provide the historical performance of above variables for last (5) years and benchmark trajectory for control period.**
Reply 9		BEST submits the historical performance of above variables for last (5) years and benchmark trajectory for the Control Period as shown in the Tables below:

<table>
<tr><th>Sr. No.</th><th>Reference</th><th>Data Query</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td></td><td colspan="5">Actual</td></tr>
<tr><td></td><td>2019-20</td><td>2020-21</td><td>2021-22</td><td>2022-23</td><td>2023-24</td></tr>
<tr><td>SAIDI in minutes</td><td>71.86</td><td>62.99</td><td>70.56</td><td>67.71</td><td>61.17</td></tr>
<tr><td>SAIFI</td><td>2.88</td><td>2.63</td><td>2.75</td><td>2.32</td><td>2.17</td></tr>
<tr><td>Collection Efficiency in %</td><td>97.99</td><td>94.13</td><td>101.25</td><td>100.46</td><td>100.46</td></tr>
<tr><td>Billing Efficiency in %</td><td>95.35</td><td>96.07</td><td>95.37</td><td>95.82</td><td>95.88</td></tr>
<tr><td>AT&C Losses in %</td><td>6.57</td><td>9.57</td><td>3.44</td><td>3.74</td><td>3.68</td></tr>
<tr><td>*Payment Efficiency %</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td></tr>
</table>
*Considering Rebate
<table>
<tr><td></td><td colspan="6">Estimated</td></tr>
<tr><td></td><td>2024-25</td><td>2025-26</td><td>2026-27</td><td>2027-28</td><td>2028-29</td><td>2029-30</td></tr>
<tr><td>SAIDI in minutes</td><td>66.86</td><td>66.86</td><td>66.86</td><td>66.86</td><td>66.86</td><td>66.86</td></tr>
<tr><td>SAIFI</td><td>2.55</td><td>2.55</td><td>2.55</td><td>2.55</td><td>2.55</td><td>2.55</td></tr>
<tr><td>Collection Efficiency in %</td><td>100.00%</td><td>100.00%</td><td>100.00%</td><td>100.00%</td><td>100.00%</td><td>100.00%</td></tr>
<tr><td>Billing Efficiency in %</td><td>95.82%</td><td>95.82%</td><td>95.82%</td><td>95.82%</td><td>95.82%</td><td>95.82%</td></tr>
<tr><td>AT&C Losses in %</td><td>4.18%</td><td>4.18%</td><td>4.18%</td><td>4.18%</td><td>4.18%</td><td>4.18%</td></tr>
<tr><td>Payment Efficiency %</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td><td>100%</td></tr>
</table>
</td></tr>
<tr><td>10.</td><td>Energy Efficiency Improvement</td><td>As per Regulation 104.3 of the MERC MYT Regulations, 2024, the Distribution Licensee shall submit its existing level of own energy consumption and Energy Conservation measure at the beginning of the Control Period and provide the trajectory for the reduction of such own energy consumption through the implementation of Energy Efficiency improvement scheme/plan under Capital Expenditure or Opex Expenditure as part of the MYT Petition along with the target of Energy Efficiency related savings, and monitoring plan. BEST shall submit the trajectory for reduction of such own energy consumption.</td></tr>
<tr><td>Reply 10</td><td></td><td>BEST wishes to submit that it is assessing its own energy consumption and the future trajectory of such consumption with the implementation of Energy Efficiency improvement Schemes.</td></tr>
</table>

Sr. No.	Reference	Data Query
		Further, BEST would like to highlight that for energy conservation, various conventional lamps and fans were replaced by LED lights and star rated ceiling fans. More than 30,000 No. tube lights were replaced and more than 1700 No. ceiling fans were replaced departmentally in five years. 5 star rated AC were also installed in its premises. Also, some fixtures were installed/ replaced in contract. The details of the same are attached as **Annexure 3**.
11.	**Bulk Power Transmission Agreement**	**BEST to provide the signed copy of bulk power transmission agreement (BPTA). If BPTA is not signed, then please justify the same.**
Reply 11		BEST submits the signed copy of bulk power transmission agreement (BPTA) as **Annexure 4.**
12.	**Excel Format**	**BEST to provide the formulated numbers wherever required rather than punch number in the petition format.**
Reply 12		BEST submits that it has hard punched the raw input data only. Rest of the data is internally linked.
13.	**RI Charges Impact**	**BEST to submit the details RI charges capitalised for FY 2022-23 and FY 2023-24 and its Per unit impact for the said period. BEST to also include the same in the revised Petition**
Reply 13		BEST submits that Rs. 22.19 Crore and Rs. 19.08 Crore capitalised as against RI Charges in FY 2022-23 and FY 2023-24 respectively for HV & LV cable laying. Per unit impact for FY 2022-23 is Rs. 0.05/unit. Per unit impact for FY 2023-24 is Rs. 0.04/unit. BEST submits that it will incorporate the same in the Revised Petition. However, it may be noted that Regulation 91.2 of the MYT Regulations, 2019 may not be applicable in case of BEST as the RI Charges are already being recovered from the consumers of the same area of supply.
B.	**True-up of FY 2022-23 and FY 2023-24**	
14.	**Power**	**BEST to duly reconcile its Power Purchase Cost with its Books of Accounts for the following discrepancies:**

<table>
<tr><th>Sr. No.</th><th>Reference</th><th>Data Query</th></tr>
<tr><td></td><td>Purchase Cost Reconciliation with Books of Account</td><td>
<table>
<tr><th rowspan="2">Particulars</th><th colspan="2">FY 2022-23</th><th colspan="2">FY 2023-24</th></tr>
<tr><th>As per Table 29 of the Petition</th><th>As per Appendix E2 for FY24</th><th>As per Table 30 of the Petition</th><th>As per appendix E2 for FY 24</th></tr>
<tr><td>Cost of energy Purchased</td><td rowspan="3">3,519.53</td><td>2860.97</td><td rowspan="3">2931.86</td><td>2393.69</td></tr>
<tr><td>External Power Purchased</td><td>561.30</td><td>445.06</td></tr>
<tr><td>Standby Charges</td><td>98.53</td><td>94.02</td></tr>
<tr><td>Total</td><td>3519.53</td><td>3520.8</td><td>2931.86</td><td>2932.77</td></tr>
</table>
BEST to provide break of the Petition Cost w.r.t to the break up provided in the Books of Account.
</td></tr>
<tr><td>Reply 14</td><td></td><td>
BEST submits the Power Purchase Cost reconciled with the Books as shown below:
<table>
<tr><th rowspan="2">Particulars</th><th colspan="2">FY 2022-23</th><th colspan="2">FY 2023-24</th></tr>
<tr><th>As per Table 29 of the Petition</th><th>As per Appendix E2 for FY24</th><th>As per Table 30 of the Petition</th><th>As per appendix E2 for FY 24</th></tr>
<tr><td>Cost of energy Purchased</td><td>2859.71</td><td>2860.97</td><td>2392.77</td><td>2393.69</td></tr>
<tr><td>External Power Purchased</td><td>561.30</td><td>561.30</td><td>445.06</td><td>445.06</td></tr>
<tr><td>Standby Charges</td><td>98.53</td><td>98.53</td><td>94.03</td><td>94.02</td></tr>
<tr><td>SLDC Charges</td><td>1.26</td><td></td><td>0.92</td><td></td></tr>
<tr><td>Total</td><td>3520.79</td><td>3520.80</td><td>2932.78</td><td>2932.77</td></tr>
</table>
The detailed computation of the above is attached as Annexure 5.

BEST submits that the amount of Rs. 3520.80 Crore and Rs. 2932.77 Crore shown in Books of Accounts for FY 2022-23 and FY 2023-
</td></tr>
</table>

<table>
<tr><th>Sr. No.</th><th>Reference</th><th>Data Query</th></tr>
<tr><td></td><td></td><td>24, respectively, are including SLDC Charges. SLDC charges are not shown separately in the Books of accounts, whereas the same are shown separately in the Petition.</td></tr>
<tr><td>15.</td><td>Table 100 of the Petition</td><td>BEST to duly reconcile its MSLDC charges paid during FY 2022-23 and FY 2023-24 with the Books of Account</td></tr>
<tr><td>Reply 15</td><td></td><td>BEST submits that MSLDC Charges considered for FY 2022-23 and FY 2023-24 are correct. Further, it is submitted that the SLDC charges are not shown separately in the Books of accounts and are embedded under the head ‘cost of energy purchased’ as can be seen from reply to Query No. 14.</td></tr>
<tr><td>16.</td><td>O&M Expenses – Employee Expenses</td><td>BEST to duly reconcile its Employee Expenses as claimed for FY 2022-23 and FY 2023-24 with its Audited Accounts as under:
<table>
<tr><th rowspan="2">Particulars</th><th colspan="2">FY 2022-23</th><th colspan="2">FY 2023-24</th></tr>
<tr><th>Form F 3.2</th><th>As per Note XX</th><th>Form F 3.2</th><th>As per Note XX</th></tr>
<tr><td>Basic Salary</td><td>259.62</td><td></td><td>256.19</td><td></td></tr>
<tr><td>Dearness Allowance (DA)</td><td>63.33</td><td></td><td>67.47</td><td></td></tr>
<tr><td>House Rent Allowance</td><td>36.12</td><td></td><td>33.10</td><td></td></tr>
<tr><td>Conveyance Allowance</td><td>0.84</td><td></td><td>0.78</td><td></td></tr>
<tr><td>Leave Travel Allowance</td><td>4.83</td><td></td><td>2.71</td><td></td></tr>
<tr><td>Earned Leave Encashment</td><td>-</td><td></td><td>-</td><td></td></tr>
<tr><td>Other Allowances</td><td>-</td><td></td><td>-</td><td></td></tr>
<tr><td>Medical Reimbursement</td><td>3.14</td><td></td><td>2.87</td><td></td></tr>
<tr><td>Overtime Payment</td><td>14.66</td><td></td><td>17.04</td><td></td></tr>
<tr><td>Bonus/Ex-Gratia Payments</td><td>13.72</td><td></td><td>14.05</td><td></td></tr>
<tr><td>Interim Relief / Wage Revision</td><td></td><td></td><td>4.02</td><td></td></tr>
<tr><td>Functional Allowance, Incentive, EDIE</td><td>6.05</td><td></td><td>5.25</td><td></td></tr>
<tr><td>Provident Fund Contribution</td><td>35.16</td><td></td><td>34.46</td><td></td></tr>
<tr><td>Provision for PF Fund</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Pension Payments</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Gratuity Payment</td><td>90.95</td><td></td><td>86.46</td><td></td></tr>
</table></td></tr>
</table>

<table>
<tr><th>Sr. No.</th><th>Reference</th><th>Data Query</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>Gross Employee Expenses</td><td>528.41</td><td></td><td>524.39</td><td></td></tr>
<tr><td>Less: Expenses Capitalised</td><td>-</td><td></td><td>-</td><td></td></tr>
<tr><td>Less: Estb. Of CAS, T&E & ST.LTG. Dept.</td><td>52.87</td><td></td><td>54.23</td><td></td></tr>
<tr><td>Net Employee Expenses</td><td>475.54</td><td></td><td>470.16</td><td></td></tr>
</table>
BEST to provide the justification relating to the claim of interim relief/Wage Revision as its submitted that, wage revision shall be claimed at later stage post signing of the Agreement.
</td></tr>
<tr><td>Reply 16</td><td></td><td>BEST submits that the reconciliation of Employee Expenses is attached as Annexure 6.

Additionally, BEST submits that the Gross Employee Expenses of Rs. 528.41 Crore and Rs. 524.39 Crore claimed in the Petition for FY 2022-23 and FY 2023-24, respectively, are reported under Establishment Cost (Supply) in Appendix No. E-2 of Audited Accounts. BEST submits that the Establishment Cost (Gen. Admn.) of Rs. 63.59 Crore and 57.35 Crore reported in Appendix No. E-2 of the Audited Accounts for FY 2022-23 and FY 2023-24 are claimed under Share of General Administration as shown in Table 44 of the Petition.

Further, BEST submits that the amount of Rs. 4.02 Crore claimed against Interim Relief/ Wage Revision for FY 2023-24 corresponds to the Arrears of the previous Wage Revision Agreement (FY 2016-17 to FY 2020-21).

As regards the justification relating to the claim of interim relief/Wage Revision at later stage post signing of the Agreement, the Hon’ble Commission will appreciate that the impact of the Wage Agreement can be claimed only after signing of the Agreement and once the actual impact on Arrears and salary revision is known, and cannot be claimed on projection basis.</td></tr>
<tr><td>17.</td><td>O&M Expenses – R&M Expenses</td><td>BEST to duly reconcile it’s R&M Expenses as claimed for FY 2022-23 and FY 2023-24 with its Audited Accounts as under:
<table>
<tr><th rowspan="2">Particulars</th><th colspan="2">FY 2022-23</th><th colspan="2">FY 2023-24</th></tr>
<tr><th>Form F 3.3</th><th>As per Note XX</th><th>Form F 3.3</th><th>As per Note XX</th></tr>
<tr><td>Plant & Machinery</td><td>7.15</td><td></td><td>3.49</td><td></td></tr>
<tr><td>Buildings</td><td>-</td><td></td><td>-</td><td></td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>Sr. No.</th><th>Reference</th><th>Data Query</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>Civil Works</td><td>28.31</td><td></td><td>53.28</td><td></td></tr>
<tr><td>Hydraulic Works</td><td>-</td><td></td><td>-</td><td></td></tr>
<tr><td>Lines & Cable Networks</td><td>17.18</td><td></td><td>32.76</td><td></td></tr>
<tr><td>Vehicles</td><td>-</td><td></td><td>-</td><td></td></tr>
<tr><td>Furniture & Fixtures</td><td>0.17</td><td></td><td>0.12</td><td></td></tr>
<tr><td>Office Equipment</td><td>4.94</td><td></td><td>3.44</td><td></td></tr>
<tr><td>Meter & Equipment</td><td>3.58</td><td></td><td>3.15</td><td></td></tr>
<tr><td>Gross R&M Expenses</td><td>61.33</td><td></td><td>96.25</td><td></td></tr>
<tr><td>Less: R&M Expenses Capitalised</td><td>-</td><td></td><td>-</td><td></td></tr>
<tr><td>Net R&M Expenses</td><td>61.33</td><td></td><td>96.25</td><td></td></tr>
</table>
BEST to justify the increase in the R&M Expenses during FY 2023-24 as compared to the expenses claimed during FY 2022-23.
</td></tr>
<tr><td>Reply 17</td><td></td><td>BEST submits the reconciliation of R&M Expenses as Annexure 7.

The Hon’ble Commission will appreciate that Regulation 75.6 of the MYT Regulations, 2019 specify as under:
“In case the expenditure on Repairs & Maintenance falls below 20% of total O&M expenses allowed under these Regulations, then such savings in Repairs & Maintenance shall not be set off against other heads of O&M expenses.”
In essence, the Hon’ble Commission has specified that at least 20% of the O&M expenses should be incurred against R&M expenses. However, in case of BEST, the R&M expenses are significantly lesser than 20% of the O&M expenses.

BEST submits that it has hence, been putting conscious efforts to increase the share of R&M expenses. The same can be seen from increase in R&M expenses on Civil work, Lines and Cable Network, etc.</td></tr>
<tr><td>18.</td><td>O&M Expenses</td><td>BEST to share its computation of its actual share of R&M Expenses (9.10% and 13.80% for FY 2022-23 and FY 2023-24, respectively) as against the actual O&M Expenses for FY 2022-23 and FY 2023-24, respectively.</td></tr>
</table>

<table>
<tr><th>Sr. No.</th><th>Reference</th><th>Data Query</th></tr>
<tr><td></td><td>Para. 2.6.22</td><td></td></tr>
<tr><td>Reply 18</td><td></td><td>BEST submits the computation of actual share of R&M Expenses as shown in the Table below:
<table>
<tr><th>Particulars</th><th>FY 2022-23</th><th>FY 2023-24</th></tr>
<tr><td>Actual O&M Expenses for Combined Distribution Business (Rs. Crore)</td><td>674.21</td><td>697.49</td></tr>
<tr><td>Actual R&M Expenses for Combined Distribution Business (Rs. Crore)</td><td>61.33</td><td>96.25</td></tr>
<tr><td>Share of R&M Expenses (%)</td><td>9.10%</td><td>13.80%</td></tr>
</table></td></tr>
<tr><td>19.</td><td>O&M Expenses – A&G Expenses</td><td>BEST to duly reconcile its A&G Expenses as claimed for FY 2022-23 and FY 2023-24 with its Audited Accounts along with the reference to the Notes to the Audited Accounts as per the following template:
BEST to also provide the justification for the increase in the Share of General Administration Expenses as compared to FY 2021-22 for FY 2022-23 and FY 2023-24.
<table>
<tr><th rowspan="2">Particulars</th><th colspan="2">FY 2022-23</th><th colspan="2">FY 2023-24</th></tr>
<tr><th>Form F 3.3</th><th>As per Note XX</th><th>Form F 3.3</th><th>As per Note XX</th></tr>
<tr><td>Rent Rates & Taxes</td><td>6.20</td><td></td><td>5.05</td><td></td></tr>
<tr><td>Insurance</td><td>0.48</td><td></td><td>0.60</td><td></td></tr>
<tr><td>Telephone & Postage, etc.</td><td>5.48</td><td></td><td>5.73</td><td></td></tr>
<tr><td>Legal charges & Audit fee</td><td>0.62</td><td></td><td>0.97</td><td></td></tr>
<tr><td>Professional, Consultancy, Technical fee</td><td>0.32</td><td></td><td>0.37</td><td></td></tr>
<tr><td>Conveyance & Travel</td><td>-</td><td></td><td>-</td><td></td></tr>
<tr><td>Electricity charges</td><td>4.00</td><td></td><td>3.41</td><td></td></tr>
<tr><td>Water charges</td><td>-</td><td></td><td>-</td><td></td></tr>
<tr><td>Security arrangements</td><td>9.66</td><td></td><td>8.40</td><td></td></tr>
<tr><td>Fees & subscription</td><td>-</td><td></td><td>-</td><td></td></tr>
<tr><td>Books & periodicals</td><td>-</td><td></td><td>-</td><td></td></tr>
</table></td></tr>
</table>

Sr. No.	Reference	Data Query

Computer Stationery	**-**		**-**	
Printing & Stationery	**1.32**		**1.33**	
Advertisements	**0.64**		**1.58**	
Purchase Related Advertisement Expenses	**-**		**-**	
Contribution/Donations	**-**		**-**	
License Fee and other related fee	**2.06**		**0.01**	
Vehicle Running Expenses Truck / Delivery Van	**15.97**		**13.54**	
Vehicle Hiring Expenses Truck / Delivery Van	**-**		**-**	
Cost of services procured	**-**			
Outsourcing of metering and billing system	**-**		**-**	
Freight On Capital Equipments	**-**		**-**	
V-sat, Internet and related charges	**-**		**-**	
Training	**-**		**-**	
Bank Charges				
Miscellaneous Expenses	**8.62**		**10.75**	
Share of General Administration Expenses	**81.96**		**79.34**	
Gross A &G Expenses	**137.34**		**131.08**	
Less: Expenses Capitalised	**-**		**-**	
Net A &G Expenses	**137.34**		**131.08**	

Reply 19		BEST submits the reconciliation of A&G Expenses as **Annexure 8**. **Justification for increase in General Administration Expenses:** BEST submits that the Share of General Administration for FY 2021-22 was Rs. 69.20 Crore, whereas for FY 2022-23, it was Rs. 81.96 Crore i.e., General Administration Expenses was increased by Rs. 12.76 Crore. This increase is primarily attributable to a surge in Establishment costs, which rose from Rs. 49.60 Crore to Rs. 63.58 Crore, a difference of Rs. 13.98 Crore. This substantial rise in

<table>
<tr><th>Sr. No.</th><th>Reference</th><th>Data Query</th></tr>
<tr><td></td><td></td><td>Establishment costs is directly linked to the implementation of the MOU Agreement for wage revision for the period from 01.04.2016 to 31.03.2021, which led to increased wages. Similarly, the share of GA for FY 2023-24 reached Rs. 79.34 Crore indicating a Rs. 10.14 Crore increase compared to FY 2021-22. This difference is again attributed to the increase in Establishment costs resulting from the aforementioned wage revision.</td></tr>
<tr><td>20.</td><td>Form F4.1</td><td>BEST to justify the delay in completion of the following Schemes approved by the Commission:
<table>
<tr><th rowspan="2">Project Code</th><th rowspan="2">Project Title</th><th rowspan="2">MERC Approval No.</th><th rowspan="2">MERC Approval Date</th><th colspan="2">Project Start Date</th><th colspan="2">Project Completion date (Scheduled)</th></tr>
<tr><th>Original</th><th>Actual</th><th>Original</th><th>Actual</th></tr>
<tr><td>a) DPR Schemes</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td colspan="3"><u>(i) In-principle approved by MERC</u></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td>New RSS Commissioning</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>BEST/FY16/01</td><td>New Receiving Stations</td><td>MERC/CAPEX/FY 2016-17/ 00770</td><td>28.09.2016</td><td>Apr-16</td><td>Apr-15</td><td>Mar-19</td><td>WIP</td></tr>
<tr><td>BEST/FY21/01</td><td>New Receiving Stations</td><td>MERC/CAPEX /FY 2020-21/</td><td>16.07.2020</td><td>Apr-20</td><td>Apr-22</td><td>Mar-25</td><td>WIP</td></tr>
<tr><td colspan="5">Augmentation / Replacement at existing RSS</td><td></td><td></td><td></td></tr>
<tr><td>BEST/FY16/02</td><td>Revamping of existing RSS</td><td>MERC/TECH_V/CAP /DPR/20122013/02688</td><td>22.02.2013</td><td>Apr-15</td><td>Apr-15</td><td>Mar-16</td><td>WIP</td></tr>
<tr><td>BEST/FY17/02</td><td>Revamping of existing RSS</td><td>MERC/CAPEX/2017-18 /4706</td><td>16.11.2017</td><td>Apr-16</td><td>Apr-16</td><td>Mar-20</td><td>WIP</td></tr>
<tr><td>BEST/FY18/02</td><td>Revamping of existing RSS</td><td>MERC/CAPEX/2017-18 /4706</td><td>16.11.2017</td><td>Apr-16</td><td>Apr-16</td><td>Mar-20</td><td>WIP</td></tr>
<tr><td>BEST/FY18/02A</td><td>Revamping of existing RSS</td><td>MERC/CAPEX/2019-20 /135</td><td>10.05.2019</td><td>Apr-17</td><td>Apr-17</td><td>Mar-20</td><td>WIP</td></tr>
</table></td></tr>
</table>

Sr. No.	Reference	Data Query

BEST/FY20/02	Revamping of existing RSS	MERC/CAPEX/2020-21/553	15.12.2021	Apr-19	Apr-19	Mar-25	WIP
New Distribution Substation & Augmentation & alteration to existing DSS							
BEST/FY21/03	New Distribution Substation	MERC/CAPEX/2020-21/552	15.12.2021	Apr-20	Apr-20	Mar-25	WIP
	Extension of Distribution Network						
BEST/FY21/04	Extension of Distribution Network	MERC/CAPEX/2020-21/	22.06.2020	Apr-20	Apr-20	Mar-25	WIP
	SCADA, Computerisation & digitisation						
BEST/FY18/08A	SCADA	MERC/CAPEX/2017-18/4759	22.11.2017	Apr-17	--	Mar-21	--
BEST/FY18/08B	Digitisation	MERC/CAPEX/2017-18/47886	13.12.2017	Apr-17	Apr-18	Mar-19	WIP
Integrated Power Development Scheme (IPDS)							
IPDS/BEST/FY15-16/01	IPDS BEST-PART	MERC/CAPEX/2019-20/418	26.07.19	Apr-18	Apr-18	Mar-20	WIP
	IPDS L&T-PART		26.07.19	Apr-18	Apr-18	Mar-20	WIP
(ii) Yet to receive in-principle MERC approval							
BEST/FY21/02	PROP	-	-	Apr-19	Apr-19		WIP

BEST to further confirm, whether there is any impact of Time-over run or cost -overrun is claimed as part of actual capitalisation. Considering that the actual status is WIP, BEST to confirm whether the assets are put to use and any capitalisation against the said assets is claimed.

Reply 20		BEST submits the detailed justification of the delay in completion of the schemes as **Annexure 09**. Further, BEST submits that most of the schemes are completed and closure report of the schemes have been submitted to the Hon'ble Commission. The details of the same

<table>
<tr><th>Sr. No.</th><th>Reference</th><th>Data Query</th></tr>
<tr><td></td><td></td><td>are attached in Annexure 09.

Further, BEST submits that there is no cost over-run due to the delay in completion.</td></tr>
<tr><td>21.</td><td>Capitalisation during the year (Reco)</td><td>BEST to duly reconcile the following highlighted discrepancies:
<table>
<tr><th rowspan="3">Particulars</th><th colspan="6">FY 2022-23</th></tr>
<tr><th colspan="2">Addition during the year</th><th colspan="2">Retirement during the year</th><th colspan="2">Transfer of assets during the year</th></tr>
<tr><th>As per F 5</th><th>As per Appendix E-6 of books</th><th>As per F 5</th><th>As per Appendix E-6 of books</th><th>As per F 5</th><th>As per Appendix E-6 of books</th></tr>
<tr><td>Capitalisation</td><td>161.49</td><td>142.59</td><td>15.11</td><td>13.97</td><td>-</td><td>(4.63)</td></tr>
</table>
<table>
<tr><th rowspan="3">Particulars</th><th colspan="6">FY 2023-24</th></tr>
<tr><th colspan="2">Addition during the year</th><th colspan="2">Retirement during the year</th><th colspan="2">Transfer of assets during the year</th></tr>
<tr><th>As per F 5</th><th>As per Schedule 7 of books</th><th>As per F 5</th><th>As per Schedule 7 of books</th><th>As per F 5</th><th>As per Schedule 7 of books</th></tr>
<tr><td>Capitalisation</td><td>128.72</td><td>128.72</td><td>14.84</td><td>14.91</td><td>-</td><td>3.97</td></tr>
</table></td></tr>
<tr><td>Reply 21</td><td></td><td>BEST submits the Reconciliation of Capitalisation as shown in the Table below:
<table>
<tr><th>Capitalisation: Appendix</th><th>FY 2022-23</th></tr>
</table></td></tr>
</table>

<table>
<tr><th>Sr. No.</th><th>Reference</th><th>Data Query</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><th>No. E-6 of the Audited Accounts</th><th>Addition during the year</th><th>Retirement during the year</th><th>Transfer of assets during the year</th></tr>
<tr><td>Electric Supply (A)</td><td>142.59</td><td>13.97</td><td>(0.4637)</td></tr>
<tr><td>General Admn.</td><td>37.79</td><td>1.34</td><td>-</td></tr>
<tr><td>50% of General Admn. (B)</td><td>18.895</td><td>0.67</td><td>-</td></tr>
<tr><td>(A) + (B)</td><td>161.49</td><td>14.64</td><td>(0.4637)</td></tr>
</table>

BEST submits that it has claimed GFA Addition of Rs. 161.49 Crore for FY 2022-23 considering 50% share of General Administration as it is common for both Transportation and Electric Supply Business. Further, it is submitted that it has inadvertently considered the retirement of Rs. 15.11 Crore instead of Rs. 14.64 Crore for FY 2022-23 by including Transfer of assets of Rs. 0.46 Crore in retirement during the year.
<table>
<tr><th rowspan="2">Schedule-7 of the Audited Accounts</th><th colspan="3">FY 2023-24</th></tr>
<tr><th>Addition during the year</th><th>Retirement during the year</th><th>Transfer of assets during the year</th></tr>
<tr><td>Capitalisation</td><td>128.72</td><td>14.91</td><td>0.0397</td></tr>
</table>

BEST submits that it will reconcile the retirements during the year for FY 2023-24 with the amount reflecting in Schedule-7 of the Audited Accounts in the revised Petition.
</td></tr>
<tr><td>22.</td><td>CAPEX and Capitalisation</td><td>
a. As regards Non-DPR schemes undertaken in FY 2022-23 and FY 2023-24, BEST should submit:
i. details of works carried out under Non-DPR schemes.
ii. Justification that work carried out is capital in nature.
iii. Cost-benefit-analysis of the capital expenditure.
b. As per Regulation 10.1 of MERC ((Approval of Capital Investment Schemes) Regulations, 2022 regarding the non-DPR
</td></tr>
</table>

Sr. No.	Reference	Data Query
		scheme provide that: ***"10.1 All Non-DPR Schemes shall be required to be registered with the Commission on quarterly basis in physical form, till the commencement of the web-portal referred in Regulation 19 of these Regulations, after which the Schemes shall be registered on the web portal:*** ***Provided that the Format specified in Appendix 1 for submission of DPR Schemes shall be applicable for Non-DPR Schemes also, to be filled-up as applicable/relevant:*** **Accordingly, BEST to provide the details of the submission of Non-DPR schemes to MERC, which has been claimed in FY 2022-23 and FY 2023-24.** **c. BEST to submit the DPR and Non-DPR schemes in line with the Capex Approval Regulations 2022.**
Reply 22		a. BEST submits the following details in **Annexure 10**: i. Details of works carried out under Non-DPR schemes. ii. Justification that work carried out is capital in nature. BEST submits the details of Cost benefit Analysis of Non-DPR schemes for FY 2022-23 and FY 2023-24 as **Annexure 11.** b. BEST agrees to the Hon'ble commissions views that "as per Regulation 10.1 of MERC Regulation, 2022, BEST had to be registered all Non DPR Schemes on quarterly basis in physical form". However, BEST submits that it has followed the old practice during FY2022-23 & FY 2023-24. Therefore, till date BEST has not registered Non-DPR schemes on quarterly basis. BEST assures that all Non-DPR Schemes will be registered on quarterly basis from FY 2025-26 onwards. In the interim, we are actively mobilizing our executing departments to implement the necessary systems to strictly adhere to the provisions of Capex Regulations, 2022. c. BEST to submit the DPR and Non-DPR schemes in line with the Capex Approval Regulations 2022: - BEST submits that the DPR for the RDSS Scheme and Smart Meters have been submitted to the Hon'ble Commission in accordance with the Capex Regulations, 2022. Going forward, BEST will continue to submit both DPR and Non-DPR Schemes in

<table>
<tr><th>Sr. No.</th><th>Reference</th><th>Data Query</th></tr>
<tr><td></td><td></td><td>compliance with the Capex Regulations, 2022.</td></tr>
<tr><td>23.</td><td>Capitalisation</td><td>BEST to provide the Scheme wise Capitalisation claimed during the year and corresponding funding through Grants, Debt and Equity as per the following for format for Wires and Retail Supply Business and Combined:
<table>
<tr><th>Sr. No.</th><th>FY</th><th>Particulars</th><th>Capitalisation during the Year</th><th>Grants (A)</th><th>Debt (B)</th><th>Equity (C)</th><th>Total Funding</th></tr>
<tr><td>1.</td><td>FY 2022-23</td><td>Scheme 1</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>2,</td><td>FY 2022-23</td><td>Scheme 2</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>3.</td><td>FY2023-24</td><td>Scheme 3</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td>…….</td><td></td><td></td><td></td><td></td><td></td></tr>
</table></td></tr>
<tr><td>Reply 23</td><td></td><td>BEST submits the details of the Scheme-wise Capitalisation claimed during the year and corresponding funding through Grants, Debt and Equity, as shown in the table below:
<table>
<tr><th>BEST Code</th><th>Particulars</th><th>Capitalisation during the Year</th><th>Grants (A)</th><th>Debt (B)</th><th>Equity (C)</th><th>Total Funding</th></tr>
<tr><td>FY 2022-23</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Wire Business</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>BEST/FY16/01</td><td>MERC/CAPEX/FY 2016-17/ 00770 dated 28.09.2016</td><td>8.24</td><td>0.00</td><td>5.77</td><td>2.47</td><td>8.24</td></tr>
<tr><td>BEST/FY21/01</td><td>MERC/CAPEX /FY 2020-21/ dated 16.07.2020</td><td>0.09</td><td>0.00</td><td>0.06</td><td>0.03</td><td>0.09</td></tr>
<tr><td>BEST/FY16/02</td><td>MERC/TECH_V/CAP /DPR/20122013/02688 dated 22.02.2013</td><td>2.74</td><td>0.00</td><td>1.92</td><td>0.82</td><td>2.74</td></tr>
<tr><td>BEST/FY17/02</td><td>MERC/CAPEX/2017-18 /4706 dated 16.11.2017</td><td>11.38</td><td>0.00</td><td>7.97</td><td>3.41</td><td>11.38</td></tr>
<tr><td>BEST/FY18/02</td><td>MERC/CAPEX/2017-18 /4706 dated 16.11.2017</td><td>1.53</td><td>0.00</td><td>1.07</td><td>0.46</td><td>1.53</td></tr>
<tr><td>BEST/FY18/02A</td><td>MERC/CAPEX/2019-20 /135 dated 10.05.20219</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td></tr>
<tr><td>BEST/FY20/02</td><td>MERC/CAPEX/2020-21/553 dated 15.12.2021</td><td>3.98</td><td>0.00</td><td>2.79</td><td>1.19</td><td>3.98</td></tr>
</table></td></tr>
</table>

Sr. No.	Reference	Data Query

BEST/FY21/02	MERC/CAPEX/2021-22/552 dated 14.11.2022	1.11	0.00	0.78	0.33	1.11
BEST/FY21/03	MERC/CAPEX/2020-21/552 dated 15.12.2021	35.67	0.00	24.97	10.70	35.67
BEST/FY21/04	MERC/CAPEX/2020-21/ dated 22.06.2020	57.01	0.00	39.91	17.10	57.01
BEST/FY18/08A	MERC/CAPEX/2017-18 /4759 dated 22.11.2017	0.00	0.00	0.00	0.00	0.00
BEST/FY18/08B	MERC/CAPEX/2017-18/47886 dated 13.12.2017	0.00	0.00	0.00	0.00	0.00
IPDS/BEST/FY15-16/01	MERC/CAPEX/2019-20/418 dated 26.07.2019	0.00	0.00	0.00	0.00	0.00
Non DPR	-	57.72	0.00	40.40	17.32	57.72
Retail Supply						
Non DPR	-	1.02	0.00	0.71	0.31	1.02
GRAND TOTAL		**180.49**	**0.00**	**126.34**	**54.15**	**180.49**

BEST submits that the amount claimed in the Petition is different from the amount shown in the Table above. The difference is because of the revision in amount claimed under Non-DPR Schemes. The following schemes are added under Non-DPR Schemes:

i. **Installation of additional 33 kV GIS Bus Section at 110 kV DBA RSS in FY 2019-20**

As per the ruling given by the Hon'ble Commission in Case No.212 of 2022 dtd. 31.03.2023, Para 3.6.11, it is mentioned that the Capitalisation amount of Rs. 4.37 Crore was disallowed stating that "the Capitalisation was not of that scheme i.e. BEST/FY18/02A, MERC Ref. No. MERC/CAPEX/2019-20/135 dated 10.05.2019". Now, the said capitalization amount towards Installation of additional 33 kV GIS Bus Section at 110 kV DBA RSS is considered in Non DPR Schemes in FY 2022-23.

ii. **Replacement of old Conventional Energy Meters**

As per the ruling given by the Hon'ble Commission in Case No.212 of 2022 dtd. 31.03.2023, Para 4.6.10, it is mentioned that *"BEST has claimed the capitalisation of Rs. 14.63 Crore in FY 2021-22 against which the DPR is yet to be approved and is in relation to implementation of Energy Meters. As per the past approach of the Commission, the capitalisation undertaken for the scheme which is yet to be approved is not allowed and accordingly, the Commission not considered the capitalisation of Rs. 14.63 Crore in FY 2021-22. BEST may seek approval for such capitalisation in next tariff Petition post seeking approval of the Commission for said DPR".*

The Hon'ble Commission is requested to consider the revised Capitalisation as shown in the Table above for FY 2022-23. The same will

Sr. No.	Reference	Data Query

be incorporated in the revised Petition to be submitted after the TVS.

BEST Code	Particulars	Capitalisation during the Year	Grants (A)	Debt (B)	Equity (C)	Total Funding
FY 2023-24						
Wire Business						
BEST/FY16/01	MERC/CAPEX/FY2016-17/00770 dated 28.09.2016	0.83	0.00	0.58	0.25	0.83
BEST/FY21/01	MERC/CAPEX /FY 2020-21/ dated 16.07.2020	-0.09	0.00	-0.06	-0.03	-0.09
BEST/FY16/02	MERC/TECH_V/CAP /DPR/20122013/02688 dated 22.02.2013	0.00	0.00	0.00	0.00	0.00
BEST/FY17/02	MERC/CAPEX/2017-18 /4706 dated 16.11.2017	5.37	0.00	3.76	1.61	5.37
BEST/FY18/02	MERC/CAPEX/2017-18 /4706 dated 16.11.2017	1.96	0.00	1.37	0.59	1.96
BEST/FY18/02A	MERC/CAPEX/2019-20 /135 dated 10.05.20219	0.00	0.00	0.00	0.00	0.00
BEST/FY20/02	MERC/CAPEX/2020-21/553 dated 15.12.2021	2.38	0.00	1.67	0.71	2.38
BEST/FY21/02	MERC/CAPEX/2021-22/552 dated 14.11.2022	0.01	0.00	0.01	0.00	0.01
BEST/FY21/03	MERC/CAPEX/2020-21/552 dated 15.12.2021	38.18	0.00	26.73	11.45	38.18
BEST/FY21/04	MERC/CAPEX/2020-21/ dated 22.06.2020	48.05	0.00	33.64	14.42	48.05
BEST/FY18/08A	MERC/CAPEX/2017-18 /4759 dated 22.11.2017	0.00	0.00	0.00	0.00	0.00
BEST/FY18/08B	MERC/CAPEX/2017-18/47886 dated 13.12.2017	0.00	0.00	0.00	0.00	0.00
IPDS/BEST/FY15-16/01	MERC/CAPEX/2019-20/418 dated 26.07.2019	0.00	0.00	0.00	0.00	0.00
RDSS/BEST/FY2023-24/01 (R)	MERC/CAPEX/2023-24/0023 dated 09.01.2024	12.99	5.75	5.07	2.17	12.99
Non DPR	-	19.52	0.00	13.32	5.71	19.03
Retail Supply						
RDSS/BEST/FY2023-24/01 (R)	MERC/CAPEX/2023-24/0023 dated 09.01.2024	0.01	0.00	0.01	0.00	0.01
GRAND TOTAL		**128.72**	**5.75**	**86.08**	**36.89**	**128.72**

Sr. No.	Reference	Data Query
24.	**Details of Capitalisation**	**In accordance with Regulation 23.5 of the MERC MYT Regulations, 2019, BEST to submit detailed justification for the following capital expenditure schemes:** **a.** ***All cases where the actual capitalisation for any scheme exceeds 10% of the*** **approved** ***capitalisation*** **for FY 2022-23 and FY 2023-24 and the reasons for the same. The variation may be bifurcated between Time overrun and cost overrun.** **b.** ***Schemes that have not commenced during FY 2022-23 and FY 2023-24 but approved for the year.***
Reply 24		a. BEST submits that there is no scheme whose capitalisation is more than approved cost. All capitalisation is within the limit of approved cost. b. BEST Scheme No. BEST/FY21/01, approved by MERC under ref. No. MERC/CAPEX/FY2020-21/- dated 16.07.2020, pertains to the commissioning of new RSS at Pimpalwadi, Spring Mill Chawl (Bombay Dyeing Mill) and Bharat Potdar Mill (India Blue). While the scheme has received MERC approval, the actual implementation has not yet commenced.
25.	**Depreciation under F 5.1 (E), F 5.2 (E)**	**a) BEST to duly link its Depreciation computation under F 5.1 (E), F 5.2 (E) for FY 2022-23 and FY 2023-24 post adjusting the assets claimed under Grants as the same is Hard Punched.** **b) BEST to also provide the computations of the Depreciation Rate @3.50% and @3.47% considered for FY 2022-23 and FY 2023-24.** **c) BEST to provide the details of the assets decapitalised and justification for the decapitalisation in the Petition for FY 2022-23 and FY 2023-24** **d) BEST to provide the asset register highlighting the amount of depreciation calculated as per MYT Regulations 2019 and the decapitalisation of the assets for FY 2022-23 and FY 2023-24.**
Reply 25		a) BEST submits that the Depreciation values that are hard punched in F 5.1 (E) and F 5.2 (E) are as per Audited Accounts and are for representation purpose only and cannot be linked. The Hon'ble Commission is requested to refer to the "Regulatory GFA & Depreciation" Sheet for the computation of Depreciation, which considers the Regulatory GFA and regulatory depreciation. b) BEST has considered the average Rate of Depreciation for FY 2022-23 and FY 2023-24 as derived from Audited Accounts, as shown in the Table below:

<table>
<tr><th>Sr. No.</th><th>Reference</th><th>Data Query</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><th>Particulars</th><th>FY 2022-23</th><th>FY 2023-24</th></tr>
<tr><td>Audited opening GFA</td><td>3,050.43</td><td>3,196.81</td></tr>
<tr><td>Audited closing GFA</td><td>3,196.81</td><td>3,310.69</td></tr>
<tr><td>Average Audited GFA</td><td>3,123.62</td><td>3,253.75</td></tr>
<tr><td>Audited Depreciation</td><td>109.30</td><td>113.03</td></tr>
<tr><td>Average Rate of Depreciation</td><td>3.50%</td><td>3.47%</td></tr>
</table>
c) BEST submits that there is no decapitalisation of assets in FY 2022-23 and FY 2023-24. Further, details of assets retired during FY 2022-23 and FY 2023-24 is submitted as Annexure 37 and Annexure 38 respectively.
d) BEST submits the Asset Register as Annexure 12.</td></tr>
<tr><td>26.</td><td>Interest on Long Term Loan</td><td>
a) BEST to provide the documentary evidence for the Interest Rate claimed based on the actual loan portfolio.
b) BEST to further justify and reconcile the following:
<table>
<tr><th rowspan="2">Sr. No.</th><th rowspan="2">Loan</th><th colspan="2">FY 2022-23</th><th colspan="2">FY 2023-24</th></tr>
<tr><th>Table 52 - Petition</th><th>Note 3 of Accounts</th><th>Table 53 – Petition</th><th>Note 3 of Accounts</th></tr>
<tr><td>1.</td><td>APDRP</td><td>11.50%</td><td>10.50%</td><td>11.50%</td><td>10.50%</td></tr>
<tr><td>2.</td><td>REC</td><td>10.75%</td><td>11.75%</td><td>10.75%</td><td>11.75%</td></tr>
</table>
c) BEST to provide the details the Finance Charges claimed for FY 2022-23 and FY 2023-24 of Rs. 3.50 Crore and Rs. 3.67 Crore, respectively duly reconciled with the audited accounts.
d) BEST to clarify whether there is any refinancing of loan and towards which loan the above finance charges are claimed.</td></tr>
<tr><td>Reply 26</td><td></td><td>a) BEST submits the documentary evidence for the Interest Rate claimed as Annexure 13.
b) BEST submits that the interest rate (%) shown in the Audited Accounts are not fixed and it is fluctuating every month. The same can</td></tr>
</table>

<table>
<tr><th>Sr. No.</th><th>Reference</th><th>Data Query</th></tr>
<tr><td></td><td></td><td>be referred from the Annexure 13.
c) BEST submits that the Finance Charges claimed for FY 2022-23 and FY 2023-24 corresponds to Bank Charges. As per the Audited Accounts, Bank Charges are a part of A&G Expenses and are not shown separately.
d) BEST submits that there is no refinancing of loan.</td></tr>
<tr><td>27.</td><td>Interest on Working Capital</td><td>a) The Commission has notified the MERC Supply Code Regulations in February 2021, wherein the amount of Security Deposit has been increased to 2 months of average billing. BEST to clarify whether the security deposit as highlighted for FY 2022-23 of Rs. 518.43 Crore and Rs. 555.57Crore for FY 2023-24 is considering the 2 months of average billing. BEST to provide the status and action considered for the same.
b) BEST to also provide the amount of security deposit claimed and received in cash and bank guarantee and amount yet to be recovered.
c) BEST to duly reconcile the Consumer Security Deposit considered for FY 2022-23 and FY 2023-24 with the Annual Accounts of the respective years.
d) BEST to reconcile its Actual Working Capital claimed for respective year duly with the Books of Accounts while referring to the Notes to the Account. BEST to further justify the allocation of its actual Working Capital and interest portion for the respective years since, as per para. 2.11.4. BEST utilises its Canara Bank OD for both electric supply and transport division.</td></tr>
<tr><td>Reply 27</td><td></td><td>a) BEST submits that the security deposits for FY 2022-23 and FY 2023-24 is based on consideration of 2 months of average billing. However, BEST submits that it has inadvertently considered the amount of Rs. 518.43 Crore and Rs. 555.57 Crore instead of Rs. 531.37 Crore and Rs. 565.98 Crore for FY 2022-23 and FY 2023-24, respectively. The same shall be incorporated with all consequential impact in the Revised Petition to be submitted after the TVS.
b) The exercise of collection of additional CSD for FY 2021-22 was started in the month of Dec-2022 and for FY 2023-24 in June-2024.
<table>
<tr><th colspan="5">Additional Security Deposit Data</th></tr>
<tr><th rowspan="2">S.No.</th><th colspan="2">Additional Security Deposit Data for FY 2021-22</th><th colspan="2">Additional Security Deposit Data for FY 2023-24</th></tr>
<tr><th>Demand Raised (in Rs. Cr.)</th><th>Amount Received (in Rs. Cr.)</th><th>Demand Raised (in Rs. Cr.)</th><th>Amount Received as on 29.10.2024 (in Rs. Cr.)</th></tr>
</table></td></tr>
</table>

<table>
<tr><th>Sr. No.</th><th>Reference</th><th>Data Query</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>1.</td><td>303.10</td><td>88.42</td><td>424.82</td><td>57.95</td></tr>
</table>

c) BEST submits that it has inadvertently considered the amount of Rs. 518.43 Crore and Rs. 555.57 Crore instead of Rs. 531.37 Crore and Rs. 565.98 Crore for FY 2022-23 and FY 2023-24 respectively. The same will be reconciled in the Revised Petition.
d) Reconciliation of Actual Working with the Books of Accounts is shown in the Table below:
<table>
<tr><th>Particulars (As per Audited Accounts)</th><th>FY 2022-23 (Rs. Crore)</th><th>FY 2023-24 (Rs. Crore)</th></tr>
<tr><td>Interest on Term Loan (a)</td><td>8.96</td><td>12.95</td></tr>
<tr><td>Interest on OD / Cash Credit (b)</td><td>0.35</td><td>0.90</td></tr>
<tr><td>Interest on Short Term Financing (c)</td><td>11.76</td><td>14.14</td></tr>
<tr><td>Interest on Account of Tata Bill Discounting (d)</td><td>89.88</td><td>121.52</td></tr>
<tr><td>Total Finance Cost as per Note 19 of Proforma Audited Accounts (a+b+c+d)</td><td>110.96</td><td>149.51</td></tr>
<tr><td>Actual Interest on Working Capital (b+c)</td><td>12.11</td><td>15.04</td></tr>
<tr><td>Actual Interest on Working Capital claimed in Petition</td><td>12.11</td><td>15.04</td></tr>
</table>

The Electricity Supply Business of the Undertaking receives its income in a piecemeal manner on a daily basis. However, it is obligated to make substantial payments, including bulk power purchase, transmission charges, standby charges, employee salaries, and transformer and cable payments. To ensure timely payment and avoid incurring penal interest, the Undertaking requires significant funds. The utilization of overdraft facilities enables the timely release of these payments. The same is claimed under Actual interest on Working Capital.
</td></tr>
<tr><td>28.</td><td>Interest on Consumer Security</td><td>BEST to duly reconcile its Actual Interest claimed towards the Consumer Security Deposits for FY 2022-23 and FY 2023-24, respectively from its books of accounts while referring to the Notes to the Audited Statement.</td></tr>
</table>

<table>
<tr><th>Sr. No.</th><th>Reference</th><th>Data Query</th></tr>
<tr><td></td><td>Deposit</td><td></td></tr>
<tr><td>Reply 28</td><td></td><td>BEST submits that it has considered actual interest on CSD, however, the value is different in the Books of Accounts as the same was not updated at the time of preparation of Accounts Statement.</td></tr>
<tr><td>29.</td><td>Other Expenses</td><td>a) BEST to duly reconcile each of the parameters claimed under Other Expenses with the Books of Accounts for the respective years along with the reference to the “Notes to the Audited Account”.
b) BEST to further clarify, where is the ED and M. Tax paid to the government is claimed under ARR for FY 2022-23 and FY 2023-24, as the same was approved by the Commission under Other expenses for FY 2020-21 and FY 2021-22.</td></tr>
<tr><td>Reply 29</td><td></td><td>a) BEST submits the reconciliation of Other Expenses as shown in the Tables below:
Amount claimed as per Table 58 of the Petition:
<table>
<tr><th>Particulars</th><th colspan="2">FY 2022-23</th><th colspan="2">FY 2023-24</th></tr>
<tr><th></th><th>MTR Order</th><th>Actual</th><th>MTR Order</th><th>Actual</th></tr>
<tr><td>Prompt Payment Discount</td><td></td><td>12.30</td><td></td><td>15.11</td></tr>
<tr><td>Power Factor Incentive</td><td></td><td>9.55</td><td></td><td>11.52</td></tr>
<tr><td>Load Factor Incentive</td><td></td><td>2.82</td><td></td><td>4.48</td></tr>
<tr><td>Discount on Digital Payment to Consumers</td><td></td><td>3.36</td><td></td><td>4.32</td></tr>
<tr><td>Discount on E Bill Option</td><td></td><td>6.77</td><td></td><td>6.66</td></tr>
<tr><td>Reimbursement of Transaction charges against payment through Visa Master Debit/Credit card</td><td></td><td>0.17</td><td></td><td>0.13</td></tr>
<tr><td>Total</td><td>24.19</td><td>34.97</td><td>24.19</td><td>42.23</td></tr>
</table>
Amount as per Note 20 of the Proforma Audited Accounts:
<table>
<tr><th>Particulars</th><th>FY 2022-23</th><th>FY 2023-24</th></tr>
<tr><td>Incentive Charges</td><td>12.37</td><td>16.00</td></tr>
</table></td></tr>
</table>

<table>
<tr><th>Sr. No.</th><th>Reference</th><th>Data Query</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>Discount on Electricity Charges</td><td>22.60</td><td>26.23</td></tr>
<tr><td>Total</td><td>34.97</td><td>42.23</td></tr>
</table>

b) BEST submits that it has not considered the ED and M. Tax paid to the State Government as the same was disallowed in the MTR Order. Para 3.13.7 of the MTR Order reads as follows:
" The Commission is of the view that as a normal practice any amount payable to GoM towards ED, M-TOSE or otherwise is not considered in the revenue from sales. Accordingly, the Commission directs BEST to apply the similar treatment and not consider amount towards ED and M-TOSE as revenue as well as expense …….."</td></tr>
<tr><td>30.</td><td>Contribution to Contingency Reserves</td><td>The 4th proviso of the Regulation 35.1 of the MERC MYT Regulations, 2019 provides that no Contribution to contingency reserves shall not be allowed as part of the ARR reserves for the subsequent if the Licensee does invest amount of contribution to Contingency Reserves in authorised securities for two consecutive Years. As per para. 2.13.2 BEST has submitted that, the same was disallowed in the MTR Order dated 31 March 2023. In this context, BEST shall justify its claims towards the Contribution to Contingency Reserves for the subsequent years.

BEST has submitted the SGL statement of the Securities where it has invested the Contribution to Contingency Reserves for FY 2022-23 and FY 2023-24. However, the enclosed submission is not clear as the proof of investment since, the investment years are marked manually and not system generated. In this context, BEST to submit the Annual Statement of the Securities invested towards the Contingency Reserves, which is system generated and reconciles with the invested amount for the respective years.</td></tr>
<tr><td>Reply 30</td><td></td><td>BEST submits that the Para 5.12.4 of the MTR Oder dated 31.3.2023 in Case 212 of 2022 reads as below:
" As per Regulation 35.1 of MYT Regulations, 2019, if the licensee does not invest the amount of contribution to Contingency Reserves in authorised securities for two consecutive Years, then the contribution to Contingency Reserves shall not be allowed in the calculation of Aggregate Revenue Requirement from the subsequent Year onwards. Considering the fact that BEST has not been allowed any investment towards Contingency Reserves for last three years, the Commission has not considered any Contribution to Contingency Reserves. However, the Commission directs BEST to invest such contribution as per Regulation 35.1 of the MYT Regulations, 2019. The Commission will consider the same at the time of Truing-up based on submission of documentary evidence of said</td></tr>
</table>

<table>
<tr><th>Sr. No.</th><th>Reference</th><th>Data Query</th></tr>
<tr><td></td><td></td><td>investment."(emphasis added)

Accordingly, BEST has claimed the Contribution to Contingency Reserves for FY 2022-23 and FY 2023-24, based on the actual investment made in Contingency Reserves.

BEST submits the Annual Statement of the Securities invested towards the Contingency Reserves as Annexure 14.</td></tr>
<tr><td>31.</td><td>Return on Equity</td><td>a) BEST to submit the SAIDI details as submitted quarterly to the MERC for FY 2022-23 and FY 2023-24 as part of the SOP compliance and justify its claims towards the Wires Availability for the respective years.
b) BEST to submit the Audited Report for the Collection Efficiency claimed for FY 2022-23 and FY 2023-24 to claimed its Additional RoE to the tune of 1%.
c) BEST has claimed the additional RoE @1% during the FY 2022-23 and FY 2023-24 towards the Assessed Bills, BEST has to provide the Assessed Bill statement to demonstrate its claims towards the 1% RoE, for the respective year. For the purpose of illustration, BEST has submitted that for FY 2023-24 the assessed bills % is 3.47%, however, computation of the assessed bills on monthly basis is not provided in the MYT Formats.</td></tr>
<tr><td>Reply 31</td><td></td><td>a) BEST submits the SAIDI details as submitted quarterly to the MERC for FY 2022-23 and FY 2023-24 as under:
<table>
<tr><th>Sr. No.</th><th>Month</th><th>SAIDI</th><th>SAIFI</th><th>SAIDI / SAIFI</th></tr>
<tr><td>1</td><td>Apr-22</td><td>10.40</td><td>0.30</td><td>34.59</td></tr>
<tr><td>2</td><td>May-22</td><td>8.07</td><td>0.27</td><td>29.60</td></tr>
<tr><td>3</td><td>Jun-22</td><td>5.51</td><td>0.19</td><td>28.55</td></tr>
<tr><td colspan="2">Total</td><td>23.98</td><td>0.77</td><td>31.30</td></tr>
</table>
<table>
<tr><th>Sr. No.</th><th>Month</th><th>SAIDI</th><th>SAIFI</th><th>SAIDI / SAIFI</th></tr>
<tr><td>1</td><td>Apr-23</td><td>8.04</td><td>0.26</td><td>31.02</td></tr>
<tr><td>2</td><td>May-23</td><td>7.78</td><td>0.29</td><td>26.84</td></tr>
<tr><td>3</td><td>Jun-23</td><td>5.23</td><td>0.22</td><td>23.98</td></tr>
<tr><td colspan="2">Total</td><td>21.06</td><td>0.77</td><td>27.44</td></tr>
</table>
<table>
<tr><th>Sr. No.</th><th>Month</th><th>SAIDI</th><th>SAIFI</th><th>SAIDI / SAIFI</th></tr>
</table>
<table>
<tr><th>Sr. No.</th><th>Month</th><th>SAIDI</th><th>SAIFI</th><th>SAIDI / SAIFI</th></tr>
</table></td></tr>
</table>

Sr. No.	Reference	Data Query

1	**Jul-22**	5.93	0.22	26.68
2	**Aug-22**	4.35	0.19	23.14
3	**Sep-22**	3.65	0.14	26.67
Total		**13.93**	**0.55**	**25.46**

1	**Jul-23**	5.50	0.20	27.94
2	**Aug-23**	4.84	0.19	25.46
3	**Sep-23**	3.33	0.12	28.14
Total		**13.67**	**0.51**	**27.05**

Sr. No.	**Month**	**SAIDI**	**SAIFI**	**SAIDI / SAIFI**
1	**Oct-22**	6.48	0.19	33.48
2	**Nov-22**	3.68	0.12	30.84
3	**Dec-22**	4.15	0.13	30.90
Total		**14.31**	**0.45**	**32.00**

Sr. No.	**Month**	**SAIDI**	**SAIFI**	**SAIDI / SAIFI**
1	**Oct-23**	6.48	0.20	31.88
2	**Nov-23**	2.92	0.10	28.87
3	**Dec-23**	3.64	0.14	26.68
Total		**13.03**	**0.44**	**29.58**

Sr. No.	**Month**	**SAIDI**	**SAIFI**	**SAIDI / SAIFI**
1	**Jan-23**	5.01	0.19	25.74
2	**Feb-23**	4.07	0.14	28.98
3	**Mar-23**	6.41	0.23	28.40
Total		**15.49**	**0.56**	**27.62**

Sr. No.	**Month**	**SAIDI**	**SAIFI**	**SAIDI / SAIFI**
1	**Jan-24**	4.13	0.15	28.13
2	**Feb-24**	3.41	0.12	29.21
3	**Mar-24**	5.88	0.19	31.14
Total		**13.42**	**0.45**	**29.66**

Sr. No.	**Month**	**SAIDI**	**SAIFI**	**SAIDI / SAIFI**
1	**Apr-22**	10.40	0.30	34.59
2	**May-22**	8.07	0.27	29.60
3	**Jun-22**	5.51	0.19	28.55

Sr. No.	**Month**	**SAIDI**	**SAIFI**	**SAIDI / SAIFI**
1	**Apr-23**	8.04	0.26	31.02
2	**May-23**	7.78	0.29	26.84
3	**Jun-23**	5.23	0.22	23.98

Sr. No.	Reference	Data Query

4	**Jul-22**	5.93	0.22	26.68	4	**Jul-23**	5.50	0.20	27.94
5	**Aug-22**	4.35	0.19	23.14	5	**Aug-23**	4.84	0.19	25.46
6	**Sep-22**	3.65	0.14	26.67	6	**Sep-23**	3.33	0.12	28.14
7	**Oct-22**	6.48	0.19	33.48	7	**Oct-23**	6.48	0.20	31.88
8	**Nov-22**	3.68	0.12	30.84	8	**Nov-23**	2.92	0.10	28.87
9	**Dec-22**	4.15	0.13	30.90	9	**Dec-23**	3.64	0.14	26.68
10	**Jan-23**	5.01	0.19	25.74	10	**Jan-24**	4.13	0.15	28.13
11	**Feb-23**	4.07	0.14	28.98	11	**Feb-24**	3.41	0.12	29.21
12	**Mar-23**	6.41	0.23	28.40	12	**Mar-24**	5.88	0.19	31.14
Total		**67.71**	**2.32**	**29.17**	**Total**		**61.17**	**2.17**	**28.25**

b) BEST submits that it has not conducted any 3rd Party audit for collection efficiency as the same has not asked by the Hon'ble Commission in the past.

c) BEST submits the details of Assessed bills as shown in the Table below:

Date : 15-10-2024			
Month wise Count Of Meters Billed on Actual And Estimation For the Financial Year 2022-23			
BILL MONTH	**Total No. Of Meters Billed On Estimation**	**Total No. Of Meters Billed On Actual**	**Total No. Of Meters**
2022/04	14480	1033229	1047709
2022/05	22579	1025153	1047732
2022/06	27655	1019783	1047438

Sr. No.	Reference	Data Query

2022/07	24080	1001206	1025286
2022/08	16701	1031347	1048048
2022/09	28555	1019378	1047933
2022/10	142844	904746	1047590
2022/11	14971	1032381	1047352
2022/12	12365	1034628	1046993
2023/01	11251	1036167	1047418
2023/02	10628	1037449	1048077
2023/03	10309	1037752	1048061
FY 2022-23	**336418**	**12213219**	**12549637**

Month wise Count Of Meters Billed on Actual And Estimation For the Financial Year 2023-24

BILL MONTH	Total No. Of Meters Billed On Estimation	Total No. Of Meters Billed On Actual	Total No. Of Meters
2023/04	10350	1037141	1047491
2023/05	14471	1032787	1047258
2023/06	11843	932359	944202
2023/07	17319	1031055	1048374
2023/08	17004	1031997	1049001
2023/09	13302	1036615	1049917
2023/10	12767	1037224	1049991
2023/11	13227	1037025	1050252

<table>
<tr><th>Sr. No.</th><th>Reference</th><th>Data Query</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>2023/12</td><td>28801</td><td>1021939</td><td>1050740</td></tr>
<tr><td>2024/01</td><td>56652</td><td>994529</td><td>1051181</td></tr>
<tr><td>2024/02</td><td>23161</td><td>1028680</td><td>1051841</td></tr>
<tr><td>2024/03</td><td>35257</td><td>1016846</td><td>1052103</td></tr>
<tr><td>FY 2023-24</td><td>254154</td><td>12238197</td><td>12492351</td></tr>
</table>
BEST submits that it has inadvertently considered % share of Assessed Bills as 0.99% and 3.47% for FY 2022-23 and FY 2023-24 respectively. BEST will incorporate the accurate values as outlined in the above Table and recalculate the % share of Assessed Bills for FY 2022-23 and FY 2023-24 respectively in the revised Petition to be submitted after the TVS.

Reason for high Assessed Bills for the month of October, 2022:
BEST submits that System downtime was taken for cloud migration activity, from M/s. ESDS to M/s. Cloudstrats, in the month of Sep.22 and Oct. 22 for the period from 23rd Sep. 22 at 5.00 pm to 5th Oct. 22 mid night as the new contract work order is awarded to M/s. Cloudstrats. During this period, three billing cycles (i.e., Cycle 18 for the month of Sep. 2022, cycle 1, and cycle 2 for the month of Oct. 2022) were billed on estimation.</td></tr>
<tr><td>32.</td><td>Provision of Bad and Doubtful Debts</td><td>BEST to provide the actual bad debt written off during the year for FY 2022-23 and FY 2023-24 duly reconciled with the Audited Accounts for the respective years in line with first proviso of the Regulation 76 of the MERC MYT Regulations, 2019.</td></tr>
<tr><td>Reply 32</td><td></td><td>BEST submits that it will incorporate the changes in the Revised Petition.</td></tr>
<tr><td>33.</td><td>Non-Tariff Income</td><td>BEST shall duly reconcile its non-tariff claimed for FY 2022-23 and FY 2023-24 with its Books of Accounts while also referring to the Notes to the audited accounts. In case any income not being considered under Non-Tariff Income, however, booked in the accounts, justification of the same shall also be provided.</td></tr>
</table>

Sr. No.	Reference	Data Query

Sr. No.	Particulars	FY 2022-23		FY 2023-24		Clarifications Required
		As per F 9	As per Books (Note XX)	As per F 9	As per Books (Note XX)	
1.	Contract Charges	1.93		1.85		
2.	Rents of land or buildings	5.14		2.40		
3.	Sale of Scrap					
4.	Income from investments	4.73		5.51		
5.	Interest on advances to suppliers/contractors					
6.	Rental from staff quarters					
7.	Rental from contractors					
8.	Income from hire charges from contractors and others					
9.	Supervision charges for capital works	0.63		0.36		
10.	Income from consumer charges levied in accordance with Schedule of Charges approved by the Commission	7.80		8.35		
11.	Income from recovery against theft and/or pilferage of electricity	2.38		7.29		
12.	Income from advertisements	0.25		0.17		
13.	Income from sale of tender documents					
14.	Interest Subsidy on REC loan	1.20				
15.	Others	33.46		21.37		

<table>
<tr><th>Sr. No.</th><th>Reference</th><th>Data Query</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>16.</td><td>Share of General Administration</td><td>1.93</td><td></td><td>1.85</td><td></td><td></td></tr>
<tr><td>17.</td><td>Total NTI</td><td>57.22</td><td></td><td>47.30</td><td></td><td></td></tr>
<tr><td>18.</td><td>Any other income not claimed under MYT</td><td></td><td></td><td></td><td></td><td></td></tr>
</table>
</td></tr>
<tr><td>Reply 33</td><td></td><td>BEST submits the reconciliation of Non-Tariff income for FY 2022-23 and FY 2023-24 as Annexure 15. The necessary changes shall be incorporated in the Revised Petition to be filed after the TVS.</td></tr>
<tr><td>34.</td><td>Revenue from Sale of Electricity

Table 73 of the Petition</td><td>
BEST to reconcile its Revenue from Sale of Electricity as under:
<table>
<tr><th rowspan="2">Sr. No.</th><th rowspan="2">Particulars</th><th colspan="2">FY 2022-23</th><th colspan="2">FY 2023-24</th><th rowspan="2">Clarifications Required</th></tr>
<tr><th>As per F 13</th><th>As per Books (Note 16)</th><th>As per F 13</th><th>As per Books (Note 16)</th></tr>
<tr><td>1.</td><td>Revenue from Sales of Distribution Meter</td><td>3,527.52</td><td>3529.54</td><td>4,188.89</td><td>4185.14</td><td>Discrepancy with the Books v/s MYT formats</td></tr>
<tr><td>2.</td><td>Distribution of Energy to Street Lights</td><td>-</td><td>8.75</td><td>-</td><td>11.22</td><td>Why revenue is not considered as part of total Revenue as electricity is being supplied to Street Light category?</td></tr>
<tr><td>3.</td><td>R&M of Street Light</td><td>-</td><td>69.71</td><td>-</td><td>63.61</td><td>What is the impact of the same in the MYT ARR parameters?</td></tr>
<tr><td>4.</td><td>Total</td><td>3537.52</td><td>3601.90</td><td>4188.89</td><td>4266.08</td><td></td></tr>
</table>
BEST to provide the detailed justification duly reconciled with its Books of Accounts for the respective years.
</td></tr>
</table>

Sr. No.	Reference	Data Query
Reply 34		BEST submits the reconciliation of Revenue for FY 2022-23 and FY 2023-24 as **Annexure 16**.
C.	**Provisional True-up of FY 2024-25**	
35.	**Provisional accounts of H1**	**BEST to provide the provisional accounts of H1 of FY 2024-25.**
Reply 35		BEST submits the provisional accounts of H1 of FY 2024-25 as **Annexure 17**.
36.	**Energy Sales Form F1**	**BEST to provide the links in the Form F1 for the estimation of Sales for H2 period as the same is hard punched**
Reply 36		BEST submits that it will incorporate the changes in the Revised Model to be submitted with the Revised Petition after the TVS.
37.	**Distribution Loss Para. 3.3.1**	**BEST to provide the details of the actual Distribution Loss recorded for FY 25(H1) and accordingly, the Sales distribution loss for H2 shall be estimated.**
Reply 37		BEST submits that it has different billing cycles and considering the actual Distribution Loss for 6 months will not be appropriate. Also, MSLDC has not declared the final month-wise drawal for H1 of FY 2024-25. Hence, BEST has considered the Distribution Loss (%) for FY 2024-25 as approved by the Hon'ble Commission in the Order dated 31.03.2023 in Case No. 212 0f 2022.
38.	**Power Purchase Para. 3.5.30**	**a. BEST to submit the communication received from SECI for non-availability of Power tied up during FY24 and FY 25.** **b. BEST to further justify what actions have been taken with SECI for such non-availability of power leading to the procurement of power from Short Term Market.**
Reply 38		a. BEST submits the communication received from SECI for non-availability of Power tied-up during FY 2023-24 and FY 2024-25 as **Annexure 18**. b. BEST submits as follows

Sr. No.	Reference	Data Query
		1. BEST Undertaking has signed Power Sale Agreement with SECI for procurement of 400 MW Wind-Solar Hybrid power under ISTS Hybrid Tranche-III scheme and 234 MW solar power under SECI's Manufacturing linked solar scheme on 25.06.2021 and 09.12.2022, respectively. These projects were expected to be commissioned by the third quarter of FY 2022-23 and December 2024, respectively. However, the date of scheduled commissioning was extended from time to time to January 2023, June 2024, December 2024, March 2025 due to the various reasons and now, the Scheduled Commercial Operation Date (SCOD) of these projects is linked with Long Term Access (LTA) Operationalization date. 2. In this regard, BEST vide its emails dated 02.08.2021, 07.12.2021, 09.02.2022, had requested SECI to submit the progress and the development of commissioning of the project. In this regard, SECI vide its email dated 15.02.2022 had informed that Long Term Access has been granted to the developers, land for project has been identified and Scheduled Commissioning Date is mentioned as January 2023. 3. Against revised Schedule Commissioning date, vide email dated 17.02.2022, 28.02.2022, 11.05.2022, BEST had requested SECI to adhere to the time-line furnished by them in respect to the procurement of equipment, land acquisition, Grid-connectivity, Material, start & completion of activities, Testing & Commissioning so as to ensure the SCoD in time. 4. Further ,vide email dated 07.07.2022 and 29.07.2022, BEST has requested SECI to submit the Progress of all three projects tied up with generators M/s ABC RE Pvt. Ltd, M/s AMP Energy Green Eight Pvt. Ltd and M/s Adani Hybrid Energy Jaisalmer Five Ltd as on 30.06 2022 regarding LTA granted by CTU, land identification and land acquisition, procurement of materials and commissioning of plant. It was further requested to SECI to adhere to the time-line in respect to the commissioning of project so as to commence the SCoD in time. Vide letters dated 25.08.2022 and 29.08.2022, SECI has informed that the scheduled commissioning date of the project is extended till the actual date of LTA operationalization due to delay in readiness of power evacuation infrastructure. 5. Therefore, vide letter ref. No. **CER/DEPP-122/147/2022 dated 07.09.2022**, BEST have informed SECI that to meet BEST's load requirement and Solar/ Non-solar RPO of BEST from FY 2023-24 onwards, BEST has envisaged the RE power from these SECI projects. The delay in the commissioning of these projects may result in RPO shortfall of BEST in FY 2023-24. As the timely completion of the above project is very important for BEST Undertaking, BEST requested to adhere to the time line as specified

Sr. No.	Reference	Data Query
		in the Power Supply Agreement, so that BEST can fulfil its RPO requirement as well as meet the load requirement of its consumers at very economical rate. 6. Subsequently BEST vide its letter ref. No. **ESO/AGMES/52/16650 dated 03.08.2023**, BEST has requested SECI to give necessary instructions to developers for adhering to the timeline of December 2024 and expedite the projects. 7. Thereafter, BEST has made correspondence with various authorities such as Ministry of Power, Central Transmission Utility and Maharashtra state Transmission Utility and requested these authorities to complete the commissioning of pooling substation and associated Transmission Lines so as to evacuate the power from the SECI's proposed Renewable Projects. Copies of **D.O. Letters** sent to various authorities are attached herewith as **Annexure 19**. 8. Vide **Letter dated 10.10.2024**, SECI informed CTU that the developers have highlighted the delay in readiness of evacuation infrastructure which leads to delay in commissioning of the Projects. SECI has extended the project timelines due to delay in start date of connectivity. Subsequently, Buying Entities have also raised the delay in off take of power which are affecting their RPOs. SECI requested CTU to expedite the activities pertaining to evacuation infrastructure, so that Projects can be commissioned on time. Copy of Letter is attached herewith as **Annexure 20**. 9. Vide **Letter dated 10.04.2024,** BEST has informed SECI that it has considered the power from SECI of 634 MW as part of its stack for meeting the power requirement and accordingly planned the requirement from different sources. Achieving Scheduled Commissioning Operation Date (SCOD) at the designated date is therefore of utmost importance. BEST requested SECI to give necessary instructions to solar developers for meeting the prescribed deadlines and expedite the projects. Copy of Letter is attached herewith as **Annexure 21**.
39.	**O&M Expenses Para. 3.6.20**	**BEST to submit the terms and conditions of payment to AMISP and details of payment done by BEST. BEST to confirm whether it has adhered to the terms and conditions as per agreement with AMISP**
Reply 39		BEST submits the terms and conditions of payment to AMISP as **Annexure 22**. Additionally, BEST submits that it has adhered to the terms and conditions as per agreement with AMISP. Further BEST submits the details of payment made to AMISP as **Annexure 39.**
40.	**O&M Expenses**	**BEST to reconcile the Arrears of Rs. 80 Crore paid during FY (H1) with the provisional accounts of FY 2024-25.**

<table>
<tr><th>Sr. No.</th><th>Reference</th><th>Data Query</th></tr>
<tr><td></td><td>Para. 3.6.25</td><td></td></tr>
<tr><td>Reply 40</td><td></td><td>For the wage revision of the period FY16-21, 30% of Arrears amounting Rs. 80 Crore has been paid on actuals as per court directives. The arrears for remaining employees will be claimed at the time of true up (once payment is made).</td></tr>
<tr><td>41.</td><td>O&M Expenses Para. 3.6.30</td><td>BEST to provide the break-up of the Share of General Administration Expenses claimed during H1 duly reconciled with the Provisional Accounts for FY 2024-25.</td></tr>
<tr><td>Reply 41</td><td></td><td>BEST submits the break-up of the Share of General Administration Expenses claimed during H1 of FY 2024-25 as Annexure 23.
Further, BEST submits that it will reconcile the Share of GA Expenses claimed during H1 of FY 2024-25 with the amount reflecting in the Provisional Accounts for H1 of FY 2024-25 in the revised Petition to be submitted after the TVS.</td></tr>
<tr><td>42.</td><td>Depreciation under F 5.1 (E), F 5.2 (E)</td><td>a. BEST to duly link its Depreciation computation under F 5.1 (E), F 5.2 (E) for FY 2024-25 post adjusting the assets claimed under Grants as the same is Hard Punched.
b. BEST to also provide the computations of the Depreciation Rate @3.47% considered for FY 2024-25.</td></tr>
<tr><td>Reply 42</td><td></td><td>a. BEST submits that the Depreciation values, which are hard punched in F 5.1 (E) and F 5.2 (E) are as per Audited Accounts and are for representation purpose only and cannot be linked. The Hon'ble Commission is requested to refer to the "Regulatory GFA & Depreciation" Sheet for the computation of Depreciation.
b. BEST submits that it has considered the Depreciation Rate of 3.47%, same as that in FY 2023-24.</td></tr>
<tr><td>43.</td><td>Capitalisation</td><td>BEST to provide the Scheme wise Capitalisation claimed during the year and corresponding funding through Grants, Debt and Equity as per the following for format for Wires and Retail Supply Business and Combined:
<table>
<tr><th>Sr. No.</th><th>FY</th><th>Particulars</th><th>Capitalisation during the Year</th><th>Grants (A)</th><th>Debt (B)</th><th>Equity (C)</th><th>Total Funding</th></tr>
<tr><td>1.</td><td>FY 2024-25</td><td>Scheme 1</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>2,</td><td>FY 2024-25</td><td>Scheme 2</td><td></td><td></td><td></td><td></td><td></td></tr>
</table></td></tr>
</table>

<table>
<tr><th>Sr. No.</th><th>Reference</th><th>Data Query</th></tr>
<tr><td></td><td></td><td>…….</td></tr>
<tr><td>Reply 43</td><td></td><td>BEST submits the Scheme-wise details of Capitalisation claimed for FY 2024-25 and the corresponding funding through Grants, Debt and Equity as shown in the Table below:
<table>
<tr><th>BEST Code</th><th>Particulars</th><th>Capitalisation during the Year</th><th>Grants (A)</th><th>Debt (B)</th><th>Equity (C)</th><th>Total Funding</th></tr>
<tr><td>FY 2024-25</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Wire Business</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>BEST/FY16/01</td><td>MERC/CAPEX/FY 2016-17/ 00770 dated 28.09.2016</td><td>11.22</td><td>0.00</td><td>7.85</td><td>3.37</td><td>11.22</td></tr>
<tr><td>BEST/FY21/01</td><td>MERC/CAPEX /FY 2020-21/ dated 16.07.2020</td><td>4.00</td><td>0.00</td><td>2.80</td><td>1.20</td><td>4.00</td></tr>
<tr><td>BEST/FY16/02</td><td>MERC/TECH_V/CAP /DPR/20122013/02688 dated 22.02.2013</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td></tr>
<tr><td>BEST/FY17/02</td><td>MERC/CAPEX/2017-18 /4706 dated 16.11.2017</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td></tr>
<tr><td>BEST/FY18/02</td><td>MERC/CAPEX/2017-18 /4706 dated 16.11.2017</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td></tr>
<tr><td>BEST/FY18/02A</td><td>MERC/CAPEX/2019-20 /135 dated 10.05.20219</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td></tr>
<tr><td>BEST/FY20/02</td><td>MERC/CAPEX/2020-21/553 dated 15.12.2021</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td></tr>
<tr><td>BEST/FY21/02</td><td>MERC/CAPEX/2021-22/552 dated 14.11.2022</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td></tr>
<tr><td>BEST/FY21/03</td><td>MERC/CAPEX/2020-21/552 dated 15.12.2021</td><td>36.94</td><td>0.00</td><td>25.86</td><td>11.08</td><td>36.94</td></tr>
<tr><td>BEST/FY21/04</td><td>MERC/CAPEX/2020-21/ dated 22.06.2020</td><td>39.62</td><td>0.00</td><td>27.73</td><td>11.89</td><td>39.62</td></tr>
<tr><td>BEST/FY18/08A</td><td>MERC/CAPEX/2017-18 /4759 dated 22.11.2017</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td></tr>
<tr><td>BEST/FY18/08B</td><td>MERC/CAPEX/2017-18/47886 dated 13.12.2017</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td></tr>
<tr><td>IPDS/BEST/FY15-16/01</td><td>MERC/CAPEX/2019-20/418 dated 26.07.2019</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td></tr>
<tr><td>RDSS/BEST/FY2023-24/01 (R)</td><td>MERC/CAPEX/2023-24/0023 dated 09.01.2024</td><td>453.00</td><td>170.00</td><td>198.10</td><td>84.90</td><td>453.00</td></tr>
<tr><td>Non DPR</td><td>-</td><td>31.05</td><td>0.00</td><td>21.74</td><td>9.32</td><td>31.05</td></tr>
<tr><td>Retail Supply</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>RDSS/BEST/FY2023-24/01 (R)</td><td>MERC/CAPEX/2023-24/0023 dated 09.01.2024</td><td>10.00</td><td>5.00</td><td>3.50</td><td>1.50</td><td>10.00</td></tr>
</table></td></tr>
</table>

Sr. No.	Reference	Data Query
		GRAND TOTAL | **585.83** | **175** | **287.58** | **123.25** | **585.83** BEST submits that in the Petition it has inadvertently claimed the capitalisation amount of Rs. 9 Crore (BEST/FY20/02 – 5 Crore + BEST/FY21/02 – Rs. 4 Crore) under new RSS. However, the scheme was closed in March, 2024. Hence, BEST has revised the capitalisation for FY 2024-25. The same will be incorporated in the revised Petition to be submitted after the TVS.
44.	**Capital Expenditure and Capitalisation**	**a. As regards Non-DPR schemes undertaken in FY 2024-25, BEST should submit:** **i. details of works carried out under Non-DPR schemes.** **ii. Justification that work carried out is capital in nature.** **iii. Cost-benefit-analysis of the capital expenditure.** **b. As per Regulation 10.1 of MERC ((Approval of Capital Investment Schemes) Regulations, 2022 regarding the non-DPR scheme provide that:** ***"10.1 All Non-DPR Schemes shall be required to be registered with the Commission on quarterly basis in physical form, till the commencement of the web-portal referred in Regulation 19 of these Regulations, after which the Schemes shall be registered on the web portal:*** ***Provided that the Format specified in Appendix 1 for submission of DPR Schemes shall be applicable for Non-DPR Schemes also, to be filled-up as applicable/relevant:*** **Accordingly, BEST to provide the details of the submission of Non-DPR schemes to MERC, which has been claimed in FY 2024-25** **c. BEST to submit the DPR and Non-DPR schemes in line with the Capex Approval Regulations 2022.**
Reply 44		a. Till date BEST has not finalized Capitalisation statement for FY 2024-25. Therefore, Non DPR Data is not available. As soon as received, BEST will submit the same. b. BEST Agree with the Hon'ble commissions views that "as per Regulation 10.1 of MERC Regulation, 2022, BEST had to be registered all Non DPR Schemes on quarterly basis in physical form". However, BEST submits that BEST has followed the old practice till date. Therefore, till date BEST has not registered non DPR schemes on quarterly basis. BEST assures that all Non DPR Schemes will be registered on quarterly basis from FY 2025-26 onwards. In the mean time we will mobilize our executing department to adopt the system for implementation of Capex Regulation, 2022 strictly. c. BEST to submit the DPR and Non-DPR schemes in line with the Capex Approval Regulations 2022: - BEST submits that the

Sr. No.	Reference	Data Query
		DPR for RDSS Scheme and Smart Meters is already submitted to the Hon'ble commission in line with the Capex Regulation, 2022. Henceforth also, BEST will submit DPR and Non DPR Schemes in line with the Capex Regulation, 2022.
45.	**Details of Capitalisation**	**In accordance with Regulation 23.5 of the MERC MYT Regulations, 2019, BEST to submit detailed justification for the following capital expenditure schemes:** **a.** ***All cases where the actual capitalisation for any scheme exceeds 10% of the*** **approved** ***capitalisation*** **for FY 2024-25 and the reasons for the same. The variation may be bifurcated between Time overrun and cost overrun.** **b.** ***Schemes that have not commenced during FY 2024-25 but approved for the year.***
Reply 45		a. BEST submits that there is no cost over-run anticipated for FY 2024-25. b. BEST submits that it does not envisage any schemes that were approved for implementation in FY 2024-25 but shall not be initiated during the year. However BEST Scheme No. BEST/FY21/01, MERC ref. No. MERC/CAPEX/FY2020-21/- dated 16.07.2020 is for commissioning of new RSS at Pimpalwadi, Spring Mill Chawl (Bombay Dyeing Mill) and Bharat Potdar Mill (India Blue) RSS is approved by MERC but not commenced.
D.	**ARR Projections for 5th Control Period i.e. FY 2025-26 to FY 2029-30**	
46.	**Background**	**BEST to refer the applicable Regulations of MERC MYT Regulations, 2024, under which the ARR Projections for 5th Control Period is claimed.**
Reply 46		BEST submits that it has already referred to the relevant clauses of the MERC MYT Regulations, 2024 for the projection of ARR for 5th Control Period, wherever required.
47.	**Energy Sales**	**BEST has not proposed Energy Sales in kVAh for LT consumers for 5th Control Period even after it has proposed for the implementation of the Smart Meters in the same Control Period for all consumer categories. In this context BEST shall justify the reason for not proposing kVAh based billing for the LT Consumers.**
Reply 47		BEST submits that at present BEST does not have any mechanism for kVAh billing system for LT consumers and the same can be configured once all the smart meters are installed. Accordingly, BEST will come up with the kVAh billing system for all 10 kW and above consumer categories in its next MTR Petition.
48.	**Form F1**	**BEST to link its monthly sales percentage derived for 5th Control Period under Row No. 226 of F1 as the same is hard punched.**

Sr. No.	Reference	Data Query
Reply 48		BEST submits that it will incorporate the changes in the Revised Model along with the Revised Petition to be submitted after the TVS.
49.	**Growth in Connected Load**	**BEST to also provide the growth proposed in the Connected Load with proper calculation in excel, since it has proposed the increase in the Demand under Form F 1.5 during the 5th Control Period.**
Reply 49		BEST submits that it has not used sanctioned load for the calculation of revenue and hence it has not considered the increase in Connected load for 5th Control Period.
50.	**Distribution Loss**	**a. BEST has proposed for the implementation of RDSS scheme, which aim for the reduction of the AT&C Loss levels during the 5th Control Period. Further, as per para. 4.7.3 it has mentioned with the proposed Capex schemes during the 5th Control Period it will enable BEST to reduce its losses. In this context, BEST shall justify in detail why the loss levels are kept at same level as that was approved by the Commission @4.18% during MTR Order and whether implementation of RDSS scheme would benefit in distribution loss reduction.** **b. BEST to submit the trajectory of Distribution Loss Reduction proposed in RDSS and submit the relevant document for the same.**
Reply 50		a. BEST submits that as RDSS scheme is not fully implemented, the reduction in Distribution loss (%) cannot be quantified at this stage. Hence, BEST has considered the distribution loss at the same level that was approved by the Hon'ble Commission in the MTR Order. b. The objective of the RDSS scheme is to reduce AT&C losses to Pan-India levels of 12-15% by 2024-25. BEST had already achieved this target. BEST's distribution loss is less than 5%. Further, objective is to reduce ACS-ARR gap to zero by 2024-25, to develop Institutional Capabilities for Modern DISCOMS and for improvement in the quality, reliability and affordability of power supply to the consumers through a financially sustainable and operationally efficient Distribution Sector.
51.	**AT&C Losses**	**As per Regulations 110.2 of MYT Regulations 2024, the Distribution Licensee as a part of its MYT Petition shall submit the AT&C Loss trajectory. BEST has provided the same in the format but has to be submitted in the Petition.**
Reply 51		BEST submits that it will incorporate the AT&C Loss Trajectory for the Fifth Control Period in the Revised Petition to be submitted after the TVS.

Sr. No.	Reference	Data Query
52.	**Form F 1.5**	**BEST has considered its entire demand under Peak Load, while the same be provided with the Base and Peak Load requirements.**
Reply 52		BEST submits that it will incorporate the changes in the Revised Form F1.5 and submit the same along with the Revised Petition to be submitted after the TVS.
53.	**Power Purchase from TPC-G (Para. 4.5.3 to 4.5.4)**	**a. BEST has submitted that it has extended the PPA with TPC-G for the total quantum of 676.69 MW from 1 April 2024 to 31 March 2029. In this context, BEST to provide clarification why it has proposed to only discontinue the power from Unit 5 of TPC-G, when the entire PPA is getting terminated on 31 March 2029. Further why BEST has proposed to extend the procurement of Power from TPC-G (remaining Units) during FY 2029-30, when PPA is getting terminated on 31 March 2029.** **b. BEST to further clarify whether it has made any communication with TPC-G for such extension.** **c. BEST to clarify, why it has not proposed to procure power from other generating source and instead planned to continue with TPC-G.** **d. BEST to consider the escalation on the power procurement cost from TPC-G over the 5th Control Period as the same looks understated. BEST may also refer to the TPC-G's revised Petition submitted to the Commission.**
Reply 53		a. Considering the transmission constraints and the requirement of Embedded generation, the Hon'ble Commission in its Order dated 28.11.2023 in Case No. 39 of 2023 and Order dated 28.12.2023 in Case No. 189 of 2023 has directed BEST as follows: *24.10: ".....the Commission directs TPC-D to extend existing PPA with TPC-G for 5 years from 1 April 2024 i.e. 31 March 2029. While extending such PPA for 5 more years, it is also important to prepare for gradual phase out if sufficient transmission capacity becomes ready. The Commission notes that TPC-G has different type of units i.e. Coal based, Gas based and Hydro units, life of each generating unit of is different and the Commission has been determining unit wise tariff for all units of TPC-G. However, PPA signed by TPC-G with Distribution Licensee i.e. TPC-D and BEST Undertaking is bundled PPA for all units. But considering the fact that tariff is not bundled tariff and is being determined unit wise, the Commission is of the opinion that PPA should also be signed unit wise. This will help while decided about next extension of PPA. At that point of time, based on available transmission capacity, PPA for certain costly embedded units can be discontinued. Also, PPA for cheaper Hydro units can be extended for longer period say 15/20 years based on life assessment study. Such arrangement would also enable TPC-G to undertake long term capital investment on their generating units. Hence, the Commission directs TPC-D to sign unit wise PPA with TPC-G for extended period of 5 years. While signing such PPA, existing unit wise allocation between BEST Undertaking and TPC-D shall be maintain. Based on same*

Sr. No.	Reference	Data Query
		principles, BEST Undertaking shall also sign unit wise PPA with TPC-G. Accordingly, BEST has signed unit-wise PPA for TPC-G Unit 5,7,8 and Hydro (Unit wise for Bhira, Bhivpuri and Khopoli) for 5 years from 1 April 2024 to 31 March 2029. Also, as per the directives of the Hon'ble Commission in its Order dated 20.09.2024 in Case No. 135 of 2024, BEST had signed APP with M/s Sai Wardha on 15.10.2024 for 125 MW RTC Power for 7 years. Therefore, considering the directives in various Orders of Hon'ble Commission, available transmission capacity and considering the life and costly variable charge of Unit 5 and more capex involved for enhancement of life of Unit 5, BEST proposed to discontinue the PPA of Unit 5 and considered Hydro units, Unit 7 APM Gas base Unit and Unit 8 Thermal power unit of TPC-G after 31 March 2029 for tariff determination purposes. However, BEST will conduct the competitive bidding process as per the Act and Rules and Regulations in force to procure the power from FY 2029-30 onwards. Further BEST will take necessary steps to procure Renewable power as per the RPO trajectory set by Hon'ble commission and Hon'ble MOP from FY 2029-30 onwards. The Hon'ble Commission will appreciate that as of today, BEST cannot undertake any competitive bidding process for power procurement from FY 2029-30 onwards, in the absence of clarity regarding the state of transmission network congestion. Hence, since, BEST cannot also assume that its entire power requirement is going to be sourced from the Power Exchange in FY 2029-30, as there will be no valid PPA, BEST has assumed extension of part of the PPA, only for projection of ARR and tariff. BEST shall approach the Hon'ble Commission for necessary approvals at the appropriate time. b. At present, BEST has not made any communication with TPC-G for extension. After considering the transmission constraints within Mumbai and requirement of embedded generation, BEST will communicate with TPCG for extension of PPA at the appropriate time, if required for BEST. c. Considering the life and costly variable charge of Unit 5 and capex involved for enhancement of life of Unit 5, BEST has proposed to discontinue the PPA of Unit 5. BEST has considered other units of TPC-G after 31 March 2029 for tariff determination purpose only. However, BEST will conduct the competitive bidding process as per the Acts and Rules in force to procure the power from FY 2029-30 onwards. Further, BEST will take necessary steps to procure Renewable power as per the RPO trajectory set by Hon'ble commission and Hon'ble MOP from FY 2029-30 onwards. BEST shall approach the Hon'ble Commission for necessary approvals at the appropriate time.

Sr. No.	Reference	Data Query
		d. BEST shall incorporate the changes in the Revised Petition to be submitted after the TVS.
54.	**Power Purchase from SWPGPL**	**a. BEST to provide the status of the revised BPTA amendment for scheduling/procure power of 125 MW RTC from Sai Wardha and accordingly BEST to confirm the proposed date of procuring power (power flow) from Sai Wardha, whether it will be from January 2025 as submitted under FY 2024-25 Power Purchase section.**
Reply 54		BEST submits that **Revised BPTA Amendment** for FY 2024-25 is signed between BEST and MSETCL; Copy is attached herewith as **Annexure 24**. BEST is in process of consent from CE SLDC for scheduling the power . After obtaining the consent from CE SLDC, power of 125 MW RTC from Sai Wardha may be scheduled from January 2025 onwards.
55.	**RE Power Purchase from SECI (Para. 4.5.14 to 4.5.16)**	**a. BEST to provide the communication received from SECI for the delay in SCOD of Adani Green Energy Twenty Six A Ltd.** **b. BEST to further demonstrate, what actions they have taken towards such delay, whether there was any clause for the alternative supply of power from any other source in case of delay of SCOD post signing of PSA until the concerned project is commissioned,** **c. BEST to submit the notice of termination received from ABC RE Pvt. Ltd. BEST to provide the status of the litigation and whether the same is at the level of SECI or filed Petition before the CERC.** **d. BEST to also share all the PSA's signed with SECI.** **e. BEST to also provide the SCOD v/s Expected COD of the RE Plant tied-up through SECI.**
Reply 55		a. Communication received from SECI for non-availability of Power tied up during FY 2023-24 and FY 2024-25 is attached herewith as **Annexure 18**. b. BEST has made correspondence with various authorities such as Ministry of Power, Central Transmission Utility and Maharashtra state Transmission Utility and requested these authorities to complete the commissioning of pooling substation and associated Transmission Lines so as to evacuate the power from the SECI's proposed Renewable Projects. Copies of D.O. Letters sent to various authorities are attached herewith as **Annexure 19**. Vide Letter dated 10.10.2024, SECI informed CTU that the developers have highlighted the delay in readiness of evacuation infrastructure which leads to delay in commissioning of the Projects. SECI has extended the project timelines due to delay in start date of connectivity. Subsequently, Buying Entities have also raised the issue of delay in off take of power, which are affecting their RPOs. SECI requested CTU to expedite the activities pertaining to evacuation infrastructure, so that Projects can be commissioned on time. Copy of Letter is attached herewith as **Annexure 20**. Vide Letter dated

Sr. No.	Reference	Data Query
		10.04.2024 BEST has informed SECI that it has considered the power from SECI of 634 MW as part of its stack for meeting the power requirement and accordingly planned the requirement from different sources. Achieving Scheduled Commissioning Operation Date (SCOD) at the designated date is therefore of utmost importance. BEST requested SECI to give necessary instructions to solar developers for meeting the prescribed deadlines and expedite the projects. Copy of Letter is attached herewith as **Annexure 21**.There is no clause for the alternative supply of power from any other source in case of delay of SCOD post signing of PSA until the concerned project is commissioned. c. BEST submits the copy of **Termination notice** served by M/s ABC RE Pvt. Ltd. to SECI as **Annexure 25**. Vide Letter dated 04.07.2024 submitted to SECI, BEST has strongly opposed the termination of the 380 MW Solar - Wind Hybrid project of M/s ABC Renewable Energy (RJ-03) Private Limited and requested SECI not to accept the notice served by M/s ABC Renewable Energy (RJ-03) Private Limited and direct the developer to complete the project as per the schedule. M/s ABC Renewable Energy (RJ-03) Private Limited has filed **appeal before Dispute Resolution Committee (DRC**) of SECI on 01.11.2024 . Copy of appeal is attached herewith as **Annexure 26**. d. Copies of PSA and PPA are attached herewith as **Annexure 27**. e. BEST submits that SECI has submitted the Monthly progress report for the Month of Oct-2024, showing the details of SCOD v/s Expected COD of the RE Plant tied-up through SECI. Copy of the same is attached herewith as **Annexure 28**.
56.	**Power Purchase Batter Storage RPO**	**BEST to provide the details of the BESS Competitive Bidding prices it has referred and reference for the consideration of BESS rate @Rs. 3.50/kWh.** **BEST to further provide the quantum in (MU) considered for BESS during FY 2029-30 for arriving at BESS Cost of Rs. 42.16 Crore.**
Reply 56		BEST submits that it has considered the Rate of Rs. 3.50/kWh based on the recent price discovered by SECI for Selection of 1200 MW ISTS-connected Solar PV Power Projects with 600 MW/1200 MWh ESS (SECI-ISTS-XV). (RfS No. SECI/C&P/IPP/11/0023/23-24 dated 16.03.2024). BEST submits that it will incorporate the quantum considered for BESS during FY 2029-30 for arriving at BESS cost of Rs. 42.16 Crore in the Revised Petition.
57.	**RA Plan**	**a. BEST to submit its RA Plan considered for proposing its Sales and Power Purchase for 5th Control Period.**

Sr. No.	Reference	Data Query
		b. The Commission vide its letter dated 18 November 2024 directed to revisit its ST-DRAP, MT-DRAP planning along with proposed power procurement and file the revised RA plan along with MYT filing. BEST shall submit the compliance of the letter dated 18 November 2024.
Reply 57		a. BEST submits the copy of RA Plan as **Annexure 29**. b. The Hon'ble Commission vide letter no. MERC/RA/2024-25/0691 has examined Resource Adequacy Plan submitted by BEST on 30th September 2024 vide letter no. CER/PP/56/2024. In the said letter, the Hon'ble Commission provided its observations on the RA Plan submitted by BEST in Annexure-I accompanying the letter. On perusal of the Annexure, BEST notes that it is compliant with all the provisions of the MERC Resource Adequacy Regulations, 2024. Additionally, in the said letter, Hon'ble Commission highlighted that as per Regulation 10.3 of MERC Resource Adequacy Regulations, 2024, contribution of Capacity Credit (CC) factor for the RE sources should be factored, as specified by Central Electricity Authority (CEA) or MERC itself. The Hon'ble Commission provided reference of "Discussion Paper on Methodology for Capacity Credit of Generation Sources and Coincident peak requirement of utilities under Resource Adequacy Framework" as issued by CEA vide letter dated 18th October 2024. The said Discussion Paper proposes a methodology that considers the 80th percentile of the top 5% of coincident demand values. Hon'ble Commission has suggested that Distribution Licensees should revisit the RA Plan as per methodology specified by CEA in its Discussion Paper dated 18th October 2024. It is pertinent to note that these methodologies as specified in the Discussion Paper are currently at the discussion stage. The CEA has sought feedback and comments from stakeholders across the sector, including utilities, generators, regulators, and other concerned entities. As these methodologies are still under evaluation, they are not part of any existing regulatory framework. BEST would like to submit that in its RA Plan (as submitted on 30th September 2024), it has considered CC as per net load based approach/methodology specified in Regulation 10.2 of MERC Resource Adequacy Regulations, 2024, which is quite elaborate and also applicable for determination of CC factors for wind, solar, and wind-solar hybrid generation resources. Further, Regulation 10.4,10.5 and 10.6 of MERC Resource Adequacy Regulations, 2024 have been considered as required. BEST submits that as MERC Resource Adequacy Regulations, 2024 has been notified, the same should prevail over methodology suggested in Discussion Paper, which is still not notified and subject to change based on comments by stakeholders.

Sr. No.	Reference	Data Query
		BEST would also like to submit that submitting revised RA Plan as per Discussion Paper entails a significant effort and substantial data requirements. It requires a detailed block-wise analysis of demand across all utilities in the country, along with projections for the planning horizon. Additionally, comprehensive data on demand and renewable energy generation profiles at both the national and state levels over the past 2-3 years is essential. It is also important to note that the methodologies specified in MERC Resource Adequacy Regulations 2024 and Guidelines issued by CEA differ from those in the Discussion Paper. The existing Regulations predominantly utilize a top net load-based approach (MERC) or a top load-based approach (CEA) for resource adequacy assessments. The preparation of BEST's Short-Term and Mid-Term Resource Adequacy Plans (ST-DRAP and MT-DRAP) adhered to these existing regulatory frameworks and guidelines, ensuring compliance with established processes and methodologies. The Resource Adequacy Plans were developed through rigorous studies and analyses, leveraging the methodologies specified in the current Regulations and guidelines issued by MERC and CEA. These studies were conducted with due diligence to meet the regulatory requirements in force at the time of submission. While the methodologies proposed in the CEA's Discussion Paper offer valuable insights, they remain at the consultative stage and are yet to be finalized following stakeholder feedback. BEST would like to humbly request the Hon'ble Commission that until methodologies specified in the Discussion Paper are finalized and incorporated into the regulatory framework, the RA Plan as already submitted by BEST on 30th September 2024 should be considered as it is in alignment with the prevailing Regulations and Guidelines, ensuring consistency and adherence to established procedures. BEST would also like to point out that as the RA Plan is required to be conducted annually, and since, the new methodologies are not yet finalized, the Hon'ble Commission may mandate usage of new methodologies only once they are finalized.
58.	**Standby Charges**	**Based on the Power Purchase portfolio proposed for 5th Control Period, BEST has to rely on Short-Term procurement due to limited generating sources, it is evident from the submissions of BEST that for past year it has taken support from MSEDCL as**

<table>
<tr><th>Sr. No.</th><th>Reference</th><th>Data Query</th></tr>
<tr><td></td><td></td><td>a standby arrangement. Since, the same is not proposed in the 5th Control Period, BEST shall demonstrate its alternative arrangement in case of stand-by power requirement.</td></tr>
<tr><td>Reply 58</td><td></td><td>BEST submits that it is availing standby power from MSEDCL as and when the generators are under forced outages and also during intermittent tripping. Inspite of paying the FC charges annually, MSEDCL is charging VC on basis of highest of i) highest per unit rate at which MSEDCL has purchased power in that particular block. So, whichever rate is higher-OD rate with applicable penalty, highest MOD rate or highest rate at which power purchased through exchange in the block under consideration - is applied for standby consumption calculation. These rates are unilaterally decided by MSEDCL and not approved by MERC.
In the Petition, BEST has decided to discontinue the provision of Standby Arrangement as its fixed cost is putting unnecessary burden on power purchase cost. Beside that variable charge rate is also much higher than Power Exchange and Bilateral Power rate, which is evident from the table given below:
<table>
<tr><th rowspan="2">FY</th><th>Energy</th><th>Energy Cost</th><th>Energy Rate</th><th>Fixed Cost</th><th>Net Rate</th><th>Power Exchange Rate</th><th>Bilateral Rate</th><th>Total Energy</th><th>% of Standby Energy</th></tr>
<tr><th>Mus</th><th>Rs. Cr.</th><th>Rs./kWH</th><th>Rs. Cr.</th><th>Rs./kWH</th><th>Rs./kWH</th><th>Rs./kWH</th><th>Mus</th><th></th></tr>
<tr><td>2018-19</td><td>3.09</td><td>1.42</td><td>4.60</td><td>103.32</td><td>338.96</td><td>4.99</td><td>4.21</td><td>4923.93</td><td>0.06</td></tr>
<tr><td>2019-20</td><td>5.55</td><td>2.09</td><td>3.77</td><td>102.64</td><td>188.70</td><td>3.36</td><td>4.9</td><td>4948.66</td><td>0.11</td></tr>
<tr><td>2020-21</td><td>2.86</td><td>1.58</td><td>5.52</td><td>100.28</td><td>356.15</td><td>3.78</td><td>-</td><td>4,050.14</td><td>0.07</td></tr>
<tr><td>2021-22</td><td>5.17</td><td>6.77</td><td>13.09</td><td>99.4</td><td>205.36</td><td>4.37</td><td>6.82</td><td>4407.2</td><td>0.12</td></tr>
<tr><td>2022-23</td><td>8.5</td><td>8.76</td><td>10.31</td><td>98.53</td><td>126.22</td><td>5.49</td><td>6.87</td><td>4836.32</td><td>0.18</td></tr>
<tr><td>2023-24</td><td>2.55</td><td>2.58</td><td>10.12</td><td>94.03</td><td>378.86</td><td>4.11</td><td>7.69</td><td>5112.02</td><td>0.05</td></tr>
</table>
In the absence of Standby Power in case of forced outage/tripping condition, BEST can arrange power from following sources:
1. Immediately increasing the generation from its available sources.
2. BEST has already done Inter-DISCOM Trade (IDT) Agreements with TPC-D and AEML-D. BEST is in the process of extending IDT agreements with MSEDCL and Indian Railways.
3. In case of forced outage/tripping condition, BEST can arrange power from Power Exchange through Real Time Market.</td></tr>
</table>

Sr. No.	Reference	Data Query
		4. For longer duration outages, BEST may go for short-term contracts. 5. BEST is also going for Battery Energy Storage System (BESS), which can be used in case of emergency.
59.	**Table 150 of the Petition**	**BEST to highlight the per-unit charge cost provided under the referred Table.**
Reply 59		BEST submits that it will include the per-unit power purchase cost in the revised MYT Petition to be submitted after the TVS.
60.	**Form F 2.1**	**BEST to duly link its Form 2.1 with the back-up sheets or formulas used to project its source-wise Power Procurement quantum.**
Reply 60		BEST submits that it will submit the revised MYT model incorporating the linkage in Form F2.1 as suggested by the Hon'ble Commission along with the revised MYT Petition to be submitted after the TVS.
61.	**O&M Expenses – Form 3.1**	**BEST has not linked its GFA with the GFA as submitted under Form F5 instead the same is linked with GFA booked as per its Audited Accounts. Accordingly, BEST shall revisit its O&M computation for entire 5th Control Period for both Wires and Retail Supply Business.**
Reply 61		BEST humbly submits that it has verified O&M computation for the entire 5th Control Period at its end and as such it does not find any discrepancy in linking of GFA.
62.	**Smart Meter Scheme**	**a. BEST to provide the complete set of the Smart Meter DPR inclusive of Annexures.** **b. BEST to provide the break-up of the Smart Meters installed as on date in comparison with Table 155 of the Petition.** **c. BEST to justify, since the work has started in December 2023 and as per the Work Plan, maximum of the Smart Meter should have been implemented by the AMISP, however, the status as on September 2024 of 2,67,478 Smart Metering looks significantly lower. BEST to therefore justify reason for such lower implementation.** **d. BEST to also clarify, whether the delay was to the extent of AMISP performance or any other reason.** **e. What is the action plan of BEST to complete the entire implementation of Smart Meters by March 2026 s proposed.** **f. BEST under Para. 4.6.12 has submitted that, post 9 months of LOA, first 5% of the meters shall be covered under Go-Live system, accordingly, BEST to confirm how many Smart Meters are covered under Go-live system.** **g. BEST to provide justification why the Postpaid smart meters have been installed instead of pre-paid smart meters.** **h. BEST to confirm whether any cost overrun is proposed towards the Smart Meter Scheme.**

Sr. No.	Reference	Data Query
		i. BEST to also provide all the communications and documents relating to the Competitive Bidding for selection of the AMISP for the Smart Meter scheme.
Reply 62		a. BEST has submitted the Smart Meter DPR inclusive of Annexures as **Annexure 30**. b. BEST has already submitted the break-up of the Smart Meters installed as on 30th September 2024 in Annexure 21 at the time of submission of MYT Petition. c. BEST submits that major chunk of smart meters to be installed are for residential consumer category, which is approx. 75% of total no. of consumers and BEST faced practical issue of high resistance from this category only pertaining to smart meter installation. Also, due to unforeseen circumstances, including the recent election period, there was a delay in installation of Smart Meters. The copy of the D.O. letter submitted to Energy Secretary is attached as **Annexure 31**. d. BEST clarifies that the delay in smart meter installation is not due to any adverse performance of AMISP. e. The month wise and meter type wise future installation is described and illustrated in the attached **Annexure 32** with the reply of this Data gap. f. BEST submits that under Go-live system 25,000 meters are covered. g. BEST submits that at present, BEST does not have the required supporting infrastructure for pre-paid meter, i.e., MDMS, MDC, ADMS, etc. Also there is high resistance from consumer for pre-paid meter installation. It is respectfully submitted that there is no mandate in the Act or Regulations for installation of pre-paid meters as against post-paid meters. h. BEST submits that it has not proposed any cost overrun towards smart meter scheme as the same is under payment mechanism where payment will be disbursed to AMISP on the basis of actual number of meters installed per month. i. BEST submits the details relating to the Competitive Bidding for the selection of the AMISP for the Smart Meter Scheme as **Annexure 33**.
63.	**Form F 3.1**	**BEST to provide the basis of estimating the OPEX charges as the same is hard punched. The same shall be duly linked with the back-up computations. BEST to also reconcile the same with the Payment Schedule of AMISP as per the awarded the LOA.**
Reply 63		The Details of computation of the year-wise OPEX charges claimed is provided in **Annexure 32.** BEST submits that actual amount paid to AMISP depends upon the actual number of meters installed during the month irrespective of the Payment Schedule of AMISP as per the awarded LOA.

<table>
<tr><th>Sr. No.</th><th>Reference</th><th>Data Query</th></tr>
<tr><td>64.</td><td>Table 159 of the Petition</td><td>BEST to provide the basis of estimating the Capitalisation for the RDSS Phase II scheme, when the same is at the assessment stage and the DPR is yet to be submitted for the in-principal approval.</td></tr>
<tr><td>Reply 64</td><td></td><td>BEST submits that BEST has submitted the DPR to the State Government and MoP. Based on the data submitted to them is considered as base for estimating the Capitalisation for the RDSS Phase II scheme for control period 2025-26 to 2029-30. The schemes to be executed during the period are listed in Annexure 34.</td></tr>
<tr><td>65.</td><td>Funding of Capitalisation</td><td>BEST to list the loss reduction schemes under the RDSS scheme In-principally approved by the Commission, further, how the grant of PFC is utilised towards such scheme. Accordingly, BEST shall separately provide the break -up of each sub-scheme capitalisation of RDSS I and its funding arrangement in terms of Grant, Debt and equity. The same shall be irrespective of the 50% capitalisation being claimed in the 5th Control Period.</td></tr>
<tr><td>Reply 65</td><td></td><td><u>Loss Reduction schemes under RDSS scheme:</u>

<table>
<tr><th>Sl. No.</th><th>Distribution Infrastructure Related Works and Smart Metering</th><th>Tender Cost (in Rs. Crore)</th></tr>
<tr><td>1</td><td>Power / New receiving Sub-Station (RSS) (Excluding RI Charges)</td><td>344.63</td></tr>
<tr><td>2</td><td>Distribution Sub-Station (DRSS) (Excluding RI Charges)</td><td>420.65</td></tr>
<tr><td>3</td><td>Auxiliary components FOR Prepaid Smart Metering</td><td>82.05</td></tr>
<tr><td>4</td><td>Implementation of SCADA & DMS (ADMS)</td><td>182.15</td></tr>
<tr><td>5</td><td>Implementation of ERP, Billing Software& IT/OT enablement Works</td><td>235.93</td></tr>
<tr><td>6</td><td>PMA Charges</td><td>15.24</td></tr>
</table>

<u>Grant of PFC utilised:</u>

<u>Scheme wise break up of RDSS Phase I</u>
<u>FY 2024-25</u></td></tr>
</table>

Sr. No.	Reference	Data Query

Sr. No.	Scheme	Capitalisation	Debt	Equity	Grant
1	RSS	250.00	122.50	52.50	75.00
2	DSS	70.00	21.00	9.00	40.00
3	ADMS	80.00	25.76	11.04	43.42
4	Aux. Components.	10.00	3.50	1.50	5.00
5	IT/OT	50.00	28.00	12.00	10.00
6	PMA	3.00	0.84	0.36	1.80

FY 2025-26

Sr. No.	Scheme	Capitalisation	Debt	Equity	Grant
1	RSS	150.00	70.00	30.00	50.00
2	DSS	300.00	119.00	51.00	130.00
3	ADMS	80.00	25.88	11.09	43.03
4	Aux. Components.	60.00	21.00	9.00	30.00
5	IT/OT	100.00	49.00	21.00	30.00
6	PMA	5.00	1.40	0.60	3.00

FY 2026-27

Sr. No.	Scheme	Capitalisation	Debt	Equity	Grant
1	RSS	92.61	58.53	25.08	9.00
2	DSS	320.93	155.60	66.69	98.64
3	ADMS	22.15	15.51	6.65	0.00
4	Aux. Components.	12.04	2.46	1.06	8.52
5	IT/OT	85.93	56.24	24.10	5.59

<table>
<tr><th>Sr. No.</th><th>Reference</th><th>Data Query</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>6</td><td>PMA</td><td>7.24</td><td>2.30</td><td>0.98</td><td>3.96</td></tr>
</table>
</td></tr>
<tr><td>66.</td><td>Capitalisation Para. 4.7.4.</td><td>BEST to provide the present status and preparedness for complete implementation of the RDSS Scheme it has proposed during the 5th Control Period, since, the Sunset date for this scheme as per MoP is 31 March 2026 as per para. 4.7.4 of the Petition.</td></tr>
<tr><td>Reply 66</td><td></td><td>BEST submits that the present status and complete implementation plan of RDSS scheme as Annexure 35.</td></tr>
<tr><td>67.</td><td>Capitalisation Para. 4.7.11</td><td>BEST has submitted that for the purpose of MYT Projections and to avoid undue burden on to its consumers, it has proposed 50% capitalisation. In this context, BEST to confirm, whether the claim towards the remaining 50% of the Capitalisation in next control period will be claimed with or without carrying cost. BEST to further demonstrate the net benefit to its consumer with its proposed 50% capitalisation approach along with carrying cost burden, if planning to claim in the ensuing years v/s the capitalisation projected on realistic basis during the 5th Control Period.</td></tr>
<tr><td>Reply 67</td><td></td><td>BEST requests the Hon’ble Commission to consider the reduced capitalisation (50%) as proposed by BEST in the MYT Petition for tariff purposes only. However, BEST would strive to achieve the Capex as planned, and in reality, if there is any variation between approved and actual capitalisation, the same shall be claimed on actual basis along with associated carrying/holding cost, at the time of truing up of the respective years.</td></tr>
<tr><td>68.</td><td>Capitalisation</td><td>a. BEST to provide the proportion of Non-DPR capitalisation against DPR capitalisation claimed during the 5th control period.
b. BEST to submit the DPR and Non-DPR schemes in line with the Capex Approval Regulations 2022</td></tr>
<tr><td>Reply 68</td><td></td><td>a. BEST submits the proportion of Non-DPR capitalisation against the DPR capitalisation for the 5th Control Period as shown in the Table below:
<table>
<tr><th>Particulars</th><th>FY 2025-26</th><th>FY 2026-27</th><th>FY 2027-28</th><th>FY 2028-29</th><th>FY 2029-30</th></tr>
<tr><td>DPR Schemes (Rs. Crore)</td><td>804.44</td><td>659.61</td><td>459.40</td><td>450.00</td><td>450.00</td></tr>
<tr><td>Non-DPR Schemes (Rs. Crore)</td><td>34.03</td><td>45.75</td><td>42.20</td><td>39.25</td><td>44.00</td></tr>
<tr><td>Non-DPR to DPR(%)</td><td>4.23%</td><td>6.94%</td><td>9.19%</td><td>8.72%</td><td>9.78%</td></tr>
</table>
Thus, the Non-DPR Schemes are well below the limit of 20% of DPR Schemes.</td></tr>
</table>

<table>
<tr><th>Sr. No.</th><th>Reference</th><th>Data Query</th></tr>
<tr><td></td><td></td><td>b. BEST assures the Hon'ble Commission that it will submit the DPR and Non-DPR schemes in line with the Capex Approval Regulations 2022 in the ensuing years.</td></tr>
<tr><td>69.</td><td>Provision of Bad and Doubtful Debts</td><td>a. BEST to also provide the cumulative impact as a distribution business towards the provision of bad and doubtful debts for 5th Control Period.
b. BEST to confirm whether any revenue is realised towards the bad debts written off during the past year as per second proviso of the Regulation 76 of the MERC MYT Regulations, 2019.</td></tr>
<tr><td>Reply 69</td><td></td><td>a.
<table>
<tr><th>Particulars</th><th>FY 2025-26</th><th>FY 2026-27</th><th>FY 2027-28</th><th>FY 2028-29</th><th>FY 2029-30</th></tr>
<tr><td>Provision for Bad Debts (Rs. Crore)</td><td>7.92</td><td>7.92</td><td>7.92</td><td>7.92</td><td>7.92</td></tr>
<tr><td>Sales (MU)</td><td>4,837.77</td><td>4,879.27</td><td>4,924.00</td><td>4,974.42</td><td>5,030.97</td></tr>
<tr><td>Impact on Tariff (Rs./kWh)</td><td>0.016</td><td>0.016</td><td>0.016</td><td>0.016</td><td>0.016</td></tr>
</table>
BEST has claimed the Provision for Bad Debts in accordance with the MERC MYT Regulations, 2024. The tariff impact in Rs/kWh terms is shown in the above Table.
b. BEST submits that it has not realised any revenue towards the bad debts written off during the past year.</td></tr>
<tr><td>E.</td><td colspan="2">Tariff Philosophy for 5th Control Period</td></tr>
<tr><td>70.</td><td>Wheeling Charges</td><td>BEST to provide the computation of the HT:LT voltage ratio considered for the computation of the wheeling charges as the same is hard punched in the MYT Tariff Formats</td></tr>
<tr><td>Reply 70</td><td></td><td>BEST will submit the computation of the HT:LT voltage ratio for the computation of Wheeling Charges and the same will be linked in the MYT Model to be submitted along with the Revised Petition to be submitted after the TVS.</td></tr>
<tr><td>71.</td><td>Voltage Wise Asset Details</td><td>As per Regulation 97.2 of the MERC MYT Regulations, 2024, the Distribution Licensee shall submit the actual allocation of its voltage wise assets in accordance with the Guidelines stipulated in Annexure III, as part of its Tariff Petition. Further, the Annual Revenue Requirement of the Distribution Wires Business pertaining to HT and LT voltage level may be allocated by considering such actual voltage wise asset details submitted by the Distribution Licensee.
In compliance to above, BEST shall submit the requisite details of voltage wise asset details</td></tr>
</table>

Sr. No.	Reference	Data Query
Reply 71		BEST will submit the requisite details of voltage wise asset details in the Revised MYT Model and also, the Annual Revenue Requirement of the Distribution Wires Business pertaining to HT and LT voltage level will be allocated by considering such actual voltage wise asset details in the Revised Petition to be submitted after the TVS.
72.	**Cross-Subsidy Trajectory**	**BEST to justify the increase the CSS Trajectory proposed during the 5th Control Period, as the same was supposed to be reducing trend within the limit of +/- 20% of the ACoS Or RCoS.**
Reply 72		BEST has proposed the trajectory of cross-subsidy reduction w.r.t. RCoS, such that the cross-subsidy is reduced and is within the limit of ±20 of RCoS for most of the categories, except 1-2 categories.
73.	**Time of Day Tariff**	**BEST to provide the actual Load Curve from FY 2021-22 to FY 2023-24 and the estimated Load Curve for the 5th Control Period based on the RA Plan proposed and therefore justify its submissions towards continuing with the ToD slots as per the MTR Order.**
Reply 73		BEST submits the details of the actual Load Curve from FY 2021-22 to FY 2023-24 and estimated Load Curve for the 5th Control Period as **Annexure 36**.
74.	**Form 13.1 to FY 13.5 and Form F 14.1 to F 14.5**	**BEST has proposed the increase in Demand during the 5th Control Period under Form F1.5, accordingly, the increase in the Consumer Growth is also proposed for the respective years during the 5th Control Period, however, the Billing Demand has remained constant across the 5th Control Period while estimating the recovery of Fixed/Demand Charges based on existing or proposed Fixed/Demand Charges for the 5th Control Period. The summary of the same is provided as under:** **a. BEST to therefore clarify for no increase in the Billing Demand of the respective consumers where increase in consumer growth is proposed.** **b. BEST to further clarify why Billing Demand is higher than the Sanctioned Load.**
Reply 74		a. BEST submits that it has assumed growth in consumers for only two categories i.e. LT-I (B) Residential and LT -II(a) Commercial < 20kW. Further, BEST clarifies that these two categories fall under non-Billing demand category consumers. Thus, there is no effect in increase of billing demand due to projected increase in number of consumers. Therefore, the Billing Demand is projected to remain constant across the 5th Control Period. b. BEST submits that it has inadvertently considered the Billing Demand for the entire year instead of per month Billing Demand in the Forms F13.1 to F13.5 and F14.1 to F14.5 because of which Billing Demand appears to be higher than Sanctioned Load. BEST will incorporate the changes and correct the representation of Billing Demand in the Revised Model to be submitted along with the Revised

Sr. No.	Reference	Data Query
		Petition to be submitted after the TVS.
75.	Schedule of Charges	**BEST has proposed to consider the Schedule of Charges in as approved for TPC-D. BEST has submitted that, the existing Schedule of Charges are inadequate to recover its expenses. In this context, BEST to provide the details of the actual expenses towards its Schedule of Charges booked for the past years viz. FY 2020-21 to FY 2023-24 to justify its submission.**
Reply 75		BEST on sample basis highlights some of the actual expenses which are significantly higher than the present rates approved in the Schedule of Charges, resulting in BEST being unable to recover its expenses: i. **Charges for Dishonoured Cheques** For first instance BEST charges Rs. 250 per instance, however, on actual basis, Bank charges are higher and vary from bank to bank. For 2nd and subsequent instance of dishonoured cheque, BEST at present does not charge any amount, however, on actual basis Bank does charge for the same and even TPC-D charges Rs. 900. ii. **Supervision Charges in case work is carried out by Licenced Electrical Contractor (LEC)** Presently BEST charges Nil, however, on actual basis, it is pertinent that expenses will be incurred as manpower cost, travelling cost and other associated cost are involved. Whereas TPC-D charges Rs. 18,750/- for providing HT supply and Rs. 7,500/- for providing LT supply to three phase Industrial/Commercial Consumers only.

CHIEF ENGINEER (REGULATORY) OFFICE ELECTRIC SUPPLY B.E.S.&T. UNDERTAKING

Chief Engineer
(Regulatory)

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Link for Data Gap Annexures in Excel format

https://drive.google.com/drive/folders/1npMit7td9LqydAuNeISaE0MqCwsgObAL?usp=sharing

ANNEXURE-1

APTEL

Sr.No.	Matter	Appeal / Case No.	Details	Status
1	TPC's Revised Network Rollout plan, - BEST (Appellant) V/s MERC	Appeal No. 21 of 2016 & Appeal no. 279 of 2017	Appeal No.21 of 2016 filed against MERC's Interim Order dated 09.11.2015 and Appeal No.279 of 2017 against MERC's Final Order dated 12.06.2017 in Case No. 182 of 2014 ----- (MERC's vide its Order dated 16.09.2016 in Case No.40 of 2015 in the matter of Protocol for consumers opting for migration, MERC Clubbed this case with case No.182 of 2014)	In terms of APTEL's Notification dated 29.07.2021, these matters are adjourned to 01.03.2022. (Hearing dtd. 03.08.2021 was adjourned and Next Hearing is scheduled on 01.03.2022.) __ **Appeal no. 21 of 2016 dispossed off by APTELas per Order dated 01.10.2024 as it is infractues and was filed for Interim Order in MERC's Case No.182 of 2014 and appeal no. 279 of 2017 will be heard by Court from 06.11.2024 only.** Heard by Court 2 on 07.11.2024 arguments started next hearing date on 11.12.2024 same is postpond on 20.12.2024
2	BEST (Appelant) V/S MERC, M/s TPC Issue direction u/s 128 to TPC (restraining laying of cable)	Appeal No. 330 of 2018 in Case No. 43 of 2016	Appel filed against MERC's Case No. 43 of 2016 Order dated 22.01.2018 in the matter restraining TPC from laying cable, investigation of TPC u/s 128 of EA 2003	As per APTEL Registrar Court Order dated 10.08.2022 present appeal included in the list of final of Court I and shall be taken up from there in its turn
3	BEST (Appellant) V/S CERC & Others In the matter TPTCL & Jindal TPL's petition before CERC claiming compensation of about Rs.1.82 crores from BEST	Appeal No. 3 of 2019 in Case No. 159/MP/2017.	Appeal filed against CERC' s Case No.159/MP/2017 Order dated _____ in the matter TPTCL & Jindal TPL's petition before CERC claiming compensation of about Rs.1.82 crores from BEST on account of event pertaining to change in law as the terms of LoI dated 14.11.2016	As per APTEL Court I Order dated 17.04.2023, in Appeal No.3 of 2019 BEST has paid compensesation of Rs.1.99 Crore to JTPL and case is closed now vide JTPL has filed DPC Appeal before CERC vide case No.139/MP/2022 Same case disposed vide CERC's Order dated 17.05.2024. Now JTPL has filed DPC Appeal before CERC vide case No.253/MP/2022
4	TPC's Revised Network Rollout plan, - Adani (Appellant in Appeal No. 201 of 2014, 296 of 2015 and 195 of 2017) TPC (Appellant in 243 of 2017) & MIDC Marol (Appellant in Appeal No.250 of 2017) V/s Respondent MERC & BEST	Adani (Appellant in Appeal No. 201 of 2014, 296 of 2015 and 195 of 2017) TPC (Appellant in 243 of 2017) MIDC Marol (Appellant in Appeal No.250 of 2017)	Appeal No.21 of 2016 filed against MERC's Interim Order dated 09.11.2015 and Appeal No.279 of 2017 against MERC's Final Order dated 12.06.2017 in Case No. 182 of 2014 ----- (MERC's vide its Order dated 16.09.2016 in Case No.40 of 2015 in the matter of Protocol for consumers opting for migration, MERC Clubbed this case with case No.182 of 2014)	As per APTEL Court 1 Order dated 30.05.2024 Learned Consel of both side are argued for non taking up hearing till Civil Appeal pleading before Hon'ble Supreme Court, are varied / are finally disposed off appeals be included in the list of matters stayed by the Supreme Court
5	MSEDCL (Appellant) V/S MERC & Ors - **FBSM Provisional Variable and Fixed Cost bills.** (Appeal No. 158 of 2020)	A.No. 158 of 2020, DFR No. 2402 of 2019 & IA No. 2124 of 2019 in Case No. 297 of 2018	Against MERC's Order dated 26.09.2019 in Case No. 297 of 2018 in the matter of FBSM Provisional Variable and Fixed Cost bills.	As per APTEL Registrar Court Order dated 14.09.2022 present appeal included in the list of final of Court I and shall be taken up from there in its turn
	TPC-D (Appellant)Vs MERC **FBSM Provisional Variable and Fixed Cost bills.** (Appeal No.159 of 2020)	A.No.159 of 2020,DFR No. 2 of 2020 (IA 9 /2020) against MERC Case No. 297		
	AEML (Appellant) Vs MERC **FBSM Provisional Variable and Fixed Cost bills.** (Appeal No.149 of 2020)	A. No. 149 of 2020 , DFR 129 of 2020 by AEML and TPC-D, DFR No.457 of 2020		
6	MSETCL (Appellant) V/s. MERC	A.No.107 of 2021 in DFR 441 of 2020 against MERC Case No.302 of 2019	Against MERC's Order dtd. 30.03.2020 in Case No. 302 of 2019 regarding MSETCL's ARR for FY 2020-21 to FY 2024-25	As per APTEL Court - I Order dated 12.09.2023 present appeal included in the list of finals of Court I and shall be taken up from there in its turn.
7	TPC-T V/s. MERC & Ors.	A. No. 32 of 2022 in DFR 32 of 2022	Instant Appeal under Section 111 of E 2003 against MERC Order dated 07.01.2022 passed in Case No. 95/AD/2021 Appellant want exemption from filing certified copy impuged Order, Interalia relief and Urgent listing	As per APTEL Court 1 Order dated 15.07.202 , Request / seek permission of consel of Appellant to withdraw Appeal Accordingly Appeal 32 of 2022 dismission as withdrawn. All the IA therein shall consequetly stand dismissed.
8	MSEDCL (Appellant) V/S MERC & Ors -	A. No. 380 of 2022 in DFR 330 of 2021	Petition of MEGPECL for approval of Capital cost as on Commercial Operation, date of project True up of ARR MERC 50 of 2016	As per APTEL Court 1 Order dated 15.07.2024 Appeal remain included in the list of Short matter to be taken up from there in its run.
9	KVTL (Appellant) V/s. MERC (Respondent) - BEST (Respondent No.3)	A. No. 385 of 2022 in DFR No. 389 of 2022	Transmission Service Agreement	As per APTEL Court 2, Order dated 25.10.2024 Reply in the IA No. 1706 of 2024 (for amendment to the memo of appeal) and in the main appeals shall be filed within four weeks followed by rejoinder within two weeks with advance copy to the other side. Post the matters on 20.12.2024
10	AEML (Appellant) Vs MERC (Respondent) - BEST (Respondent No.3)	A. No. 360 of 2023 in DFR No.516 of 2022	In the matter of Commercial Implementation of MERC (DSM & related matter) Regulaiton 2019, Post expiry of stabilization period and related issuee thereof (Appeal Under Section 111 of ES 2003 against Suo Moto Order passed by MERC on 02.08.2022)	As per APTEL Court 1 Order dated 04.05.2023, Six weeks time is granted to the Respondent to file the reply and four weeks thereafter to file the rejoinder by the Appellant. After the pleadings are complete, and after verification by the Registry, let this Appeal be included in the 'List of Finals' to be taken up from there, in its turn.
11	MSEDCL (Appellant) V/s. MERC (Respondent) -	A. No. 393 of 2022 in DFR no. 388 of 2022	Transmission Service Agreement	As per APTEL Court-I Order dated 18.05.2023 If, pleading on both side are complete and verifiying by Registry. let this appeal be included in the 'List of Finals of Court-II' to be taken up from there, in its turn.
12	Indian Hotels & Restaurant Association (AHAR) (Appellant) V/s. BEST (Respondent No.1) - MERC (Respondent No.2)	A. No.749 of 2023 in DFR No,271 of 2023	AHAR has objection to Wheeling Charges propsed to be levied by BEST on all its Consumer of its Regail Supply of Electricity	As per APTEL Court-I Order dated 19.11.2024 Learned Counsel, on both sides, agree that, the issue involved in this appeal is short, and the Appeal be transferred from List of Finals to List of Short Matters. Appeal be included in the 'List of Short Matters' to be taken up from there, in its turn.

Sr.No.	Matter	Appeal / Case No.	Details	Status
13	AEML(D) (Appellant) V/s. MERC, MSEDCL (Respondent)	A. No. 516 of 2023 in DFR No. 235 of 2023	Stand by Charges	As per APTEL Court 1 Order dated 23.01.2024 Learned Counsel on both side agree that pleadings are otherwise complete, Registry to verify, and then include the appeal in the List of Finals, to be taken up from there in its turn.
14	MSETCL (Appellant) V/s. MERC (Respondent) - BEST (Respondent No.5)	A. No. 9 of 2024 in DFR 389 of 2023	MSETCL's MTR Order in Case No, 232 of 2022 dated 31.03.2023	As per APTEL Court 1 Order dated 29.07.2024 Subject to fulfilment of the aforesaid direction regarding payment of costs by the Appellant, let this Appeal be reincluded in the 'List of Finals' to be taken up from there, in its turn.
15	MSEDCL (Appellant) V/s. MERC (Respondent) - BEST (Respondent No.7)	A. No.42 of 2024 in DFR 664 of 2023	Instant Appeal under Section 111 of E 2003 against MERC Order dated 02.08.2022 & 11.10.2023 passed in Case No. 204 of 2022	As per Court Order dated 29.07.2024 After pleadings are complete, after verification by the Registry, and subject to fulfilment of the aforesaid direction regarding payment of costs by the Appellant, let this Appeal be reincluded in the 'List of Finals' to be taken up from there, in its turn.
16	MSEDCL (Appellant) V/s. MERC (Respondent) - BEST (Respondent No.5)	Appeal No.95 of 2024 in DFR 705 of 2023	Appeal Under Section 111 of EA 2003 filed on 22.12.2023 to review he methodology of Sharing of Transmission Charges of Distribution Utilities of POA (Partial Open Access) Consumers	As per APTEL Court 1 Order dtd 30.05.2024, Court-I has heard learned Counsel for the Appellant and learned Counsel for the 1st Respondent elaborately and at length, and as both have also filed their written submissions, we shall pass judgment in the main appeal. Judgment is Reserved.
17	KVTL (Appellant) V/s. MERC (Respondent) - BEST (Respondent No.5)	A. No.271 of 2024 in DFR 285 of 2027	Appeal Under Section 111 of EA 2003 filed on 20.04.2024 passed by Hon'ble MERC in Petiton No.205/AD/2023 by KVTL`	As per APTEL Court 1 Order dated 18.05.2024, After pleadings are complete, after verification by the Registry, and subject to fulfilment of the aforesaid direction regarding payment of costs by the 10th Respondent, let this Appeal be included in the 'List of Finals' to be taken up from there, in its turn.

	SUPREME COURT			
Sr.No.	**Matter**	**Appeal / Case No.**	**Details**	**Status**
1	BEST V/S TPC, MERC (In the matter of Licence to TPCD to supply electicity in the area of BEST)	Civil Appeal No. 4074 of 2015	Against ATE's Order dated 25.11.2014 in Appeal 216 of 2014 & Review Petition No. 05 of 2015 Order dated 12.03.2015 & MERC Order dated 14.08.2014 in Case No. 90 of 2014.	**Pending** **(Last Order dated 02.11.2018)**
2	BEST V/S TPC, MERC (In the matter of Licence to TPCD to supply electicity in the area of BEST)	Civil Appeal No. 4862 of 2015 (against Appela No.216 of 2014) and C.A. No. 4074 (against review Appeal No.05 of 2015) / Diary No. 11771 of 2015	Against ATE's Order dated 25.11.2014 in Appeal 216 of 2014 & Review Petition No. 05 of 2015 Order dated 12.03.2015 & MERC Order dated 14.08.2014 in Case No. 90 of 2014.	**Appeals are pending for hearing & final disposal before the Hon'ble Supreme Court** **(Last Order dated 02.11.2018)**
3	BEST V/S MERC, M/s TPC (In the matter of SOP Reg.-To challenge the legality, validity and vires of Regulation 4.10 of the MERC (SOP) Regulation, 2014.	SLP(C) No. 23470 of 2016	BEST's Petition in the matter of MERC's SoP Regulations Case No. 2641 of Bombay High Court, Impunged Judgment & Order dtd. 02.03.2016 SLP No.23470 of 2016 of the Hon'ble Supreme Court	**Pending.** **(As per Order dated 03.09.2024 matter listed for final Disposal on 11.12.2024)**
4	BEST V/S MERC, M/s TPC (In the matter of Expression o f Interest issued by MERC for grant of Distribution Licence in the area of supply of BEST)	Civil Appeal No. 3403 / 3404 of 2017	Against ATE's Order dated 04.11.2016 in Appeal 243 of 2014 & MERC Order dated 14.08.2014 in Case No. 37 of 2014.	There is no stay in this matter, TPC is laying its Network wherever it needs targeting HV Consumers. Appeals are pending for hearing and final disposal before the Hon'ble Supreme Court t **(Last Order dated 02.11.2018)**

	Current Cases at MERC								
Petition No.	Subject	Petitioner Name	Filed by	Filed On	Registered On	Case Handled by	BEST Undertaking as Respondent/ Other Respondent	Date of MERC Order on	Remark
	Current Cases at MERC								
44/Ad/2024	Extension of SCOD & Comensesation of Change in Law events	Kharghar Vikhroli Trnasmission Ltd (KVTL	Kharghar Vikhroli Trnasmission Ltd (KVTL	01.03.2024	20.03.2024	Power Purchase Dept	Respondent 3		As per Daily Order dated 12.11.2024, the interim relief granted vide Daily Order dtd.09.07.2024 continues till the final decision in the case. The case adjourned for next hearing and Commision will intimate the next date of hearing
103/MP/2024	Petiton seeking appropriate Oders for removal of difficulties granting of relaxation & issuance of appropriate direction under the Clause NO. (18) (19) (20) & (21) of MERC (Deviation settelment Mechanic & released matter) Regulations 2019 & under section 86(1) of EA 2003	MSLDC	MSLDC	28.06.2024	04.07.2024	Power Management Dept.	Respondent 2		As per Daily Order dtd 22.10.2024, the case adjourned for next hearing and Commision will intimate the next date of hearing
130/RC/2024	Petition Under Section 94(1)(f) of EA 2003 read with Regulation 28 of MERC (Transaction of Business & Fees & Charges) Regulations 2022 seeking review of Order dated 01.07.2024 in Case No.73 of 2023	Sai Wardha Power Generation Pvt. Ltd.	Sai Wardha Power Generation Pvt. Ltd.	09.08.204	12.08.2024	Power Purchase Dept	Respondent 2		As per Daily Order dtd 03.12.2024, Commission directed parties to file their additional submission on affidavit, within 7 days if any and **Reserved for Order** ,
151/MP/2024	Petition Under Section 86(1) (k) for recalculating the base TCR a fresh for control Peirod FY 2020-21 to FY 2024-25 pursuant to the Order dated 05.07.2024 in Appeal No. 95 of 2024 passed by APTEL	MSEDCL	MSEDCL	09.09.2024	12.09.2024	Power Management Dept.	Respondent 3		--
227/AD/2024	Petition of Mr. Motilal Narayan Patel & Mr. Shailesh Babulal Patel for Disconnection of Fraudulent Electricity Connections and Stringent Action regarding unauthorized electricity connections obtained through forgery and fraudulent means by Mr. Ramlal N. Patel, misuse of the same by Mrs. Pramila Ramlal Patel (wife of Ramlal Narayan Patel), and the failure of the Brihanmumbai Electric Supply and Transport (BEST) Undertaking to fulfill its statutory obligations. _ **Case No. 227/AD/2024**	Motilal Narayan Patl	Motilal Narayan Patel	23.10.2024	11.12.2024				Notice dated 11.12.2024 from MERC received vide their email dated 11.12.2024

ANNEXURE-3

Details of BEST own consumption

Billing_Year	TotalConsumption
2019-20	11642497
2020-21	11380302
2021-22	9891983
2022-23	9727407
2023-24	9153311

Report on savings in energy consumption by replacing existing appliances by energy efficient appliances

		Replacement Year					
Sr No	Description	2019	2020	2021	2022	2023	2024
1	36 Watt Conventional Tube with 19W LED Tube	981	2294	1661	319	23180	3353
2	150 Watt / 250 Watt HPSV / HPMV Lanterns with 105 W (Max.) LED Lanterns.		582	772	68	450	115
3	400 Watt Single Flood Light Lanterns with 150 Watt COB LED Lanterns.					30	310
4	400 Watt Dual Flood Light Lanterns with 250 Watt COB Flood Light Lanterns.				880	361	32
5	1400mm Sweep Ceiling Fan with 1200mm Sweep Star-Rated Ceiling Fan.		184	326	863	302	43
6	1 Ton 5 Star				1	2	0
7	1.5 Ton 5 Star				36	10	14
8	2 Ton 5 Star				5	2	0

Note : Tender for procurement of 19 W LED tublights for retrofitting (12000 Nos) is in progress

ANNEXURE-4

भारतीय गैर न्यायिक

एक सौ रुपये

Rs. 100

रु. 100

ONE HUNDRED RUPEES

सत्यमेव जयते

भारत INDIA

INDIA NON JUDICIAL

महाराष्ट्र MAHARASHTRA

BS 315869

Stamp Office, Mumbai
No. 694
10 NOV 2008
Officer

M.S.E.T.C.L.
"PRAKASH GANGA"
4th Floor, Plot No. C-19,
"E" Block, Bandra-Kurla Complex,
Bandra (E), Mumbai - 400 051
मुद्रांक विक्रेता
अविनाश मोहनसिंग चव्हाण

THIS BULK POWER TRANSMISSION AGREEMENT (hereinafter referred to as "BPTA" or "Agreement" or "the Agreement" or "this Agreement") is made on the 12th of JANUARY Two Thousand Nine.

Between:

Brihanmumbai Electric Supply & Transport Undertaking (of the Brihanmumbai Mahanagarpalika), (a company incorporated under the Companies Act, 1913), having its registered office at BEST Bhavan, Colaba, Mumbai 400 001 (hereinafter referred to as "***BEST***" which expression shall unless repugnant to the context or meaning thereof include its successors, and permitted assigns) as party of the one part;

and

भारतीय गैर न्यायिक

एक सौ रुपये

Rs. 100

रु. 100

ONE HUNDRED RUPEES

सत्यमेव जयते

भारत INDIA

INDIA NON JUDICIAL

महाराष्ट्र MAHARASHTRA

BS 315845

General Stamp Office, Mumbai
S. V. No. 6924
20 NOV 2008
Depot Officer

दि. महाराष्ट्र मंत्रालय अॅन्ड अलाईड ऑफिसर्स को. ऑप. बँक लि., मंत्रालय, मुंबई ४०० ०३२
एल. एस. ही. क्रमांक:- ६९४
क्रमांक:- 992 दिनांक:- 2/4/2009
वांद्रा शाखा, वांद्र (पुर्व), मुंबई.
सर्वश्री/श्री./श्रीमती ...
यांना न्यायेतर मुद्रांक रु ... विकला.

M.S.E.T.C.L.
"PRAKASH GANGA"
4th Floor, Plot No. C-19,
"E" Block, Bandra-Kurla Complex,
Bandra (E), Mumbai - 400 051
मुद्रांक विक्रेता

अविनाश मोहनसिंग चव्हाण

L. S. BAMBLE

Maharashtra State Electricity Transmission Company Limited,(a company incorporated under the Companies Act, 1956), having its registered office at "Prakashganga", Plot No C 19, 'E' Block, Bandra Kurla Complex, Bandra (East), Mumbai-400051 (hereinafter referred to as "***MSETCL***" which expression shall unless repugnant to the context or meaning thereof include its successors, and permitted assigns) as party of the other part;

AS:

Maharashtra Electricity Regulatory Commission in MERC (Transmission Open Access) Regulations, 2005 at clause 5.1 stipulate that, *"Provided further that a user of an Intra-State transmission system under this Regulation shall enter into a Bulk Power Transmission Agreement with the Transmission Licensee within sixty (60) days from the date on which such user is deemed to be a Transmission System User under this Regulation."*

If any of agreements, correspondence or communication is prepared in any language other than English, the English translation of such documents, correspondence or communications shall prevail in matters of interpretation.

1.7 Discretion

Except where this Agreement expressly requires a party to act fairly or reasonably, a party may exercise any discretion given to it under this Agreement in any way it deems fit.

1.8 Discrepancy

In case of discrepancy between terms and conditions stipulated in MERC Transmission License Conditions, Regulations 2004 and/or those of *Transmission License* issued to ***MSETCL*** and the agreement(s) executed between ***BEST*** and ***MSETCL***, the terms and conditions of MERC Transmission License Conditions, Regulations 2004 and/or those of Transmission License shall prevail.

2. EFFECTIVE DATE AND DURATION OF AGREEMENT

2.1 Effective Date

This Agreement shall be effective from the date on which Bulk Power Transmission Agreement is executed and delivered by parties or the date on which System strengthening schemes as defined by STU are commissioned, whichever is later;

2.2 Duration of the Agreement

This Agreement shall be deemed to have come into force with effect from Effective Date for all purposes and intents and shall remain operative for the period of 25 [Twenty Five] years.

2.3 Term and Termination

2.3.1 Subject to Clause 2.3.3, this Agreement shall continue to be effective, until the Expiry Date (subject to Clause2.4), when it shall automatically terminate.

2.3.2 Both the parties agree to terminate this agreement through mutual written consent.

2.3.3 This Agreement shall terminate before the Expiry Date, if the Conditions Precedent referred to in clause 3 is neither satisfied nor waived.

2.3.4 If a Termination Notice is served in accordance with clause 18 by

a. ***BEST***, following ***MSETCL*** Event of Default; or

b. ***MSETCL*** following ***BEST***, Event of Default;

c. If ***BEST*** or ***MSETCL*** serves a notice to terminate in accordance with Clause 18.5.

2.4 Survival

The expiry or termination of this Agreement shall not affect any accrued rights, obligations and liabilities of the parties under this Agreement including but not limited to those specifically provided in this Agreement nor shall it affect any continuing obligations which this Agreement provides either expressly or by necessary implication, which are to survive its expiry or termination.

3. CONDITIONS PRECEDENT

3.1 Obligation to satisfy/Waive Condition Precedent

3.1.1 Parties shall use their reasonable endeavors to ensure either the satisfaction or waiver of the condition precedent relating to the effectiveness of their obligations under this Agreement.

3.1.2 Each party shall take all reasonable efforts to satisfy the conditions to which its obligations are subject to as soon as practicable and notify the other party, when such condition is satisfied or waived

3.2 Right to Terminate

This Agreement shall automatically terminate on the termination of the TDA at any time prior to the expiry date of the TDA. However this provision is only for new evacuation schemes.

The common termination clauses for both new and existing transmission lines are covered in clause 18.

4. OPERATION & MAINTENANCE OF TRANSMISSION SYSTEM

4.1 *Transmission licensee's* obligations in operation and maintenance of the transmission System

Subject to the terms and conditions of this Agreement, ***MSETCL*** at its own cost and expense shall observe, comply with, perform, undertake and be responsible:

i) For procuring and maintaining in full force and effect the Consents, required by it pursuant to this Agreement and in accordance with Law.

ii) To maintain and repair the Transmission System as set out in this Agreement and in accordance with the provision of Section 40 of Electricity Act 2003.

iii) For owning the Transmission System throughout the term of this Agreement free and clear of encumbrance except those permitted under this Agreement.

iv) To make available Transmission Capacity as per Yearly Average of schedule (of long term contracted generation) of SLDC for previous year on Intra State Transmission System (InSTS), which is 764 MW for FY 08-09 for ***Brihanmumbai Electric Supply & Transport Undertaking*** (***BEST***)between points of injection and points of drawal as per Schedule 3.

v) For providing all assistance to the Arbitrator as may be required for the performance of their duties and services; and to comply with its obligations under this Agreement,

vi) to comply with its obligations under this agreement, AND

vii) To provide any other service/assistance as may be mutually agreed upon by the two parties.

5. OPERATING PROCEDURES

5.1 ***MSETCL***, shall provide to the ***BEST*** and ***STU*** with a draft of the operating procedures (the "Operating Procedures") dealing with all operational interfaces between ***MSETCL*** and ***BEST***; including, but not limited to;

i) Methods of round the clock communication between ***MSETCL*** and ***BEST,***

ii) Safety co-ordination;

iii) Seeking permits to work for attending to outages;

iv) Contingency planning in the event of a partial or total shutdown of the grid;

v) Incident reporting;

vi) Testing, inspection and monitoring of the Transmission System;

vii) Maintenance & repair during Scheduled Outages, Unscheduled Outages, Forced Outages and during Force Majeure Events;

20.5 Compliance and Notification

If any provision of this Agreement shall be in deviation of, inconsistent with or repugnant to the provisions contained in the Electricity Act, 2003, such provision shall be deemed to be amended to the extent required to bring it into compliance with the relevant provisions of the Electricity Act, 2003 as amended from time to time.

IN WITNESS WHEREOF, THE PARTIES HAVE CAUSED THIS AGREEMENT TO BE EXECUTED BY THEIR REPRESENTATIVE / DULY AUTHORISED OFFICERS AS OF THE DATE SET FORTH ABOVE.

S.A. PURANIK Signed on behalf of
Brihanmumbai Electric Supply & Transport Undertaking
DGM (ES)

NOTARY
M. S. GAITONDE
GR. MUMBAI
Regd. No. 193
GOVT. OF MAHARASHTRA

SUBRAT RATHO Signed on behalf of
Maharashtra State Electricity Transmission Company Limited
Managing Director
M.S.E.Transmission Co. Ltd.

WITNESSES:

Identified By Me

A. N. PANDE
B.A., LL.B.
ADVOCATE HIGH COURT
Lawyers Chambers,
Bhasker Building,
Bandra Court,
Greater Bombay

ATUL G. PATIL
CE (Regulatory Cell)

P. G. KHANDALKAR
DIRECTOR (FINANCE)

2.
ATTESTED BY ME
12/1/09
M. S. GAITONDE
B.A., LL. M.
NOTARY
GREATER MUMBAI
GOVT. OF MAHARASHTRA
INDIA

K.N. RAJGOPAL
Dy. Chief, Engineer (Technical)

S. D. SHROUTY
Executive Director (O)
M.S.E.T.C.L., Mumbai-51.



महाराष्ट्र MAHARASHTRA ◑ 2016 ◑ RP 017948

प्रधान मुद्रांक कार्यालय, मुंबई
प. मु. वि. क्र. ८०००१०
16 DEC 2016
सक्षम अधिकारी

श्री. प्र. ना. चिंचघरे

AMENDMENT TO THE BPTA EXECUTED BETWEEN MSETCL AND BEST ON 12.01.2009

Pursuant to Hon'ble Maharashtra Electricity Regulatory Commission (MERC) Suo Moto InSTS Tariff Order Case No.91 of 2016 dated 22nd July, 2016,

The Clause 4.1(iv) (on Page No. 07) of the BPTA executed between MSETCL and BEST on 12th Jan, 2009 is amended as follows :

Clause 4.1 (iv)

"To make available Transmission Capacity on Intra State Transmission System (InSTS) as per Long Term contracted Generation Capacity which is 952 MW (Annexure – I) for FY 2016-17 for BEST between points of Injection and points of Drawl.

The Base Transmission Capacity Rights (Base TCR) on Intra State Transmission System (InSTS) of Maharashtra for BEST will be as determined by the Hon'ble Maharashtra Electricity Regulatory Commission (MERC) in the matter of Determination of Transmission Tariff for Intra State Transmission System (InSTS), from time to time."

C.E. (S.T.U.)

Name of the TSU (Distribution Licensee) : BEST Undertaking, Mumbai.

Information of Generation Capacity Contracted or otherwise arranged

Sr. No.	Power Project/ Agency	Capacity of Power Project/ Agency in MW	Capacity Contracted/ arranged (MW)	Capacity Presently Utilized	Prospective Date of Balance Capacity Utilization	* Date of PPA	Duration of PPA (years)	Remarks
1	TPC-G (Hydro)	447	228	224	-	01.04.2008	10	Hydro Power
2	TPC-G Unit No. 5	500	256	241	-	01.04.2008	10	Thermal Power
3	TPC-G Unit No. 6	500	256	* 0		01.04.2008	10	* Economy shutdown & kept stand by (As per MERC order Oil Unit is kept off for high fuel cost, proposed for conversion of Oil to cool).
4	TPC-G Unit No. 7	180	92	89	-	01.04.2008	10	Thermal Power
5	TPC-G Unit No. 8	250	100	92	-	01.04.2010	8	Thermal Power
6	Welspun Energy Maharashtra Ltd.	20	20	20	-	27.05.2013	25	Solar RE for fulfilment of BEST RPO
		1947	952	665				

NOTE :

Capacity presently utilized is calculated after deducting Auxiliary Consumption.

* PPA between BEST & TPC-G for 800 MW power executed on 21.12.2006 & commission approved for period 01.04.2008 to 31.03.2018 & the same PPA extended for 100 MW on 05.02.2010 & commission approved for period 01.04.2010 upto the period 31.03.2018

C.E. (S.T.U.) MSETCL

19/1/17

भारतीय गैर न्यायिक

भारत INDIA

रु. 500 FIVE HUNDRED RUPEES

पाँच सौ रुपये Rs. 500

सत्यमेव जयते

INDIA NON JUDICIAL

महाराष्ट्र MAHARASHTRA ◑ 2024 ◑ CU 486138

प्रधान मुद्रांक कार्यालय, मुंबई
प.मु.वि.क्र ८.०००३०
19 NOV 2024
सक्षम अधिकारी

श्रीमती मिनल महाजन,

AMENDMENT TO THE BPTA EXECUTED BETWEEN MSETCL AND BEST ON 12/01/2009

Pursuant to Hon'ble Maharashtra Electricity Regulatory Commission (MERC) tariff order dated 31.03.2023 in Case No.239 of 2022 in the matter of " **Determination of Multi-Year Tariff for Intra-State Transmission Tariff for the Balance period of 4th Control Period for FY 2023-24 & FY 2024-25**".

The Clause 4.1(iv) (on Page No.7) of the BPTA executed between **MSETCL** and **BEST** on 12th Jan, 2009 is amended as follows:

Clause 4.1(iv)

"To make available Transmission Capacity on Intra-State Transmission System (InSTS) as per Long Term & Medium Term contracted Generation Capacity which is 921.69 MW (Annexure – I) for FY 2024-25 for BEST between points of injection and points of Drawl.

p.t.o.

जोडपत्र - २ Annexure - 2

नोंद वही अनु क्रमांक/दिनांक (Serial No./Date)	79
(Nature of Document)	AGREEMENT
	President S. Pawar
	M 75
Name of	BEST
(Stamp Purchaser)	
मुद्रांक विक्रेत्या	

28 NOV 2021

परवाना क्रमांक : ८०००३०

मुद्रांक विक्रीचे ठिकाण/पत्ता : स्वाती सु[illegible] शिर्के

[illegible] सोसायटी लि.

नगर दिवानी व सत्र न्यायालय, जुनी सिव्हिल इमारत, काला घोडा, पहिला मजला, मुंबई विद्यापीठाजवळ, मुंबई - ४०० ०३२.

ज्या कारणासाठी ज्यांनी मुद्रांक खरेदी केला त्यांनी त्याचे कारणासाठी मुद्रांक खरेदी केल्यापासून ६ महिन्यात वापरणे बंधनकारक आहे.

The Base Transmission Capacity Rights (Base TCR) on Intra-State Transmission System (InSTS) of Maharashtra for <u>BEST</u> will be as determined by the Hon'ble Maharashtra Electricity Regulatory Commission (MERC) in the matter of Determination of Transmission Tariff for Intra-State Transmission System (InSTS), from time to time."

The generation capacity contracted to be considered under the Commission approved Base TCR of BEST is as per MERC tariff order in Case No.239 of 2022.

(Peeyush S. Sharma)
Chief Engineer (STU)
MSETCL

Sign & Stamp

(Suresh P. Makwana)
Chief Engineer Planning,
B.E.S.&T Undertaking

Sign & Stamp

BEST Undertaking, Mumbai

Total Genration Capacity Contracted for FY 2024-25								
Sr. No.	Name of Power Project/Agency (Operationalized)	Location of project	Installed Capacity of Power Project/ Agency (in MW)	Capacity Contracted (Operational PPA) (in MW)	Date of PPA	Contract Period (Long term /Medium term)	Duration of PPA	Remark
1	TPC-G (Hydro)	Bhira	300	153.51	06.03.2024	Medium Term	5 Years	Hydro Power
2	TPC-G (Hydro)	khopoli	72	36.84	06.03.2024	Medium Term	5 Years	Hydro Power
3	TPC-G (Hydro)	Bhivapuri	75	38.38	06.03.2024	Medium Term	5 Years	Hydro Power
4	TPC-G Unit No. 5	Trombay	500	255.85	06.03.2024	Medium Term	5 Years	Thermal Power
5	TPC-G Unit No. 7	Trombay	180	92.11	06.03.2024	Medium Term	5 Years	Thermal Power
6	TPC-G Unit No. 8	Trombay	250	100	06.03.2024	Medium Term	5 Years	Thermal Power
7	* M/s Manikaran Power Ltd.	Varora Dist-Chandrapur	540	100	24.05.2019	Medium Term	5 Years	Thermal Power
8	Walwhan Solar MH Ltd.	Mangalwedha Dist- Solapur	20	20	27.05.2013	Long Term	25 years	Solar RE for fulfilment of BEST RPO for Long Term
9	# M/s Sai Wardha power Generation pvt. Ltd.	Varora Dist-Chandrapur	540	125	15.10.2024	Medium Term	7 Years	Thermal Power
				921.69				

Total Genration Capacity Contracted for FY 2024-25 is **921.69 MW**

* Agreement for procurement of Power (APP) is signed between BEST & M/s Manikaran Power Ltd. (100 MW) through M/s Sai Wardha Power Generation Ltd. for 5 years from 01.04.2019 to 31.03.2024, however actual power flow started from 01.03.2020.

Agreement for procurement of Power (APP) is signed between BEST & M/s Sai Wardha Power Generation pvt. Ltd. for 125 MW RTC Power for 7 years on 15.10.2024. Condition's precedent completed. However, consent of CESTU/CESLDC is awaited.

DEPP 22/11/2024

Power Purchase Dept.

ANNEXURE-5

Sr. No.	Particulars	Particulars 1	Particulars 2	FY 2022-23		Particulars 1	Particulars 2	FY 2022-23	
				As per Table 29 of the Petition	As per Appendix E2 for FY 23			As per Table 29 of the Petition	As per Appendix E2 for FY 24
				Rs. Crore	Rs. Crore			Rs. Crore	Rs. Crore
1	Cost of Energy Purchased	TPC-G	Energy Charges	953.29	953.29	TPC-G	Energy Charges	1956.68	1956.68
		Manikaran	Energy Charges	157.49	157.49	Manikaran	Energy Charges	186.95	186.95
		TPC-G	FAC	1127.23	1127.23	TPC-G	FAC	-344.13	-344.13
		Manikaran				Manikaran			
		TPC-G	Fixed Charges	443.16	443.16	TPC-G	Fixed Charges	414.72	414.72
		Manikaran	Fixed Charges	140.38	140.38	Manikaran	Fixed Charges	155.56	155.56
		TPC-G	Thermal Incentive Charges	7.88	7.88	TPC-G	Thermal Incentive Charges	8.67	8.67
		Manikaran	Thermal Incentive Charges	3.61	3.61	Manikaran	Thermal Incentive Charges	8.75	8.75
		Manikaran	Damage Charges	-3.28	-3.28	Manikaran	Damage Charges	-0.12	-0.12
		Manikaran	Yearly Reconcilation Charges	1.45	1.45	Manikaran	Yearly Reconcilation Charges	0.32	0.32
		TPC Credit Bills prior Period		-0.96	-0.96	TPC Credit Bills prior Period		-33.48	-33.48
		Differential Energy Charges Bills from October 2021 to		-0.35	-0.35	Provisional Fixed Charge bills under intra state ABT for the		0.01	0.01
		Manikaran Supplementary Invoice bill P P		6.93	6.93				
		RPS	Enrgy Charges	39.70	39.70	RPS	Enrgy Charges	28.36	28.36
			OA Charges	1.94	1.94		OA Charges	0.23	0.23
			REC	0.00	0.00		REC	0.00	0.00
			Rebate	-0.35	-0.35		Rebate	-0.27	-0.27
		FBSM	Prior Period	0.00	0.00	FBSM	Prior Period		
		FBSM	FY 2021-22 (Current Year)	0.00	0.00	FBSM	FY 2021-22 (Current Year)		
		DSM	01-Apr-2022 to 31-MAR-2023	-20.37	-20.37	DSM	01-Apr-2023 to 31-MAR-2024	9.43	9.43
			Additional DSM Charges Payable	1.96	1.96		Additional DSM Charges Payable	1.09	1.09
		Monthly MSLDC Charges		*	1.26		Monthly MSLDC Charges	*	0.92
	Total 1			**2859.71**	**2860.97**			**2392.77**	**2393.69**
2	External Power Purchased	Bilateral		563.42	563.42	External Power Purchased	Bilateral	425.0932717	425.093272
							Prior Period Payment for stand-by energy purchased in FY 2016-17 & FY 2017-18	23.1790243	23.1790243
		Bilateral Rebate		-2.12	-2.12		Bilateral Rebate	-3.2142325	-3.2142325
	Total 2			**561.30**	**561.30**			**445.06**	**445.06**
3	**Stand by Charges**			**98.53**	**98.53**			**94.03**	**94.03**
	Grand total			**3519.53**	**3520.79**			**2931.86**	**2932.77**

ANNEXURE-6

	Particulars	FY 2022-23				FY 2023-24		
	EMPLOYEE EXPENSES	AS PER PETITION SUBMITTED		AS PER AUDITED STAEMENT		AS PER PETITION SUBMITTED		AS PER AUDITED STAEMENT
	Basic Salary	259.62		259.62		256.19		256.19
	Dearness Allowance (DA)	63.33		63.33		67.47		67.47
	House Rent Allowance	36.12		36.12		33.10		33.10
	Conveyance Allowance	0.84		0.84		0.78		0.78
	Leave Travel Allowance	4.83		4.83		2.71		2.71
	Earned Leave Encashment							
	Other Allowances							
	Medical Allowance	3.14		3.14		2.87		2.87
	Overtime Payment	14.66		14.66		17.04		17.04
	Bonus/Ex-Gratia Payments	13.72		13.72		14.05		14.05
	Interim Relief / Wage Settlement (Ex-employee)					4.02		4.02
	Functional allowance,Incentive,EDIE	6.05		6.05		5.25		5.25
	VRS Expenses/Retrenchment Compensation							
	Special Benefit to Employees							
	Training Expenses							
	Payment under Workmen's Compensation Act							
	Net Employee Costs							
	Terminal Benefits							
	Provident Fund Contribution	35.16		35.16		34.46		34.46
	Provision for PF Fund							
	Pension Payments							
	Gratuity Payment	90.95		90.95		86.46		86.46
	Others							
	Cost of bus token / passes							
	Gross Employee Expenses (A)	528.42		528.42		524.40		524.40
	General Administration est cost							
	in petition considered under Administration & general expenses							
	as share of GA	**63.59**		**63.59**		**57.35**		**57.35**
	As per audited balance sheet	592.01		592.01		581.75		581.75
	Less: Expenses Capitalised **			-				
	*Less:Estb. of CAS ,T&E & ST.LTG. Dept. (B)	**52.87**				**54.23**		
	(A-B)	475.55				470.17		
	*The 52.87 crores of amount deducted on account of cost of the employees responsible for maintenance of street lightinng							

As per Appendix No. E2 of Audited Accounts	FY 2022-23	FY 2023-24
Establishment Cost (Supply) (Rs. Cr.)	528.42	524.39
*Less:Estb. of CAS ,T&E & ST.LTG. Dept. (B) (Rs. Cr.)	52.87	54.23
Net Employee Expenses (Rs. Cr.)	**475.55**	**470.16**
*The 52.87 crore and 54.23 crore of amount deducted on account of cost of the employees responsible for maintenance of street lighting		

ANNEXURE-7

query 17

		FY 2022-23		FY 2023-24	
REPAIRS AND MAINTENANCE	PARTICULAR	AS PER PETITION SUBMITTED	AS PER AUDITED STAEMENT	AS PER PETITION SUBMITTED	AS PER AUDITED STAEMENT
	Plant & Machinery	7.15	7.15	3.49	3.49
	Building				
	Civil Works	28.31	28.31	53.28	53.28
	Hydraulic Works				
	Lines & Cable Networks	17.18	17.18	32.76	32.76
	Vehicles				
	Furniture & Fixtures	0.17	0.17	0.12	0.12
	Office Equipment	4.94	4.94	3.44	3.44
	Meter & Equipment	3.58	3.58	3.15	3.15
	Gross R&M Expenses	**61.33**	**61.33**	**96.24**	**96.24**
	ADD STREET LIGHTING EXP				
	STREET LIGHTING R & M MATERIAL 1355	-	3.76		3.60
	LEASE RENT FOR DISTRIBUTION SL 1356	-			0.30
	STREET LT HIGH MAST UNIT R&M 1370	-	0.11		0.07
	STREET LIGHTING R & M LABOUR 1354	-			
	AMC OF AUTOMATED ST LIGHTING M 1366	-	0.23		0.04
		-	4.10		4.01
		61.33	65.43	96.24	100.25
	Amount as per Appendix No. E2 of Audited Accounts [Repairs and Maintenance -Supply]		**65.43**		**100.25**

UNDERTAKING DO NOT CONSIDER THE INCOME OF REPAIRS & MAINTENANCE CHARGES OF ALL IN HIRE CHARGES RECEIVED FROM THE MCGM SUBSEQUENTLY THE EXPENSES RELATED TO STREE LIGHT ON MAINTENANCE IS ALSO NOT CONSIDERED. HOWEVER IN THE AUDITED BALANCE SHEET THE SAME IS CONSIDERED

ANNEXURE-8

A & G EXPENSES	FY 2022-23			
Particulars	AS PER PETITION SUBMITTED		AS PER AUDITED STAEMENT	
Rent Rates & Taxes	6.20		6.20	OTHER EXP.PROFOR
Insurance	0.48		0.48	OTHER EXP.PROFOR
Telephone & Postage, etc.	5.48		5.48	OTHER EXP.PROFOR
Legal charges & Audit fee	0.62		0.62	OTHER EXP.PROFOR
Professional, Consultancy, Technical fee	0.32		0.32	OTHER EXP.PROFOR
Conveyance & Travel	-		-	OTHER EXP.PROFOR
Electricity charges	4.00		4.00	OTHER EXP.PROFOR
Water charges	-		-	OTHER EXP.PROFOR
Security arrangements	9.66		9.66	***
Demand side management expenses	-		-	
Fees & subscription	-		-	
RPO MEDA	-		-	
Computer Stationery	-		-	
Printing & Stationery	1.32		1.32	OTHER EXP.PROFOR
Advertisements	0.64		0.64	OTHER EXP.PROFOR
Purchase Related Advertisement Expenses	-		-	
Contribution/Donations	-		-	
License Fee and other related fee	2.06		2.06	OTHER EXP.PROFOR
Vehicle Running Expenses Truck / Delivery Van	15.97		15.97	OTHER EXP.PROFOR
Vehicle Hiring Expenses Truck / Delivery Van	-		-	
Cost of Training	-		-	
Outsourcing of metering and billing system	-		-	
Freight On Capital Equipments	-		-	
V-sat, Internet and related charges	-		-	
Amenities to Staff	-		-	
Bank Charges	-		-	
Miscellaneous Expenses	-		-	
Rebate on advance payment	-		-	
Power factor incentive	-		-	
Property Insurance Fund	-		-	
Contingency Reserve Fund	-		-	
Lease Rent On Meters	-		-	
Service Charges on Gas Insulated Switches	-		-	
Other expenses	8.62		8.62	OTHER EXP.PROFOR
Share of General Administration Expenses	81.96		81.96	***
Gross A&G Expenses	137.34		137.34	
Less: Expenses of DSM	-		-	
Net A&G Expenses	137.34		137.34	

AS PER Appendix No. E2 of Audited Accounts	FY 2022-23*
A&G EXPENSES OF SUPPLY	53.51
A&G EXPENSES OF SUPPLY (GA)	12.40
R&M SHARE OF (GA)	9.17
OTHER COST SUPPLY	47.45
OTHER COST SUPPLY (GA)	4.89
DEPRECIATION SHARE OF GA	1.56
ESTABLISHMENT COST (GA)	63.59
Sub Total	**192.57**
Less:	
BANK CHARGES	3.5
STREET LIGHTING DEPT	2.58
OTHER EXPENSES	34.97
PROVISION FOR BAD DEBTS	5.65
INTEREST ON CSD	8.53
Sub Total	55.23
Net A&G Expenses	**137.34**

**Amount in Rs. Crore*

A&G EXPENSES	F.YR. 23-24		
PARTICULARS	AS PER PETITION SUBMITTED	AS PER AUDITED STAEMENT	
Rent Rates & Taxes	5.05	5.05	OTHER EXP.PROFOR
Insurance	0.60	0.60	OTHER EXP.PROFOR
Telephone & Postage, etc.	5.73	5.73	OTHER EXP.PROFOR
Legal charges & Audit fee	0.97	0.97	OTHER EXP.PROFOR
Professional, Consultancy, Technical fee	0.37	0.37	OTHER EXP.PROFOR
Conveyance & Travel	-	-	OTHER EXP.PROFOR
Electricity charges	3.41	3.41	OTHER EXP.PROFOR
Water charges	-	-	OTHER EXP.PROFOR
Security arrangements	8.40	8.40	***
Demand side management expenses	-	-	
Fees & subscription	-	-	
RPO MEDA	-	-	
Computer Stationery	-	-	
Printing & Stationery	1.33	1.33	OTHER EXP.PROFOR
Advertisements	1.58	1.58	OTHER EXP.PROFOR
Purchase Related Advertisement Expenses	-	-	
Contribution/Donations	-	-	
License Fee and other related fee	0.01	0.01	OTHER EXP.PROFOR
Vehicle Running Expenses Truck / Delivery Van	13.54	13.54	OTHER EXP.PROFOR
Vehicle Hiring Expenses Truck / Delivery Van	-	-	
Cost of Training	-	-	
Outsourcing of metering and billing system	-	-	
Freight On Capital Equipments	-	-	
V-sat, Internet and related charges	-	-	
Amenities to Staff	-	-	
Bank Charges			OTHER EXP.PROFOR
Miscellaneous Expenses	-	-	
Rebate on advance payment	-	-	
Power factor incentive	-	-	
Property Insurance Fund	-	-	
Contingency Reserve Fund	-	-	
Lease Rent On Meters	-	-	
Service Charges on Gas Insulated Switches	-	-	
Other expenses	10.75	10.75	OTHER EXP.PROFOR
Share of General Administration Expenses	79.34	79.34	***
Gross A&G Expenses	134.75	134.75	
Less: Expenses of DSM	-	-	
Net A&G Expenses	**131.08**	**131.08**	

AS PER APPENDIX NO. E2 OF AUDITED ACCOUNTS	FY 2023-24
A&G EXPENSES OF SUPPLY	52.54
A&G EXPENSES OF SUPPLY GA	13.18
R&M SHARE OF GA	7.83
OTHER COST SUPPLY	76.63
OTHER COST SUPPLY GA	5.10
DEPRECIATION SHARE OF GA	4.26
ESTABLISHMENT COST GA	57.35
Less:	
BANK CHARGES	3.67
STREET LIGHTING DEPT	2.35
OTHER EXPENSES	42.23
PROVISION FOR BAD DEBTS	6.60
INTEREST ON CSD	25.32
PROPERTY INSURANCE FUND	5.64
NET A&G EXPENSES	**131.08**

ANNEXURE-9

Detailed Justification for Delay in Completion of the DPR Schemes		
BEST Scheme Code	**MERC Approved No. with date**	**Remark/ Justification for delay in completion of DPR Schemes**
New Receiving Substations (RSS) Commissioning:		
BEST/FY16/01	MERC/CAPEX/FY 2016-17/ 00770 dated 28.09.2016	**Time-over run**: The DPR, originally scheduled to be closed by March, 2019, will now be finalized upon the completion of FY 2024-25. Despite this time over-run, there is no anticipated impact on the project's overall cost. The DPR Capitalisation cost remains within the approved cost. This DPR includes commissioning of M.G.M Hospital, Wankhede Stadium, Dosti Acres, Sai Sunder Nagar and Jerbai Wadia Road RSS. The reasons for the time over-run are given below. **M.G.M Hospital:** The plot for the commissioning of 2 T/F, 33kV RSS at M.G.M Hospital was handed over on 21.11.2013. The 33kV cables were laid from TPC Parel RS up to M.G.M. Hospital in F.Y.2016-17. Civil work was delayed due delay in finalization of tender and the actual construction work of RSS had commenced on 10.05.2018. Both civil and electrification work were completed in March 2020. Due to the lack of immediate load requirement from the surrounding area, the project was delayed to avoid unnecessary capital expenditure. Additionally, material shortages during the previous year further hindered progress. The current DPR will now be closed, and this work will be included in a new DPR. **Wankhede Stadium:** The scheme of commissioning of new RSS at Wankhede Stadium executed under IPDS in FY 2018-19. While obtaining in principle approval for IPDS DPR, the said scope of work except civil work was deleted from this DPR. Now, scheme is completed in all respect under IPDS. **Dosti Acres**: The handover of RSS site was delayed. Civil work on the proposed RSS commenced September 2018, and both civil and electrification work have been completed. A portion of 33kV cable

		has already been laid from TPC Antop Hill RS to the gate of Dosti Acres. Now, 1 No. of T/F has been commissioned, while the second T/F will be commissioned once additional demand is identified. Therefore, it has been decided to close this DPR. **Sai Sunder Nagar**: The developer handed over the RSS plot to BEST undertaking on 22.06.2017 for the commissioning of a 33kV RSS. The civil work on the proposed 33kV RSS commenced in Sept. 2018. However, due to the diversion of existing HV and LV cables on the plot, civil work has been delayed and remains stagnant. The current DPR will now be closed, and the remaining work will be included in a new DPR. **Jerbai Wadia Road**: The developer not showed interest in taking electric supply from BEST and approached M/s. TPC-D for obtaining power supply to this project. Hence, the scope of work of this scheme is deleted from this DPR. **"All Assets are Put To Use".** The scheme is old one & proposed to be closed before 31st March, 2025.
BEST/FY21/01	MERC/CAPEX /FY 2020-21/ Dated 16.07.2020	This DPR includes commissioning of Pimpalwadi, Spring Mill Chawl (Bombay Dyeing Mill) and Bharat Potdar Mill (India Blue) RSS. **Pimpalwadi**: The developer handed over the basement, ground, and first podium floors of Wing D building to BEST on 31.01.2018 for the purpose of construction of 1 No. of T/F, 33kV Receiving Substation. The construction of the RSS building, excluding minor finishing work such as flooring, painting, door and window installation, and electrical work, has been completed by the Party under the supervision of BEST. The 33kV cable laying work for the RSS has also been finished. However, the handover of the RSS building has been delayed due to ongoing minor civil works.

		Spring Mill Chawl (Bombay Dyeing Mill): The necessary EEBP approval have been obtained by Party for the commissioning of RSS. BEST has taken possession of the plot on May 28, 2024 for construction of RSS Building and accordingly, Soil Testing work is in progress. A tender will be floated for civil work once the soil testing results are available. The commissioning of equipment will be scheduled after the completion of civil and electrical work. **Bharat Potdar Mill (India Blue):** Civil work for the RSS has been completed, and Electrification work is currently underway. Equipment commissioning work is scheduled for FY 2025-26, with the entire scheme expected to be completed before March, 2026. The project was originally scheduled for completion by March 2025. However, there has been a delay in progress. A comprehensive review of the project status will be conducted before March 2025 to determine the appropriate course of action, including the potential closure of the scheme. **"All Assets are Put To Use".**
Augmentation / Replacement at existing RSS:		
BEST/FY16/02	MERC/TECH_V/CAP /DPR/20122013/02688 dated 22.02.2013	**Time-over run**: The DPR, originally scheduled to be closed by March 2016, was finalized on October 30, 2023. Despite the time overrun, the DPR capitalization cost remains within the approved budget. The reasons for the time overrun are given below. **Time-over run**: • The replacement of 10 MVAT/F by 16MVA T/F at Mahalaxmi Mazgaon Dock and Kussara was delayed due to non-receipt of additional load requirement from consumers, during FY 2019-20. The work was deferred due to urgent EHV cable diversion work by MMRC (Mumbai Metro Rail Corporation). During FY 2020-21 & FY 2021-22, the work was not completed in the target scheduled period due to COVID -19 and delay in material deliveries from the suppliers. • The replacement of 33kV &11 kV switchgear work was also delayed during FY 2019-20 due to urgent EHV cable diversion work of MMRC (Mumbai

		Metro Rail Corporation). During FY 2020-21 & FY 2021-22, the work was not completed in the target scheduled period due to COVID -19 and delay in material deliveries from the suppliers. • The supply, installation, and commissioning of AFF System at all RSS mentioned in this DPR has been delayed due to delay in tendering process. An earlier tender was cancelled due to high rates quoted by the suppliers. • Regarding the supply, installation and commissioning of Battery & Battery Charger, a contract was awarded to M/s. Chabbi Electricals Ltd. While the firm has partially executed the work, progress has been hindered by supplier related issues. • The 33 kV cable laying from TPC Carnac to Ballard Estate & Naval Dock Yard RSS is pending as our management has decided to replace all 45 kms of cables in south Mumbai under Turnkey contract. The necessary documentation for inviting tenders for this project is currently being prepared. The cable laying work at Mahalaxmi & Worli RSS is to be executed under IPDS Project (IPDS DPR No. MERC/CAPEX/2019-20/418 dated 26 July 2019). Due to delay in tendering process of IPDS, this work has also been delayed. Currently, cable laying at these locations is being carried out by the turnkey contractor M/s. L&T Ltd., under the IPDS project. ***Please note that this scheme is now closed on 30.10.2023 and copy of closure report is attached herewith as Annexure-A, Pg. No. 1 to 4.*** **"All Assets are Put To Use".**
BEST/FY17/02	MERC/CAPEX/2017-18 /4706 dated 16.11.2017	**Time-over run**: The DPR, originally scheduled to be closed by March 2020, was finalized on December 16, 2024. Despite the time overrun, the DPR capitalization cost remains within the approved cost. The reasons for the time overrun are given below. The replacement of 11 kV switchgear work at Mahim Causeway & Esplanade RSS was delayed due to two primary reasons. Firstly, urgent EHV cable diversion work by the Mumbai Metro Rail Corporation

		(MMRC) during FY 2019-20 necessitated the deferral of the project. Secondly, the COVID-19 pandemic and subsequent disruptions in the supply chain during FY 2020-21 and FY 2021-22 further hindered progress. • Given BEST's power factor of 0.99, the replacement of capacitors and reactors has been deferred. • The replacement of batteries and battery chargers at KEM RSS was delayed due to supplier-related issues exacerbated by the COVID-19 pandemic. • Cable laying for G.T Hospital, Girgaum Esplanade, and Marine Drive was not executed due to shortage of work force and funds for execution of scheme. ***Please note that this scheme is now closed on 16.12.2024 and copy of closure report is attached herewith as Annexure-A, Pg. No. 5 to 11.*** **"All Assets are Put To Use".**
BEST/FY18/02	MERC/CAPEX/2017-18 /4706 dated 16.11.2017	**Time-over run**: The DPR, originally scheduled to be closed by March 2020, was finalized on December 16, 2024. There is no any impact due to time-over run. The DPR Capitalisation cost is within approved cost. The reasons for the time overrun are given below. • Replacement of 33 kV & 11 kV switchgear work at Ballard Estate and Mahim (2 Nos.) & Nepean Sea (1 No.) respectively was delayed due to two primary reasons. Firstly, urgent EHV cable diversion work by the Mumbai Metro Rail Corporation (MMRC) during FY 2019-20 necessitated the deferral of the project. Secondly, the COVID-19 pandemic and subsequent disruptions in the supply chain during FY 2020-21 and FY 2021-22 further hindered progress. • Given BEST's power factor of 0.99, the replacement of capacitors and reactors has been deferred. • Replacement of Battery & Battery Charger at Worli Dairy & 110 kV DBA RSS was delayed due to Covid-19 pandemic as there was problem at supplier's end.

		• 33 kV cable laying from TPC Carnac to Ballard Estate (4 Km.) & part replacement of Hutatma Chowk, Marine Drive, G.T. Hospital, Colaba, Naval Dock Ballard Estate & Navy Nagar (Qty.; 29.26 km.). is deffered due to shortage of work force and funds for execution of schemes. ***Please note that this scheme is now closed on 16.12.2024 and copy of closure report is attached herewith as Annexure- A, Pg. No. 5 to 11.*** **"All Assets are Put To Use".**
BEST/FY18/02A	MERC/CAPEX/2019-20 /135 dated 10.05.2019	**Time-over run**: The DPR, originally scheduled to be closed by March 2020, was finalized on October 16, 2023 There is no any impact due to time-over run. The DPR Capitalisation cost is within approved cost. However, the reasons for the time overrun are given below.` • As per schedule, the work included in this DPR is required to be completed before March 2020. However, the civil work at Naval Dock RSS is deferred due to security reasons i.e., strict restrictions imposed on outside personnel entering in the naval premises by the Naval Authority. Because of which, considerable time had elapsed for security check of contractor personnel before entering in the naval premises each time. Now, civil work is completed. • The work included in this DPR is also deferred due to EHV cable diversion for MMRC (Mumbai Metro Rail Corporation). Since the MMRC work was of urgent in nature. ***Now, the scheme is closed on 16.10.2023 and closure Report is attached herewith as Annexure-A, Pg. No. 12 to 14.*** **"All Assets are Put To Use".**
BEST/FY20/02	MERC/CAPEX/DPR/2020-21/553 dated 15.12.2021	The scheme is for period 1st April, 2020 to March 2025. Now, the scheme is closed within timeline. ***Now, the scheme is closed on 16.12.2024 and closure Report is attached herewith as Annexure-A, Pg. No. 15 to 18.***

		"All Assets are Put To Use".
BEST/FY21/02	MERC/CAPEX/DPR/2022-23/556 dated 14.11.2022	The scheme, which was initiated on April 1, 2021, and was scheduled to conclude by March 31, 2023, was delayed due to the impact of the COVID-19 pandemic. ***Now, the scheme is closed on 16.12.2024 and closure Report is attached herewith as Annexure-A, Pg. No. 19 to 21.*** **"All Assets are Put To Use".**
New Distribution Substation & Augmentation & alteration to existing DSS:		
BEST/FY21/03	MERC/CAPEX/2020-21/552 dated 15.12.2021	The scheme, which commenced in April 2020 and was originally scheduled to be completed by March 2025, is currently in progress. The scheme is now expected to be closed in FY 2026-27.(WIP) **"All Assets are Put To Use".**
Extension of Distribution Network:		
BEST/FY21/04	MERC/CAPEX/2020-21/dated 22.06.2020	The scheme, which commenced in April 2020 and was originally scheduled to be completed by March 2025, is currently in progress. The scheme is now expected to be closed in FY 2026-27. (WIP) **"All Assets are Put To Use".**
SCADA, Computerisation & digitisation:		
BEST/FY18/08A	MERC/CAPEX/2017-18 / 4759 dated 22.11.2017	**Time-over run:** The DPR, originally scheduled to be closed by March 2021, was finalized on November 11, 2022. There is no any impact due to time-over run. The DPR Capitalisation cost is within approved cost. The reasons for the time overrun are given below. • For implementation of SCADA system for new and existing RSS was delayed due to preparation of RFP and tendering process. Further, tender was invited but same was not materialized due to NIL response. In the mean-time BEST had formed a special study team to combine various automation

		projects. Accordingly, proposal was prepared by combining requirement of zones SCADA, DMS, OMS and put up for management approval. However, due to higher cost, the same proposal was kept on hold by management. After that, it was planned to invite a tender specifically for the Backbay RSS SCADA system. However, the launch of the RDSS by the Ministry of Power, Government of India, prompted BEST management to decide that the SCADA project would be executed under the RDSS framework. As a result, this DPR has been closed ***Now, the scheme is closed on 11.11.2022 and closure Report is attached herewith as Annexure-A, Pg. No. 22 & 23.*** **"All Assets are Put To Use".**
BEST/FY18/08B	MERC/CAPEX/2017-18/47886 dated 13.12.2017	**Time-over run**: The DPR, originally scheduled to be closed by March 2020, was finalized on December 16, 2024. Despite the significant delay, the DPR capitalization cost remains within the approved cost. The reasons for the time overrun are given below. • Initially, BEST intended to execute the Digitization System project independently. Consequently, a DPR was submitted and approved by MERC. However, MCGM subsequently informed BEST of the need to adopt a common GIS software platform to align with MCGM's systems. MCGM has deployed its staff to execute this project within BEST, and all associated costs will be borne by MCGM. As a result, no further expenditure is anticipated for this project. ***Now, the scheme is closed on 16.12.2024 and closure Report is attached herewith as Annexure-A, Pg. No.24 & 25.*** **"All Assets are Put To Use".**
Integrated Power Development Scheme (IPDS):		
IPDS/BEST/FY15-16/01	MERC/CAPEX/2019-20/418 dated 26.07.2019	The scheme, originally scheduled to be completed by March 2020, was finalized on March 31, 2021. The delay in completion was attributed to prolonged

		tendering processes, material delivery delays, and the impact of the COVID-19 pandemic.` ***Now, the scheme is closed on 16.12.2024 and closure Report is attached herewith as Annexure-A, Pg. No. 26 to 28.*** **"All Assets are Put To Use".**
Energy Meter		
BEST/FY15-16/01 (Energy Meter)	MERC/CAPEX/2019-20 /116 dated 18.04.2019	The scheme for IPDS Energy Meter was for period 1st April, 2018 to 31st March 2020. The scheme is closed within time line as approved by MERC and IPDS. ***Now, the scheme is closed on 07.06.2021 and closure Report is attached herewith as Annexure-A, Pg. No. 29 & 30.*** **"All Assets are Put To Use".**
BEST/FY19/06	MERC/CAPEX/2019-20 /1110 dated 28.11.2019	The scheme was completed within timeline and all objective of the scheme is achieved. ***Now, the scheme is closed on 26.04.2024 and closure Report is attached herewith as Annexure-A, Pg. No. 31 to 33.*** **"All Assets are Put To Use".**

o/c

Annexure-A

The Brihan Mumbai Electric Supply & Transport Undertaking

(OF THE BRIHAN MUMBAI MAHANAGARPALIKA)

TELEPHONE : (022) 22856262
FAX : (022) 22851244
TELEX : 1185755 BEST IN
TELEGRAM : BEST, MUMBAI-400 001.

BEST BHAVAN,
BEST MARG,
POST BOX NO. 192.
MUMBAI - 400 001.

ADDRESS ALL COMMUNICATION BY TITLE NOT BY NAME

OUR REF. ESO/CEPL/Adm9(B)/MERC/ 85 /2023

DATE : 30 OCT 2023

To,

The Secretary,
Maharashtra Electricity Regulatory Commission
13th Floor, Centre No.1,
World Trade Centre,
Cuffe Parade, Colaba 400 005

Sub: Scheme Closure Report for DPR Scheme 'Revamping of Existing Receiving Substations' BEST Code- BEST/FY16/02.

Ref: DPR approved by the Hon'ble Commission vide Letter reference No. MERC/TECHV/CAP/DPR/20122013/02688 dated 22nd February2013.

Dear Sir / Madam,

This has reference to the Capital Scheme MERC Reference No. MERC/TECHV/CAP/DPR/20122013/02688 dated 22nd February2013 (BEST Reference No. BEST/FY16/02) for "Revamping Existing Receiving Substations" for FY 2015-16. The Hon'ble Commission has accorded in-principle approval for subject DPR with Costing of Rs.36.63 Cr. This scheme is to be closed as the scope of work under approved DPR is almost completed and balance if any work will be included in new DPR. Also, this DPR is old one; therefore, we are submitting the Scheme Closure Report of the Scheme as *Appendix* to this submission.

Yours faithfully,

(S. P. Makwana)
Chief Engineer (Planning)

OFFICE OF THE
MAHARASHTRA ELE... REGULATORY ...
..., CUFFE PARADE ... 005.

"BEST Travel Saves Fuel"

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Appendix

PROJECT COMPLETION REPORT

Name of the Scheme	'Revamping Existing Receiving Substations' (2015-16)
BEST Scheme Code	BEST/FY16/02
MERC Reference No.	MERC/TECH_V/CAP/DPR/20122013 /02688 dated 22nd February 2013.
Objective of the Scheme (As per DPR)	To meet increasing load in area of supply and to improve quality and reliability of supply

Scheduled / Actual completion dates:

Scheduled date of starting	1st April 2015
Actual date of starting	1st April 2015
Scheduled date of completion	31st March 2016
Actual date of completion	31 March 2023
Scope of Work (As per DPR)	• Replacement of 10 MVA T/F by 16 MVA at RSS- Worli, Kussara, Mahalaxmi (2 Nos each) and Mazgaon Dock, PMGP (1 No each) (Qty- 8 Nos.) • Replacement of 33 kV switchgears at RSS – Mumbadevi, Mahim Causeway, Worli Dairy (2 Nos each), Masjid, Mumbai Central, Sion Fort (1 No each) (Qty- 9 Nos.) • Replacement of 11 kV switchgears at RSS – Mumbadevi, Love Grove, Wadala, Navy Nagar (1 No each), Grant Road (2 Nos.) & Naval Dock (3 Nos.) (Qty- 9 Nos.) • Replacement / installation of Capacitors at RSS-Dharavi, Sion Fort, Worli, Parel (2 Nos each) (Qty- 8 Nos.) • Replacement / installation of Reactors at RSS- Sion Fort, Grant Road, Byculla (2 Nos. each), Naval Dock, Mahalaxmi (1 No each) (Qty- 8 Nos.) • Replacement of Battery and Charger at RSS- Naval Dock, Parel, Marine Drive, Mahim, KEM Hospital, Kingsway & Worli (Qty- 7) • Replacement of AFF System at RSS- Girgaum, Masjid, Mumbadevi, Nair Hospital, Worli Dairy & Nestle (CO_2Type Qty-6) • 33 kV cable replacement of RSS- Worli, Ballard Estate, Mahalaxmi, Colaba (6.18 kms)
Actual completed work	**FY2015-16**: 1) Replacement of T/F at PMGP & Worli RSS. 2) Replacement of 11kV Bus Sections at Mumbadevi & Wadala RSS. **FY2016-17**: 1) Replacement of 11KV Bus sections at Wadala, Mumbadevi & Naval Dock RSS.

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	2) Installation of capacitor at Worli & Parel RSS. **FY2017-18 & FY 2018-19**: 1) Replacement of 11KV Bus Section & reactor at Naval Dock RSS. 2) Replacement of Capacitor at Worli RSS. 3) Replacement of 33KV Switchgears at Worli Dairy RSS. 4) Replacement of Battery Set at Parel RSS. **FY2019-20:** 1) Replacement of Earthing and T/F at Kussara RSS. 2) Replacement of Battery and Charger at Parel, Marine Drive, Worli, Kingsway and Naval Dock RSS 3) Installation of Earthing at Masjid, Kussara, Mumbadevi & Mumbai Central RSS 4) Replacement of 33 kV switchgears at Worli dairy. 5) Replacement of T/F at Kussara RSS 6) Reactor installed at Neval Dock RSS 7) AFF installed at Nestle RSS. **FY2020-21:** 1) Installation of Earthing at Masjid, Kussara, Mumbadevi & Mumbai Central RSS. 2) Replacement of Battery Set at Kingsway & Worli RSS. 3) Installation of AFF System (CO2) at Nair Hospital **FY2021-22:** Earthing at Worli, Kussara & Mazgaon Dock RSS **FY2022-23:** 1) Earthing at Mumbadevi & Mazgaon Dock RSS 2) Installation of 33 kV Sw./Gr. at Sion Fort RSS. 3) AFF System at Girgaum, Masjid and Nair Hospital.
Pending Work if any	• Replacement of 10 to 16 MVA transformers at RSS – Kussara (Qty-1) Mazgaon Dock (Qty-1 No. each) and Mahalaxmi (Qty-2 Nos.). • 33 kV switchgear replacement at RSS:– Mahim Causeway, Mumbadevi (2 Nos. each), Masjid (1 No each) • 11 kV Bus Section replacement at RSS:– Grant Road (Qty-2) • Installation of Capacitors- Dharavi, Sion Fort & Parel RSS (Qty-2 each) • Installation of Reactors: - Sion Fort, Grant Road, Byculla (2 Nos. each), Mahalaxmi (1 No each) (Qty- 7 Nos.) • Replacement of Battery and Charger at Mahim & KEM Hospital • 33 kV cable replacement of RSS- Ballard Estate & Colaba
Reason for delay if any	• Replacement of 10 MVAT/F by 16MVA T/F at Mahalaxmi Mazgaon Dock and Kussara is delayed due to non receipt of additional load requirement from consumers, during FY 2019-20, the work was deferred due to urgent EHV cable diversion work of MMRC (Mumbai Metro Rail Corporation) and during FY 2020-21 & FY 2021-22, the work was not completed in the target scheduled period due to COVID -19 and delay in material deliveries from the suppliers. • Replacement of 33kV &11 kV switchgear work was delayed

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	because, during FY 2019-20, the work was deferred due to urgent EHV cable diversion work of MMRC (Mumbai Metro Rail Corporation) and during FY 2020-21 & FY 2021-22, the work was not completed in the target scheduled period due to COVID - 19 and delay in material deliveries from the suppliers. • The job of supply, installation, and commissioning of AFF System at all RSS mentioned in this DPR is delayed due to delay in tendering process. Earlier tender was invited for the same. but it was cancelled due to higher rates quoted by the suppliers. • For supply installation and commissioning of Battery & Battery Charger, a contract was awarded to the firm M/s. Chabbi Electricals Ltd. The firm has executed some work; balance work is delayed due supplier's problems at their end. • 33 kV cable laying from TPC Carnac to Ballard Estate & Naval Dock Yard RSS is pending as our management has decided to replace all 45 kms of cables in south Mumbai under Turnkey contract and preparation of document for inviting tender is in progress. • Cable laying at Mahalaxmi & Worli RSS is to be executed under IPDS Project (IPDS DPR No. MERC/CAPEX/2019-20/418 dated 26 July 2019). Hence due to delay in tendering process of IPDS, scheme is delayed. At present cable is laid by the turnkey contractor firm M/s. L&T Ltd. Under IPDS.
Reason for cost overrun if any	-

Expenditure details:

	Expenditure as per DPR	Actual Expenditure
Project Cost	Rs.36.63 Crore	Rs. 14.20 Crore

Extent to which scope and objective were achieved:

i. Except Mahalaxmi RSS (2 Nos.), Kussara & Mazgaon Dock RSS (1 No. each), all other work related to replacement of T/Fs in the DPR is completed in all respect.

1 No. of T/F at Worli RSS is replaced under IPDS. Hence scope of work is deleted from this DPR.

ii. Except Mumbadevi RSS & Masjid RSS (1 No.), all other work related to replacement of 33 kV Switchgears in the DPR is completed in all respect.

Mahim Causeway (2 Nos) and Sion Fort (1 No.) was deleted from the scope of work of this DPR and included in BEST/21/02 & BEST/ 20/02 DPR respectively. Also Mumbai Central work was executed in IPDS scheme. Hence scope of work of above RSS is deleted from this DPR.

iii. All work related to replacement of 11 kV switchgears in the DPR is completed in all respect. Except Grant Road RSS, this is covered in BEST 20/02 DPR. Hence scope of work of above RSS is deleted from this DPR.

iv. Due to execution of this DPR, reliability and quality of supply is improved

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The Brihan Mumbai Electric Supply & Transport Undertaking

(OF THE BRIHAN MUMBAI MAHANAGARPALIKA)

PROJECT DEPARTMENT

TELEPHONE : (022) 22822080
Email ID : depro@bestundertaking.com

2nd Floor,
Backbay Veej Bhavan,
149/150, Gen. J. Bhosale Marg,
Nariman Point,
Mumbai - 400 021.

ADDRESS ALL COMMUNICATION BY TITLE NOT BY NAME

ESO/CEPL/Adm-9(B)/MERC/ 194 /2024

DATE : 16 DEC 2024

To,
The Secretary,
Maharashtra Electricity Regulatory Commission
13th Floor, Centre No.1,
World Trade Centre,
Cuffe Parade, Colaba 400 005

Sub: Scheme Closure Report for DPR Scheme 'Revamping of Existing Receiving Substations' Capital Investment Scheme for FY 2016-17 to 2019-20).

Ref: MERC MERC/CAPEX /2017-18/4706 dated 16th November 2017.

Dear Sir / Madam,

This has reference to the Capital Scheme MERC Reference No. MERC/CAPEX /2017-18/4706 dated 16th November 2017 (BEST Reference No. BEST/FY17/02 and BEST/FY18/02) for "Revamping Existing Receiving Substations" for FY 2017-18 to FY2019-20. The Hon'ble Commission has accorded in-principle approval for subject DPR with Costing of Rs.64.09 Cr and 58.86 Cr. This scheme is to be closed as the scope of work under approved DPR is almost completed and balance if any work will be included in new DPR. Also, this DPR is old one; therefore, we are submitting the Scheme Closure Report of the Scheme as *Appendix* to this submission.

Yours faithfully,

DCE REVIEW COMMITTEE-I BEST

(S.S.Adlinge)
Dy.Chief Engineer (RC-1)

OFFICE OF THE
MAHARASHTRA ELECTRICITY
REGULATORY COMMISSION
WTC, CUFFE PARADE, MUMBAI - 400 005.

Appendix-A

PROJECT COMPLETION REPORT

Name of the Scheme	'Revamping Existing Receiving Substations' (2016-17 to 2019-20)
BEST Scheme Code	BEST/FY17/02
MERC Reference No.	MERC/CAPEX/2017-18/4706 dated 16th November 2017.
Objective of the Scheme (As per DPR)	To meet increasing load in area of supply and to improve quality and reliability of supply

Scheduled / Actual completion dates:

Scheduled date of starting	1st April 2016
Actual date of starting	1st April 2014
Scheduled date of completion	31st March 2020
Actual date of completion	31 March 2024
Scope of Work (As per DPR)	• Replacement of 10 MVA T/F by 16 MVA at PMGP & Sewree RSS (Qty- 2Nos.) • Replacement of 33 kV switchgears at PMGP & KEM RSS – (Qty- 2 Nos.) • Replacement of 11 kV switchgears at RSS – PMGP (1 No.), Mahim Causeway (2 Nos.), Sion Fort (2 Nos.) & Esplanade (3 Nos.) (Qty- 8Nos.) • Replacement of Battery and Charger at RSS- G.T. Hospital, Khetwadi, KEM , Esplanade, Nepean sea, Mahim Causeway (Qty-6) • 33 kV cable laying from TPC Dharavi fort PMGP RSS. • 33 kV cable replacements on L.T. Marg from Metro Junction to Mohd. Ali Road for G.T. Hospital, Esplanade, Girgaum, Malabar Hill, Marine Drive RSS, Cable on Apollo Bunder & Diversion of connection point of KEM & Kingsway RSS, Cable from TPC Mahalaxmi to Prabhadevi RSS.
Actual completed work	**FY2014-15, FY2015-16 & FY2016-17**: 1) 33 kV cable laid from Malabar Hill to Birla Krida Kendra Girgaum. TPC Mahalaxmi to Prabhadevi RSS. 2) In addition to above, in FY 2016-17, T/F No.3 at Sewree RSS (WIP) and Battery & Battery Charger are replaced at Mahim Causeway. **FY2017-18**: 1) Replacement of T/F at Sewree RSS. 2) Replacement of Battery & Battery Charger at Naval Dock RSS. 3) 33 kV cable laid from TPC Dharavi to PMGP RSS & K'way to KEM RSS (WIP). **FY2018-19**: 1) 33 kV cable laid from Kingsway to KEM RSS.

	2) Installation of 11 kV bus section at Sion Fort RSS (WIP). **FY2019-20:** 1) Replacement of 11 kV Bus Section No.1 at Sion Fort RSS. 2) Replacement of Battery and Charger at Nepean Sea, KEM & Esplanade RSS (WIP). 3) AFF CO_2 Type at 110 kV Backbay RSS (WIP). **FY2020-21& FY 2021-22:** 1) Replacement of Battery and Charger at Esplanade, Khetwadi & G.T. Hospital RSS. 2) Installation of AFF CO_2 Type at 110 kV Backbay RSS. **FY2022-23:** 1) Installation of 33/11 kV, 16 MVA T/F, 33 kV & 11 kV Switchgears, AFF & CARP at PMGP RSS (WIP). 2) Installation of 11 kV Bus Section No. 2 at Sion Fort RSS. 3) AFF System at Nariman Point RSS. 4) Cable laying for Kingsway & Prabhadevi RSS. **FY2023-24:** 1) Installation of T/F, 33 kV & 11 kV Sw/grs at PMGP 2) Cable laying at PMGP RSS.
Pending Work if any	• 33 kV switchgear replacement at KEM RSS (1 No.) • 11 kV Bus Section replacement at RSS: – Mahim Causeway (2 Nos.) & Esplanade (3 Nos.) • Installation of Capacitors & Reactor at PMGP RSS. • Replacement of Battery and Charger at KEM RSS. • Cable laying for G.T Hospital, Girgaum Esplanade, Marine Drive.
Reason for delay if any	• Replacement of 11 kV switchgear work at Mahim Causeway & Esplanade RSS was delayed because, during FY 2019-20, the work was deferred due to urgent EHV cable diversion work of MMRC (Mumbai Metro Rail Corporation) and during FY 2020-21 & FY 2021-22, the work was not completed in the target scheduled period due to COVID -19. • Power Factor of BEST is 0.99, therefore, the replacement of Capacitor & Reactor is deferred. • Replacement of Battery & Battery Charger at KEM RSS was delayed due to Covid-19 pandemic as there was problem at supplier's end. • Cable laying for G.T Hospital, Girgaum Esplanade, and Marine Drive was not executed due to shortage of work force and funds for execution of scheme.
Reason for cost overrun if any	-

Expenditure details:

	Expenditure as per DPR	Actual Expenditure
Project Cost	Rs.64.09 Crore	Rs. 39.53 Crore

Extent to which scope and objective were achieved:

i. Except 11 kV switchgears at Mahim Causeway (2 Nos.), Esplanade (3 Nos.) and cable laying schemes at L.T. Marg to Marine Drive, G.T. Hospital, Girgaum, Malbar Hill, Battery & Charger at KEM all other work included in this DPR is completed in all respect.

ii. Pending work including balance 33 kV cable laying is included in RDSS DPR. Therefore, capitalization cost is less (Rs.39.53 Cr) as compared to the approved cost (Rs.64.09 Cr).

iii. Due to execution of this DPR, reliability and quality of supply is improved

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Appendix-B

PROJECT COMPLETION REPORT

Name of the Scheme	'Revamping Existing Receiving Substations' (2016-17 to 2019-20)
BEST Scheme Code	BEST/FY18/02
MERC Reference No.	MERC/CAPEX/2017-18/4706 dated 16th November 2017.
Objective of the Scheme (As per DPR)	To meet increasing load in area of supply and to improve quality and reliability of supply

Scheduled / Actual completion dates:

Scheduled date of starting	1st April 2016
Actual date of starting	1st April 2016
Scheduled date of completion	31st March 2020
Actual date of completion	31 March 2024
Scope of Work (As per DPR)	• Replacement of 10 MVA T/F by 16 MVA at Ballard Estate(1 No.) , Prabhadevi(1 No.) , Sewree RSS (2 Nos.) & Love Grove RSS (2 Nos.) (Qty- 6 Nos.) • Replacement of 33 kV switchgears at Sewree (2 Nos.), G.T. Hospital (2 Nos.) & Ballard Estate (1 No.) (Qty-5 Nos.) • Replacement of 11 kV switchgears at RSS – Ballard Estate (1 No.), Mahim (2 Nos.), Nepean Sea (3 Nos.) and Malabar Hill (1 No.) (Qty- 7 Nos.) • Replacement of HT Capacitor & Reactor at Ballard Estate RSS. • Replacement of Battery at Sion Fort, DBA, Lalbaug, Worli Dairy, J,J,Hospital, Elphinston Mill, Tardeo RSS & Peninsula Land HT Room.(Qty-8) • Battery Charger at Sion Fort, DBA& Lalbaug RSS. (Qty.3 Nos.) • 33 kV cable laying from TPC Carnac to Ballard Estate RSS (4 Km) • 33 kV cable replacements in part for Hutatma Chowk, Marine Drive, G.T. Hospital, Colaba, Naval Dock Ballars Estate & Navy Nagar (Qty.; 29.26 kM.).
Actual completed work	**FY2016-17**: Replacement of 11 kV bus section at Malabar Hill RSS. **FY2017-18 & 2018-19:** Replacement of T/F & accessories at Love Grove RSS. **FY2019-20**: 1. Installation of Earthing at Prabhadevi RSS. 2. Installation of Battery & Charger at J.J. Hospital.

	FY 2020-21 & FY 2021-22: **1.** Earthing & Replacement of 33 KV Switchgears at Sewree RSS. **FY2022-23:** **1)** Installation of 33 kV switchgears at Sewree RSS and G.T. Hospital, 2) Installation of Battery & Charger at Tardeo, Lalbaug, Peninsula Land & Sion Fort RSS. 3) Earthing at Prabhadevi, G.T. Hospital & Ballard Estate RSS. **FY2023-24**: Installation of 11 kV bus sections at Nepean sea RSS.
Pending Work if any	• Replacement of Transformers at RSS – Ballard Estate (1 No.), Love Grove (1 No), Prabhadevi (1 No.), and Sewree (1 No.) (Qty-4 Nos.). • 33 kV switchgear replacement at RSS: – Ballard Estate (1 No.) • 11 kV Bus Section replacement at RSS: – Ballard Estate (1 No.), Mahim (2 Nos.) Nepean Sea (1 No.) (Qty.: 4 Nos.) • Installation of Capacitors & Reactor at Ballard Estate RSS. • Replacement of Battery Charger at Worli Dairy & 110 kV DBA RSS. • 33 kV cable laying from TPC Carnac to Ballard Estate RSS (4 Km) • 33 kV cable replacements in part for Hutatma Chowk, Marine Drive, G.T. Hospital, Colaba, Naval Dock Ballars Estate & Navy Nagar (Qty.; 29.26 kM.).
Reason for delay if any	• Replacement of 33 kV & 11 kV switchgear work at Ballard Estate and Mahim (2 Nos.) & Nepean Sea (1 No.) respectively was delayed because, during FY 2019-20, the work was deferred due to urgent EHV cable diversion work of MMRC (Mumbai Metro Rail Corporation) and during FY 2020-21 & FY 2021-22, the work was not completed in the target scheduled period due to COVID -19 and delay in material deliveries from the suppliers. • Power Factor of BEST is 0.99, therefore, the replacement of Capacitor & Reactor is deferred. • Replacement of Battery & Battery Charger at Worli Dairy & 110 kV DBA RSS was delayed due to Covid-19 pandemic as there was problem at supplier's end. • 33 kV cable laying from TPC Carnac to Ballard Estate (4 Km.) & part replacement of Hutatma Chowk, Marine Drive, G.T. Hospital, Colaba, Naval Dock Ballard Estate & Navy Nagar (Qty.; 29.26 km.). is deffered due to shortage of work force and funds for execution of schemes.
Reason for cost overrun if any	-

Expenditure details:

	Expenditure as per DPR	Actual Expenditure
Project Cost	Rs.58.86 Crore	Rs. 9.25 Cr

Extent to which scope and objective were achieved:

1. The T/Fs at Love Grove (1 No), Prabhadevi (1 No.) was installed under IPDS DPR. Hence the scope of work is deleted from this DPR.

2. Now, balance work is included in RDSS DPR, hence same may be deleted from this DPR.

iv. Due to execution of this DPR, reliability and quality of supply is improved

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The Brihan Mumbai Electric Supply & Transport Undertaking

(OF THE BRIHAN MUMBAI MAHANAGARPALIKA)

TELEPHONE : (022) 22856262
FAX : (022) 22851244
TELEX : 1185755 BEST IN
TELEGRAM : BEST, MUMBAI-400 001.

BEST BHAVAN,
BEST MARG,
POST BOX NO. 192
MUMBAI - 400 001.

ADDRESS ALL COMMUNICATION BY TITLE NOT BY NAME

OUR REF. : **ESO/CEPL/Adm9(B)/MERC/ 81 /2023**

DATE : 16.10.2023

To,

The Secretary,
Maharashtra Electricity Regulatory Commission
13th Floor, Centre No.1,
World Trade Centre,
Cuffe Parade, Colaba 400 005

Sub: Scheme Closure Report for DPR Scheme 'Revamping of Existing Receiving Substations' (BEST Code No. - BEST/FY18/02A).

Ref: DPR approved by the Hon'ble Commission vide Letter reference No. MERC/CAPEX/DPR/2019-20/135 dated 10.05.2019.

Dear Sir / Madam,

This has reference to the Capital Investment Scheme (BEST Code No. BEST/FY18/02A) for "Revamping of Receiving Substations" for FY2017-18 to FY 2019-20. The Hon'ble Commission had accorded in principle approval for subject DPR (Scheme MERC approved value Rs. 15.58 Crore) vide above referred MERC letter on 10th May 2019. This scheme is to be closed as the scope of work under this approved DPR is almost completed. Pending work (replacement of 11 kV switchgears at Masjid, Love Grove RSS and installation of T/F at Naval Dock RSS; will be included in new DPR scheme. We are submitting the Scheme Closure Report of the subject Scheme as *Appendix* to this submission.

The Hon'ble commission is kindly requested to consider the attached scheme closure report.

Yours faithfully,

(S. P. Makwana)
Chief Engineer (Planning)

17/10/2023
OFFICE OF THE
MAHARASHTRA ELECTRICITY
REGULATORY COMMISSION
WTC, CUFFE PARADE, MUMBAI - 400 005.

DEPTY
16/10/23.

"BEST Travel Saves Fuel"

Appendix

PROJECT COMPLETION REPORT

Name of the Scheme	'Revamping of Receiving Substations' (FY 2017-18, FY2018-19 & FY2019-20)
BEST Scheme Code	BEST/FY18/02A
MERC Code No.	MERC/CAPEX/2019-20/135 dated10.05.2019
Objective of the Scheme (As per DPR)	To meet increasing load in area of supply and to improve quality and reliability of supply.

Scheduled / Actual completion dates:

Scheduled date of Starting	1st April 2017 (FY 2017-18)
Actual date of Starting	1st April 2017 (FY 2017-18)
Scheduled date of completion	31st March 2020 (FY 2019-20)
Actual date of completion	31st March 2022 (FY 2021-22)
Scope of Work (As per DPR)	• Installation of additional T/Fs at 110 kV DBA (2 Nos) & Naval Dock, Sitaladevi RSS (1 No. each). • Replacement of 33 kV AIS 1800 MVA bus sections (Switchgears& Accessories) 2 Nos. at 110 kV Khetwadi RSS and 33 kV, 1500 MVA, Switchgears at Naval Dock RSS (Qty- 1 No.). • Replacement of 11 kV, switchgears & accessories at Nestle, Love Grove, Malbar Hill & Masjid RSS.
Actual completed work	**FY2017-18**: 1) Replacement / installation of 11 kV Bus Sections at Nestle & Naval Dock RSS. 2) Installation of additional T/F at Sitaladevi RSS. 3) Installation of earthing electrode, CARP, 33 kV switchgears & 11 kV Bus sections at 110 kV, DBA RSS (**Capitalization - 4.33 Cr**.). **FY2018-19**: 1) Installation of earthing, T/F, 11kV bus sections, NIFP at 110 kV DBA RSS. 2) Civil work & Electrical work at DBA RSS. 3) Installation of 11 kV switchgears & CARP at Naval Dock RSS for additional T/F (T/F No.4) 4) Installation of 11 kV & 33 kV switchgears, T/F, earthing, CARP atSitaladevi RSS. **(Capitalization -5.80 Cr)**. **FY2019-20 & FY2020-21:**1) Installation of NIFP System at 110 kV DBA RSS. 2) Installation of 33 kV AIS bus sections at 110 kV, Khetwadi RSS (**Capitalization -2.79 Cr. & 1.83 Cr.).** **FY2021-22**: Installation of T/F and civil work at Naval Dock RSS **(Capitalisation -0.73 Crs.).**
Pending Schemes / Work if any	1) Replacement of 11 kV switchgears at Masjid RSS. The scheduledwork is executed under IPDS; hence the scheme is deleted from this DPR.

	2) Scheme of replacement of 11 kV switchgears at Love Grove RSS (Qty-1). 3) Installation of additional T/F at Naval Dock RSS
Reason for delay if any	1) As per schedule, the work included in this DPR is required to be completed before March 2020. However, the civil work required for installation & commissioning of T/F at Naval Dock RSS is deferred due to security reasons i.e., strict restrictions imposed on outside personnel entering in the naval premises by the Naval Authority. Because of which, considerable time had elapsed for security check of contractor personnel before entering in the naval premises each time. Now, civil work is completed. 2) The work included in this DPR is also deferred due to EHV cable diversion for MMRC (Mumbai Metro Rail Corporation). Since the MMRC work was of urgent in nature.
Reason for pending work at Naval Dock RSS and Not considering the T/F cost in DPR	1. Transformer installation work at Naval Dock is pending due to non-availability of 33/11-6.6 kV D/R T/F. Earlier it was decided to install old 10/12.5 MVA, 22/11-6.6 kV, Sr. No. 90WF-003/6, Kirloskar Make, T/F Manufacturing year 1992 removed from Cumbala Hill RSS. But due heavy oil leakage, it was decided 'Not to Install' old T/F. 2. Being an old transformer, the depreciated cost of the transformer is worked out and same is considered as Unit cost of the transformer. Depreciated / residual value of power transformer is Rs.340093.00. Hence, in cost Sheet the cost of T/F is considered as NIL.
Reason for cost overrun if any	-

Expenditure details:

	Expenditure as per DPR	Actual Expenditure
Project Cost	Rs.15.58 Crore	Rs.15.48 Cr.

Extent to which scope and objective were achieved:

1. Except replacement of 11 kV switchgears at Masjid, Love Grove RSS and installation of T/F at Naval Dock all other work included in the DPR is completed in all respect.
2. Due to execution of this DPR, reliability and quality of supply is improved.

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o/c

The Brihan Mumbai Electric Supply & Transport Undertaking

(OF THE BRIHAN MUMBAI MAHANAGARPALIKA)

PROJECT DEPARTMENT

TELEPHONE : (022) 22822080
Email ID : depro@bestundertaking.com

2nd Floor,
Backbay Veej Bhavan,
149/150, Gen. J. Bhosale Marg,
Nariman Point,
Mumbai - 400 021.

ADDRESS ALL COMMUNICATION BY TITLE NOT BY NAME

ESO/CEPL/Adm9(B)/MERC/ 195 /2024

DATE : 16 DEC 2024

To,
The Secretary,
Maharashtra Electricity Regulatory Commission
13th Floor, Centre No.1,
World Trade Centre,
Cuffe Parade, Colaba 400 005

Sub: Scheme Closure Report for DPR Scheme 'Revamping of Existing Receiving Substations' Capital Investment Scheme for FY 2019-20 to 2024-25 (BEST Reference No. BEST/FY20/02).

Ref: MERC/CAPEX /2020-21/553 dated 15th December, 2021.

Dear Sir / Madam,

This has reference to the Capital Scheme MERC Reference No. MERC/CAPEX /2020-21/553 dated 15th December, 2021 (BEST Reference No. BEST/FY20/02) for "Revamping Existing Receiving Substations" for FY 2019-20 to 2024-25. The Hon'ble Commission has accorded in-principle approval for subject DPR with Costing of Rs.40.60 Cr. This scheme is to be closed as the scope of work under approved DPR is almost completed and balance if any work will be included in new DPR. Therefore, we are submitting the Scheme Closure Report of the Scheme as *Appendix* to this submission.

Yours faithfully,

DCE REVIEW COMMITTEE-I BEST

(S.S.Adlinge)
Dy.Chief Engineer (RC-1)

16/12/2024

OFFICE OF THE
MAHARASHTRA ELECTRICITY
REGULATORY COMMISSION
WTC, CUFFE PARADE, MUMBAI - 400 005.

Appendix-A

PROJECT COMPLETION REPORT

Name of the Scheme	'Revamping Existing Receiving Substations' (2019-20 to 2024-25)
BEST Scheme Code	BEST/FY20/02
MERC Reference No.	MERC/CAPEX /2020-21/553 dated 15th December, 2021.
Objective of the Scheme (As per DPR)	To meet increasing load in area of supply and to improve quality and reliability of supply

Scheduled / Actual completion dates:

Scheduled date of starting	1st April 2019
Actual date of starting	1st April 2019
Scheduled date of completion	31st March 2025
Actual date of completion	31 March 2024
Scope of Work (As per DPR)	• Installation of additional Transformer, 16 MVA, 33/11 kV and associated equipments at Nepean Sea and Kingsway RSS (Qty- 2Nos.) • Replacement of 16 MVA, 33/11 kV Transformer at Grant Road RSS (Qty- 1 Nos.) • Installation of additional 1 no. of 33 kV, 1500 MVA, RMU at Avighna, 33/0.415 kV DSS (Qty. 1 No.) • Replacement/Installation of 33kV, 1500 MVA, AIS Bus Section at Elphinstone Mill RSS (Qty.:- 2 Nos.) • Replacement of 33 kV, 1500 MVA, switchgears at Mazgaon Dock (1 No.), Sion Fort (2 Nos.), Colaba (1No.), Nepean Sea (2 Nos.), Kingsway(2Nos.), Mahim (2 Nos.) and Dharavi (3 Nos.) (Total Qty- 13 Nos.) • Replacement of 11 kV switchgears at Grant Road(4 Nos.), Sewree(3 Nos.), Parel(3 Nos.), Dharavi(2 Nos.), Wadala (2 Nos.), Kingsway(3 Nos.), Mahim(2 Nos.), Prabhadevi(3 Nos.), KEM Hospital (1 No.), Worli (2 Nos.), Mahalaxmi (3 Nos.) and Nair Hosp. RSS (1 No.) (Total Qty- 29 Nos.) • Replacement/Installation of Capacitors at Cumballa Hill RSS, Kingsway RSS, Wadala RSS, Worli Dairy RSS, Sitaladevi RSS (1 No. Each) and Sewree (2 Nos.) (Total Qty- 7 Nos.) • Replacement/Installation of Reactors at Masjid RSS, Hutatma Chowk RSS, Grant Road RSS,, Cumballa Hill RSS, Kingsway RSS, Kussara RSS, Mahalaxmi RSS (1 No.Each) and Sewree (2 Nos.) (Total Qty- 9 Nos.)

	• Replacement of Battery and Charger at Grant Road, Nariman Point, Ballard Estate, Colaba, Hutatma Chowk, MAZGAON Dock , Dharavi and Apollo RSS (Qty-8) • Replacement of Fire Fighting System at Love Grove and Naval Dock RSS (Water Mist Type, Qty.: 2 Nos.) • Replacement of Fire Fighting System at Sitladevi RSS, Sion Fort RSS, Hutatma Chowk RSS, Mahim Causeway RSS, Byculla RSS, Sewree RSS, Khetwadi RSS (CO 2 Type, , Qty.: 7 Nos.)
Actual completed work	**FY2019-20:** 1) Install. of earthing, 11 kV & 33 kV Sw/Gr. at Nepean Sea RSS. 2) Install. of earthing & T/F at Grant Road RSS 3) 33 kV RMU Replacement of at Avighna RSS. 4) Repal. of 33 kV Sw/Gr. at Sion Fort and Mazgaon Dock RSS. 5) Repla. of 11 kV B.S. at Parel and Sewree RSS 6) Repla. of Battery and Charger at Mazgaon Dock and Hutatma Chowk RSS 7) AFF System at Naval Dock RSS. 8) 33 kV cable laying at Nepean Sea RSS. **FY2020-21:** 1) Cable laying, Installation of earthing, 11 kV & 33 kV Sw/Gr and T/F at Nepean Sea RSS. 2) Civil work at Grant Road RSS 3)Installation of RMU at Avighna RSS. 4) Inst. Of 1i kV Sw.Gr at Sewree & Parel RSS. 5) Earthing at Kingsway, Parel & Mahalaxmi RSS. 6) FF at Hutatama Chowk & Khetwadi RSS. 7)Replacement of Battery and Charger at Nariman Point Ballard Estate, Colaba & Mazgaon Dock RSS **FY2021-22:** 1) Earthing ,Civil work and Inst. Of 33 kV Sw/Gr. , T/F & FF at Nepean Sea RSS. 2) Earthing at Grant Rd. Avighna, Mahalaxmi & Kingsway RSS. 3) Repl. Of 11 kV Sw/Gr. at Parel RSS. 4) Battery & Charger at Ballard Estate. **FY2022-23:** 1) Installation of addnl. T/F, 11 kV sw.gr. AFF & Earthing at Kingsway RSS. 2) Earthing at Nepean Sea , Colaba RSS 3) Battery &/battery charger at Nariman Point RSS. 4) Installation of 11 kV Sw.Gr at Prabhadevi & Kingsway RSS. 5) Installation of AFF at Byculla , Kingsway, Hutatma Chowk RSS 6) Cable diversion of Nepensea RSS. **FY2023-24:** 1) Installation of earthing & Install. Of 11 kV Sw/Gr. At Kingsway RSS..

SPRDH

Pending Work if any	• 33 kV switchgear replacement at Colaba(1 No.), Kingsway (2 Nos.), Mahim(2 Nos.), Dharavi(3 Nos.) (Total Qty- 8 Nos.) • 11 kV switchgear replacement at Grant Road (4 Nos.), Sewree (2 Nos.), Dharavi (2 Nos.), Wadala(2 Nos.), Mahim(2 Nos.), Prabhadevi (2 Nos.), KEM (1 No.), Worli (2 Nos.), Mahalaxmi (3 No.), Nair Hosp.(1 No.). (Total Qty- 21 Nos.) • Installation of Capacitors at Cumballa Hill, Kingsway, Wadala, Worli Dairy, Sitaldevi (1 each) and Sewree RSS (2 Nos.) (Total Qty- 7 Nos.) • Installation of Reactor at Masjid RSS, Hutatma Chowk RSS, Grant Road RSS,, Cumballa Hill RSS, Kingsway RSS, Kussara RSS, Mahalaxmi RSS (1 No.Each) and Sewree (2 Nos.) (Total Qty- 9 Nos.) • Replacement of Battery and Charger at Grant Road, Dharavi and Apollo RSS. • Replacement of Fire Fighting System at Love Grove RSS (Water Mist Type, Qty.: 1 Nos.) • Replacement of Fire Fighting System at Sitladevi RSS, Sion Fort RSS, Mahim Causeway RSS, Sewree RSS (CO 2 Type, Qty.: 5 Nos.)
Reason for delay if any	----
Reason for cost overrun if any	----

Expenditure details:

	Expenditure as per DPR	Actual Expenditure
Project Cost	Rs.40.60 Crore	Rs. 30.18 Crore

Extent to which scope and objective were achieved:

i. Major scope of the work included in this DPR is completed in all respect.

ii. 33 kV switchgear replacement at Colaba (1 No.), Kingsway (2 Nos.), Mahim (2 Nos.), Dharavi (3 Nos.) (Total Qty- 8 Nos.) is already included in RDSS DPR, hence the said work may be considered as deleted from this DPR.

iii. 11 kV switchgear replacement at Grant Road (4 Nos.), Sewree (2 Nos.), Dharavi (2 Nos.), Wadala (2 Nos.), Mahim(2 Nos.), Prabhadevi (2 Nos.), KEM (1 No.), Worli (2 Nos.), Mahalaxmi (3 No.), Nair Hosp.(1 No.). (Total Qty- 21 Nos.) is already included in RDSS DPR, hence the said work may be considered as deleted from this DPR.

iv. Balance scope of work i.e. Battery & Battery charger & replacement of AFF System is to be included in the new DPR .

v. Due to execution of this DPR, reliability and quality of supply is improved

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The Brihan Mumbai Electric Supply & Transport Undertaking

(OF THE BRIHAN MUMBAI MAHANAGARPALIKA)

PROJECT DEPARTMENT

TELEPHONE : (022) 22822080
Email ID : depro@bestundertaking.com

2nd Floor,
Backbay Veej Bhavan,
149/150, Gen. J. Bhosale Marg,
Nariman Point,
Mumbai - 400 021.

ADDRESS ALL COMMUNICATION BY TITLE NOT BY NAME

DATE : 16 DEC 2024

ESO/CEPL/Adm9(B)/MERC/196 /2024

To,
The Secretary,
Maharashtra Electricity Regulatory Commission
13th Floor, Centre No.1,
World Trade Centre,
Cuffe Parade, Colaba 400 005

Sub: Scheme Closure Report for DPR Scheme 'Revamping of Existing Receiving Substations' Capital Investment Scheme for FY 2020-21 to 2022-23) (BEST Reference No. BEST/FY21/02).

Ref: MERC/CAPEX /2022-23/0556 dated 14th November, 2022.

Dear Sir / Madam,

This has reference to the Capital Scheme MERC Reference No. MERC/CAPEX /2022-23/0556 dated 14th November, 2022 (BEST Reference No. BEST/FY21/02) for "Revamping Existing Receiving Substations" for FY 2020-21 to 2022-23. The Hon'ble Commission has accorded in-principle approval for subject DPR with Costing of Rs.56.07 Cr. This scheme is to be closed as the scope of work under approved DPR is almost completed and balance if any work included in new DPR. Also, this DPR is old one; therefore, we are submitting the Scheme Closure Report of the Scheme as *Appendix* to this submission.

Yours faithfully,

DCE REVIEW COMMITTEE-I BEST

(S.S.Adlinge)
Dy.Chief Engineer (RC-1)

OFFICE OF THE
MAHARASHTRA ELECTRICITY
REGULATORY COMMISSION
WTC, CUFFE PARADE, MUMBAI - 400 005.

Appendix-A

PROJECT COMPLETION REPORT

Name of the Scheme	'Revamping Existing Receiving Substations' (2019-20 to 2022-23)
BEST Scheme Code	BEST/FY21/02
MERC Reference No.	MERC/CAPEX /2022-23/0556 dated 14th November, 2022.
Objective of the Scheme (As per DPR)	To meet increasing load in area of supply and to improve quality and reliability of supply

Scheduled / Actual completion dates:

Scheduled date of starting	1st April 2019
Actual date of starting	1st April 2019
Scheduled date of completion	31st March 2023
Actual date of completion	31 March 2024
Scope of Work (As per DPR)	• Replacement of 10/12.5 MVA Transformer at Sitladevi RSS and Byculla RSS Tr. No. 1&3. (Total Qty- 3 Nos.) • Replacement of 33 kV, 1500 MVA, switchgears at Mahim Causeway RSS (Total Qty- 3 Nos.) • Diversion of 33 kV feeder cables of RSS viz. Wadala RSS (T/F. No. 1&3), Kingsway RSS (T/F. No. 2), Raoli Hill RSS (T/F. No. 2), Sion Fort RSS (T/F. No. 2), Pratiksha Nagar RSS (T/F. No. 1), Lodha Crown T6 RSS (T/F. No. 1) from TPC Dharavi to TPC Antop Hill and laying of additional cables for proposed Pratiksha Nagar RSS (T/F. No. 2), Lodha Crown T6 RSS (T/F. No. 2), Lodha Crown T10 RSS (T/F. No. 1&2) and New RSS commissioning at Dosti Acres (Total Qty.: 16.961 Kms..) • Replacement of 33 kV cable from TPC Parel to Marathon Futurex along with additional cables. (Total Qty.: 5.722 Kms.) • Replacement and Diversion of 33 kV cable part portion of Cumballa Hill RSS (T/F. 1,2 & 4) and laying additional one 33 kV cable for Apollo Mill RSS(T/F. 2) (Total Qty.: 7.761 Kms.) • Diversion & Replacement of EHV cables of Sitladevi RSS (T/F. 1,2,3 &4), VSNL HV Consumer from T.H. Kataria Marg ROB below Western Railway Tracks (Total Qty.: 2.210 Kms., Includes HDD Cost) • Diversion & Replacement of EHV cables of part portion of 33 kV feeder DBA1→ Futurex 33 kV HT Room LHS & DBA 2→ Futurex 33 kV HT Room RHS below Western Railway Tracks (Delisle ROB) (Total Qty.: 3.420 Kms., Includes HDD Cost)

Actual completed work	**FY2019-20**: 1) Installation of earthing at Byculla & Mahim Causeway RSS. 2) 33 kV cable laid at Antop Hill. **FY2020-21**: Earthing & laying of 33 kV cable at Byculla RSS 2) 33 kV cable diversion at Antop Hill. **FY2021-22**: 1) Installation of earthing & T/F at Byculla RSS. 2) 33 kV cable diversions at Antop Repl. Hill. 3) Replacement of 33 kV switchgears at Mahim Causeway RSS. **FY2022-23:** 1) Diversion & Replacement 33 kV cable for DBA ---> Marathon Futurex 2) 33 kv Cable diversion for Raoli Hill, Lodha Crown , Sion Fort, Pratiksha Nagar RSS. 3) Cable diversion at T.H.Kataria Marg and Chinchpokli Rly. Station. **FY2023-24:** 1) Cable laying at Kataria Bridge.
Pending Work if any	• Replacement of Transformer at Sitaladevi RSS (1 No.) • Replacement and Diversion of 33 kV cable part portion of Cumballa Hill RSS (T/F. 1,2 & 4) and laying additional one 33 kV cable for Apollo Mill RSS(T/F. 2) (Total Qty.: 7.761 Kms.) • Diversion & Replacement of EHV cables of Sitaladevi RSS (T/F. 1,2,3 &4), VSNL HV Consumer from T.H. Kataria Marg ROB below Western Railway Tracks (Total Qty.: 2.210 Kms., Includes HDD Cost)
Reason for delay if any	----
Reason for cost overrun if any	----

Expenditure details:

	Expenditure as per DPR	Actual Expenditure
Project Cost	Rs.56.07 Crore	Rs. 27.36 Crore

Extent to which scope and objective were achieved:

i. Replacement of Transformer at Sitaladevi RSS and cable laying schemes for Cumballa Hill, Stialdevi (Tr. 1,2,3 & 4) & VSNL is included in the RDSS DPR hence, the said scope of work may be deleted from this DPR.

ii. As per estimated cost, major capital expenditure is required to be made on Cable laying and RI Charges. Now, the same work is included in RDSS. Hence, there is lower capitalisation (Rs.27.36 Cr) as against approved capitalisation (Rs. 56.07 Cr).

iii. Due to execution of this DPR, reliability and quality of supply is improved

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O/c

The Brihan Mumbai Electric Supply & Transport Undertaking

(OF THE BRIHAN MUMBAI MAHANAGARPALIKA)

TELEPHONE : (022) 22856262
FAX : (022) : 22851244
TELEX : 1185755 BEST IN
TELEGRAM : BEST, MUMBAI-400 001.

BEST BHAVAN,
BEST MARG,
POST BOX NO. 192
MUMBAI - 400 001.

ADDRESS ALL COMMUNICATION BY TITLE NOT BY NAME

OUR REF. : ESO/CEPL/Adm9(B)/SCADA/DPR/ 63 /2022

DATE : 11.11.2022

To,
The Secretary,
Maharashtra Electricity Regulatory Commission
13th Floor, Centre No.1,
World Trade Centre,
Cuffe Parade, Colaba 400 005

Sub: Scheme Closure Report for DPR Scheme 'Supervisory Control & Data Acquisition (SCADA)'. BEST Code No.BEST/FY18/08A.

Ref: DPR approved by the Hon'ble Commission vide Letter reference No. MERC/CAPEX/2017-18/4759 dated 22 November 2017.

Dear Sir / Madam,

This has reference to the Capital Investment Scheme No. BEST/FY18/08A for "Supervisory Control & Data Acquisition (SCADA) for FY 2017-18 to FY2020-21". The Hon'ble Commission had accorded in-principle approval for subject DPR (with Scheme MERC approved value Rs. 13.12 Crore) on 22 November 2017. This scheme is old one and the scope of work of this DPR will be included in the RDSS DPR. Therefore, there are NIL chances to complete the work. We are submitting the Scheme Closure Report of the Scheme as *Appendix* to this submission.

The Hon'ble commission is kindly requested to consider the attached scheme closure report.

14/11/2022

OFFICE OF THE
MAHARASHTRA ELECTRICITY
REGULATORY COMMISSION
WTC, CUFFE PARADE, MUMBAI - 400 005.

Yours faithfully,

(V. M. Kamat)
Chief Engineer (Planning)

Cc: CEPL / DCESL- for information.
DETE: For necessary action.

"BEST Travel Saves Fuel"

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PROJECT COMPLETION REPORT

Name of the Scheme	"Scheme 'Supervisory Control & DataAcquisition (SCADA)" Phasing period (FY2017-18 up to FY2020-21)
BEST Scheme Code	BEST/FY18/08A
MERC Code No.	MERC/CAPEX/2017-18/4759dated 22November 2022
Objective of the Scheme (As per DPR)	• Prompt restoration of Electric supply. • Good communication system for SCADA which will reduce revenue loss & assure consumers satisfaction. • To adhere Standards of Performance (SoP) guidelines. • To enhance the safety of the operating personnel during operations for load transfer & outage / maintenance arrangement of electrical equipment's of RSS.

Scheduled / Actual completion dates:

Schedule date of starting	1st April 2017 (FY 2017-18)
Actual date of starting	-
Scheduled date of completion	31st March 2021. (FY2020-21)
Actual date of completion	-
Scope of Work (As per DPR)	A) SCADA System for Central South zone. B) SCADA System for 110 kV Backbay RSS & C) SCADA System for 110 kV DBA RSS
Actual completed work	**NIL**
Pending Work if any	1) SCADA System for Central South zone. 2) SCADA System for 110 kV Backbay RSS 3) SCADA System for 110 kV DBA RSS
Reasons for Delay	1. For implementation of SCADA system for new and existing RSS was delayed due to preparation of RFP and tendering process. Further, tender was invited but same was not materialized due to NIL response. 2. In the mean time BEST had formed a special study team to combine various automation projects. Accordingly, proposal was prepared by combining requirement of zones SCADA, DMS, OMS and put up for management approval. However, due higher cost, the same proposal was kept on hold by management. 3. Afterwards, it was decided to invite tender only for Backbay RSS SCADA and accordingly, tendering process was initiated. In the mean time the Revamped Distribution Sector Scheme (RDSS) was launched by MoP, Government of India. Therefore, BEST management has decided to execute the SCADA project under RDSS. Because of which this DPR is closed.

Expenditure details:

	Expenditure as per DPR	Actual Expenditure
Project Cost	Rs.13.12 Crore	-
Reason for variation of if any : NIL		

Extent to which scope and objective were achieved: NIL

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The Brihan Mumbai Electric Supply & Transport Undertaking

(OF THE BRIHAN MUMBAI MAHANAGARPALIKA)

PROJECT DEPARTMENT

TELEPHONE : (022) 22822080
Email ID : depro@bestundertaking.com

2nd Floor,
Backbay Veej Bhavan,
149/150, Gen. J. Bhosale Marg,
Nariman Point,
Mumbai - 400 021.

ADDRESS ALL COMMUNICATION BY TITLE NOT BY NAME

ESO/CEPL/Adm-9(B)/MERC/ 192 /2024

DATE : 16 DEC 2024

To,
The Secretary,
Maharashtra Electricity Regulatory Commission
13th Floor, Centre No.1,
World Trade Centre,
Cuffe Parade, Colaba 400 005

OFFICE OF THE MAHARASHTRA ELECTRICITY
WTC, CUFFE PARADE, MUMBAI 400 005.

Sub: Scheme Closure Report for DPR Scheme for 'Digitization System' (BEST Code No.BEST/FY18/08B).

Ref: MERC/CAPEX/2017-18/4886 dated 13.12.2017.

Dear Sir / Madam,

This has reference to the Capital Investment Scheme for 'Digitisation System' (BEST Code No.BEST/FY18/08B), the Hon'ble Commission had accorded in principle approval for subject DPR (Scheme MERC approved value Rs. 9.22 Cr) vide above referred MERC letter on 13th December 2017. This scheme is to be closed as the scope of work for GIS Software under this approved DPR is completed with the help of MCGM. We are submitting the Scheme Closure Report of the subject Scheme as *Appendix* to this submission.

The Hon'ble commission is kindly requested to consider the attached scheme closure report.

DCE REVIEW COMMITTEE BEST

Yours faithfully,

(S.S.Adlinge)
Dy.Chief Engineer (RC-1)

Cc: CEPL / DCEW: - For information.
DECO: For necessary action.
DETE: For information and Necessary Action.

Appendix

PROJECT COMPLETION REPORT

Name of the Scheme	'Digitisation System
BEST Scheme Code	BEST/FY18/08B
MERC Code No.	MERC/CAPEX/2011-18/4886 dated13.12.2017
Objective of the Scheme (As per DPR)	To provide improved service to consumers and to Atomize Outage Management System.

Scheduled / Actual completion dates:

Scheduled date of Starting	1st April 2017 (FY 2017-18)
Actual date of Starting	1st April 2017
Scheduled date of completion	31st March 2020
Actual date of completion	31st March 2024
Scope of Work (As per DPR)	• Augmentation / Up-gradation Digitisatioin System. • To undertake integration of CM, CRM, SCADA &Digitisation system to bring them on common GIS Platform.
Actual completed work	FY2017-18: NIL FY2018-19 & FY2019-20: Purchase of hardware. FY 2020-21, FY 2022-23 & FY 2023-24 :NIL
Pending Schemes / Work if any	NIL
Reason for delay and Non execution of the project	Initially it was decided to execute the "Digitisation System" Project by BEST itself. Therefore, this DPR was submitted and approved by MERC. However, in the mean time MCGM has informed to BEST that to bring BEST and MCGM on same platform, GIS Software is required to be used. MCGM is using GIS software of M/s. ESRI and they have deputed their staff for execution of this project in BEST. Please note that the total expenditure towards this project will be borne by MCGM. Therefore, there is No any further expenditure on this project.
Reason for cost overrun if any	NA

Expenditure details:

	Expenditure as per DPR	Actual Expenditure
Project Cost	Rs.9.22 Crore	Rs.0.45 Crore

Extent to which scope and objective were achieved:

1. Except Integration of SCADA &DA, all other work related to GIS included in the DPR is completed in all respect. The work will be done by the staff allotted by MCGM.

2. Due to execution of this DPR, there is faster restoration of supply, asset mapping is also done.

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o/c

The Brihan Mumbai Electric Supply & Transport Undertaking

(OF THE BRIHAN MUMBAI MAHANAGARPALIKA)

PROJECT DEPARTMENT

TELEPHONE : (022) 22822080
Email ID : depro@bestundertaking.com

2nd Floor,
Backbay Veej Bhavan,
149/150, Gen. J. Bhosale Marg,
Nariman Point,
Mumbai - 400 021.

ADDRESS ALL COMMUNICATION BY TITLE NOT BY NAME

ESO/CEPL/Adm9(B)/MERC/ 193 /2024

DATE : 16 DEC 2024

To,
The Secretary,
Maharashtra Electricity Regulatory Commission
13th Floor, Centre No.1,
World Trade Centre,
Cuffe Parade, Colaba 400 005

Sub: Scheme Closure Report for DPR Scheme 'Revamping of Existing Receiving Substations' (BEST Code No.IPDS/BEST/FY15-16/01).

Ref: DPR approved by the Hon'ble Commission vide Letter reference No. MERC/CAPEX/DPR/2019-20/418 dated 26.07.2019.

Dear Sir / Madam,

This has reference to the Capital Investment Scheme (BEST Code No. IPDS/BEST/FY15-16/01) for "Strengthening of electrical Network (Receiving Substation, Dist. Substation & Cable Related Work). The Hon'ble Commission had accorded in principle approval for subject DPR (Scheme MERC approved value Rs. 118.09 Crore) vide above referred MERC letter on 26th July 2019. This scheme is to be closed as the scope of work under this approved DPR is completed. We are submitting the Scheme Closure Report of the subject Scheme as *Appendix* to this submission.

The Hon'ble commission is kindly requested to consider the attached scheme closure report.

Yours faithfully,

(S.S.Adlinge)
Dy.Chief Engineer (RC-1)

DCE REVIEW COMMITTEE-I BEST

Cc: CEPL / DCEW: For information.
DECO: For necessary action.

OFFICE OF THE
MAHARASHTRA E Y
REGULATORY
WTC, CUFFE PARADE,

Appendix

PROJECT COMPLETION REPORT

Name of the Scheme	"Strengthening of electrical Network (Receiving Substation, Dist. Substation & Cable Related Work).
BEST Scheme Code	IPDS/BEST/FY15-16/01
MERC Code No.	MERC/CAPEX/DPR/2019-20/418 dated 26.07.2019.
Objective of the Scheme (As per DPR)	To meet increasing load in area of supply and to improve quality and reliability of supply.

Scheduled / Actual completion dates:

Scheduled date of Starting	1st April 2018
Actual date of Starting	1st April 2018
Scheduled date of completion	31st March 2020
Actual date of completion	31st March, 2021.
Scope of Work (As per DPR)	• Commissioning of New RSS: Pratiksha Nagar & Wankhede • Installation of additional T/F at PMGP 501 RSS. (Qty.; 1No.) • Replacement of 22KV, 10 MVA T/F by 33 KV, 16 MVA T/F. (Qty.; 12 Nos.) • Replacement of 33 kV Primary Switchgears (Qty.; 7 Nos.) • Replacement of 11 kV, switchgears & accessories (Qty.; 5 Nos.) • Commissioning of New DSS (Qty.; 12 Nos.) • Installation of additional D/T's (Qty.; 3Nos.) • Replacement of D/T's . (Qty.; 6 Nos.) • Replacement/ Laying of 33 kV cables (Qty.; 24.972 Km.) • Replacement/Laying of 11 kV cables (Qty.; 10.596 Km.) • Installation of Earth Fault Passage Indicator (EFPI) (Qty.; 2250 Nos.)
Actual completed work	**FY2018-19**: 1) Installation/ Replacement of 22/11 kV 10 MVA T/F by 33/11 kV T/F at Love Grove, Pratiksha Nagar, Cumballa Hill & Nestle RSS. 2) Replacement/ Laying of 33 kV & 11 kV cables. (Capitalization – 24.27 Cr.). **FY2019-20**: 1) Installation/ Replacement of Transformer at Cumballa Hill, Nestle, Love Grove, Worli, Worli Dairy, Sitaladevi, Wankhede, PMGP & Prabhadevi RSS. 2) Replacement of 33 kV & 11 kV switchgears at PMGP, Pratiksha Nagar, Wankhede, Masjid & Mumbai Central RSS. 3) Installation of 33 kV Sw/Gr at Mumbadevi & Kingsway RSS. 4) 33 kV Cable laying at Prabhadevi & Worli RSS up to Tata Mahalaxmi RS. 5) Commissioning of New DSS (5 Nos.). 6) Installation/ Replacement of DT's (4 Nos.). • Installation of Earth Fault Passage Indicator in FY 2018-19, FY 2019-20 & FY 2020-21 (EFPI -2250 Nos.) (Capitalization – 67.42 Cr).

	FY 2020-21: 1) Replacement of Transformer at Cumballa Hill, Pratiksha Nagar, Nestle, Love Grove, Sitaladevi, & Prabhadevi RSS. 2) 33 kV Cable laying from TPC Dharavi to Sitaladevi RSS 3) Commissioning of New DSS (7 Nos.). 4) Installation/ Replacement of DT's (5 nos.). (Capitalisation – 10.66 Cr).
Pending Schemes / Work if any	(i) TPC Carnac RS (Carnac Bridge) to Esplanade RSS Tr. No. 1, 2 & 3, ii) TPC Carnac RS (M A Road) to Girgaon RSS Tr. No. 1 (up to princes street) and iii) TPC Carnac RS (Carnac Bridge) to Malbar Hill RSS Tr. No. 2 (up to princess Street) Partly 33 kV cable laying work is pending due to time limit of the project. Partly 11 kV cable laying work is also pending due to time limit of the scheme.
Reason for delay if any	As per schedule, the work included in this DPR is required to be completed before March 2020. The delay is due to delivery of material and Covid-19.
Reason for cost overrun if any	NA

Expenditure details:

	Expenditure as per DPR	Actual Expenditure
Project Cost	Rs.118.09 Crore	Rs.102.35 Crore

Extent to which scope and objective were achieved:

1. About 86% work included in the DPR is completed in all respect. Balance work is pending due to time limit of the IPDS Scheme.
2. Due to execution of this DPR, reliability and quality of supply is improved.

SPRD4

o/c

The Brihan Mumbai Electric Supply & Transport Undertaking

(OF THE BRIHAN MUMBAI MAHANAGARPALIKA)

PROJECT DEPARTMENT

TELEPHONE : (022) 22822080
Email ID : depro@bestundertaking.com

2nd Floor,
Backbay Veej Bhavan,
149/150, Gen. J. Bhosale Marg,
Nariman Point,
Mumbai - 400 021.

ADDRESS ALL COMMUNICATION BY TITLE NOT BY NAME

PR/CEPL/Adm9(B)/MERC(IPDS)/ 35/2021

DATE : 07 JUN 2021

To,
The Secretary,
Maharashtra Electricity Regulatory Commission
13th Floor, Centre No.1, World Trade Centre,
Cuffe Parade, Colaba 400 005

Sub: Scheme Closure Report of IPDS DPR Scheme **'Energy Meter'**
Scheme No. BEST/FY2015-16/01.

Ref: MERC Approval No. MERC/CAPEX/2019-20/116
Dated 18th April, 2019.

Dear Sir / Madam,

This has reference to the IPDS Capital investment Scheme No. BEST/FY2015-16/01 for "Energy Meter". The Hon'ble Commission has accorded in-principle approval for subject DPR with Capital Scheme MERC approved value Rs. 12.94 Crore on 18th April, 2019. This scheme is to be closed as the scope of work under approved DPR is completed. We are submitting herewith the Scheme Closure Report of the Scheme as *Appendix* to this submission.

We trust the same is in order.

Yours faithfully,

(S. P. Makwana)
Chief Engineer (Planning)

CEPL 7/6

MUMBAI - 400 005.

Appendix

PROJECT COMPLETION REPORT

Name of the Scheme	'Energy Meter'FY2018-19 and FY2019-20
Scheme Code	BEST/FY2015-16/01
MERC Code No.	MERC/CAPEX/2019-20/116 dated 18thApril,, 2019.
Objective of the Scheme (As per DPR)	To replace 2 Lakh conventional meters with Electronic meters for accurate measurement of energy. To provide improvedservice to consumers.

Scheduled / Actual completion dates:

Scheduled date of completion	FY2018-19 & FY2019-20
Actual date of completion	FY2018-19 and FY2019-20
Scope of Work (As per DPR)	**For Scope of work**: Replacement of 2 Lakh Nos. of electro-mechanical(conventional)meters by Electronic meters
Actual completed work	**FY18-19**:During financial year, total 81,999 Nos. of electro-mechanical (conventional) meters were replaced by Electronic meters. **FY19-20**: During financial year, total 1,18,001 Nos. of electro-mechanical (conventional) meters were replaced by Electronic meters.
Pending Work if any	NA
Reason for cost overrun if any	Not Applicable (NA)

Expenditure details:

	Approved Cost (in RS Crs.)	Actual Cost (in RS Crs.)
Capital Expenditure	FY 2018-19-5.49 FY 2019-20- 7.45 Total =12.94	FY 2018-19- 5.49 FY 2019-20- 7.41 **Total =12.90**
Capitalisation	FY 2018-19- 5.49 FY 2019-20- 7.45 **Total =12.94**	FY 2018-19- 5.49 FY 2019-20- 7.41 **Total =12.90**

Extent to which scope and objective were achieved:

i. 2 Lakh Nos. of electro-mechanical meters are replaced with Electronic meters.

ii. All objective of the scheme is achieved.

The Brihan Mumbai Electric Supply & Transport Undertaking

(OF THE BRIHAN MUMBAI MAHANAGARPALIKA)

TELEPHONE : (022) 22856262
FAX : (022) : 22851244
TELEX : 1185755 BEST IN
TELEGRAM : BEST, MUMBAI-400 001.

ADDRESS ALL COMMUNICATION BY TITLE NOT BY NAME

BEST BHAVAN,
BEST MARG,
POST BOX NO. 192
MUMBAI - 400 001.

OUR REF. : _____

DATE : 26 APR 2024

PR/CEPL/Adm9(B)/MERC/2024-25/ 42/2024

To,

The Secretary,
Maharashtra Electricity Regulatory Commission
13th Floor, Centre No.1,
World Trade Centre,
Cuffe Parade, Colaba
Mumbai - 400 005.

Dear Sir / Madam,

Sub: Scheme Closure Report for DPR Scheme 'Energy Meter' (BEST Scheme No. BEST/FY19/06).

Ref: Commission's reference No. MERC/CAPEX/2019-20/1110 Dated 28.11.2019.

This has reference to the Capital Scheme No. BEST/FY19/06 for "Energy Meter". The Hon'ble Commission has accorded in-principle approval for subject DPR with Capital Scheme MERC approved value Rs. 30.19 Crore on 28November, 2019. This scheme is to be closed as the scope of work under approved DPR is completed. We are submitting the Scheme Closure Report of the Scheme as *Appendix* to this submission.

Yours faithfully,

(S. P. Makwana)
Chief Engineer (Planning)

26/4/2024
OFFICE OF THE
MAHARASHTRA ELECTRICITY
REGULATORY COMMISSION
WTC, CUFFE PARADE, MUMBAI - 400 005.

"BEST Travel Saves Fuel"

Appendix

PROJECT COMPLETION REPORT

Name of the Scheme	'Energy Meter'FY2018-19, FY2019-20& FY2020-21
Scheme Code	BEST/FY19/06
MERC Code No.	MERC/CAPEX/2019-20/1110 dated 28.11.2019.
Objective of the Scheme (As per DPR)	Reduction in loss, for accurate measurement of energy,to provide improvedservice to the consumers, to release new supply, to replace conventional/electromechanical meters, to replace defective meters on site.

Scheduled / Actual completion dates:

Scheduled date of completion	FY2018-19, FY2019-20& FY2020-21
Actual date of completion	FY2018-19, FY2019-20 & FY2020-21
Scope of Work (As per DPR)	For Scope of work refer Annexure-A.
Actual completed work	**FY18-19**: Meter installed for new connections: Single Phase-24606Nos, Poly Phase-8807Nos.Net Single Phase -9 Nos, Net Poly Phase-80 Nos. (Total Qty-33,502Nos.) Meter Replaced: Single Phase -29,366Nos, Poly Phase -16,123Nos. (Total Qty-45,489 Nos.) CTs: 599Nos. Meter Seals- 2,13,389Nos. **FY2019-20**: Meter installed for new connections: Single Phase -19,695 Nos, Poly Phase-7,714 Nos. Net Single Phase -2 Nos, Net Poly Phase-83Nos. (Total Qty-27,494Nos.) Meter Replaced: Single Phase -33,872 Nos, Poly Phase -13,044 Nos. (Total Qty-46, 916 Nos.) CTs: 298Nos. Meter Seals-3,58,942Nos. **FY2020-21**: Meter installed for new connections: Single Phase -10,914Nos, Poly Phase-4,329Nos. Net Poly Phase-39 Nos. (Total Qty-15,282Nos.) Meter Replaced: Single Phase -29,850 Nos, Poly Phase -30,940Nos. (Total Qty-60,790Nos) CTs: 546Nos. Meter Seals-1,16,431 Nos.
Pending Work if any	-
Reason for cost overrun if any	NIL.
Reason for Time overrun if any	NIL

Expenditure details:

Total Approved Project Cost	Financial	Approved Phasing		Actual Capital Expenditure & Capitalisation	
	Year	CAPEX	Capitalisation	CAPEX	Capitalisation
30.19 Cr	2018-19	8.60	8.60	6.79	6.79
	2019-20	8.34	8.34	10.52	10.52
	2020-21	13.25	13.25	11.95	11.95
30.19 Cr	TOTAL	30.19	30.19	29.26	29.26

Extent to which scope and objective were achieved: All objective of the scheme is achieved.

--

Data Gap Sr. No.22: CAPEX and Capitalisation:

a. As regards Non-DPR schemes undertaken in FY 2022-23 and FY 2023-24, BEST should submit:

   i. Details of works carried out under Non-DPR schemes.

   ii. Justification that work carried out is capital in nature.

   iii. Cost-benefit-analysis of the capital expenditure.

Reply: a) As regards Non-DPR schemes undertaken in FY 2022-23 and FY 2023-24, BEST submit as follows:

Non DPR- Schemes executed during FY 2022-23:

(i) **Details of works:** - Installation & Commissioning of additional T/F and accessories at Pochkhanwala Road RSS along with the accessories.

Justification that work carried out is capital in nature: As per Capex Regulation, 2022, Clause No. 3.9 (a) the said work was done at Pochkhanwala Road RSS for releasing 10 MW Load at Whispering Height i.e. infrastructure is used for releasing new supply connection.

(ii) **Details of works:** - Installation of earthing was done at Marine Drive, Apollo, Malbar Hill, DBA & Lodha Crown RSS.

Justification that work carried out is capital in nature: The useful life of the Assets is already completed. As per Capex Regulation, 2022, Clause No. 3.9 (i) the said work was done at above mentioned RSS for improvement in quality of supply and reliability of distribution system.

(iii) **Details of works:** - Replacement of AFF system at Simplex Mill, Wadala, Raoli Hill, Pratiksha Nagar, Navy Nagar, G.T. Hospital, Elphinstone Mill and Dharavi RSS.

Justification that work carried out is capital in nature: The useful life of the Assets is already completed.As per Capex Regulation, 2022; Clause No. 3.9 (h) the said work was done at Simplex Mill, Wadala, Raoli Hill, Pratiksha Nagar, Navy Nagar, G.T. Hospital, Elphinstone Mill and Dharavi RSS under augmentation of transformers at existing Receiving Stations.

(iv) **Details of works:** - Installation of Control & Relay Panel (CARP) at Lodha Crown, Kussara & Mazgaon Dock RSS.

Justification that work carried out is capital in nature: The useful life of the Assets is already completed. As per Capex Regulation, 2022, Clause No. 3.9 (h) the said work

was done at Lodha Crown, Kussara and Mazgaon Dock RSS under augmentation of transformers at existing Receiving Stations.

(v) **Details of works:** - Replacement of Battery & Battery Charger at Mazgaon Dock & Backbay RSS.

Justification that work carried out is capital in nature: The useful life of the Assets is already completed. As per Capex Regulation, 2022, Clause No. 3.9 (h) the said work was done at Mazgaon Dock & Backbay RSS under augmentation of transformers at existing Receiving Stations.

(vi) **Details of works:** -Replacement of old Conventional Energy Meters.

Justification that work carried out is capital in nature:

- FY 2021-22:- As per the ruling given by the commission in Case No.212 of 2022 dtd. 31.03.2023, Para 4.6.10, it is mentioned that *"BEST has claimed the capitalisation of Rs. 14.63 Crore in FY 2021-22 against which the DPR is yet to be approved and is in relation to implementation of Energy Meters. As per the past approach of the Commission, the capitalisation undertaken for the scheme which is yet to be approved is not allowed and accordingly, the Commission not considered the capitalisation of Rs. 14.63 Crore in FY 2021-22. BEST may seek approval for such capitalisation in next tariff Petition post seeking approval of the Commission for said DPR".*

  Vide Letter No. ESO/AGMES/EM DPR/2022-23/06 dated 31st January, 2023, DPR for 'Energy Meter' was submitted to the Hon'ble Commission. However, the Hon'ble Commission has returned back the said DPR stating that "After evaluation of the DPR it is observed that the cost of the proposal is below the stipulated limit of Rs.25 Cr as per Regulation 4.1 of Capex Regulation, 2022". Further directed "to consider the proposal under Non DPR Scheme as per Regulation, 4.2 of Capex Regulation, 2022 and may submit the proposal with justification at the time of next MYT Tariff Petition for pass through of the cost". A copy of Letter from MERC is attached herewith as ***Annexure-B.***

- FY 2022-23: The useful life of the Assets is already completed. As per Capex Regulation, 2022, Clause No. 3.9 (n) (o), the replacement of old conventional meters with Static Meters work was done under "all metering schemes and Improvement in consumer services".

(vii) **Details of works:** - Installation of additional 33 kV GIS Bus Section at 110 kV DBA RSS in FY 2019-20.

Justification that work carried out is capital in nature: As per Capex Regulation, 2022, Clause No. 3.9 (h) the said work was done at 110 kV DBA RSS under augmentation of transformers at existing Receiving Stations.

As per the ruling given by the commission in Case No.212 of 2022 dtd. 31.03.2023, Para

3.6.11, it is mentioned that the Capitalisation amount of Rs. 4.37 Cr was disallowed stating that "the Capitalisation was not of that scheme i.e. BEST/FY18/02A, MERC Ref. No. MERC/CAPEX/2019-20/135 dated 10.05.2019". Now, the said capitalization amount towards Installation of additional 33 kV GIS Bus Section at 110 kV DBA RSS is considered in Non DPR Schemes in FY 2022-23.

(viii) **For Cost Benefit Analysis (CBA) of Non DPR Schemes,** kindly refer CBA Repot for FY 2022-23. ***Kindly refer Annexure-11***.

Non DPR- Schemes executed during FY 2023-24:

(i) Details of works: - Replacement of 11 kV Bus Section at Sitaladevi RSS.

Justification that work carried out is capital in nature: As per Capex Regulation, 2022, Clause No. 3.9 (h) the said work was done at Sitaladevi RSS under augmentation of transformers at existing Receiving Stations.

(ii) Details of works: - Replacement of AFF system at Raoli Hill , Worli Dairy, Colaba & Pochkhanwala Road RSS.

Justification that work carried out is capital in nature: The useful life of the Assets is already completed. As per Capex Regulation, 2022, Clause No. 3.9 (h) the said work was done at Raoli Hill , Worli Dairy, Colaba & Pochkhanwala Road RSS under augmentation of transformers at existing Receiving Stations.

(iii) Details of works: - Installation of earthing was done at Apollo, Malbar Hill, Cumballa Hill , Grant Road , Masjid, Love Grove, Mumbadevi, Sewree, Marine Drive & Pratiksha Nagar RSS.

Justification that work carried out is capital in nature: The useful life of the Assets is already completed. As per Capex Regulation, 2022, Clause No. 3.9 (i) the said work was done at above mentioned RSS for improvement in quality of supply and reliability of distribution system.

(iv) Details of works: - Replacement of Battery & Battery Charger at Esplanade, Sewree, Raoli Hill, Prabhadevi, Masjid, Lalbaug, Peninsula Land, Girgaum & Nariman Point RSS.

Justification that work carried out is capital in nature: The useful life of the Assets is already completed. As per Capex Regulation, 2022, Clause No. 3.9 (h) the said work was done at Esplanade, Sewree, Raoli Hill, Prabhadevi, Masjid, Lalbaug, Peninsula Land, and Girgaum & Nariman Point RSS under augmentation of transformers at existing Receiving Stations.

(v) For Cost Benefit Analysis (CBA) of Non DPR Schemes, kindly refer CBA Report for

FY 2023-24. ***Kindly refer Annexure-11.***

महाराष्ट्र विद्युत नियामक आयोग
Maharashtra Electricity Regulatory Commission

MERC/CAPEX/2023-24/0260 **Date: 02 June, 2023**

To,
The General Manager,
BEST Undertaking,
2nd Floor, BackbayVeej Bhavan
149/150, Gen J. Bhosale Marg,
Nariman Point, Mumbai 400 021.

Subject :-Returning Back DPR for Post Facto Approval of BEST for "Energy Meters" For FY 2021-22 and FY 2022-23

Sir,

This has reference to your submitted DPR of Energy Meter for FY **2021-22 and FY 2022-23** for Post Facto approval of the Commission. The said scheme has been evaluated with reference to the capex Regulations, 2022.

1. After evaluation of the DPR it is observed that, the cost of the proposal is below the stipulated limit of Rs 25 Cr as per Regulation 4.1 of Capex Regulations, 2022. Detail of evaluation of the proposal is attached as per Annexure A
2. Accordingly, I am directed to return the DPR back as it is not fulfilling the criteria as specified under Regulation 4.1 of the Capex Regulations, 2022
3. BEST may consider the proposal under non DPR Schemes as per Regulation 4.2 of Capex Regulations, 2022 and may submit the proposal with justification at the time of next MYT Tariff Petition for pass through of the cost.
4. BEST is directed to submit capex proposal of such schemes related to Universal Service Obligation at least one year in advance from proposed date of execution of scheme.

Yours faithfully,

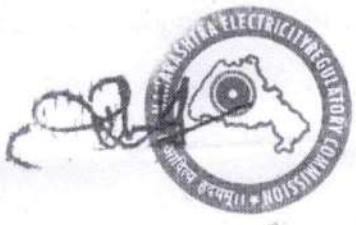
(Dr. Rajendra G. Ambekar)
Executive Director

Encl: Annexure "A"

Annexure – A

Sr.No.	Type of Meter	Unit Cost	FY 2021-21		FY 2022-23	
A-1	**Energy Meters for New Connection**	in Rs.	Qty. in Nos.	Amount Rs in lakh	Qty. in Nos.	Amount (in Rs. Lakh)
1	Single Phase Static Meter (10-60 A)	594.72	17670	105.09	15985	95.07
2	Three Phase Static Meter (10-60 A)	1949.01	4842	94.37	5065	98.72
3	Three Phase Static Meter (50-100 A)	2701	0	0.00	498	13.45
4	Three Phase Static Meter 5(6)A LVCTO	3925	0	0.00	389	15.27
A-2	**Energy Meters for Replacement**					
1	Single Phase Static Meter (10-60 A)	594.72	139330	828.62	68375	406.64
2	Three Phase Static Meter (10-60 A)	1949.01	17338	337.92	16019	312.21
3	Three Phase Static Meter (50-100 A)	2701	0	0.00	250	6.75
4	Three Phase Static Meter 5(6)A LVCTO	3925	0	0.00	250	9.81
	TOTAL A (A-1 + A-2)		**179180**	**1366.00**	**106831**	**957.9193**
B	**Net Meters (New Connection)**					
1	Single Phase Static Meter (10-60 A)	1947.00	0	0.00	0	0.00
2	Three Phase Static Meter (50-100 A)	4900.01	0	0.00	0	0.00
3	Three Phase Static Meter 5(6)A LVCTO	7800.00	0	0.00	0	0.00
4	Three Phase Static Meter -/5 A Volt CTPT Operated	9000.00	0	0.00	0	0.00
	TOTAL 'B'		**0**	**0.00**	**0**	**0.00**
C	**Instruments and Accessories**					
I-1	**LV Current Transformers –New Connection**					
1	LV CTs 150/5	3876.30	69	2.67	0	0.00
1A	LV CTs 150/5	5044.50	359	18.1098	193	9.74
2	LV CTs 200/5	5262.80	52	2.74	0	0.00
2A	LV CTs 200/5	6490.00	191	12.40	119	7.72
3	LV CTs 300/5	5262.80	53	2.79	0	0.00
3A	LV CTs 300/5	6490.00	208	13.50	109	7.07
4	LV CTs 600/5	7947.30	20	1.59	0	0.00
4A	LV CTs 600/5	10030.00	89	8.9267	45	4.51
5	LV CTs 1000/5	18880.00	0	0.0000	0	0.00
I-2	**LV Current Transformers –Replacement**					
1	LV CTs 150/5	5044.50	41	2.07	36	1.82

Sr.No.	Type of Meter	Unit Cost	FY 2021-21		FY 2022-23	
A-1	Energy Meters for New Connection	in Rs.	Qty. in Nos.	Amount Rs in lakh	Qty. in Nos.	Amount (in Rs. Lakh)
2	LV CTs 200/5	6490.00	9	0.58	9	0.58
3	LV CTs 300/5	6490.00	11	0.71	12	0.78
4	LV CTs 600/5	10030.00	11	1.10	6	0.60
5	LV CTs 1000/5	18880.00	0	0.0000	0	0.00
II-1	**HV Current Transformers-New Connection**					
1	HV CTs 30/5	6609.25	0	0.00	6	0.40
2	HV CTs 100/5 & 150/5	5528.25	0	0.00	9	0.50
3	HV CTs 300/5	5605.00	0	0.00	6	0.34
II-2	**HV Current Transformers-Replacement**					
1	HV CTs 30/5	6609.25	0	0.00	3	0.20
2	HV CTs 100/5 & 150/5	5528.25	0	0.00	6	0.33
3	HV CTs 300/5	5605.00	0	0.00	3	0.17
	TOTAL'C'		**1113**	**67.19**	**562**	**34.76**
D	**Summation C Ts**		New connection			
1	5+5/5	828.74	0	0.00	9	0.07
2	5+5+5+5/5	1158.98	0	0.00	3	0.03
	TOTAL 'D'		**0**	**0.00**	**12**	**0.11**
E	**Meter Seals**		**FY 2020-21**		**FY 2021-22**	
1	Polycarbonate	4.01	211480	8.48	211480	8.48
	TOTAO 'E'		**211480**	**8.48**	**211480**	**8.48**
F	Adaptor for LVCTO Meters	**1239**	**85**	**1.05**	**30**	**0.37**
	TOTAL 'A+B+C+D+E+F'			**1442.7255**		**1001.6365**
	Total Capital Cost in Crore			**14.43**		**10.02**
	Grand Total Capita Cost in Crore				**24.44**	



ANNEXURE-11A

The Brihan Mumbai Electric Supply & Transport Undertaking

(OF THE BRIHAN MUMBAI MAHANAGARPALIKA)

PROJECT DEPARTMENT

TELEPHONE : (022) 22822080
Email ID : depro@bestundertaking.com

2nd Floor,
Backbay Veej Bhavan,
149/150, Gen. J. Bhosale Marg,
Nariman Point,
Mumbai - 400 021.

ADDRESS ALL COMMUNICATION BY TITLE
NOT BY NAME

ESO/AGM(ES)/CEPL/ 260 /2024

DATE : 19 DEC 2024

The Secretary,
Maharashtra Electricity Regulatory Commission
13th floor, Centre No.1,
World Trade Centre, Cuffe Parade, Colaba
Mumbai 400 005

Sub: Submission of Cost Benefit Analysis (CBA) for FY 2022-23

Sir,

With reference to above subject, BEST is submitting herewith Cost Benefit Analysis (CBA) for FY 2022-23 for the Hon'ble Commission's consideration, please.

Thanking you,

Yours faithfully,

19/12/24

(S. D. Chougule)
Divisional Engineer
Planning (Material) Dept

BEST's Submission of COST BENEFIT REPORT FOR FY-2022-23

1.0 The details of Capital Expenditure incurred during FY 2022-23 are as follows.

Table 1: Details of proposed Capital Expenditure& Actual Capitalisation during FY 2022-23

Scheme No.	Project schemes	Capitalisation FY 2022-23 (Rs. Cr) (As per approved DPR)	Actual Capitalization FY 2022-23 (Rs. Cr)
DPR-I	New Receiving Station (110 kV &33-22/11 kV)	5.71	8.33
DPR-II	Revamping at existing RSS	31.69	20.74
	N-DPR Schemes- (New RSS/ Revamping at existing RSS)	-	15.46
DPR-III	New DSS Commissioning, Augmentation & alteration to existing DSS	29.95	35.67
DPR-IV	Extension of Dist. Network (laying of HV and LV lines)	49.24	57.01
DPR-V	SCADA	0.00	0.00
DPR VI	Energy Meters	0.00	0.00
Non-DPR Schemes	Energy Meter		15.65
	Business Process Automation	0.00	0.03
	Street lighting (lamps & cables)	0.00	6.69
	G.A. Expenses (Furniture, office equipment, Tools, Civil works, Motor works etc.)	0.00	20.91
	Total	**116.59**	**180.49**

For detail approved capitalisation refer, Annexure-A, Pg. No.3, 9, 15 and for actual capitalisation refer, Annexure-A, Page No.27**.**

2.0 Scheme -I: New Receiving Substations (110 kV &33-22/11 kV)

2.1 The projected capitalisation proposed during FY 2022-23 Amt in Cr.

Sr. No.	Scheme No. &work at RSS	MERC Approval No. & Date	Projected Capitalisation FY 2022-23
1	**BEST/FY21/01**: New RSS Commissioning of RSS	MERC/CAPEX/FY2020-21/ dated 16.07.2020	5.71
	Total		**5.71**

For projected capitalisation refer Annexure-A, Pg. No. 3.

2.1.1The Projected benefit on implementation of the above schemes (for new RSS):

Sr. No.	Scheme No. & work at RSS	MERC Approval No. & Date	Projected Cost Benefit for FY 2022-23 (Rs. In Crore)
1	**BEST/FY21/01**: Commissioning of New Receiving Substations	MERC/CAPEX/FY2020-21/ - dated 16.07.2020	1.63
	Total		**1.63**

Projected additional revenue realisation = 1.63 Cr, Refer Annexure-B, Pg. No.1

2.1.2 Calculations of RoE for FY 2022-23 (Case No. 212 of 2022 dtd.31.03.2023)

Return on Equity for FY2022-23= Rs.139.11 Cr) Refer ------- Annexure-B, Pg. No.9.

Distribution Loss = 4.18% ------- Annexure-B, Pg. No.7

Energy sale = 4537.98 Mus. ------- Annexure-B Pg. No.7

R0E per unit = $139.11 \times 10^7 / 4537.98 \times 10^6 = 0.306$

For calculation of RoE per unit, the values of RoE, DistributionLoss, Energy Sales are taken from the approved Copy of MERC Order Case No. Case No. 212 of 2022 dtd.31.03.2023 and same is enclosed as ***Annexure –B Page No. 2-9.***

2.1.3 Projected cost benefit as proposed in the DPR BEST/FY-21/01 due to commissioning of 16 MVA T/Fs at new RSS:

For calculation purpose it is assumed that in the first year of commissioning a new T/F shall be loaded to the extent of 20%, in the 2nd year at 30%, in the 3rd year at 40%, in the 4th year 50% and finally in the 5th year at about load factor i.e. 58.01% for FY 2022-23.

No. of units realized in FY 2022-23 = Load (MVA) *Load Factor* Power Factor* Incremental load*(1- Distribution Loss)* No. of hours per day * No. of days * 1000/10^6

= (16*0.40* 0.99 *(1-0.0418)* 24 * 365 * 1000 / 10^6

= 53.18 Mus.

RoE per unit = **0.306**

Additional Revenue allocated in FY 2022-23 = $26.59 \times 0.306 \times 10^6 / 10^7$

= 1.63 Cr.

2.2 The actual capitalisation accrued during FY2022-23 as against above projections:

Sr. No.	Scheme No. & work at RSS	MERC Approval No. & Date	Amount Capitalised in FY 2022-23 (Rs. In Crore)
1	**BEST/FY-16/01**: Commissioning of New Receiving Substations.	MERC/CAPEX/FY2016-17 dated 28.09.2016	8.24
2	**BEST/FY21/01**: Commissioning of New Receiving Substations	MERC/CAPEX/FY2020-21/ dated 16.07.2020	0.09
	Total		**8.33**

2.2.1 Actual benefits achieved: The actual benefits achieved during the FY 2022-23 due to commissioning of 1X16 MVA Power Transformer at Dosti Acres RSS under New RSS is given in the following Table.

Amount in Crore

Name of RSS	Date of Commissioning	Days of Operation	Load in MVA	Energy Units Realised (MUs)	RoE	Revenue Realised
Dosti Acres	28.03.2023	3	4.8	0.20	0.31	0.01

Calculations of RoE for FY 2022-23 (Case No.212 of 2022 dtd. 31.03.2023)

Return on Equity for FY2022-23= Rs.139.11 Cr) ***Refer Annexure-B, Pg. No.9.***

Actual Distribution Loss = 4.18% ***Refer Annexure-B, Page No.10.***

Actual Energy sale = 4483.32 Mus. **Refer, *Annexure-B Pg. No.10.***

R0E per unit = 139.11 x 10^7 / 4483.32 x 10^6 = 0.31

No. of units realized in FY 2022-23 = Load (MVA) *Load Factor* Power Factor* Incremental load*(1- Distribution Loss)* No. of hours per day * No. of days * 1000/10^6

= 4.8*0.6004* 0.99 * (1-0.0418)* 24 * 3 * 1000 / 10^6

= **0.20 MUs.**

RoE per unit = 0.31

Additional Revenue allocated in FY 2022-23 = 0.20 x 0.31 x 10^6 / 10^7 = **0.01** Cr.

Wherein Capacity increased = 16 MVA, Load Factor = 60.04 %, Distribution Loss=4.18%.

The projected Additional Revenue realisation = Rs.0.01 Crore

For calculation of RoE per unit, the values of RoE are taken from the approved Copy of MERC Order Case No. Case No.212 of 2022 dtd.31.03.2023 and Distribution Loss, Energy Sales are taken from bulletin data and same is enclosed as **Annexure –A.**

3.0 Scheme -II: Augmentation / Replacement at existing Receiving Sub Stations

3.1 Projected capacity addition and commissioning schedule during FY 2022-23 as proposed in the DPR Scheme No. BEST/FY-20/02 & BEST/FY-21/02:

Sr. No.	Scheme No. and works at RSS	Existing Capacity (in MVA)	Proposed Capacity (in MVA)	Added Capacity FY 2022-23 (in MVA)
1	**BEST/FY-20/02**: Revamping of Existing RSS	0.00	0.00	0.00
2	**BEST/FY-21/02**: Revamping of Existing RSS	0.00	6	6
	Total (in MVA)	**0.00**	**6**	**6**

Projected capitalisation as per approved DPRs shall be as given in the following table:

Sr. No.	Scheme No. & work at RSS	MERC Approval No. With Date	Amount capitalised (Rs. Crore)
1	Scheme No. BEST/FY-20/02: Revamping of existing RSS	MERC/CAPEX/2020-21/553 dt.15.12.2021	2.32
2	**Scheme No. BEST/FY-21/02**: Revamping of existing RSS	MERC/CAPEX/2022-23/0556 dt.14.11.2022	29.37
	Total amount to be Capitalised		**31.69**

Annexure-A, Pg. No. 9 & 15.

3.1.1 Calculations of RoE for FY 2022-23 (Case No.212 of 2022 dtd.31.03.2023)

Return on Equity for FY2021-22 = Rs.139.11 Crs Refer Annexure-B, Pg. No.9.

Distribution Loss = 4.18% Refer Annexure-B, Pg. No.7.

Energy sale = 4550.60 Mus. Refer Annexure-B Pg. No. 7.

R0E per unit = 139.11 X 10^7 / 4537.98 X 10^6 = 0.306

For calculation of RoE per unit, the values of RoE, Distribution Loss and Energy Sales are taken from the approved Copy of MERC Order Case No. Case No.212 of 2022 dtd.31.03.2023 and same is enclosed as **Annexure –B, Page No. 2-9.**

3.1.2 Projected cost benefit as proposed in the DPR Scheme No. BEST/FY-20/02 and BEST/FY-21/02 due to augmentation/replacement of T/Fs at existing RSS:

For calculation purpose it is assumed that in the first year of commissioning a additional T/Fs at RSS shall be loaded to the extent of 20%, in the 2nd year at 30%, in the 3rd year at 40%, in the 4th year 50% and finally in the 5th year at about load factor i.e. 60.04%.

Further to this, it is assumed that additional 16 MVA T/Fs to be installed at existing RSS shall be loaded to the extent of 20% of added capacity in first year, in the 2nd year at 30%, in the 3rd year at 40%, in the 4th year 50% and finally in the 5th year at about load factor i.e.60.04%.

Nos. of projected Units to be realised in FY2022-23 shall be as follows:

= Load * Power Factor * Incremental load * No. of hours per day * No. of days * (1- Distribution Losses)
=(6*0.99*20%*24*365*1000*(1-0.0418))/10^6
= 9.97 Mus

RoE per unit = 0.306
Additional Revenue allocated in FY 2022-23 = 9.97 X 0.306 X 10^6 / 10^7
= 0.31 Cr (kindly refer Annexure-B, Pg. No. 11.

Wherein Capacity increased = 6 MVA, Incremental loading =20%, Distribution Loss=4.18%.

The projected Additional Revenue realisation = Rs.0.82 Crore.

3.2 The actual capitalisation accrued during the FY2022-23 as against the above projections:

Sr. No.	Scheme No. and works at RSS	Capacity addition (MVA)	MERC Approval No. & Date	Amount capitalised (Rs. Crs.)
1.	**BEST/FY-16/02** 1) Earthing work at Mazgaon and Mumbadevi RSS, 2) Inst. of 33 kV sw/gr at Sion Fort RSS. 3) AFF at Girgaum, Masjid and Nair Hospital RSS.	-	MERC /TECK-V/ CAP / DPR /20122013 /02688 dated 22.02.2013	2.74
2.	**BEST/FY-17/02** 1) Inst. Of T/F, 33 KV & 11 KV Sw/gr, AFF and CARP at PMGP. 2) Inst. Of 11 KV sw/gr. At Sion Fort RSS. 3) Battery at Esplanade RSS. 4) AFF at Nariman Point RSS. 5) Cable laying for Kingsway and Prabhadevi RSS.	-	MERC / CAPEX/ 2017-18 / 4706 dated 16.11.2017	11.38
3.	**BEST/FY-18/02** 1) Earthing at Prabhadevi , G.T. Hospital & Ballard Estate RSS. 2) Installation of 33 kv switchgear at Sewree & G.T. Hospital RSS. 3) Inst. Of Battery/ Charger at Tardeo, Lalbaug, Peninsula Land & Sion Fort RSS.	-	MERC /CAPEX/ 2017-18/4706 dated 16.11.2017	1.53
4.	**BEST/FY-20/02** 1) Installation of addnl. T/F, 11 kV sw.gr., AFF & Earthing at Kingsway RSS. 2) Earthing at Nepean Sea , Colaba RSS 3) Battery &/battery charger at Nariman Point RSS. 4) Installation of 11 kV Sw.Gr	16	MERC/CAPEX/2020-21/553 dated 15.12.2021	3.98

	at Prabhadevi & Kingsway RSS. 5) Installation of AFF at Byculla , Kingsway, Hutatma Chowk RSS 6) Cable diversion of Nepensea RSS			
5.	**BEST/FY-21/02** 1) Div. & Replacement 33 kV cable for DBA ---> Marathon Futurex .2) 33 kv Cable doiversion for Raoli Hill, Lodha Crown , Sion Fort, Pratiksha Nagar RSS. 3) Cable diversion at T.H.Kataria Marg and Chinchpokli Rly. Station.	0	MERC/CAPEX/2022-23/0556 dated 14.11.2022	1.11
	Total in Crores	**16**		**20.74**

Refer Annexure-A, Page No.27 (Sr. No. 3 to 9.

3.3 Actual Benefits achieved during FY 2022-23:

The actual cost benefit realised due to augmentation / replacement of Power Transformers at following places:

NAME OF RSS	Year of Commissioning	Date of commissioning	Days of operation	Load (MVA)	Energy Units realized MUs.	RoE	Revenue realized (Rs. Cr)
Kingsway T/F-4	2022	27.05.2022	308	3.2	13.47	0.31	0.42
TOTAL				**3.2**	**13.47**	**0.31**	**0.42**

Revenue Realized = (units)*ROE/Unit for FY 2022-23

ROE/Unit = $139.11*10^7$ /$4483.32*10^6$ = **0.31**

For Kingsway RSS Tr. No.4

Units realized in MU =Load (MVA)*Load Factor*P.F. *(1- Dist. loss)*24*days of operation*1000/10^6

=$3.2*0.6004*0.99*(1-0.0418)*24*308*1000/10^6$ = 13.47 Mus

Additional Revenue allocated in FY 2021-22 = 13.47 X 0.31 $X10^6$ /10^7 = 0.42 C.

Actual Benefits of Rs. 0.42 Cr is achieved as against projected revenue realisation of Rs.0.82 Cr during FY 2022-23.

4.0 Capitalisation occurred during FY 2022-23 as against Non-DPR Schemes:

Sr. No.	Non-DPR Scheme work	Capacity addition (MVA)	Amount capitalised (Rs. Cr.)
1.	1) Installation & Commissioning of additional T/F and accessories at Pochkhanwala Road RSS 2) Installation of earthing was done at Marine Drive, Apollo, Malbar Hill, DBA & Lodha Crown RSS 3) Replacement of AFF system at Simplex Mill, Wadala, Raoli Hill, Pratiksha Nagar, Navy Nagar, G.T. Hospital, Elphinstone Mill and Dharavi RSS 4) Installation of Control & Relay Panel (CARP) at Lodha Crown, Kussara & Mazgaon Dock RSS 5) Replacement of Battery & Battery Charger at Mazgaon Dock & Backbay RSS 6) Installation of additional 33 kV GIS Bus Section at 110 kV DBA RSS in FY 2019-20.	16	15.46
	Total in Crs	**16**	**15.46**

Refer A, Page No. 24 (Sr. No. 17).

4.1 The actual cost benefit realised due to addition of Power Transformers at following places:

NAME OF RSS	Year of Commissioning	Date of commissioning	Days of operation	Load (MVA)	Energy Units realized MUs.	RoE	Revenue realized (Rs. Cr)
Pochkhanwala T/F -2	2022	05.04.2022	360	3.2	15.75	0.31	0.49
TOTAL				**3.2**	**15.57**	**0.31**	**0.49**

Revenue Realized = (units)*ROE/Unit for FY 2022-23

ROE/Unit = $139.11*10^7$ /$4483.32*10^6$ = **0.31**

For Pochkhanwala RSS Tr. No.2

Units realized in MU =Load (MVA)*Load Factor*P.F. *(1- Dist. loss)*24*days of operation*1000/10^6

=$3.2*0.6004*0.99*(1-0.0418)*24*360*1000/ 10^6$ = **15.75** Mus

Additional Revenue allocated in FY 2021-22 = 15.75 X 0.31 X10^6 /10^7 = **0.49 Cr.**

Actual Benefits of Rs. 0.49 Crore is achieved as against NDPR during FY 2022-23.

5.0 Scheme -III: New Distribution Substation Commissioning, Augmentation & Alteration to existing DSS

5.1 Projected capitalisation proposed during FY 2022-23 as against DPR Scheme CodeNo. BEST/FY21/03

PARTICULARS	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Capex for the scheme, Rs. in Cr. (40 DSS in each year)	**30.20**	**29.95**	**29.95**	**29.95**	**29.95**
Capacity proposed to be installed (in MVA)	49.205	50.20	51.80	53.765	55.755
Total Transformer Nos.	68	70	72	74	77
Amount proposed to be capitalised (in Rs. Crore)	**30.20**	**29.95**	**29.95**	**29.95**	**29.95**

Refer Annexure-A, Page No.21. For detail MVA Capacity kindly refers Annexure-C, Pg. No.1.

5.1.1 During the FY 2022-23, the proposed distribution transformer capacity addition was as follows:

1) **Capacity addition by commissioning of New DSS:** During the year, it was proposed to commission 42 nos. of new DSS, having 42 nos. of DTs of capacities 630 kVA (22 Nos.), 995 kVA (13 Nos.) & 1600 kVA (7 Nos.) aggregating to total capacity addition as 38 MVA (Kindly refer Annexure-C, Page No.1).

2) **Capacity addition by Tr. Replacement**

During the year it was proposed to replace 1 No. of 400 KVA DT with 630 KVA DT leading to a capacity addition of 230 KVA (0.230 MVA) per transformer and 0.23 MVA in total, 20 Nos. of 630 KVA DTs with 995 KVA DTs leading to a capacity addition of 365 KVA (0.365 MVA) per DT and 7.30 MVA in total, 5 Nos. of 995 KVA DTs with 1600 KVA DTs leading to a capacity addition of 605 KVA (0.605 MVA) per DT and 3.025 MVA in total. Due to 26 Nos. of DTs replacement with higher capacity, total capacity addition will be 10.56 MVA (Kindly refer Annexure-C, Page No.1).

3) Capacity addition by Additional transformer

During the year, it was proposed to install 2 Nos. of additional DTs of 630 KVA leading to a total capacity addition of 1.26 MVA and 2 Nos. of additional DTs of 995 KVA leading to a total capacity addition of 1.99 MVA. Due to installation 4 Nos. of DTs total capacity addition will be 3.25 MVA (Kindly refer Annexure-C, Page No.1).

During the year, total capacity addition to the system by augmentation work would be the sum of capacity addition by commissioning new DSS and replacement/ addition of DTs

= 38 MVA + 10.56 MVA + 3.25 MVA

= 51.81 MVA

The projected capacity addition during FY 2022-23 = 51.81 MVA

No. of units realised = load (MVA)*Load Factor*Power Factor*(1-loss)*24*365*1000/10^6
= 51.81 *0.20*0.99 *(1-0.0418)*24*365*1000/10^6
= 86.11 Mus.

Projected no. of units realised due to capacity addition: 86.11 Mus.
RoE per unit for FY 2022-23 =$139.11*10^7$ /$4537.98*10^6$ = 0.306

Revenue Realised = Units * RoE per unit
= $86.11*10^6$ *$0.306/10^7$
= 2.63 Cr

During the FY 2022-23, projected cost benefit was Rs. 2.63 Cr as against DPR Scheme BESTFY21/03.

5.2 The projected capitalisation accrued during FY 2022-23 as against the above projections:

Sr. No.	No. of DSS	DPR submission to MERC (ref. No.)	Amount capitalised (Rs. Crore)
1	New DSS (40 Nos.)	Scheme No. BEST/FY-21/03	29.95
	Total cost		**29.95**

Refer Annexure-A, Page. No.19

5.2.1 The actual capacity addition during FY 2022-23 as against the above projections is as follows:

1) Actual Capacity additions and load by new DSS commissioning(Annexure-C, Page No.1)

In FY 2022-23, total 36 Nos. of New DSS are commissioned. A list of 36 Nos. of DSS commissioned in 2022-23 with details of installed capacity is enclosed as Annexure-C, *Pg. No.2 (Table-A)*.

An actual Capacity addition due to commissioning of new 36 Nos. of DSS is (630kVA -25 Nos., 995 kVA- 17 Nos.& 1600 – 3 Nos.) 34.215 MVA and load is 6.843 MVA (assuming 20% loading).

2) **Actual Capacity addition by DT Replacementwith higher capacity (*Annexure- C*) (*refer Pg. No. 2, Table-B*).**

a) 1 Nos. of 400 kVA DTs is replaced with 630 kVA DT leading to a capacity addition of 230 KVA (0.230 MVA) and 0.23 MVA in total.

b) 6 Nos. of 630 kVA DTs are replaced with higher capacity. Out of 6 nos. of 630 KVA DTs, 5 no. of DT replaced with 995 kVA and balance one DT replaced with 1600 kVA leading to a capacity addition of 365 KVA (0.365 MVA) & 970 kVA (0.970 MVA) per DT and 2.795 MVA in total.

c) 2 No. of each 995 kVA are Replacement with 1600 kVA DT leading to a capacity addition of 605 KVA (0.605 MVA) per DT and 1.210 MVA in total.

Actual Capacity addition by replacement of 9 nos. of DTs with higher capacity DTs leading to a capacity addition of **4.235 MVA** in total.

3) Actual Capacity addition by Additional transformer (Annexure-C, Table-D, Page No. 2).

1 Nos. of each 630 kVA, 995 kVA & 1600 kVA additional DTs are installed during F.Y. 2022-23 and results 3.23 MVA capacity additions in total.

Further to this, due to R&M, 2X630 kVA DT are replaced with 995 kVA DT's, leading to net capacity addition as 0.73 MVA.

Thus, total capacity addition due to additional DT and DT replaced under R&M is **3.96 MVA**

The actual total capacity addition to the system by augmentation work would be the sum of capacity addition by commissioning new DSS and replacement/ addition of transformers
= 34.215 MVA +4.235 +3.96 MVA
= 42.41 MVA
Load due to this capacity addition is 8.482 MVA (assuming 20% loading of 42.41 MVA)

5.2.2 The no. units realised due to capacity addition due to commissioning of new Distribution Sub-station (DSS) &Augmentation, alteration to existing DSS are as follows:

No. of units realised = load (MVA)*Load Factor*Power Factor*(1-loss)*24*365*1000
= (42.41) *0.6004*0.99 *20%*(1-0.0418)*24*365*1000/10^6
= 42.32 Mus.

Formula & Sample calculation:

As per case 212 of 2022, ROE (apprd. By MERC for FY2022-23) =139.11 Cr (***Refer Annex-B, Pg. No.95***).

Actual Unit's sales during FY2022-23 are 4483.32 Mus as against MERC approved **4537.98 Mus *(Refer Annexure- B, Page No.10 & 7).***

RoE per unit for FY 2022-23 =$139.11*10^7$ / 4483.32 *10^6 = 0.306

Revenue Realised = Units * RoE per unit

= 42.32 *10^6 *$0.306/10^7$

= 1.29 ***Cr.***

Actual Benefits of Rs. 1.29 Cr is achieved as against projected revenue realisation of Rs. 2.63 Cr during FY 2022-23.

6.0 Scheme -IV: Extension of Distribution Network (laying HV/LV Lines)

6.1 Projected phasing of capitalisation in the Scheme BEST FY21/04

PARTICULARS (Amt. In Crores)	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Capex for the scheme	49.24	**49.24**	49.24	49.24	49.24
Amount proposed to be capitalised	49.24	**49.24**	49.24	49.24	49.24

Refer Annexure-A, Page No. 24.

6.1.1 Projected capitalisation proposed during FY 2022-23 (DPR Scheme Code No. BEST/FY21/04), (*Annexure-A, Page No. 26)*

SR. No.	PARTICULARS OF EQUIPMENTS	Km/ Nos.	Amount (Rs. Crore)
A	Laying of HV cable	25.00	6.41
B	Laying of LV cable	56.00	11.39
C	RI Charges	24.27	18.71
D	Installation of new pillars	135	1.28
E	Laying of service cables & associated equipments	40	11.45
	Total		**49.24**

Refer Annexure-A, Page No. 26.

6.1.2 Computation of revenue from additional sales

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Cumulative capacity commissioned (MVA)	49.21	99.41	**151.21**	204.97	260.73
Incremental Loading (%)	20%	30%	**40%**	50%	58.01%
Distribution losses (%)	4.18%	4.18%	**4.18%**	4.18%	4.18%
System Power factor	0.9822	0.9822	**0.9822**	0.9822	0.9822
Additional sales (MU)	81.14	204.98	**371.86**	585.18	838.04
ROE per Unit (Rs/unit)	0.279	0.278	**0.277**	0.277	0.276
Total Revenue (Rs. Crore)	2.26	5.71	**10.32**	16.18	23.09

For Capacity addition, refer Para 5.1. **Projected cost benefit during FY 2022-23.**

Actual Benefits of Rs. 10.32 Cr is achieved as against above scheme No. BEST/FY21/04 (Kindly refer above table)

6.2 The actual capitalisation accrued during FY 2022-23 as against the above projections.

Sr. No.	Particulars of Equipments	DPR submission to MERC (ref. No.)	Amount capitalised (Rs. Crore)
A	**Scheme No. BEST/FY-21/04**		
1	Laying of HV cable (35.33 km)	MERC/CAPEX/2020-21/- dated 22.06.2020	5.31
2	Laying of LV cable (102.85 km)		16.82
3	Installation of ADPs (458 nos.)		2.68
4	Laying of service cables (65.97 km)		11.56
5	R.I. Charges		20.52

Sr. No.	Particulars of Equipments	DPR submission to MERC (ref. No.)	Amount capitalised (Rs. Crore)
6	Material Transport Charges		0.12
	TOTAL		**57.01**

During FY 2022-23, for extension of distribution network, Rs. 57.01 Cr actual capitalisations are accrued as against the projected capitalisation of Rs. 49.24 Cr.

7.0 Scheme-6 : Energy Meters

During FY 2022-23 there was no approved DPR for Energy Metres.

However Scheme No. BEST/FY 23/06 was put up for approval of Hon'ble Commission, same was rejected by the commission vide Dtd.

Due to rejection of the said DPR the cost incurred in respect of the DPR is considered as Non-DPR.

7.2 The Actual cost benefit realised due to addition of Energy Meters:

7.1 Capitalisation occurred during FY 2022-23 as against Non-DPR :

Sr. No.	DPR scheme ref. no.	Amount capitalised in FY 2022-23 (Rs. Crore)
1	Non -DPR	**1.02**
	Total Amount Capitalised	**1.02**

Refer Annexure-A, Pg. No. 27 (Sr. No.16).

REPLACEMENT OF CONVENTIONAL ENERGY METERS BY STATIC METERS

Total 10000 Nos. of Single Phase mechanical (conventional) meters are replaced by electronic meters during FY 2022-23

A. Total single phase meters replaced in FY 2022-23 = 10000

B. Average Consumption per Meter per Month (In Units) = 200

C. Average Consumption per Meter per Year (In Units) = 2400

Considering 4% slowness on average as meters are more than 15 years in service.

D. Units lost by single phase meters per year = (A x C x 0.04/100000) (in Lakh)

= (10000 x 2400 x 0.04) / 100000 = 9.6

Additional Revenue realized (in Lakh Rs.)(D x 7.11)*=9.6 x 7.11= 68.26

* Considering average tariff rate of residential consumers =Rs.7.11/ kwh (kindly refer Annexure-B, Page No.12)

Additional Revenue realized in FY 2022-23 = Rs. (D x 7.11) Cr = 0.68 Cr.

During FY 2022-23, actual benefit of Rs. 0.68 Cr is achieved.

The benefits achieved due to execution of this scheme are

i. Attained reliable and accurate measurement of energy.

ii. Provided reliable and improved service to the consumers

8.0 COST BENEFIT OF OVERALL SYSTEM

For all incremental sales to be realized, the RSS would require simultaneous commissioning of Distribution Sub stations, cabling and augmentation of existing infrastructure. We assume that the benefit from adding these components is in the same proportion as the current Capital Expenditure proposed towards the total system expansion and augmentation. This includes expenditure proposed in Project Schemes I (New RSS), II (Revamping of existing RSS), Non-DPR, III (New DSS & revamping of Existing DSS), IV (Strengthening of HV LV network) and V (Energy Meter) amounting to Rs. 180.49 Cr it includes capital expenditure towards Non-DPR Schemes, Revamping of RSS, BPA, Street Lighting & General Administration.

Therefore the overall cost benefit due to Strengthening of Network due to execution of work under schemes I, II, III, IV & Non-DPR are calculated as follows.

= (Additional Units realised in MUs due to Scheme I, II Non-DPR)*(RoE/Unit)*10^6*/10^7
Revenue due to Scheme VI

Additional units realised due to Commissioning of 1 No. of T/F in New RSS = 0.20 Mus
Additional units realised due to Augmentation / replacement of Power transformers = 13.47 Mus
Additional units realised due to Non-DPR Scheme 15.75 Mus
Additional units realised due to New DSS Schemes= 42.32 Mus

RoE per Unit =0.306
Overall Cost Benefit = **((**((0.20+13.47+15.75+42.32)*0.306*10^6))+0.68)/10^7
= (71.74*0.306*10^6) /10^7 + 0.68
= (2.195+0.68) Cr
= 2.875 Cr.

8.1 We have apportioned the cost benefit of Rs. 2.22 Crores to 5 schemes in proportion of the Capex of each scheme as follows:

All amounts in Cr.

NAME OF SCHEME	CAPEX	SCHEME CODE	% OF TOTAL CAPEX	BENIFITS PROJECTED IN DPR	BENEFITS ACHIEVED
New Receiving Substation of 110 kV & 33-22kV/11 kV	8.33	**Scheme No.** BEST/FY-16/01 (8.24) BEST/FY-21/01 (0.09)	6.22%	0.82	0.16
Augmentation / Replacement at existing RSS (Revamping RSS)	20.74	**Scheme No.** BEST/FY-16/02 (2.74) BEST/FY-17/02 (11.38) BEST/FY-18/02 (1.53) BEST/FY-20/02 (3.98) BEST/FY-20/02 (1.11)	15.49%	0.82	0.39
New Dist. Sub. Commissioning & alteration to Existing DSS	35.67	**Scheme No.** BEST/FY-21/03	26.65%	2.67	0.67
Extension of Dist. Network (Laying of HV/LV Lines)	57.01	**Scheme No.** BEST/FY-21/04	42.59%	**10.32**	1.07
Revamping of RSS	15.46	Non-DPR : Aug. of RSS	8.28%	-----	0.29
Energy Meters	15.65	Non-DPR : Energy Meters	0.76%	-----	0.29
Total	**152.86**		**100 %**	**14.63**	**2.88**

9.0 Benefits of CAPEX Schemes:

The Maximum Demand for FY 2022-23 = 898 MVA.

The total capacity of Power Transformer in the system for FY 2022-23 = 2321 MVA

(***Refer Annexure-B, Page No.13)***.

The total capacity of Distribution Transformer in the system for FY 2022-23= 2842 MVA.

By execution of network strengthening schemes we have maintained a ratio of,

Total capacity of Power Transformers in system/Maximum Demand = 2321 MVA/ 898 MVA =2.58

Total capacity of Dist. Transformers in system/Maximum Demand = 2842 MVA /898 MVA = 3.16

These system parameters ensure reliable and quality power supply to the consumers.

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Annexure – A

महाराष्ट्र विद्युत नियामक आयोग
Maharashtra Electricity Regulatory Commission

No. MERC/CAPEX/ FY 2020-21/ **16 July, 2020**

To,
The General Manager,
B.E.S.T. Undertaking,
BEST Bhavan, BEST Marg,
Colaba, Mumbai-400001.

Subject: In-principle clearance for the DPR of BEST for "Commissioning of 33/11 KV New Receiving Stations at Pimpalwadi, Spring Mill Chawl (Bombay Dyeing Plot) and Bharat Potdar Mill (India Blue)"(Rs 27.40 Crores)

Sir,

This has reference to your submitted DPR for "Commissioning of 33/11 KV New Receiving Stations at Pimpalwadi,Spring Mill Chawl (Bombay Dyeing Plot) and Bharat Potdar Mill (India Blue)", for in-principle approval to the Commission. The said scheme has been evaluated with reference to the guidelines circulated by the Commission on 9 February, 2005.

1 I am directed to convey the 'in-principle' clearance of the scheme. The particulars of the scheme as approved are outlined in the Annexure "A" and Appendix "A" attached.

2 No escalation in the unit cost has been considered.

3 The IDC shall be considered after execution of the project at time of tariff Petition.

4 Please note that this in-principle approval should not be construed as final approval for ARR purpose and the scheme will be open for scrutiny during the tariff determination process/ARR review, particularly in the context of actual cost incurred, scope and objective achieved, etc., ex-post after implementation of the Scheme. BESTwill be required to submit the status of implementation of the scheme with cost incurred till date, likely completion date, etc. along with its ARR Petition or during the tariff determination process at the appropriate time.

5 BEST should submit half yearly progress reports by 20th day of the first month of next half year giving the status of implementation of the Scheme in terms of expenditure incurred and item wise physical progress achieved during the implementation of the Scheme.

१३वा मजला, केंद्र क्र. १, जागतिक व्यापार केंद्र, कफ परेड, कुलाबा, मुंबई - ४०० ००५.
13th Floor, Centre No. 1, World Trade Centre, Cuffe Parade, Colaba, Mumbai - 400 005.
Tel.: 022-2216 3964 / 2216 3965 / 2216 3969 Fax : 022-2216 3976
E-mail : mercindia@merc.gov.in / mercindia@mercindia.org.in Website : www.merc.gov.in / www.mercindia.org.in

6. Assets created after execution of the Scheme should be maintained separately in the Asset Register.

7. Income from the Scrapped material shall be considered as other income shall be shown separately at the time of MYT/MTR Tariff Petitions.

8. Immediately after completion/commissioning of the scheme, BESTshould communicate to the Commission the date of completion of the scheme, actual cost incurred, escalation in cost, if any, with reasons, the scope and objectives of the scheme and to what extent they have been achieved, etc., so as to facilitate a comparison between the benefits envisaged at the in-principle clearance and the actual benefits.

9. BEST shall endeavour to complete the project within the stipulated time frame. Further, if BEST fails to initiate the work, including tendering process if any, within period of one year from the date of in-principle approval, the scheme shall be deemed to be cancelled. Thereafter, BEST will have to take a fresh look at the scheme and be required to obtain revised in-principle approval of the Commission with justification for delay.

10. Major scope of work shall be executed through competitive bidding process only.

Yours faithfully,

Sd/-
(Dr. Rajendra G. Ambekar)
Executive Director, MERC

Encl: Annexure "A" and Appendix "A"

Annexure A

Feasibility Report for Capital Investment Scheme for BEST

<table>
<tr><th>Sl. No.</th><th>Particulars</th><th>Details</th></tr>
<tr><td>1</td><td>Title (Name of Scheme)</td><td>Commissioning of 33/11 KV New Receiving Stations at Pimpalwadi, Spring Mill Chawl (Bombay Dyeing Plot) and Bharat Potdar Mill (India Blue)</td></tr>
<tr><td>2</td><td>Brief Scope of work</td><td>a. Installation of 33/11 kV, 1x16 MVA transformers.
b. Installation of 33 kV, 11 kV switchgears and accessories.
c. Laying of 33kV cables.
d. Installation of battery & battery charger.
e. Associated civil work for constructing new Receiving Substation.
f. Provision for Air conditioning at control room
g. Provision of Automatic Fire Fighting System.</td></tr>
<tr><td>3</td><td>Objective / Justification</td><td>(i) 24x7 power supply for consumers in Mumbai City.
(ii) To meet increasing load demand in existing areas of supply.
(iii) To improve quality and reliability of supply..</td></tr>
<tr><td>4</td><td>Estimated Cost</td><td>Rs. 27.58 Crore</td></tr>
<tr><td>5</td><td>In-principle approval accorded</td><td>Rs. 27.40 Crore</td></tr>
<tr><td>6</td><td>Cost benefit analysis</td><td>Benefits of Rs 0.74 Crores in the 1st year, going up to Rs.3.56 Crores in the 5th year</td></tr>
<tr><td>7</td><td>Approved Phasing</td><td>
<table>
<tr><th>S. N.</th><th>Particulars</th><th>FY 2020-21</th><th>FY 2021-22</th><th>FY 2022-23</th><th>FY 2023-24</th><th>FY 2024-25</th></tr>
<tr><td>1</td><td>Capital Expenditure in Rs Cr</td><td>5.97</td><td>7.46</td><td>5.71</td><td>5.26</td><td>3.00</td></tr>
<tr><td>2</td><td>Capitalisation in Rs Cr</td><td>5.97</td><td>7.46</td><td>5.71</td><td>5.26</td><td>3.00</td></tr>
<tr><td>3</td><td>IDC</td><td colspan="5">NIL (shall be considered after execution of the project at time of tariff Petition)</td></tr>
</table>
</td></tr>
<tr><td>8</td><td>Proposed Funding Arrangement</td><td>Debt Equity Ratio is 70:30.</td></tr>
</table>

B. Observations / Comments on FR

1.	**Prudence of Investment / Technical Justification**	a. To meet increasing load in existing areas of supply. b. Build & maintain adequate redundancy in the system c. 24x7 power supply for consumers in Mumbai City. d. Reduction of AT&C losses/maintaining of existing low level of AT&C losses of the BEST Undertaking e. To maintain reliability and quality of Electric Supply to the Consumers.
2.	**Reasonability of Cost Estimate**	It is observed that BEST is following the open-tender Competitive Bidding approach for procurement of materials and services. The contract is awarded to lowest quoted bidder. The competitive approach ensures the least cost approach for execution of capital expenditure schemes.
3.	**Comments on Cost Benefit Analysis**	Benefits of Rs 0.74 Crores in the 1st year, going up to Rs.3.56 Crores in the 5th year
4.	**Discrepancy / Shortcomings Observed**	Complied by BEST.
5.	**Remarks / Specific Comments, if any**	The scheme is technically justified.

Appendix –A

Cost Abstract

Pimpalwadi RSS:-

Sr. No	Particulars	Qty.	Unit Cost (Rs. Lakh.)	Total (Rs. Lakh)
1	Power Transformer 16 MVA, 33/11kV with NIFP System	1	146.31	146.31
2	Primary Switchgear 33kV, 1500 MVA SF6 VCB	1	10.41	10.41
3	Secondary Switchgear 11kV 350 MVA (1 set of 9 breakers)	1	37.82	37.82
4	Control, alarm & relay panel with FRLS control cable	1	17.55	17.55
5	Battery Charger	1	4.74	4.74
6	Battery	1	4.06	4.06
7	HT Capacitor	1	13.30	13.30
8	HT Reactor	1	12.96	12.96
9	Earthing works	1	20	20.00
10	Air-conditioning for control room	1	2	2.00
11	Automatic Fire Fighting System	1	25.62	25.62
12	33KVcable laying including R.I. charges	0	182.26	0.00
13	Civil Work	0	0	0.00
	Total cost in Lakh			**294.77**
	Contingency 5%			**14.74**
	Grand Total in Crore			**3.10**

Spring Mill Chawl (Bombay Dyeing):-

Sr. No	Particulars	Qty.	Unit Cost (Rs. Lakh.)	Total (Rs. Lakh)
1	Power Transformer 16 MVA, 33/11kV	1	146.31	146.31
2	Primary Switchgear 33kV, 1500 MVA SF6 VCB	1	10.41	10.41
3	Secondary Switchgear 11kV 350 MVA (1 set of 9 breakers)	1	37.82	37.82
4	Control, alarm & relay panel with FRLS control cable	1	17.55	17.55
5	Battery Charger	1	4.74	4.74
6	Battery	1	4.06	4.06
7	HT Capacitor	1	13.30	13.30
8	HT Reactor	1	12.96	12.96

Sr. No	Particulars	Qty.	Unit Cost (Rs. Lakh.)	Total (Rs. Lakh)
9	Earthing works	1	20	20
10	Air-conditioning for control room	1	2	2
11	Automatic Fire Fighting System	1	25.62	25.62
12	33KVcable laying including R.I. charges	5.18	182.26	930.12
13	Civil Work	1	289.93	289.93
	Total cost in Lakh			**1514.82**
	Contogency 5%			61.24
	Grand Total in Crore			**15.76**

Bharat Potdar Mill RSS:-

Sr. No	Particulars	Qty.	Unit Cost (Rs. Lakh.)	Total (Rs. Lakh)
1	Power Transformer 16 MVA, 33/11kV	1	146.31	146.31
2	Primary Switchgear 33kV, 1500 MVA SF6 VCB	1	10.41	10.41
3	Secondary Switchgear 11kV 350 MVA (1 set of 9 breakers)	1	37.82	37.82
4	Control, alarm & relay panel with FRLS control cable	1	17.55	17.55
5	Battery Charger	1	4.74	4.74
6	Battery	1	4.06	4.06
7	HT Capacitor	1	13.30	13.30
8	HT Reactor	1	12.96	12.96
9	Earthing works	1	20	20
10	Air-conditioning for control room	1	2	2
11	Automatic Fire Fighting System	1	25.62	25.62
12	33KVcable laying including R.I. charges	1.35	179.56	242.41
13	Civil Work	1	289.93	289.93
	Total cost in Lakh			**827.11**
	Contogency 5%			26.86
	Grand Total in crore			**8.54**

महाराष्ट्र विद्युत नियामक आयोग
Maharashtra Electricity Regulatory Commission

सत्यमेव जयते

MERC/CAPEX/2020-21/ 553 **Date: 15 December, 2021**

To,
The General Manager,
B.E.S.T. Undertaking,
BEST Bhavan, BEST Marg,
Colaba, Mumbai-400001.

Subject: In-principle clearance for the DPR of BEST for "Revamping of existing Receiving Substations FY 2019-20 to FY 2024-25"(Rs 40.60 Cr)

Sir,

This has reference to your submitted DPR for "Laying of HV and LV Cable and associated equipments", for in-principle approval to the Commission. The said scheme has been evaluated with reference to the guidelines circulated by the Commission on 9 February, 2005.

1. I am directed to convey the 'in-principle' clearance of the scheme. The particulars of the scheme as approved are outlined in the Annexure "A" and Appendix "A" attached.

2. No escalation in the unit cost has been considered.

3. The IDC shall be considered after execution of the project at time of tariff Petition.

4. Please note that this in-principle approval should not be construed as final approval for ARR purpose and the scheme will be open for scrutiny during the tariff determination process/ARR review, particularly in the context of actual cost incurred, scope and objective achieved, etc., ex-post after implementation of the Scheme. BESTwill be required to submit the status of implementation of the scheme with cost incurred till date, likely completion date, etc. along with its ARR Petition or during the tariff determination process at the appropriate time.

5. BEST should submit half yearly progress reports by 20th day of the first month of next half year giving the status of implementation of the Scheme in terms of expenditure incurred and item wise physical progress achieved during the implementation of the Scheme.

6. Assets created after execution of the Scheme should be maintained separately in the Asset Register.

7. Income from the Scrapped material shall be considered as other income shall be shown separately at the time of MYT/MTR Tariff Petitions.

8. Immediately after completion/commissioning of the scheme, BEST should communicate to the Commission the date of completion of the scheme, actual cost incurred, escalation in cost, if any, with reasons, the scope and objectives of the scheme and to what extent they have been achieved, etc., so as to facilitate a comparison between the benefits envisaged at the in-principle clearance and the actual benefits.

9. BEST shall endeavour to complete the project within the stipulated time frame. Further, if BEST fails to initiate the work, including tendering process if any, within period of one year from the date of in-principle approval, the scheme shall be deemed to be cancelled. Thereafter, BEST will have to take a fresh look at the scheme and be required to obtain revised in-principle approval of the Commission with justification for delay.

10. Major scope of work shall be executed through competitive bidding process only.

11. It directed to keep in detail all records of its distribution assets in detail and shall ensure that the future DPRs shall be associated with detail asset information.

Yours faithfully,

(Rajendra G. Ambekar)
Executive Director, MERC

Encl: Annexure "A" and Appendix "A"

Feasibility Report for Capital Investment Scheme for BEST

<table>
<tr><th>Sl. No.</th><th>Particulars</th><th>Details</th></tr>
<tr><td>1</td><td>Title (Name of Scheme)</td><td>Revamping of existing Receiving Substations FY 2019-20 to FY 2024-25</td></tr>
<tr><td>2</td><td>Brief Scope of work</td><td>Alteration and augmentation of existing Receiving Substations
• Installation of additional transformers- Nepean Sea RSS and Kingsway RSS
• Replacement of - Grant Road RSS
• Installation of Additional RMU - Avighna RSS
• Replacement of 2nos. of AIS bus sections - Elphiston Mill RSS
• Replacement of 33 kV switchgears - Mazgaon Dock, Sion Fort, Dharavi, Mahim, Nepean Sea, Colaba and Kingsway RSS
• Replacement of 11 kV bus sections - Grant Road, Sewree, Parel, Kingsway, Prabhadevi, Mahalaxmi, Dharavi, Worli, Wadala, Mahim, KEM and Nair Hospital RSS
• Replacement / Installation of Capacitors - Cumballa Hill, Kingsway, Wadala, Worli Dairy, Sitaladevi and Sewree RSS.
• Replacement / Installation of Reactors - Cumballa Hill, Kingsway, Masjid, Hutatma Chowk, Grant Road, Kussara, Mahalaxmi and Sewree RSS.
• Replacement / Installation of Battery Set and charger - Grant Road, Nariman Point, Ballard Estate, Colaba, Hutatma Chowk, Mazgaon Dock and Nestle RSS. Mahalaxmi (only Battery Set)
• Replacement Fire Fighting System (WM Type) - Love Grove, Naval Dock RSS.
• Replacement Fire Fighting System (CO_2 Type) - Sitaladevi, Sion Fort, Hutatma Chowk, Mahim Causeway, Byculla, Sewree, Khetwadi RSS.</td></tr>
<tr><td>3</td><td>Objective / Justification</td><td>i) 24x7 power supply for consumers in Mumbai City.
(ii) reduction of AT&C losses/maintaining of existing low level of AT&C losses of the BEST Undertaking
(iii) To maintain reliability and quality of Electric Supply to the Consumers.</td></tr>
<tr><td>4</td><td>Estimated Cost</td><td>Rs. 40.60 Crore</td></tr>
<tr><td>5</td><td>In-principle approval accorded</td><td>Rs. 40.60 Crore</td></tr>
<tr><td>6</td><td>Cost benefit analysis</td><td>Benefits of Rs 0.74 Crores in the 2nd year, going up to Rs.5.02 Crores in the 6th year</td></tr>
<tr><td>7</td><td>Approved Phasing</td><td>
<table>
<tr><th>S. N.</th><th>Particulars</th><th>FY 2019-20</th><th>FY 2020-21</th><th>FY 2021-22</th><th>FY 2022-23</th><th>FY 2023-24</th><th>FY 2024-25</th></tr>
<tr><td>1</td><td>Capital Expenditure in Rs. Cr</td><td>15.78</td><td>8.75</td><td>8.52</td><td>2.32</td><td>1.61</td><td>3.62</td></tr>
<tr><td>2</td><td>Capitalisation in Rs Cr</td><td>15.78</td><td>8.75</td><td>8.52</td><td>2.32</td><td>1.61</td><td>3.62</td></tr>
<tr><td>3</td><td>IDC</td><td colspan="6">NIL (shall be considered after execution of the project at time of tariff Petition)</td></tr>
</table>
</td></tr>
<tr><td>8</td><td>Proposed Funding Arrangement</td><td>Debt Equity Ratio is 70:30.</td></tr>
</table>

MAHARASHTRA ELECTRICITY REGULATORY COMMISSION

B. Observations / Comments on FR

1.	**Prudence of Investment / Technical Justification**	To meet increasing load in existing areas of supply. Build & maintain adequate redundancy in the system 24x7 power supply for consumers in Mumbai City. Reduction of AT&C losses/maintaining of existing low level of AT&C losses of the BEST Undertaking To maintain reliability and quality of Electric Supply to the Consumers..
2.	**Reasonability of Cost Estimate**	It is observed that BEST is following the open-tender Competitive Bidding approach for procurement of materials and services. The contract is awarded to lowest quoted bidder. The competitive approach ensures the least cost approach for execution of capital expenditure schemes.
3.	**Comments on Cost Benefit Analysis**	Benefits of Rs 0.74 Crores in the 2nd year, going up to Rs.5.02 Crores in the 6th year
4.	**Discrepancy / Shortcomings Observed**	Complied by BEST.
5.	**Remarks / Specific Comments, if any**	The scheme is technically justified.

Appendix –A

DESCRIPTION	TOTAL COST	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
allation of additional Power Transformers, 16 MVA, 33/11kV and associated ipments at Nepean sea RSS and Kingsway RSS (Qty-2).	13.03	6.56	3.46	3.01			
placement / Installation of 33/11kV, 16 MVA Power Transformer at Grant Rd. RSS r-1)	1.89	1.89					
tallation of additional 1 no. of 33kV, 1500 MVA RMU at Avighna, 33/0.415 kV S (Qty-1).	0.98	0.98					
placement / Installation of 33kV, 1500 MVA, AIS Bus Section at Elphiston Mill S (Qty-2).	0.98		0.98				
placement of 33kV, 1500 MVA primary switchgears at Mazgaon Dock (1 no.), n Fort (2 nos.), Colaba (1 no.), Nepean Sea (2 nos), Kingsway 2 nos.), Mahim (os), Dharavi (3 nos.) (QTY-13)	2.46		0.88	0.00	0.78	0.22	0.58
placement of 11 KV Bus Section, 350 MVA at Grant Rd (4), Sewree RSS, Parel S, (3 nos.each), Dharavi (2), Wadala (2), Kingsway (3), Mahim (2), Prabhadevi KEM(1), Worli(2), Mahalaxmi(3), Nair Hosp.(1) (Qty- 29 nos.).	12.70	2.83	1.56	4.35	0.61	0.78	2.58
placement / Installation of Capacitors at Cumballa Hill RSS, Kingsway RSS, dala RSS, Worli Dairy, Sitaladevi (1 no. each) and Sewree RSS (2 nos) (Qty- 7 .).	0.76			0.29	0.18	0.29	
placement / Installation of Reactors at Masjid RSS, Hutatma Chowk RSS, Grant ad, Cumballa Hill RSS, Kingsway RSS, Kussara RSS, Mahalaxmi RSS (1 no. each) Sewree RSS (2 nos.each). (Qty-9).	2.29			0.75	0.75	0.32	0.47
placement / Installation of Battery and charger at Grant Road, Nariman Point RSS, lard Estate RSS, Colaba RSS, Hutatma Chowk RSS, Mazgaon Dock RSS, aravi, Apollo (Qty-8)	0.68	0.48	0.08	0.12			
placement Fire Fighting System at Love Grove RSS, Naval Dock RSS (Water Mist pe, Qty-2).	3.04	3.04					
placement Fire Fighting System at Sitaladevi RSS, Sion Fort RSS, Hutatma owk RSS, Mahim Causeway RSS, Byculla RSS, Sewree RSS, Khetwadi RSS (CO2 pe Qty-7).	1.79		1.79				
TOTAL	**40.60**	**15.78**	**8.75**	**8.52**	**2.32**	**1.61**	**3.62**

महाराष्ट्र विद्युत नियामक आयोग
Maharashtra Electricity Regulatory Commission

MERC/CAPEX/2022-23/0556 **Date: 14 November, 2022**

To,
The General Manager,
B.E.S.T. Undertaking,
BEST Bhavan, BEST Marg,
Colaba, Mumbai-400001.

Subject:In-principle clearance for the DPR of BEST for "Revamping of existing Receiving Substations during FY 2020-21 to FY 2022-23" for In-principle approval of the Commission and Post facto approval of capitalization during FY 2019-20"(Rs. 56.07 Cr).

Sir,

This has reference to your submitted DPR for "Revamping of existing Receiving Substations during FY 2019-20 to FY 2024-25" for In-principle approval of the Commission and Post facto approval of capitalization during FY 2019-20. The said scheme has been evaluated with reference to the guidelines circulated by the Commission on 9 February, 2005.

1. I am directed to convey the 'in-principle' clearance of the scheme. The particulars of the scheme as approved are outlined in the Annexure "A" and Appendix "A" attached.

2. No escalation in the unit cost has been considered.

3. The IDC shall be considered after execution of the project at time of MYT/MTR tariff Petition.

4. Please note that this in-principle approval should not be construed as final approval for ARR purpose and the scheme will be open for scrutiny during the tariff determination process/ARR review, particularly in the context of actual cost incurred, scope and objective achieved, etc., ex-post after implementation of the Scheme. BEST will be required to submit the status of implementation of the scheme with cost incurred till date, likely completion date, etc. along with its ARR Petition or during the tariff determination process at the appropriate time.

5. BEST should submit half yearly progress reports by 20th day of the first month of next half year giving the status of implementation of the Scheme in terms of expenditure incurred and item wise physical progress achieved during the implementation of the Scheme.

6. Assets created after execution of the Scheme should be maintained separately in the Asset Register.

7. Income from the Scrapped material shall be considered as other income shall be shown separately at the time of MYT/MTR Tariff Petitions.

8. Immediately after completion/commissioning of the scheme, BESTshould communicate to the Commission the date of completion of the scheme, actual cost incurred, escalation in cost, if any, with reasons, the scope and objectives of the scheme and to what extent they have been achieved, etc., so as to facilitate a comparison between the benefits envisaged at the in-principle clearance and the actual benefits.

9. BEST shall endeavour to complete the project within the stipulated time frame. Further, if BEST fails to initiate the work, including tendering process if any, within period of one year from the date of in-principle approval, the scheme shall be deemed to be cancelled. Thereafter, BEST will have to take a fresh look at the scheme and be required to obtain revised in-principle approval of the Commission with justification for delay.

10. Major scope of work shall be executed through competitive bidding process only.

11. It directed to keep in detail all records of its distribution assets and shall ensure that the future DPRs shall be associated with detail asset information.

Yours faithfully,

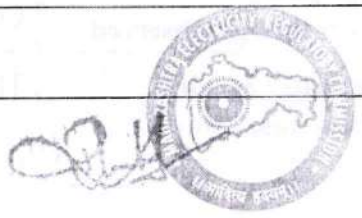
(Dr. Rajendra G. Ambekar)
Executive Director, MERC

Encl: Annexure "A" and Appendix "A"

Annexure "A"

Feasibility Report for Capital Investment Scheme for BEST

Sl. No.	Particulars	Details
1	Title (Name of Scheme)	**Revamping of existing Receiving Substations during FY 2019-20 to FY 2022-23**
2	Brief Scope of work	• Replacement of 10/12.5 MVA Power Transformers at Sitaladevi RSS Tr. No. 4, Byculla RSS Tr. No. 1 & 3 (Qty-3 Nos.) • Replacement of 33 kV switchgears at Mahim Causeway RSS(Qty-3 Nos.) • Diversion of 33 kV feeder cables of RSS viz.Wadala RSS (T/F. No. 1 & 3), Kingsway RSS (T/F. No. 2), Raoli Hill RSS (T/F. No.2), Sion Fort RSS (T/F. No. 2), Pratiksha Nagar (T/F. No. 1), Lodha Crown T6 (T/F. No. 1) from TPC Dharavi RS to TPC Antop Hill RS and laying of additional cables for proposed Pratiksha Nagar RSS (T/F2), Lodha Crown T6 (T/F2), Lodha Crown T10 (T/F1&2) and New RSS commissioning at Dosti Acres (Qty. 16.961 Kms. • Replacement of 33 kV cable from TPC Parel RS to Marathon Futurex along with additional cables. (5.722 Kms.) • Replacement & diversion of 33 kV cable pert portion of Cumballa Hill RSS (T/F 1, 2 & 4) and laying additional one no. of 33 kV cable for Apollo Mill RSS (T/F 2) (Qty. 7.761 Kms.) • Diversion & replacement of EHV Cables of Sitaladevi RSS (T/F 1, 2, 3 & 4), VSNL RSS and VSNL HV consumer from T. H. Kataria Marg ROB below Western Railway Tracks (Qty. 2.210 Kms, Included HDD Cost)) • Diversion& replacement of EHV Cables of part portion of 33 kV feeders DBA1→ Futurex 33 kV HT Room LHS & DBA2→ Futurex 33kV HT Room RHS below Western Railway Tracks (Delisle ROB) (Qty. 3.420 Kms, Included HDD Cost))
3	Objective / Justification	i. To meet increasing load in existing areas of supply. ii. Build & maintain adequate redundancy in the system iii. 24x7 power supply for consumers in Mumbai City. iv. Reduction of AT&C losses/maintaining of existing low level of AT&C losses of the BEST Undertaking v. To maintain reliability and quality of Electric Supply to the Consumers.
4	Estimated Cost	Rs. 56.22 Crore
5	In-principle approval accorded	Rs. 56.07 Crore



<table>
<tr><td>7</td><td>Approved Phasing</td><td>
<table>
<tr><th>Sr. No.</th><th>Particulars</th><th>Total</th><th>FY 2019-20</th><th>FY 2020-21</th><th>FY 2021-22</th><th>FY 2022-23</th></tr>
<tr><td>1</td><td>Capital Expenditure in Rs Cr</td><td>56.07</td><td>8.84</td><td>11.84</td><td>15.77</td><td>19.62</td></tr>
<tr><td>2</td><td>Capitalisation in Rs Cr</td><td>56.07</td><td>8.84</td><td>11.84</td><td>6.02</td><td>29.37</td></tr>
</table>
</td></tr>
<tr><td>8</td><td>Proposed Funding Arrangement</td><td>Debt Equity Ratio is 70:30.</td></tr>
</table>

B. Observations / Comments on FR

1.	**Prudence of Investment / Technical Justification**	**To meet increasing load in existing areas of supply. Build & maintain adequate redundancy in the system 24x7 power supply for consumers in Mumbai City. Reduction of AT&C losses/maintaining of existing low level of AT&C losses of the BEST Undertaking To maintain reliability and quality of Electric Supply to the Consumers..**
2.	**Reasonability of Cost Estimate**	It is observed that BEST is following the open-tender Competitive Bidding approach for procurement of materials and services. The contract is awarded to lowest quoted bidder. The competitive approach ensures the least cost approach for execution of capital expenditure schemes.
3.	**Comments on Cost Benefit Analysis**	Benefits of Rs 0.28 Crores in the 1st year, going up to Rs.1.64 Crores in the 4th year
4.	**Discrepancy / Shortcomings Observed**	Complied by BEST.
5.	**Remarks / Specific Comments, if any**	The scheme is technically justified.

Appendix – "A"

Cost Abstract

Sr. No.	Name of Scheme	Approved Cost in Rs Cr
1.	Replacement of 10/12.5 MVA Power Transformers at Sitaladevi RSS Tr. No. 4, Byculla RSS Tr. No. 1 & 3 (Qty-3 Nos.)	**5.09**
2.	Replacement of 33 kV switchgears at Mahim Causeway RSS(Qty-3 Nos.)	**0.59**
3.	Diversion of 33 kV feeder cables of RSS viz.Wadala RSS (T/F. No. 1 & 3), Kingsway RSS (T/F. No. 2), Raoli Hill RSS (T/F. No.2), Sion Fort RSS (T/F. No. 2), Pratiksha Nagar (T/F. No. 1), Lodha Crown T6 (T/F. No. 1) from TPC Dharavi RS to TPC Antop Hill RS and laying of additional cables for proposed Pratiksha Nagar RSS (T/F2), Lodha Crown T6 (T/F2), Lodha Crown T10 (T/F1&2) and New RSS commissioning at Dosti Acres (Qty. 16.961 Kms.	**22.55**
4.	Replacement of 33 kV cable from TPC Parel RS to Marathon Futurex along with additional cables. (5.722 Kms.)	**8.51**
5.	Replacement & diversion of 33 kV cable pert portion of Cumballa Hill RSS (T/F 1, 2 & 4) and laying additional one no. of 33 kV cable for Apollo Mill RSS (T/F 2) (Qty. 7.761 Kms.)	**10.92**
6	Diversion & replacement of EHV Cables of Sitaladevi RSS (T/F 1, 2, 3 & 4), VSNL RSS and VSNL HV consumer from T. H. Kataria Marg ROB below Western Railway Tracks (Qty. 2.210 Kms, Included HDD Cost)):	**3.47**
7	Diversion& replacement of EHV Cables of part portion of 33 kV feeders DBA1→ Futurex 33 kV HT Room LHS & DBA2→ Futurex 33kV HT Room RHS below Western Railway Tracks (Delisle ROB) (Qty. 3.420 Kms, Included HDD Cost))	**4.94**
	Grant total	**56.07**

महाराष्ट्र विद्युत नियामक आयोग
Maharashtra Electricity Regulatory Commission

सत्यमेव जयते

MERC/CAPEX/2021-22/ 552 **Date: 15 December, 2021**

To,
The General Manager,
B.E.S.T. Undertaking,
BEST Bhavan, BEST Marg,
Colaba, Mumbai-400001.

Subject:In-principle clearance for the DPR of BEST for "Commissioning of New Distribution Substations (DSS) and Revamping of existing Distribution Substationsfor FY 2020-21 to FY 2024-25"(Rs. 150 Cr).

Sir,

This has reference to your submitted DPR for "Commissioning of New Distribution Substations (DSS) and Revamping of existing Distribution Substationsfor FY 2020-21 to FY 2024-25", for in-principle approval to the Commission. The said scheme has been evaluated with reference to the guidelines circulated by the Commission on 9 February, 2005.

1. I am directed to convey the 'in-principle' clearance of the scheme. The particulars of the scheme as approved are outlined in the Annexure "A" and Appendix "A" attached.

2. No escalation in the unit cost has been considered.

3. The IDC shall be considered after execution of the project at time of MYT/MTR tariff Petition.

4. Please note that this in-principle approval should not be construed as final approval for ARR purpose and the scheme will be open for scrutiny during the tariff determination process/ARR review, particularly in the context of actual cost incurred, scope and objective achieved, etc., ex-post after implementation of the Scheme. BEST will be required to submit the status of implementation of the scheme with cost incurred till date, likely completion date, etc. along with its ARR Petition or during the tariff determination process at the appropriate time.

5. BEST should submit half yearly progress reports by 20th day of the first month of next half year giving the status of implementation of the Scheme in terms of expenditure incurred and item wise physical progress achieved during the implementation of the Scheme.

6. Assets created after execution of the Scheme should be maintained separately in the Asset Register.

7. Income from the Scrapped material shall be considered as other income shall be shown separately at the time of MYT/MTR Tariff Petitions.

8. Immediately after completion/commissioning of the scheme, BESTshould communicate to the Commission the date of completion of the scheme, actual cost incurred, escalation in cost, if any, with reasons, the scope and objectives of the scheme and to what extent they have been achieved, etc., so as to facilitate a comparison between the benefits envisaged at the in-principle clearance and the actual benefits.

9. BEST shall endeavour to complete the project within the stipulated time frame. Further, if BEST fails to initiate the work, including tendering process if any, within period of one year from the date of in-principle approval, the scheme shall be deemed to be cancelled. Thereafter, BEST will have to take a fresh look at the scheme and be required to obtain revised in-principle approval of the Commission with justification for delay.

10. Major scope of work shall be executed through competitive bidding process only.

11. It directed to keep in detail all records of its distribution assets in detail and shall ensure that the future DPRs shall be associated with detail asset information.

Yours faithfully,

(Dr. Rajendra G. Ambekar)
Executive Director, MERC

Encl: Annexure "A" and Appendix "A"

18

Annexure "A"

Feasibility Report for Capital Investment Scheme for BEST

<table>
<tr><th>Sl. No.</th><th>Particulars</th><th>Details</th></tr>
<tr><td>1</td><td>Title (Name of Scheme)</td><td>Commissioning of New Distribution Substations (DSS) and Revamping of existing Distribution Substations for FY 2020-21 to FY 2024-25</td></tr>
<tr><td>2</td><td>Brief Scope of work</td><td>• Commissioning of New DSS (40 nos./year)
• Installation of Additional Distribution transformers (DTs) and replacement of transformers with higher capacity and age old DTs at existing DSS (30Nos/year)
• Replacement of OCBs by VCBs at existing DSS (25 nos./year).
• Remodeling of dilapidated DSS (Relocation-10 nos./year)</td></tr>
<tr><td>3</td><td>Objective / Justification</td><td>i. To meet increasing load in existing areas of supply.
ii. Build & maintain adequate redundancy in the system
iii. 24x7 power supply for consumers in Mumbai City.
iv. Reduction of AT&C losses/maintaining of existing low level of AT&C losses of the BEST Undertaking
v. To maintain reliability and quality of Electric Supply to the Consumers.</td></tr>
<tr><td>4</td><td>Estimated Cost</td><td>Rs. 152.3 Crore</td></tr>
<tr><td>5</td><td>In-principle approval accorded</td><td>Rs. 150 Crore</td></tr>
<tr><td>6</td><td>1.1.1
Cost benefit analysis</td><td>Benefits of Rs 2.60 Crores in the 1st year, going up to Rs.23.09 Crores in the 5th year</td></tr>
<tr><td>7</td><td>Approved Phasing</td><td>
<table>
<tr><th>S. N.</th><th>Particulars</th><th>FY 20-21</th><th>FY 21-22</th><th>FY 22-23</th><th>FY 23-24</th><th>FY 24-25</th></tr>
<tr><td>1</td><td>Capital Expenditure</td><td>30.2</td><td>29.95</td><td>29.95</td><td>29.95</td><td>29.95</td></tr>
<tr><td>2</td><td>Capitalisation</td><td>30.2</td><td>29.95</td><td>29.95</td><td>29.95</td><td>29.95</td></tr>
<tr><td>3</td><td>IDC</td><td colspan="5">NIL (shall be considered after execution of the project at time of MYT/MTR tariff Petition)</td></tr>
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</td></tr>
<tr><td>8</td><td>Proposed Funding Arrangement</td><td>Debt Equity Ratio is 70:30.</td></tr>
</table>

MAHARASHTRA ELECTRICITY REGULATORY COMMISSION

B. Observations / Comments on FR

1.	**Prudence of Investment / Technical Justification**	**To meet increasing load in existing areas of supply.** **Build & maintain adequate redundancy in the system** **24x7 power supply for consumers in Mumbai City.** **Reduction of AT&C losses/maintaining of existing low level of AT&C losses of the BEST Undertaking** **To maintain reliability and quality of Electric Supply to the Consumers..**
2.	**Reasonability of Cost Estimate**	It is observed that BEST is following the open-tender Competitive Bidding approach for procurement of materials and services. The contract is awarded to lowest quoted bidder. The competitive approach ensures the least cost approach for execution of capital expenditure schemes.
3.	**Comments on Cost Benefit Analysis**	Benefits of Rs 2.26 Crores in the 1st year, going up to Rs.23.09 Crores in the 5th year
4.	**Discrepancy / Shortcomings Observed**	Complied by BEST.
5.	**Remarks / Specific Comments, if any**	The scheme is technically justified. BEST's expenditure phasing in the DPR proposal was starting from FY 20-21 to FY 24-25. As the year FY 2020-21 has been lapsed, the expenditure is shifted one year ahead i.e. starting from FY 21-22 to FY 25-26.

Appendix – "A"

Cost Abstract

Sr. No.	Item Description	FY2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
A	Commissioning of DSS (40 nos/year)	17.49	17.49	17.49	17.49	17.49
B	Augmentation/Replacement of Transformers (30 nos./year)*	5.24	4.99	4.99	4.99	4.99
C	Remodeling of DSS (10 nos./year)	4.78	4.78	4.78	4.78	4.78
D	Replacement of OCBs by VCBs (25 nos. of DSS/year)	2.69	2.69	2.69	2.69	2.69
	Total = Rs. 150 Crs	**30.20**	**29.95**	**29.95**	**29.95**	**29.95**

**For FY 20-21, Augmentation/Replacement of Transformers Qty is 32 Nos*

MERC/CAPEX/2020-21/ **Date: 22 June, 2020**

To,
The General Manager,
B.E.S.T. Undertaking,
BEST Bhavan, BEST Marg,
Colaba, Mumbai-400001.

Subject: In-principle clearance for the DPR of BEST for "Laying of HV and LV Cable and associated equipments for FY 2020-21 to FY 2024-25"(Rs 246.20 Cr)

Sir,

This has reference to your submitted DPR for "Laying of HV and LV Cable and associated equipments", for in-principle approval to the Commission. The said scheme has been evaluated with reference to the guidelines circulated by the Commission on 9 February, 2005.

1. I am directed to convey the 'in-principle' clearance of the scheme. The particulars of the scheme as approved are outlined in the Annexure "A" and Appendix "A" attached.

2. No escalation in the unit cost has been considered.

3. The IDC shall be considered after execution of the project at time of tariff Petition.

4. Please note that this in-principle approval should not be construed as final approval for ARR purpose and the scheme will be open for scrutiny during the tariff determination process/ARR review, particularly in the context of actual cost incurred, scope and objective achieved, etc., ex-post after implementation of the Scheme. BESTwill be required to submit the status of implementation of the scheme with cost incurred till date, likely completion date, etc. along with its ARR Petition or during the tariff determination process at the appropriate time.

5. BEST should submit half yearly progress reports by 20th day of the first month of next half year giving the status of implementation of the Scheme in terms of expenditure incurred and item wise physical progress achieved during the implementation of the Scheme.

6. Assets created after execution of the Scheme should be maintained separately in the Asset Register.

7. Income from the Scrapped material shall be considered as other income shall be shown separately at the time of MYT/MTR Tariff Petitions.

8. Immediately after completion/commissioning of the scheme, BEST should communicate to the Commission the date of completion of the scheme, actual cost incurred, escalation in cost, if any, with reasons, the scope and objectives of the scheme and to what extent they have been achieved, etc., so as to facilitate a comparison between the benefits envisaged at the in-principle clearance and the actual benefits.

9. BEST shall endeavour to complete the project within the stipulated time frame. Further, if BEST fails to initiate the work, including tendering process if any, within period of one year from the date of in-principle approval, the scheme shall be deemed to be cancelled. Thereafter, BEST will have to take a fresh look at the scheme and be required to obtain revised in-principle approval of the Commission with justification for delay.

10. Major scope of work shall be executed through competitive bidding process only.

Yours faithfully,

Sd/-
(Rajendra G. Ambekar)
Executive Director, MERC

Encl: Annexure "A" and Appendix "A"

Feasibility Report for Capital Investment Scheme for BEST

<table>
<tr><th>Sl. No.</th><th>Particulars</th><th>Details</th></tr>
<tr><td>1</td><td>Title (Name of Scheme)</td><td>Laying of HV and LV Cable and associated equipments for FY 2020-21 to FY 2024-25</td></tr>
<tr><td>2</td><td>Brief Scope of work</td><td>• Laying of HV cable (25 KM per year)
• Laying of LV cables (56 KM per year)
• Installation of Auxillary Distribution Feeders (135 Nos per Year)
• Laying of service cables and installation of associated equipments.(40 KM per year)</td></tr>
<tr><td>3</td><td>Objective / Justification</td><td>• To increase the reach to consumers.
• To enhance the last mile connectivity
• To improve network flexibility.</td></tr>
<tr><td>4</td><td>Estimated Cost</td><td>Rs. 246.20 Crore</td></tr>
<tr><td>5</td><td>In-principle approval accorded</td><td>Rs. 246.20 Crore</td></tr>
<tr><td>6</td><td>Cost benefit analysis</td><td>Benefits of Rs 2.26Crores in the 1st year, going up to Rs.23.09Crores in the 5th year</td></tr>
<tr><td>7</td><td>Approved Phasing</td><td>
<table>
<tr><th>S. N.</th><th>Particulars</th><th>FY 2020-21</th><th>FY 2021-22</th><th>FY 2022-23</th><th>FY 2023-24</th><th>FY 2024-25</th></tr>
<tr><td>1</td><td>Capital Expenditure in Rs Cr</td><td>49.24</td><td>49.24</td><td>49.24</td><td>49.24</td><td>49.24</td></tr>
<tr><td>2</td><td>Capitalisation in Rs Cr</td><td>49.24</td><td>49.24</td><td>49.24</td><td>49.24</td><td>49.24</td></tr>
<tr><td>3</td><td>IDC</td><td colspan="5">NIL (shall be considered after execution of the project at time of tariff Petition)</td></tr>
</table>
</td></tr>
<tr><td>8</td><td>Proposed Funding Arrangement</td><td>Debt Equity Ratio is 70:30.</td></tr>
</table>

B. Observations / Comments on FR

1.	**Prudence of Investment / Technical Justification**	• To meet increasing load in existing areas of supply. • Build & maintain adequate redundancy in the system • 24x7 power supply for consumers in Mumbai City. • Reduction of AT&C losses/maintaining of existing low level of AT&C losses of the BEST Undertaking • To maintain reliability and quality of Electric Supply to the Consumers..
2.	**Reasonability of Cost Estimate**	It is observed that BEST is following the open-tender Competitive Bidding approach for procurement of materials and services. The contract is awarded to lowest quoted bidder. The competitive approach ensures the least cost approach for execution of capital expenditure schemes.
3.	**Comments on Cost Benefit Analysis**	Benefits of Rs 2.26 Crores in the 1st year, going up to Rs.23.09 Crores in the 5th year
4.	**Discrepancy / Shortcomings Observed**	Complied by BEST.
5.	**Remarks / Specific Comments, if any**	The scheme is technically justified.

Appendix –A
Cost Abstract

Sr. No.	Item Description	CABLE TYPE	Rs. Crore PER KM	Per Year QTY in KM	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
A	**HV CABLE**		UNIT COST		**CAPITAL EXPENTITURE (In CRORE)**				
1	Laying of 11 KV HV Cables	AL, XLPE	0.2566	**25.000**	**6.41**	**6.41**	**6.41**	**6.41**	**6.41**
B	**LVCABLE**								
1	Laying of 1.1 KV 4CX300 SQ.MM CABLE	AL, XLPE	0.2061	36.000	7.42	7.42	7.42	7.42	7.42
2	Laying of 1.1 KV 4CX120 SQ.MM CABLE	AL, XLPE	0.1349	5.500	0.74	0.74	0.74	0.74	0.74
3	Laying of 1.1 KV 4CX70 SQ.MM CABLE	AL, XLPE	0.1232	1.000	0.12	0.12	0.12	0.12	0.12
4	Laying of 1.1 KV 4CX25 SQ.MM CABLE	AL, XLPE	0.1042	2.500	0.26	0.26	0.26	0.26	0.26
5	Laying of 1.1 KV 2CX25 SQ.MM CABLE	AL, XLPE	0.1003	0.500	0.05	0.05	0.05	0.05	0.05
6	Laying of 1.1 KV 2CX50 SQ.MM CABLE	AL, XLPE	0.1051	1.000	0.11	0.11	0.11	0.11	0.11
7	Laying of 1.1 KV 3CX95 SQ.MM CABLE	AL, XLPE	0.1195	0.500	0.06	0.06	0.06	0.06	0.06
8	Laying of 1.1 KV 1CX400 SQ.MM CABLE	CU. XLPE	0.2920	9.000	2.63	2.63	2.63	2.63	2.63
	TOTAL OF B			**56.000**	**11.39**	**11.39**	**11.39**	**11.39**	**11.39**
C	**R I Cost (HV+LV)**		0.7708	**24.27**	**18.71**	**18.71**	**18.71**	**18.71**	**18.71**
D	**Auxiliary Distribution Pillars (ADP)**								
1	6 WAY ADP	-	0.0087	95	0.83	0.83	0.83	0.83	0.83
2	10 WAY ADP	-	0.0110	30	0.33	0.33	0.33	0.33	0.33
3	12 WAY ADP	-	0.0125	10	0.12	0.12	0.12	0.12	0.12
	TOTAL OF D			**135**	**1.28**	**1.28**	**1.28**	**1.28**	**1.28**
E	**SERVICE CABLE (QTY IN KM)**								
1	Laying of 1.1 KV 4CX300 SQ.MM CABLE	AL, XLPE	0.2061	26.000	5.36	5.36	5.36	5.36	5.36
2	Laying of 1.1 KV 4CX120 SQ.MM CABLE	AL, XLPE	0.1349	4.000	0.54	0.54	0.54	0.54	0.54
3	Laying of 1.1 KV 4CX70 SQ.MM CABLE	AL, XLPE	0.1232	2.000	0.25	0.25	0.25	0.25	0.25
4	Laying of 1.1 KV 4CX25 SQ.MM CABLE	AL, XLPE	0.1042	2.800	0.29	0.29	0.29	0.29	0.29
5	Laying of 1.1 KV 2CX25 SQ.MM CABLE	AL, XLPE	0.1003	5.200	0.52	0.52	0.52	0.52	0.52
	TOTAL OF E			**40.000**	**6.96**	**6.96**	**6.96**	**6.96**	**6.96**
F	**R I Cost (SERVICE CABLE) (kms)**	-	0.7708	**5.830**	**4.49**	**4.49**	**4.49**	**4.49**	**4.49**
	GRAND TOTAL (A+B+C+D+E+F) in Cr	**246.2**			**49.24**	**49.24**	**49.24**	**49.24**	**49.24**

4th QTR Capex & Capitalisation for F.Y. 2022-23

Sr. No.	Project Code	MERC Approval No.	MERC Approval Date	MERC Approved Cost	Cumulative Expenditure Incurred till beginning of the Year	Capital Expenditure Capitalised	Opening CWIP FY 22-23	Investment during the year up to March 2023	Capital Work in Progress				Closing CWIP
									Works Capitalised upto March 2023	Interest Capitalised	Expenses Capitalised	Total Capitalisation	
	FY 2022-23												
	a) DPR Schemes												
	(i) In-principle approved by MERC												
	New RSS												
1	BEST/ FY16/01	MERC/CAPEX/FY2016-17 00770 dtd. 28.09.2016	28.09.2016	82.23	16.79	8.56	8.23	6.19	8.24			8.24	6.18
2	BEST/ FY21/01	MERC/CAPEX/FY2020-21/	16.07.2020	27.40	0.00	0.00	0.00	0.09	0.09			0.09	0.00
	Augmentation/Replacement at Existing RSS												
3	BEST/ FY16/02	MERC/DESK TECH_V/CAP/DPR/20122013/02688	22.02.2013	36.63	11.46	11.46	0.00	2.74	2.74			2.74	0.00
4	BEST/ FY17/02	MERC/CAPEX/2017-18/4706	16.11.2017	64.09	21.58	21.58	0.00	11.38	11.38			11.38	0.00
5	BEST/ FY18/02	MERC/CAPEX/2017-18/4706	16.11.2017	58.86	3.89	3.89	0.00	1.53	1.53			1.53	0.00
6	BEST/ FY 18/02A	MERC/CAPEX/2019-20/135	10.05.2019	15.58	18.02	18.02	0.00	0.00	0.00			0.00	0.00
7	BEST/ FY20/02	MERC/CAPEX/2020-21/553	15.12.2021	40.60	7.09	7.09	0.00	3.98	3.98			3.98	0.00
8	IPDS/BEST/ FY15-16/01	MERC/CAPEX/2019-20/418 (L & T PART)	26.07.2019	92.40	66.63	66.63	0.00	0.00	0.00			0.00	0.00
	IPDS/BEST/ FY15-16/01	BEST PART	26.07.2019	25.69	25.06	25.06	0.00	0.00	0.00			0.00	0.00
9	BEST/ FY21/02	MERC/CAPEX/2022-23/0556	14.11.2022	56.07	5.56	5.56	0.00	1.11	1.11			1.11	0.00
	New DSS & Aug. & Alt. to exist. DSS												
	Extension of Distribution Network												
10	BEST/ FY21/03	MERC/CAPWX/2020-21/552	15.12.2021	147.65	0.00	0.00	0.00	35.67	35.67			35.67	0.00
11	BEST/ FY21/04	MERC/CAPEX/2020-21	22.06.20	246.20	0.00	0.00	0.00	57.01	57.01			57.01	0.00
	SCADA,BPA & Distribution Automation												
12	BEST/ FY18/08A	MERC/CAPEX/2017-18/4759	22.11.17	13.12	0.00	0.00	0.00	0.00	0.00			0.00	0.00
13	BEST/ FY18/08B	MERC/CAPEX/2017-18/4886	13.12.2017	9.22	0.45	0.45	0.00	0.00	0.00			0.00	0.00
	Energy Meter												
14	BEST/FY19/06	MERC/CAPEX/2019-20/1110	28.11.2019	30.19	17.31	17.31	0.00	0.00	0.00			0.00	0.00
15	IPDS/BEST/ FY2015-16/01	MERC/CAPEX/2019-20/116	18.04.2019	12.94	12.90	12.90	0.00	0.00	0.00			0.00	0.00
	(ii) Yet to receive in-principle MERC approval												
	b) Non-DPR Schemes												
16	Energy Meter	-	-		14.63	0.00	14.63	1.02	15.65			15.65	0.00
17	Revamping of RSS & other schemes (Non-DPR)	-	-		11.80	7.43	4.37	13.05	15.46			15.46	1.96
18	BPA		-		0.96	0.96	0.00	0.03	0.03			0.03	0.00
19	Street Lighting (lamps & Cables)	-	-		10.46	10.46	0.00	6.69	6.69			6.69	0.00
20	Furniture, Office Eq., Tools, Civil Engg. Works, Motor Vehicle etc.	-	-		5.45	5.45	0.00	2.01	2.01			2.01	0.00
21	GFA				0.26	0.26	0.00	18.90	18.90			18.90	0.00
	Total			**958.87**	**250.30**	**223.07**	**27.23**	**161.40**	**180.49**	**0.00**	**0.00**	**180.49**	**8.14**
								188.63				**215.86**	

Annexure-B

F.Y.	2020-21	2021-22	2022-23	2023-24	2024-25
sale in Mus	4643.66	4683.78	4537.98	4772.81	5023.20
RoE projected	129.45	130.37	139.11	143.82	148.72
RoE/ unit	0.279	0.278	0.307	0.301	0.296

Particulars	Unit	Value	Value	Value	Value	Value
Total capacity added by additional Tr.	MVA	**16.00**	0.00	0.00	0.00	**32.00**
Average Power Factor		0.9900	0.9900	0.9900	0.9900	0.9900
Current RSS Load factor		62.05%	62.56%	60.04%	59.64%	58.01%
RoE/ unit	Rs.	0.279	0.278	0.307	0.301	0.296

Calculation of loading rates

loading trend	1st year	2nd year	3rd year	4th year	5th year
loading percentages	20.00%	30.00%	40.00%	50.00%	58.01%

Revenue due to additional sales

Particulars	F.Y. 2020-21	F.Y. 2021-22	F.Y. 2022-23	F.Y. 2023-24	F.Y. 2024-25
Cumulative capacity commissioned (MVA)	**16.00**	**16.00**	**16.00**	**16.00**	**48.00**
Incremental loading	20.00%	30.00%	40.00%	50.00%	58.01%
Distribution losses	3.82%	4.63%	4.18%	4.12%	4.18%
System power factor	0.9900	0.9900	0.9900	0.9900	0.9900
Additional sales (MU)	26.69	39.70	53.18	66.52	130.31
RoE per Unit (Rs/ unit)	0.279	0.278	0.307	0.301	0.296
Total adduitional revenue (Rs. Crore)	0.74	1.11	1.63	2.00	3.86

Capitalisation schedule

Particulars	TOTAL	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Capital Expenditure for the scheme (Rs. Cro	27.40	5.97	7.46	5.71	5.26	3.00
Amount proposed to be capitalized	27.40	5.97	7.46	5.71	5.26	3.00

Before the
MAHARASHTRA ELECTRICITY REGULATORY COMMISSION
World Trade Centre, Centre No.1, 13th Floor, Cuffe Parade, Mumbai – 400 005
Tel. No. 022- 22163964/ 65/ 69 Fax No. 022 - 22163976
Email: mercindia@merc.gov.in
Website: www.merc.gov.in

CASE No. 212 of 2022

In the matter of

Petition of Brihanmumbai Electric Supply and Transport Undertaking (BEST) for Truing-up of Aggregate Revenue Requirement (ARR) for FY 2019-20, FY 2020-21 and FY 2021-22, Provisional Truing-up of ARR FY 2022-23 and revised ARR & Tariff for FY 2023-24 and FY 2024-25

Coram
Sanjay Kumar, Chairperson
I. M. Bohari, Member
Mukesh Khullar, Member

Date: 31 March, 2023

ORDER

In accordance with Regulation 5 of the Maharashtra Electricity Regulatory Commission (Multi-Year Tariff) Regulations, 2019 ('**MYT Regulations, 2019**'), Brihanmumbai Electric Supply and Transport Undertaking (BEST) has filed its Mid Term Review Petition for Truing-up of Aggregate Revenue Requirement (ARR) for FY 2019-20, 2020-21 and FY 2021-22, Provisional Truing-up of ARR for FY 2022-23 and revised ARR & Tariff for FY 2023-24 and FY 2024-25. The original Petition was filed on 30 November, 2019 and the revised Petition after incorporating the replies to the data gaps was filed on 17 January, 2023.

The Petition has been filed in accordance with MERC (Multi Year Tariff) Regulations, 2015 ("**MYT Regulations, 2015**"), for Truing-up of ARR for FY 2019-20 and in accordance with MYT Regulations, 2019, for Truing-up of ARR of FY 2020-21 and FY 2021-22, Provisional Truing-up of ARR for FY 2022-23 and revised ARR and Tariff for FY 2023-24 and FY 2024-25.

The Commission, in exercise of the powers vested in it under Sections 61 and 62 of the Electricity Act (**EA**), 2003 and all other powers enabling it in this behalf, and after taking into consideration the submissions made by BEST and suggestions/objections received during the public consultation process, and all other relevant material, has approved the Truing-up of ARR for FY 2019-20, FY 2020-21 and FY 2021-22, Provisional Truing-up of ARR for FY 2022-23 and revised ARR and Tariff for FY 2023-24 and FY 2024-25 in this Order.

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accepts the methodology suggested by BEST.

Table 172: Energy Sales for FY 2022-23, as approved by the Commission (MU)

Particulars	MYT Order	MTR Petition	Approved in this Order
Energy Sales	4,726.93	4,550.60	4,550.60

5.2.9 Further, sales being an uncontrollable factor as per Regulations 9 of the MYT Regulations, 2019, the energy sales as submitted by BEST are provisionally approved by the Commission for FY 2022 -23 as shown in Table above.

5.3 Distribution Losses and Energy Balance

BEST's Submission

5.3.1 BEST has achieved a distribution loss of 4.63% in FY 2021-22. BEST has projected reduction in distribution loss further by 0.1% and considered distribution loss at 4.53% for FY 2022-23.

5.3.2 BEST submitted that the Intra-State Transmission (InSTS) loss of 3.18% has been considered while estimating the energy balance for FY 2022-23 as approved by the Commission in the MYT Order.

5.3.3 Based on proposed distribution loss of 4.53% and provisional transmission loss of 3.18% (as estimated by InSTS in its MTR Tariff Petition), BEST has estimated energy requirement for FY 2022-23 at G-T interface as shown in the below table.

Table 173 : Energy Balance for FY 2022-23, as submitted by BEST

Particulars	MYT Order	MTR Petition
Sales (MU)	4,726.99	4,537.98
Distribution loss (%)	4.18%	4.53%
Energy Requirement at T-D interface (MU)	4,933.20	4,753.30
Intra-state Transmission loss (%)	3.18%	3.18%
Energy Requirement at G-T interface (MU)	5,095.15	4,909.42

5.3.4 BEST has been taking various initiatives such as continuous vigilance activities, raids, consumer awareness on theft and energy conservation, legal actions against theft incidences and faulty meter replacements. BEST submitted that for the past few years except some exceptional years, BEST has been able to consistently maintain its distribution losses in the range of 4.5% to 5% which are almost near to the technical minimum of the network. The present distribution losses are one of the lowest in the country.

5.3.5 Further, the purchase units are recorded on the 1st of every month i.e., the purchase

are for 365 days. Whereas BEST has a total of 24 billing cycles of 30 days billing period for its around 10.36 lacs consumers, these cycles have different meter reading dates spread throughout the month. Sometimes there is a possibility of this period getting reduced or increased by a day or two due to holidays etc. Hence in some years the billing period can vary from 365 days to 366 days. Hence, any such variation in the billing cycle for a day or two can also cause the loss to vary. Therefore, the distribution loss targets for the future periods should have a buffer to accommodate such variations. Hence, BEST has taken a realistic approach and proposed 0.1% reduction in the distribution loss achieved in FY 2021-22.

Commission's Analysis and Ruling

5.3.6 The Commission noted the submission of BEST. For computation of Energy Balance and energy requirement for FY 2022-23, the Commission has considered the estimated sales as approved in this Order.

5.3.7 In MYT Order, the Commission has approved Distribution loss target of 4.18% for FY 2022-23. The Commission notes BEST has sought Distribution loss target of 4.53% for FY 2022-23 even though it has achieved actual Distribution loss of 3.93% for FY 2020-21. BEST has not been able to conclusively justify its claim that it may not be able to maintain the loss levels as approved in the MYT Order. The justification given is very generic in nature. To maintain consistency in its approach, the Commission has decided not to restate the loss trajectory as approved in the MYT Order and thus during provisional Truing-up for FY 2022-23, the Commission maintains Distribution loss target of 4.18% same as approved in MYT Order.

5.3.8 Accordingly, the Commission has considered the T<>D input of 4,735.94 MU for FY 2022-23. The InSTS Loss has been considered as 3.18% based on the loss as approved in the MYT Order.

5.3.9 In view of the above, the Distribution Loss and Energy Balance as provisionally approved by the Commission for FY 2022-23 are given in the Table below:

Particulars	MYT Order	MTR Petition	Approved in this Order
Sales (MU)*	4,726.99	4,537.98	4,537.98
Distribution loss (%)	4.18%	4.53%	4.18%
Energy Requirement at T-D interface (MU)	4,933.20	4,753.30	4,735.94
Intra-state Transmission loss (%)	3.18%	3.18%	3.18%
Energy Requirement at G-T interface (MU)	5,095.15	4,909.42	4,891.49

*-Sales considered on kWh basis

5.3.10 The Commission approves energy requirement at G<>T interface of 4,891.49 MU on provisional Truing up of ARR for FY 2022-23.

Table 206: Provision for Bad and Doubtful Debts for FY 2022-23, as approved by the Commission (Rs. Crore)

Particulars	MYT Order	MTR Petition	Approved in this Order	Wire Business	Supply Business
Provision for Doubtful debts	6.74	10.53	7.97	0.80	7.18

5.14.4 The Commission approves the Provision for Bad and Doubtful Debts of Rs. 7.18 Crore on provisional Truing up of ARR for FY 2022-23.

5.15 Return on Equity

BEST's Submission

5.15.1 BEST submitted that it has considered the Return on equity computed as per Regulation 29 of the MYT Regulations, 2019. For the purpose of arriving at the Regulatory Equity at the beginning of FY 2022-23, BEST has considered the closing equity at the end of FY 2021-22 as submitted in Truing-Up of FY 2021-22.

5.15.2 BEST submitted the details of Return on Equity for Wires & Supply business as under:

Table 207 : Return on Equity for Wires Business for FY 2022-23, as submitted by BEST (Rs. Crore)

Particulars	MYT Order	Estimated
Regulatory Equity at the beginning of the year	831.70	878.46
Capitalisation during the year	-	115.39
Equity portion of capitalisation during the year	15.73	34.62
Reduction in Equity Capital on account of retirement / replacement of assets	10.67	17.73
Regulatory Equity at the end of the year	836.77	895.35
	-	-
Return on Equity Computation	-	-
Base Rate of Return on Equity	14.00%	14.00%
Pretax Return on Equity after considering effective Tax rate	-	-
Return on Regulatory Equity at the beginning of the year	116.44	122.98
Return on Regulatory Equity addition during the year	0.35	1.18
Total Return on Equity	**116.79**	**124.17**

Table 208 : Return on Equity for Retail Business for FY 2022-23, as submitted by BEST (Rs. Crore)

Particulars	MYT Order	Estimated
Regulatory Equity at the beginning of the year	92.41	97.61
Capitalisation during the year	-	12.82
Equity portion of capitalisation during the year	1.75	3.85
Reduction in Equity Capital on account of retirement / replacement of assets	1.19	1.97
Regulatory Equity at the end of the year	92.97	99.48
	-	-

Particulars	MYT Order	Estimated
Return on Equity Computation	-	-
Base Rate of Return on Equity	15.50%	15.50%
Pretax Return on Equity after considering effective Tax rate	-	-
Return on Regulatory Equity at the beginning of the year	14.32	15.13
Return on Regulatory Equity addition during the year	0.04	0.15
Total Return on Equity	**14.37**	**15.27**

5.15.3 BEST requested the Commission to approve the Return on Equity of as shown in table above for FY 2022-23.

Commission's Analysis and Ruling

5.15.4 In absence of non-applicability of Income Tax as BEST being Local Authority, the Commission has computed RoE at 14% and 15.5% of the equity for Wires Business and Supply Businesses, respectively, in accordance with the MYT Regulations, 2019.

5.15.5 The Commission has computed RoE in accordance with Regulation 29 of the MYT Regulations, 2019, based on opening equity, addition of equity as per approved capitalisation and weighted average rate of RoE based on allocation of assets to the wires and supply business.

5.15.6 To determine the equity eligible for return as per the Regulations, the Commission has considered the closing equity for FY 2021-22 approved in this Order on Truing-up, as the opening equity for FY 2022-23. The addition in equity has been considered equal to the equity component of asset addition during the year. The impact of the replacement of assets is considered by reducing the equity to the extent of 30 % of the GFA of the assets that have been retired during the year.

5.15.7 The RoE approved upon provisional Truing up for FY 2022-23 is as per the following Table:

Table 209: Return on Equity for FY 2022-23, as approved by the Commission (Rs. Crore)

Particulars	MYT Order	MTR Petition	Approved in this Order	Wire Business	Supply Business
Regulatory Equity at the beginning of the year	924.11	976.07	968.47	871.62	96.85
Equity portion of capitalisation during the year	17.48	38.46	35.21	31.69	3.52
Reduction in Equity Capital on account of retirement / replacement of assets	11.85	19.70	5.91	5.32	0.59
Regulatory Equity at the end of the year	**929.74**	**994.83**	**997.77**	**898.00**	**99.78**
Return on Regulatory Equity at the beginning of the year	130.76	138.11	137.04	122.03	15.01
Return on Regulatory Equity addition during the year	0.40	1.33	2.07	1.85	0.23
Total Return on Equity	**131.16**	**139.44**	**139.11**	**123.87**	**15.24**

5.15.8 The Commission approves Return on Equity of Rs. 139.11 Crore on provisional Truing up of ARR for FY 2022-23.

The Brihanmumbai Electric Supply and Transport Undertaking. Statistical data for the Years 1947 to 2021-22.

Sr. No.	DESCRIPTION	Unit	2019-20	2020-21	2021-22	2022-23	2023-24
I.	**Energy Purchase Details**						
1	Units Purchased at T&D	in MUs	4790.60	3926.96	4266.59	4678.68	4944.06
2	Cost of Energy	Rs. in Crores	2445.19	2317.29	2803.51	3774.99	3166.41
3	F.A. Paid to Tatas	Rs. in Crores	99.75	100.75	100.75	101.75	102.75
3	Average Cost Per Unit Purchased at T&D	in Paise / Unit	510.41	590.10	657.09	806.85	640.45
II.	**Energy Sale Details**						
1	Units Sold	in MUs	4569.34	3776.84	4068.97	4483.32	4740.15
2	Income from Sale of Energy	Rs. in Crores	3466.68	2792.74	2995.19	3527.52	4188.89
3	Average Selling Rate Per Unit Sold	in Paise / Unit	758.68	739.44	736.11	786.81	883.70
III.	**Surplus**						
1	Revenue Surplus	Rs. in Crores	1021.49	475.46	191.68	-247.48	1022.48
2	Revenue Surplus Per unit Purchased	in Paise / Unit	213.23	121.07	44.93	-52.90	206.81
3	Electricity Duty Collected for Govt. of Maharashtra	Rs. in Crores	563.27	444.76	467.82		
IV.	**Average Distribution Loss**	%	4.62	3.82	4.63	4.18	4.12
V.	Stystem Load Factor	%	58.97	62.05	62.56	60.04	59.64
	Co-incident Maximum Demand	in MVA	936.81	729.80	786.38	898.54	955.96
	Receiving Sub-stations						
	No. of Receiving Sub-stations		64	64	64	65	65
	No. of Power Transformers		152	153	153	155	155
	Capacity of Power Transformers	in MVA	2255	2283	2289	2321	2327
	Distribution Sub-stations						
	No. of Distribution Sub-stations		2428	2451	2477	2507	2538
	No. of Distribution Transformers		3264	3298	3334	3430	3470
	Capacity of Distribution Transformers	in MVA	2645	2682	2717	2842	2892

F.Y.	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Sale in Mus	4569.34	3776.84	4068.97	**4537.98**	4740.15	5038.14
RoE projected	140.93	129.45	130.37	**139.11**	143.82	148.72
RoE/ unit	0.308	0.343	0.320	**0.307**	0.303	0.295

Revenue due to additional sales

Particulars	F.Y. 2019-20	F.Y. 2020-21	F.Y. 2021-22	F.Y. 2022-23	F.Y. 2023-24	F.Y. 2024-25
Cumulative capacity commissioned (MVA)	**0.00**	**0.00**	**0.00**	**6.00**	**6.00**	**6.00**
Incremental loading	0.00%	20.00%	30.00%	**40.00%**	50.00%	58.97%
Distribution losses	4.62%	3.82%	4.63%	**4.18%**	4.12%	4.18%
System power factor	0.9900	0.9900	0.9900	**0.9900**	0.9900	0.9900
Additional sales (MU)	0.00	0.00	24.81	**9.97**	59.87	74.28
RoE per Unit (Rs/ unit)	0.308	0.343	0.320	**0.307**	0.303	0.295
Total adduitional revenue (Rs. Crore)	0.00	0.00	0.79	**0.31**	1.82	2.19

Capitalisation schedule

Particulars	F.Y. 2019-20	F.Y. 2020-21	F.Y. 2021-22	F.Y. 2022-23	F.Y. 2023-24	TOTAL
Capital Expenditure for the scheme (Rs. Crores)	8.84	11.84	15.77	19.62	0.00	56.07
Amount proposed to be capitalized	8.84	11.84	6.02	29.37	0.00	56.07

Commission's Analysis and Ruling

5.18.4 The Commission has noted the submission of BEST. BEST has considered actual revenue of April to September 2022 and estimated for October 2022 to March 2023. The Commission considers the submission of BEST and approves revenue of Rs. 3,667.98 Crore provisionally for FY 2022-23 same as submitted by BEST.

Table 214: Provisional Revenue of FY 2022-23 as approved by the Commission.

Consumer category	Sales*	Revenue	Average Billing Rate
	MU	Rs. Crore	Rs/kWh
HT Category			
HT-1 Industrial	190.39	146.55	7.70
HT-2 Commercial	208.45	187.14	8.98
HT-3 Group Hsg	32.12	24.32	7.57
HT-4 Railway Metro	2.57	2.71	10.54
HT 5A Govt Sch & Hosp.	27.78	20.71	7.45
HT 5B Public Ser. Oths	186.01	151.57	8.15
HT 6 EV chg.	-	-	
Sub-Total	**647.33**	**533.01**	8.23
LT Category			
LT-1 A (BPL)	0.04	0.01	3.57
LT-1 B Residential			
0-100	749.71	1,494.99	7.11
101-300	721.10		
301-500	237.62		
501<	395.33		
LT2 (a)Comm <20	826.49	710.33	8.59
LT2 (b) 20-50 Comm.	170.76	185.78	10.88
LT2 (c) >50 Comm.	358.23	396.11	11.06
LT3A Industrial <20 kW	105.74	74.88	7.08
LT 3B >20 Industrial	79.81	74.98	9.40
LT-4A Schools & Hosp	61.40	43.83	7.14
LT-4B Public Service	178.82	130.09	7.28
LT 5A Agriculture Pumpset	-	-	
LT 5B Agriculture Other	0.05	0.03	5.85
LT-11 Vehicle Chg	18.17	11.97	6.58
Sub-Total	**3,903.27**	**3,123.00**	8.00
Diff in billing adjustment		-3.38	
Total	**4,550.60**	**3,652.63**	8.03
Other adjustment related to Penalty, ToD, etc		**15.35**	
Grand Total	**4,550.60**	**3,667.98**	**8.06**

*- HT units is in KVAh and LT is in kWh

2. Revamping of existing Distribution Substations- Installation of Additional Distribution transformers (DTs) and replacement of transformers with higher capacity, replacement of ONAN type DTs with Dry Type DTs and replacement of age old DTS at existing DSS (25 nos.) :-

The augmentation of DSS has been undertaken based on clearances and permits issued by Municipal Corporation of Greater Mumbai (MCGM) and availability of sufficient space in existing DSS for installation of such equipments. The capacities of DSS are planned to be augmented either by installation of additional DTs or remodelling of DSS or by replacing the DTs with higher capacity DTs. Based on the requisitions received, BEST has proposed to add 49.21 MVA to 55.76 MVA capacities during the FY 2020-21 to FY2024-25 respectively.

Table no 12 : Capacity addition by new DSS and augmenting the existing DSS

Sr. No.	Rating kVA	FY 2020-21 No. of Tr. added				FY 2021-22 No. of Tr. added				FY 2022-23 No. of Tr. added				FY 2023-24 No. of Tr. added				FY 2024-25 No. of Tr. added			
		New DSS	Add. DT.	Higher cap.	MVA added	New DSS	Add .DT.	Higher cap.	MVA added	New DSS	Add .DT.	Higher cap.	MVA added	New DSS	Add .DT.	Higher cap.	MVA added	New DSS	Add .DT.	Higher cap.	MVA added
1	630	21	2	1	14.72	22	2	1	15.35	22	2	1	15.350	22	2	1	15.35	23	2	1	15.98
2	995	12	2	19	20.865	12	2	20	21.23	13	2	20	22.225	13	2	21	22.59	14	2	22	23.95
3	1600	7	0	4	13.62	7	0	4	13.62	7	0	5	14.225	8	0	5	15.825	8	0	5	15.825
MVA Add		36.37	3.25	9.59		37.00	3.25	9.95		38.00	3.25	10.56		39.60	3.25	10.92		41.22	3.25	11.29	
Total DT No.		40	4	24		41	4	25		42	4	26		43	4	27		45	4	28	
MVA Add		**49.205**				**50.20**				**51.800**				**53.765**				**55.755**			

Annexure-C

NEWLY COMMISSIONED DSS DURING FY 2022-23 (Table-A)

SR. No.	NAME OF THE DSS	No. of X'ers	Capacity	MVA Added	Month of Installation
1	VIVAREA DSS	1	1600	1.6	Apr-22
2	AJMAL HEIGHT DSS	1	630	0.63	May-22
3	NAMAN REGENCY DSS	3	630	1.89	May-22
4	KRISHNA APARTMENT DSS	1	630	0.63	May-22
5	MAZGAON COURT DSS	3	995	2.985	Jun-22
6	CCIL ANNEX DSS	1	995	0.995	Jun-22
7	SOMAIYA AYURVIHAR DSS	2	630	1.26	Jun-22
8	CANCARE DSS (HV)	0	0	0	Jul-22
9	M/S. SARAH HOUSING DEVELOPMENT PVT LTD	2	1600	3.2	Aug-22
10	GAWADE MARKET DSS	1	995	0.995	Aug-22
11	DHARAVI PURIFICATION (HV) TEMP. DSS	0	0	0	Aug-22
12	DHOBIGHAT NO. 3 DSS	1	995	0.995	Oct-22
13	DHOBIGHAT NO. 5 DSS	1	995	0.995	Oct-22
14	NISARG SRA CHS DSS	1	995	0.995	Oct-22
15	ARANYA TOWER NORTH DSS	2	630	1.26	Feb-23
16	TEMP DSS CPWD	1	995	0.995	Feb-23
17	OMKAR REHAB DSS	1	630	0.63	Feb-23
18	FORTUNE VIEW DSS	1	630	0.63	Mar-23
19	SADGURU DELUXE DSS	1	995	0.995	Mar-23
20	JEWEL CREST DSS	1	630	0.63	Mar-22
21	Rare Villa DSS	1	630	0.63	Apr-22
22	INT Theater DSS	2	630	1.26	Apr-22
23	The Primodial House DSS	1	995	0.995	May-22
24	Aman Grih DSS	1	995	0.995	May-22
25	NCPA Apartment DSS	4	630	2.52	Sep-22
26	Sammet Shikhar DSS	1	630	0.63	Oct-22
27	State Excise DSS	1	995	0.995	Jan-23
28	Earth Anand DSS.	1	630	0.63	Feb-23
29	**A.K.Railway Residance DSS**	1	995	0.995	Feb-23
30	ITI MANDVI DSS	1	995	0.995	Mar-23
31	Siddharth Nagar DSS	1	630	0.63	Mar-23
32	**Sicka Nagar DSS**	1	630	0.63	Mar-23
33	"Girgaon Metro DSS" (Temp.)	1	995	0.995	Oct-22
34	Grant Road Metro DSS	1	995	0.995	Dec-22
35	Annapurna DSS	1	630	0.63	Feb-23
36	Chandan Signature DSS	1	630	0.63	Feb-23
	TOTAL	**45**		**34.215**	**MVA**

REPLACEMENT OF X'ERS (HIGHER CAPACITY) DURING FY 2022-23 (Table-B)

SR. No.	NAME OF THE DSS	New	Old	Added	Month of
1	SKY FOREST 'F' DSS	1600	630	970	Sep-22
2	NUGGET DSS	995	630	365	Sep-22
3	JACOB CIRCLE DSS	995	630	365	Feb-23
4	CEMTEC DSS	995	630	365	Feb-23
5	Raibhavan	630	400	230	Apil -22
6	Cold Storage DSS	995	630	365	Jun-22
7	Sachivalaya Annexe	1600	995	605	Jun-22
8	M.L.Dahanukar Marg DSS	995	630	365	Aug-22
9	Stable Street DSS	1600	995	605	Aug-22
		10405	**6170**	**4.24**	

REMODELLING OF DSS DURING FY 2022-23 (Table-C)					
SR. No.	NAME OF THE DSS	No. of X'ers	Capacity In	Month of	
1	GAWALIA CHAWL LANE DSS	1	630	Jan-23	
2	NCPA North DSS	1	1600	Sep-22	
3	NCPA South DSS	1	995	Sep-22	
4	Krishna Cinema DSS	1	630	Feb-23	
5	BEST MARG	1	1600	Dec-22	
6	Hindustan Leaver DSS.		1601	Oct-22	
7	Atur Apartment		1602	Feb-23	

INSTALLATION OF ADDITIONAL X'ERS DURING FY 2022-23 (Table-D)					
SR. No.	NAME OF THE DSS	No. of X'ers	Capacity	Added	Month of
1	LODHA CLUB HOUSE DSS NO. 3	1	995	1.00	Apr-22
2	Narayan Dabholkar Marg East	1	630	0.63	Jun-22
3	Siddharth Nagar DSS	1	1600	1.60	Mar-23
		3		**3.23**	

REPLACEMENT OF X'ERS (UNDER FAULT & 25 YEARS ABOVE) DURING FY 2022-23 (Table-E)					
SR. No.	NAME OF THE DSS	New	Old	Added	Month
1	LIBRARY ROAD	995	995	0	May-22
2	VINCENT DSS	995	995	0	May-22
3	FINE TOUCH DSS	630	630	0	Jun-22
4	NSCI DSS	630	630	0	Jul-22
5	DIGNOSTIC CENTER	630	630	0	Jul-22
6	KUSSARA STATIC	630	630	0	Aug-22
7	OMKAR TEMP. DSS	995	995	0	Aug-22
8	NUGEET DSS	630	630	0	Sep-22
9	MOON MILL DSS	995	995	0	Sep-22
10	BANWARI COMPOUND	1600	1600	0	Oct-22
11	BHARITYA KAMALA NAGAR	1600	1600	0	Nov-22
12	NAIGAON DSS	630	630	0	Nov-22
13	SHAHID NAGAR	630	630	0	Jan-23
14	SANGAM NAGAR	2 X 1600	2 X 1600	0	Mar-23
15	Cavel Street DSS	995	995	0	Aug-22
16	S K Patil Udyan DSS	995	995	0	Aug-22
17	Jail Rd (East)DSS.	995	995	0	Oct-22
18	Sahyadri Gaust House	995	630	365	Oct-22
19	Nepeansea North	995	630	365	Oct-22
20	Veer Bhavan	630	630	0	Oct-22
21	Marine Drive (East)	995	955	0	Nov-22
22	Marzaban Road DSS	995	995	0	Nov-22
23	LIC DSS	1600	1600	0	Dec-23
		20785	**20015**	**0.73**	
NET ADDITION 0.77 MVA					

ANNEXURE-11B

The Brihan Mumbai Electric Supply & Transport Undertaking

(OF THE BRIHAN MUMBAI MAHANAGARPALIKA)

PROJECT DEPARTMENT

TELEPHONE : (022) 22822080

Email ID : depro@bestundertaking.com

ADDRESS ALL COMMUNICATION BY TITLE NOT BY NAME

2nd Floor,
Backbay Veej Bhavan,
149/150, Gen. J. Bhosale Marg,
Nariman Point,
Mumbai - 400 021.

ESO/AGM(ES)/CEPL/ 261 /2024

DATE : 19 DEC 2024

The Secretary,
Maharashtra Electricity Regulatory Commission
13th floor, Centre No.1,
World Trade Centre, Cuffe Parade, Colaba
Mumbai 400 005

Sub: Submission of Cost Benefit Analysis (CBA) for FY 2023-24

Sir,

With reference to above subject, BEST is submitting herewith Cost Benefit Analysis (CBA) for FY 2023-24 for the Hon'ble Commission's consideration, please.

Thanking you,

Yours faithfully,

19/12/24

(S. D. Chougule)
Divisional Engineer
Planning (Material) Dept

BEST's Submission of COST BENEFIT REPORT FOR FY-2023-24

1.0 The details of Capital Expenditure incurred during FY 2023-24 are as follows.

Table 1: Details of proposed Capital Expenditure& Actual Capitalisation during FY 2023-24

Scheme No.	Project schemes	Capitalisation FY 2023-24 (Rs. Cr) (As per approved DPR)	Actual Capitalization FY 2023-24 (Rs. Cr)
DPR-I	New Receiving Station (110 kV &33-22/11 kV)	5.26	0.74
DPR-II	Revamping at existing RSS	1.61	9.72
	N-DPR Schemes- (New RSS/ Revamping at existing RSS)	-	2.10
DPR-III	New DSS Commissioning, Augmentation & alteration to existing DSS	29.95	38.18
DPR-IV	Extension of Dist. Network (laying of HV and LV lines)	49.24	48.05
DPR-V	Distribution Automation, SCADA and BPA	-	-
DPR VI	Energy Meters	-	-
Non-DPR Schemes	RDSS	736.94	13.00
	Street lighting (lamps & cables)	-	3.51
	G.A. Expenses (Furniture, office equipment, Tools, Civil works, Motor works etc.)	-	13.42
	Total	**823.00**	**128.72**

For detail approved capitalisation refer, Annexure-A, Pg. No.3, 9, 19 & 24 and for actual capitalisation refer, Annexure-A, Pg. No.36.

2.0 Scheme -I: New Receiving Substations (110 kV &33-22/11 kV)

2.1 The projected capitalisation proposed during FY 2023-24 Amt in Cr.

Sr. No.	Scheme No. &work at RSS	MERC Approval No. & Date	Projected Capitalisation FY 2023-24
1	**BEST/FY21/01**: Commissioning of RSS at Pimpalwadi, Spring Mill Chawl (Bombay Dyeing) & Bharat Potdar Mill (India Blu)	MERC/CAPEX/FY2020-21/- dated 16.07.2020	5.76
	Total		**5.76**

For projected capitalisation refer Annexure-A, Pg. No. 3.

2.1.1The Projected benefit on implementation of the above schemes (for new RSS):

Sr. No.	Scheme No. & work at RSS	MERC Approval No. & Date	Projected Cost Benefit for FY 2021-22 (Rs. In Crore)
1	**BEST/FY21/01**: Commissioning of RSS	MERC/CAPEX/FY2020-21/- dated 16.07.2020	2.00
	Total		**2.00**

Refer Annexure-B, Pg. No.1.

Projected additional revenue realisation = 2.00 Cr

2.1.2 Calculations of RoE for FY 2023-24 (Case No. 212 of 2022 dtd.31.03.2023)

Return on Equity for FY2023-24 = Rs.143.82 Cr) Refer ------- Annexure-B, Page No.12.

Distribution Loss = 4.18% ------- Annexure-B, Page No.9

Energy sale = 4772.81 Mus. ------- Annexure-B, Page No.9

R0E per unit = 143.82 X 10^7 / 4772.81 X 10^6 = 0.301

For calculation of RoE per unit, the values of RoE, Distribution Loss, Energy Sales are taken from the approved Copy of MERC Order Case No. Case No.212 of 2022 dtd.31.03.2023 and same is enclosed as ***Annexure –B Page No. 2-10.***

2.1.3 Projected cost benefit as proposed in the DPR Scheme No. BEST/FY-21/01 due to commissioning of 16 MVA T/Fs at new RSS:

For calculation purpose it is assumed that in the first year of commissioning a new T/F shall be loaded to the extent of 20%, in the 2nd year at 30%, in the 3rd year at 40%, in the 4th year 50% and finally in the 5th year at about load factor i.e. 58.97% for FY 2019-20.

No. of units realized in FY 2023-24 = Load * Power Factor* Incremental load* No. of hours per day * No. of days * (1- Distribution Loss)

= (16* 0.99 * 50% * 24 * 365 * 1000 * (1-0.0418%)/10^6)

= 66.48 Mus.

RoE per unit = 0.301

Additional Revenue allocated in FY 2021-22 = 65.96 x 0.301 x 10^6 /10^7

= 2.00 Cr.

2.2 The actual capitalisation accrued during FY2023-24 as against above projections:

2.2.1 Commissioning of New RSS: During the FY 2023-24, there is no capacity addition, since no power transformers are commissioned under New RSS Schemes.

3.0 Scheme –II: <u>Augmentation / Replacement at existing Receiving Sub Stations</u>

3.1 Projected capitalisation as per approved DPRs shall be as given in the following table:

Sr. No.	Scheme No. & work at RSS	MERC Approval No. With Date	Amount capitalised (Rs. Cr)
1.	**Scheme No. BEST/FY-20/02**: Revamping of existing RSS	MERC/CAPEX/2020-21/553 dt.15.12.2021	1.61
	Total amount to be Capitalised		**1.61**

Annexure-A Page No. 9 & 30.

3.1.1 Calculations of RoE for FY 2023-24 (Case No.212 of 2022 dtd.31.03.2023)

Return on Equity for FY2023-24 = Rs.143.82 Cr — Refer Annexure-B, Pg. No.12.

Distribution Loss = 4.18% — Refer Annexure-B, Pg. No.9

Energy sale = 4772.81 Mus. — Refer Annexure-B Pg. No.9

R0E per unit = 143.82 X 10^7 / 4772.81 X 10^6 = 0.301

For calculation of RoE per unit, the values of RoE, Distribution Loss and Energy Sales are taken from the approved Copy of MERC Order Case No. Case No.212 of 2022 dtd.31.03.2023 and same is enclosed as **Annexure –B, Pg. No. 2-10.**

3.1.2 Projected cost benefit as proposed in the DPR Scheme No. BEST/FY-20/02) due to augmentation at existing RSS:

For calculation purpose it is assumed that in the first year of commissioning a additional T/Fsat RSS shall be loaded to the extent of 20%, in the 2nd year at 30%, in the 3rd year at 40%, in the 4th year 50% and finally in the 5th year at about load factor i.e. 59.64%.

Further to this, it is assumed that 10 MVA T/Fs replaced by 16 MVA at existing RSS shall be loaded to the extent of 20% of added capacity in first year, in the 2nd year at 30%, in the 3rd year at 40%, in the 4th year 50% and finally in the 5th year at about load factor i.e. 59.64%.

Nos. of projected Units to be realised in FY2021-22 shall be as follows:

= Load * Power Factor * Incremental load * No. of hours per day * No. of days * (1- Distribution Losses)

= [16*0.99*50%*24*365*1000*(1-0.0418)/10^6 + [32*0.99*40%*24*365*1000*(1-0.0418)/10^6]

= (66.48 + 106.37) Mus = 172.85 MUs

RoE per unit = 0.306

Additional Revenue allocated in FY 2023-24 = 172.85 X 0.301 X 10^6 /10^7

= 5.21 Cr (kindly refer Annexure-B, Pg. No. 14)

Wherein Capacity increased = NIL MVA, Incremental loading =40%, Distribution Loss = 4.18%.

The projected Additional Revenue realisation = Rs.5.21 Cr.

3.2 The actual capitalisation accrued during the FY2023-24 as against the above projections:

Sr. No.	Scheme No. and works at RSS	Capacity addition (MVA)	MERC Approval No. & Date	Amount capitalised (Rs. Crs.)
1.	**BEST/FY-16/02** (1) Earthing at Mazgaon Dock, Kussara& Worli RSS (2)Minor civil work & NIFP at Kussara(3) Battery set installed at Worli RSS (4) 33 kV switchgear installation at Worli Dairy RSS.	-	MERC / CAPEX /2017-18 / 4706 dated 16.11.2017	0.00
2.	**BEST/FY-17/02** (1) Earthing at PMGP (2) Replacement of Battery & Battery Charger at Khetwadi & G T Hospital (3) Installation of CO_2 Type AFF system at 110 kV Backbay and Nariman Point. (4) Laing of 33kV cable at TPC Carnac, Backbay, Kingsway & Girgaon.	-	MERC / CAPEX/ 2017-18 / 4706 dated 16.11.2017	5.37
3.	**BEST/FY-18/02** (1) Earthing at Ballard Estate (2) Replacement of Battery and Battery Charger at Lalbaug, 110 kV DBA, Worli Dairy, Peninsula & Sion Fort.	-	MERC/CAPEX/2017-18/4706 dated 16.11.2017	1.96
4.	**BEST/FY-20/02** (1) Civil work at Nepean Sea, Kingsway, Parel & Elphinstone Mill (2) Earthing at Colaba & Mahalaxmi (3) Installation of switchgears at Elphinstone Mill (4) T/F installation at Kingsway RSS (5) 11 kV switchgears installation at Parel & Kingsway (6) Replacement of Battery and Battery Charger at Ballard Estate (7) AFF System installation at Khetwadi, Byculla, Sewree, Sitaladevi, Mahim C'way, Naval Dock & Hutatma Chowk.	16	MERC/CAPEX/2020-21/553 dated 15.12.2021	2.38
5.	**BEST/FY-21/02** (1) Civil work at Byculla (2) Earthing and 33 kV switchgear at Mahim C'way (3) T/F replacement at Byculla (4) 33 kV cable at DBA & Mahalaxmi.	-	MERC/CAPEX/2022-23/0556 dated 14.11.2022	0.01
	Total in Cr	**16**		**9.72**

Refer Annexure-A, Pg. No. 36.

3.3 Actual Benefits achieved during FY 2023-24:

The actual cost benefit realised due to augmentation / replacement of Power Transformers at following places:

NAME OF RSS	Year of Commissioning	Date of commissioning	Days of operation	Load (MVA)	Energy Units realized MUs.	RoE	Revenue realized (Rs. Cr)
PMGP T/F-4	2023	22.08.2023	222	3.2	16.17	0.301	0.49
TOTAL				**3.2**	**16.17**	**0.301**	**0.49**

ROE/Unit for FY 2023-24 = $143.82*10^7$ /4740.15* 10^6 = 0.303

Revenue Realized = (Units Realised)*ROE/Unit = 0.303

For PMGP RSS Tr. No.4

Units realized in MU =Load(MVA)*Load Factor*P.F.*24*days of operation*(1- Dist. loss)*10^3/10^6

=3.2*0.99*24*222 * (1-0.0418) X1000 /10^6 = 16.17 Mus

Additional Revenue allocated in FY 2023-24 = 16.17 X 0.303 X $10^6/10^7$ = 0.49 Cr

Actual Benefits of Rs. 0.49 Cr is achieved as against projected revenue realisation of Rs.5.21 Cr during FY 2023-24.

4.0 Capitalisation occurred during FY 2022-23 as against Non-DPR Schemes:

Sr. No.	Non-DPR Scheme work	Capacity addition (MVA)	Amount capitalised (Rs. Cr.)
1.	1) Replacement of 11 kV Bus Section at Sitaladevi RSS 2) Replacement of AFF system at Raoli Hill , Worli Dairy, Colaba & Pochkhanwala Road RSS 3) Installation of earthing was done at Apollo, Malbar Hill, Cumballa Hill , Grant Road , Masjid, Love Grove, Mumbadevi, Sewree, Marine Drive & Pratiksha Nagar RSS. 4) Replacement of Battery & Battery Charger at Esplanade, Sewree, Raoli Hill, Prabhadevi, Masjid, Lalbaug, Peninsula Land, Girgaum & Nariman Point RSS	-	2.10
	Total in Crs	**-**	**2.10**

Refer A, Page No. 36 (Sr. No. 17).

5.0 Scheme -III: New Distribution Substation Commissioning, Augmentation & Alteration to existing DSS

5.1 Projected capitalisation proposed during FY 2023-24 as against DPR Scheme CodeNo. BEST/FY21/03

PARTICULARS	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Capex for the scheme, Rs. in Cr. (40 DSS in each year)	**30.20**	**29.95**	**29.95**	**29.95**	**29.95**
Capacity proposed to be installed (in MVA)	49.205	50.20	51.80	**53.765**	55.755
Total Transformer Nos.	68	70	72	**74**	77
Amount proposed to be capitalised (in Rs. Crore)	**30.20**	**29.95**	**29.95**	**29.95**	**29.95**

Refer Annexure-A, Pg. No.19. For detail MVA Capacity kindly refer Annexure-C, Page No.1.

5.1.1 During the FY 2023-24, the proposed distribution transformer capacity addition was as follows:

1) **Capacity addition by commissioning of New DSS:** During the year, it was proposed to commission 43 nos. of new DSS, having 43 nos. of DTs of capacities 630 kVA (22 Nos.), 995 kVA (13 Nos.) and 1600 kVA (8 Nos.) aggregating to total capacity addition as 39.60 MVA (Kindly refer Annexure-C, Page No.1).

2) **Capacity addition by Tr. Replacement**

During the year it was proposed to replace 1 no. of 400 KVA DT with 630 KVA DT leading to a capacity addition of 230 KVA (0.230 MVA) per transformer and 0.23 MVA in total, 21 nos. of 630 KVA DTs with 995 KVA DTs leading to a capacity addition of 365 KVA (0.365 MVA) per DT and 7.665 MVA in total, and 5 nos. of 995 KVA DTs with 1600 KVA DTs leading to a capacity addition of 605 KVA (0.605 MVA) per DT and 3.025 MVA in total. Due to 27 nos. of DTs replacement with higher capacity, total capacity addition will be 10.92 MVA (Kindly refer Annexure-C, Page No.1).

3) **Capacity addition by Additional transformer**

During the year, it was proposed to install 2 nos. of additional DTs of 630 KVA leading to a total capacity addition of 1.26 MVA and 2 nos. of additional DTs of 995 KVA leading to a total capacity addition of 1.99 MVA. Due to installation 4 nos. of DTs total capacity addition will be 3.25 MVA (Kindly refer Annexure-C, Page No.1).

During the year, total capacity addition to the system by augmentation work would be the sum of capacity addition by commissioning new DSS and replacement/ addition of DTs

= 39.60 MVA + 10.92 MVA+ 3.25MVA

= 53.765 MVA

The projected capacity addition during FY 2023-24 = 53.765 MVA

No. of units realised = load (MVA)*Load Factor*Power Factor*(1-loss)*24*365*1000
= (53.765) *0.20*0.5964*0.99*(1-0.0418)*24*365*1000/10^6
= 53.29 Mus.
Projected no. of units realised due to capacity addition: 53.29 Mus.
RoE per unit for FY 2023-24=$143.82*10^7$ /$4772.81*10^6$ = 0.301

Revenue Realised = Units * RoE per unit
= $53.29*10^6*0.301/10^7$
= 1.60 Cr.

During the FY 2023-24, projected cost benefit was Rs.1.60 Cr as against DPR Scheme BESTFY21/03.

5.2 The projected capitalisation accrued during FY 2023-24 as against the above projections:

Sr. No.	No. of DSS	DPR submission to MERC (ref. No.)	Amount capitalised (Rs. Crore)
1	New DSS (40 Nos.)	Scheme No. BEST/FY-21/03	29.95
	Total cost		**29.95**

Refer Annexure-A, Page. No.19

5.2.1 The actual capacity addition during FY 2023-24 as against the above projections is as follows:

1) Actual Capacity additions and load by new DSS commissioning(Annexure-C, Pg. No. 2)

In FY 2023-24, total 30 Nos. of New DSS are commissioned. A list of 30 Nos. of DSS commissioned in 2023-24 with details of installed capacity is enclosed as Annexure-C, *Pg. No.2 (Table-A)*.

An actual Capacity addition due to commissioning of new 30 Nos. of DSS is (630kVA -10 Nos., 995 kVA- 11 Nos., Replacement of Battery & Battery Charger at Esplanade, Sewree, Raoli Hill, Prabhadevi, Masjid, Lalbaug, Peninsula Land, Girgaum & Nariman Point RSS. 1600 kVA- 12 Nos. & 2000 kVA-1 Nos.) 38.445 MVA and load is 7.69 MVA (assuming 20% loading).

2) **Actual Capacity addition by DT Replacement with higher capacity (*Annexure- C*), *refer Pg. No. 3 (Table-B)*.**

a) 1 Nos. of 400 kVA DTs is replaced with 995 kVA DT leading to a capacity addition of 595 KVA (0.595 MVA) and **0.595** MVA in total.
b) 11Nos. of 630 kVA DTs are replaced with higher capacity. Out of 11 nos. of 630 KVA DTs, 9 nos. of DT's are replaced with 995 kVA and balance 2 nos. of DT replaced with 1600 kVA leading to a capacity addition of 365 KVA (0.365 MVA) & 970 kVA (0.970 MVA) per DT and **5.225** MVA in total.

c) 4 No. of 995 kVA DT's are Replaced with 1600 kVA DT leading to a capacity addition of 605 KVA (0.605 MVA) per DT and **2.42** MVA in total.

Actual Capacity addition by replacement of 16 nos. of DTs with higher capacity DTs leading to a capacity addition of **8.24** MVA in total.

3) **Actual Capacity addition by Additional transformer (Annexure-C, Table-D & Table-E, Pg. No. 3 & 4).**

1 Nos. of each 630 kVA & 1600 kVA and 2nos. of 995 kVA additional DTs are installed during F.Y. 2023-24 and results **4.22** MVA capacity additions in total.

Further to this, due to R&M, 2X630 kVA DT are replaced with 995 kVA DT's, leading to net capacity addition as **0.73** MVA.

Thus, total capacity addition due to additional DT and DT replaced under R&M is **4.95** MVA

The actual total capacity addition to the system by augmentation work would be the sum of capacity addition by commissioning new DSS and replacement/ addition of transformers
= 38.445 MVA + 8.24 MVA + 4.95 MVA
= 51.635 MVA
Load due to this capacity addition is 10.33 MVA (assuming 20% loading of 51.635 MVA)

5.2.2 The no. units realised due to capacity addition due to commissioning of new Distribution Substation (DSS) &Augmentation, alteration to existing DSS are as follows:

No. of units realised = load (MVA)*Load Factor*Power Factor*(1-loss)*24*365*1000/10^6
= 51.635 *0.5964*0.99*20% *(1-0.0412)*24*365*1000/10^6
= 51.21 Mus.
Formula & Sample calculation:

As per case 212 of 2022, ROE (apprd. By MERC for FY2023-24) =143.82 Cr (***Refer Annex-B, Pg. No.12***).

Actual Unit's sales during FY2023-24 are 4740.15 Mus as against MERC approved **4772.81** Mus ***(Refer Annexure- B, Pg. No. 13).***

RoE per unit for FY 2023-24=$143.82*10^7$ /$4740.15*10^6$ = 0.303

Revenue Realised = Units * RoE per unit

= $51.21*10^6*0.303/10^7$

= 1.55 Cr

Actual Benefits of Rs. 1.55 Cr is achieved as against projected revenue realisation of Rs.1.60 Cr during FY 2023-24.

6.0 Scheme -IV: Extension of Distribution Network (laying HV/LV Lines)

6.1 Projected phasing of capitalisation in the Scheme BEST FY21/04

PARTICULARS (Amt. In Cr)	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Capex for the scheme	49.24	**49.24**	49.24	49.24	49.24
Amount proposed to be capitalised	49.24	**49.24**	49.24	49.24	49.24

Refer Annexure-A, Pg. No. 24.

6.1.1 Projected capitalisation proposed during FY 2023-24 (DPR Scheme Code No. BEST/FY21/04), (*Annexure-A, Page No. 28)*

Sr. No.	PARTICULARS OF EQUIPMENTS	Km/ Nos.	Amount (Rs. Cr)
A	Laying of HV cable	25.00	6.41
B	Laying of LV cable	56.00	11.39
C	RI Charges	24.27	18.71
D	Installation of new pillars	135	1.28
E	Laying of service cables & associated equipments	40.00	11.45
	Total		**49.24**

Refer Annexure-A, Pg. No. 26.

6.1.2 Computation of revenue from additional sales

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Cumulative capacity commissioned (MVA)	49.205	50.20	51.80	**53.765**	55.755
Incremental Loading (%)	20%	30%	40%	**50%**	58.01%
Distribution losses (%)	4.18%	4.18%	4.18%	**4.18%**	4.18%
System Power factor	0.9822	0.9822	0.9822	**0.9822**	0.9822
Additional sales (MU)	81.14	204.98	371.86	**585.18**	838.04
ROE per Unit (Rs/unit)	0.279	0.278	0.277	**0.277**	0.276
Total Revenue (Rs. Crore)	2.26	5.71	10.32	**16.18**	23.09

For Capacity addition, refer Para 5.1. **Projected cost benefit during FY 2023-24.**

Actual Benefits of Rs. 16.18 Cr is achieved as against above scheme No. BEST/FY21/04 (Kindly refer above table)

5.2 The actual capitalisation accrued during FY 2023-24 as against the above projections.

Sr. No.	Particulars of Equipments	DPR submission to MERC (ref. No.)	Amount capitalised (Rs. Cr)
A	**Scheme No. BEST/FY-21/04**		
1	Laying of HV cable (18.69km)	MERC/CAPEX/2020-21/- dated 22.06.2020	7.46
2	Laying of LV cable (60.92 km)		13.83
3	Installation of ADPs (212 nos.)		1.19
4	Laying of service cables (32.39)		9.56
5	R.I. Charges		15.83
6	Material Transport Charges		0.18
	TOTAL		**48.05**

During FY 2023-24, for extension of distribution network, Rs.48.05 Cr actual capitalisations are accrued as against the projected capitalisation of Rs. 49.24 Cr.

7.0 Scheme -6: Energy Meters:

During FY 2023-24, there was no approved scheme for Energy Meters.

8.0 COST BENEFIT OF OVERALL SYSTEM

For all incremental sales to be realized, the RSS would require simultaneous commissioning of Distribution Sub stations, cabling and augmentation of existing infrastructure. We assume that the benefit from adding these components is in the same proportion as the current Capital Expenditure proposed towards the total system expansion and augmentation. This includes expenditure proposed in Project Schemes I (New RSS), II (Revamping of existing RSS), Non-DPR, III (New DSS & revamping of Existing DSS), IV (Strengthening of HV LV network) and V (Energy Meter) amounting to Rs. 180.49 Cr it includes capital expenditure towards Non-DPR Schemes, Revamping of RSS, BPA, Street Lighting & General Administration.

Therefore the overall cost benefit due to Strengthening of Network due to execution of work under schemes I, II, III, IV & Non-DPR are calculated as follows.

= (Additional Units realised in MUs due to Scheme I, II Non-DPR)*(RoE/Unit)*10^6*/10^7
Revenue due to Scheme VI

Additional units realised due to Commissioning of 1 No. of T/F in New RSS = 0.20 Mus
Additional units realised due to Augmentation / replacement of Power transformers = 13.47 Mus
Additional units realised due to Non-DPR Scheme 15.75 Mus
Additional units realised due to New DSS Schemes= 42.32 Mus

RoE per Unit =0.303
Overall Cost Benefit = (16.17+51.21)*0.303*10^6)/10^7
= (67.38*0.303*10^6) /10^7
= 2.04 Cr

8.1 We have apportioned the cost benefit of Rs. 2.04 Cr to 5 schemes in proportion of the Capex of each scheme as follows:

All amounts in Cr.

NAME OF SCHEME	CAPEX	SCHEME CODE	% OF TOTAL CAPEX	BENIFITS PROJECTED IN DPR	BENEFITS ACHIEVED
New Receiving Substation of 110 kV & 33-22kV/11 kV	0.74	**Scheme No.** BEST/FY-16/01 BEST/FY-21/01	0.75%	2.00	0.02
Augmentation / Replacement at existing RSS (Revamping RSS)	9.72	**Scheme No.** BEST/FY-17/02 BEST/FY-18/02 BEST/FY-20/02 BEST/FY-21/02	9.84%	5.21	0.20
New Dist. Sub. Commissioning & alteration to Existing DSS	38.18	**Scheme No.** BEST/FY-21/03	38.65%	1.60	0.79
Extension of Dist. Network (Laying of HV/LV Lines)	48.05	**Scheme No.** BEST/FY-21/04	48.64%	16.18	0.99
Revamping of RSS	2.10	Non-DPR : Aug. of RSS	2.13%	-	0.04
Energy Meters	-	Non-DPR : Energy Meters	-	-	-
Total	**98.79**		**100 %**	**24.99**	**2.04**

9.0 Benefits of CAPEX Schemes:

The Maximum Demand for FY 2023-24 = 956 MVA.

The total capacity of Power Transformer in the system for FY 2023-24 = 2327 MVA

(Refer Annexure-B, Page No.13).

The total capacity of Distribution Transformer in the system for FY 2022-23= 2892 MVA.

By execution of network strengthening schemes we have maintained a ratio of,

Total capacity of Power Transformers in system/Maximum Demand = 2327 MVA/ 956 MVA =2.43

Total capacity of Dist. Transformers in system/Maximum Demand = 2892 MVA / 956 MVA = 3.03

These system parameters ensure reliable and quality power supply to the consumers.

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Annexure-A

महाराष्ट्र विद्युत नियामक आयोग
Maharashtra Electricity Regulatory Commission

No. MERC/CAPEX/ FY 2020-21/ **16 July, 2020**

To,
The General Manager,
B.E.S.T. Undertaking,
BEST Bhavan, BEST Marg,
Colaba, Mumbai-400001.

Subject: In-principle clearance for the DPR of BEST for "Commissioning of 33/11 KV New Receiving Stations at Pimpalwadi, Spring Mill Chawl (Bombay Dyeing Plot) and Bharat Potdar Mill (India Blue)"(Rs 27.40 Crores)

Sir,

This has reference to your submitted DPR for "Commissioning of 33/11 KV New Receiving Stations at Pimpalwadi,Spring Mill Chawl (Bombay Dyeing Plot) and Bharat Potdar Mill (India Blue)", for in-principle approval to the Commission. The said scheme has been evaluated with reference to the guidelines circulated by the Commission on 9 February, 2005.

1 I am directed to convey the 'in-principle' clearance of the scheme. The particulars of the scheme as approved are outlined in the Annexure "A" and Appendix "A" attached.

2 No escalation in the unit cost has been considered.

3 The IDC shall be considered after execution of the project at time of tariff Petition.

4 Please note that this in-principle approval should not be construed as final approval for ARR purpose and the scheme will be open for scrutiny during the tariff determination process/ARR review, particularly in the context of actual cost incurred, scope and objective achieved, etc., ex-post after implementation of the Scheme. BESTwill be required to submit the status of implementation of the scheme with cost incurred till date, likely completion date, etc. along with its ARR Petition or during the tariff determination process at the appropriate time.

5 BEST should submit half yearly progress reports by 20th day of the first month of next half year giving the status of implementation of the Scheme in terms of expenditure incurred and item wise physical progress achieved during the implementation of the Scheme.

१३वा मजला, केंद्र क्र. १, जागतिक व्यापार केंद्र, कफ परेड, कुलाबा, मुंबई - ४०० ००५.
13th Floor, Centre No. 1, World Trade Centre, Cuffe Parade, Colaba, Mumbai - 400 005.
Tel.: 022-2216 3964 / 2216 3965 / 2216 3969 Fax : 022-2216 3976
E-mail : mercindia@merc.gov.in / mercindia@mercindia.org.in Website : www.merc.gov.in / www.mercindia.org.in

6. Assets created after execution of the Scheme should be maintained separately in the Asset Register.

7. Income from the Scrapped material shall be considered as other income shall be shown separately at the time of MYT/MTR Tariff Petitions.

8. Immediately after completion/commissioning of the scheme, BESTshould communicate to the Commission the date of completion of the scheme, actual cost incurred, escalation in cost, if any, with reasons, the scope and objectives of the scheme and to what extent they have been achieved, etc., so as to facilitate a comparison between the benefits envisaged at the in-principle clearance and the actual benefits.

9. BEST shall endeavour to complete the project within the stipulated time frame. Further, if BEST fails to initiate the work, including tendering process if any, within period of one year from the date of in-principle approval, the scheme shall be deemed to be cancelled. Thereafter, BEST will have to take a fresh look at the scheme and be required to obtain revised in-principle approval of the Commission with justification for delay.

10. Major scope of work shall be executed through competitive bidding process only.

Yours faithfully,

Sd/-
(Dr. Rajendra G. Ambekar)
Executive Director, MERC

Encl: Annexure "A" and Appendix "A"

Annexure A

Feasibility Report for Capital Investment Scheme for BEST

<table>
<tr><th>Sl. No.</th><th>Particulars</th><th>Details</th></tr>
<tr><td>1</td><td>Title (Name of Scheme)</td><td>Commissioning of 33/11 KV New Receiving Stations at Pimpalwadi, Spring Mill Chawl (Bombay Dyeing Plot) and Bharat Potdar Mill (India Blue)</td></tr>
<tr><td>2</td><td>Brief Scope of work</td><td>a. Installation of 33/11 kV, 1x16 MVA transformers.
b. Installation of 33 kV, 11 kV switchgears and accessories.
c. Laying of 33kV cables.
d. Installation of battery & battery charger.
e. Associated civil work for constructing new Receiving Substation.
f. Provision for Air conditioning at control room
g. Provision of Automatic Fire Fighting System.</td></tr>
<tr><td>3</td><td>Objective / Justification</td><td>(i) 24x7 power supply for consumers in Mumbai City.
(ii) To meet increasing load demand in existing areas of supply.
(iii) To improve quality and reliability of supply..</td></tr>
<tr><td>4</td><td>Estimated Cost</td><td>Rs. 27.58 Crore</td></tr>
<tr><td>5</td><td>In-principle approval accorded</td><td>Rs. 27.40 Crore</td></tr>
<tr><td>6</td><td>Cost benefit analysis</td><td>Benefits of Rs 0.74 Crores in the 1st year, going up to Rs.3.56 Crores in the 5th year</td></tr>
<tr><td>7</td><td>Approved Phasing</td><td>
<table>
<tr><th>S. N.</th><th>Particulars</th><th>FY 2020-21</th><th>FY 2021-22</th><th>FY 2022-23</th><th>FY 2023-24</th><th>FY 2024-25</th></tr>
<tr><td>1</td><td>Capital Expenditure in Rs Cr</td><td>5.97</td><td>7.46</td><td>5.71</td><td>5.26</td><td>3.00</td></tr>
<tr><td>2</td><td>Capitalisation in Rs Cr</td><td>5.97</td><td>7.46</td><td>5.71</td><td>5.26</td><td>3.00</td></tr>
<tr><td>3</td><td>IDC</td><td colspan="5">NIL (shall be considered after execution of the project at time of tariff Petition)</td></tr>
</table>
</td></tr>
<tr><td>8</td><td>Proposed Funding Arrangement</td><td>Debt Equity Ratio is 70:30.</td></tr>
</table>

B. Observations / Comments on FR

1.	**Prudence of Investment / Technical Justification**	a. To meet increasing load in existing areas of supply. b. Build & maintain adequate redundancy in the system c. 24x7 power supply for consumers in Mumbai City. d. Reduction of AT&C losses/maintaining of existing low level of AT&C losses of the BEST Undertaking e. To maintain reliability and quality of Electric Supply to the Consumers.
2.	**Reasonability of Cost Estimate**	It is observed that BEST is following the open-tender Competitive Bidding approach for procurement of materials and services. The contract is awarded to lowest quoted bidder. The competitive approach ensures the least cost approach for execution of capital expenditure schemes.
3.	**Comments on Cost Benefit Analysis**	Benefits of Rs 0.74 Crores in the 1st year, going up to Rs.3.56 Crores in the 5th year
4.	**Discrepancy / Shortcomings Observed**	Complied by BEST.
5.	**Remarks / Specific Comments, if any**	The scheme is technically justified.

Appendix –A

Cost Abstract

Pimpalwadi RSS:-

Sr. No	Particulars	Qty.	Unit Cost (Rs. Lakh.)	Total (Rs. Lakh)
1	Power Transformer 16 MVA, 33/11kV with NIFP System	1	146.31	146.31
2	Primary Switchgear 33kV, 1500 MVA SF6 VCB	1	10.41	10.41
3	Secondary Switchgear 11kV 350 MVA (1 set of 9 breakers)	1	37.82	37.82
4	Control, alarm & relay panel with FRLS control cable	1	17.55	17.55
5	Battery Charger	1	4.74	4.74
6	Battery	1	4.06	4.06
7	HT Capacitor	1	13.30	13.30
8	HT Reactor	1	12.96	12.96
9	Earthing works	1	20	20.00
10	Air-conditioning for control room	1	2	2.00
11	Automatic Fire Fighting System	1	25.62	25.62
12	33KVcable laying including R.I. charges	0	182.26	0.00
13	Civil Work	0	0	0.00
	Total cost in Lakh			**294.77**
	Contingency 5%			**14.74**
	Grand Total in Crore			**3.10**

Spring Mill Chawl (Bombay Dyeing):-

Sr. No	Particulars	Qty.	Unit Cost (Rs. Lakh.)	Total (Rs. Lakh)
1	Power Transformer 16 MVA, 33/11kV	1	146.31	146.31
2	Primary Switchgear 33kV, 1500 MVA SF6 VCB	1	10.41	10.41
3	Secondary Switchgear 11kV 350 MVA (1 set of 9 breakers)	1	37.82	37.82
4	Control, alarm & relay panel with FRLS control cable	1	17.55	17.55
5	Battery Charger	1	4.74	4.74
6	Battery	1	4.06	4.06
7	HT Capacitor	1	13.30	13.30
8	HT Reactor	1	12.96	12.96

Sr. No	Particulars	Qty.	Unit Cost (Rs. Lakh.)	Total (Rs. Lakh)
9	Earthing works	1	20	20
10	Air-conditioning for control room	1	2	2
11	Automatic Fire Fighting System	1	25.62	25.62
12	33KVcable laying including R.I. charges	5.18	182.26	930.12
13	Civil Work	1	289.93	289.93
	Total cost in Lakh			**1514.82**
	Contogency 5%			61.24
	Grand Total in Crore			**15.76**

Bharat Potdar Mill RSS:-

Sr. No	Particulars	Qty.	Unit Cost (Rs. Lakh.)	Total (Rs. Lakh)
1	Power Transformer 16 MVA, 33/11kV	1	146.31	146.31
2	Primary Switchgear 33kV, 1500 MVA SF6 VCB	1	10.41	10.41
3	Secondary Switchgear 11kV 350 MVA (1 set of 9 breakers)	1	37.82	37.82
4	Control, alarm & relay panel with FRLS control cable	1	17.55	17.55
5	Battery Charger	1	4.74	4.74
6	Battery	1	4.06	4.06
7	HT Capacitor	1	13.30	13.30
8	HT Reactor	1	12.96	12.96
9	Earthing works	1	20	20
10	Air-conditioning for control room	1	2	2
11	Automatic Fire Fighting System	1	25.62	25.62
12	33KVcable laying including R.I. charges	1.35	179.56	242.41
13	Civil Work	1	289.93	289.93
	Total cost in Lakh			**827.11**
	Contogency 5%			26.86
	Grand Total in crore			**8.54**

महाराष्ट्र विद्युत नियामक आयोग
Maharashtra Electricity Regulatory Commission

सत्यमेव जयते

MERC/CAPEX/2020-21/ 553

Date: 15 December, 2021

To,
The General Manager,
B.E.S.T. Undertaking,
BEST Bhavan, BEST Marg,
Colaba, Mumbai-400001.

Subject: In-principle clearance for the DPR of BEST for "Revamping of existing Receiving Substations FY 2019-20 to FY 2024-25"(Rs 40.60 Cr)

Sir,

This has reference to your submitted DPR for "Laying of HV and LV Cable and associated equipments", for in-principle approval to the Commission. The said scheme has been evaluated with reference to the guidelines circulated by the Commission on 9 February, 2005.

1. I am directed to convey the 'in-principle' clearance of the scheme. The particulars of the scheme as approved are outlined in the Annexure "A" and Appendix "A" attached.

2. No escalation in the unit cost has been considered.

3. The IDC shall be considered after execution of the project at time of tariff Petition.

4. Please note that this in-principle approval should not be construed as final approval for ARR purpose and the scheme will be open for scrutiny during the tariff determination process/ARR review, particularly in the context of actual cost incurred, scope and objective achieved, etc., ex-post after implementation of the Scheme. BESTwill be required to submit the status of implementation of the scheme with cost incurred till date, likely completion date, etc. along with its ARR Petition or during the tariff determination process at the appropriate time.

5. BEST should submit half yearly progress reports by 20th day of the first month of next half year giving the status of implementation of the Scheme in terms of expenditure incurred and item wise physical progress achieved during the implementation of the Scheme.

6. Assets created after execution of the Scheme should be maintained separately in the Asset Register.

7. Income from the Scrapped material shall be considered as other income shall be shown separately at the time of MYT/MTR Tariff Petitions.

8. Immediately after completion/commissioning of the scheme, BEST should communicate to the Commission the date of completion of the scheme, actual cost incurred, escalation in cost, if any, with reasons, the scope and objectives of the scheme and to what extent they have been achieved, etc., so as to facilitate a comparison between the benefits envisaged at the in-principle clearance and the actual benefits.

9. BEST shall endeavour to complete the project within the stipulated time frame. Further, if BEST fails to initiate the work, including tendering process if any, within period of one year from the date of in-principle approval, the scheme shall be deemed to be cancelled. Thereafter, BEST will have to take a fresh look at the scheme and be required to obtain revised in-principle approval of the Commission with justification for delay.

10. Major scope of work shall be executed through competitive bidding process only.

11. It directed to keep in detail all records of its distribution assets in detail and shall ensure that the future DPRs shall be associated with detail asset information.

Yours faithfully,

(Rajendra G. Ambekar)
Executive Director, MERC

Encl: Annexure "A" and Appendix "A"

Feasibility Report for Capital Investment Scheme for BEST

<table>
<tr><th>Sl. No.</th><th>Particulars</th><th>Details</th></tr>
<tr><td>1</td><td>Title (Name of Scheme)</td><td>Revamping of existing Receiving Substations FY 2019-20 to FY 2024-25</td></tr>
<tr><td>2</td><td>Brief Scope of work</td><td>Alteration and augmentation of existing Receiving Substations
Installation of additional transformers- Nepean Sea RSS and Kingsway RSS
Replacement of - Grant Road RSS
Installation of Additional RMU - Avighna RSS
Replacement of 2nos. of AIS bus sections - Elphiston Mill RSS
Replacement of 33 kV switchgears - Mazgaon Dock, Sion Fort, Dharavi, Mahim, Nepean Sea, Colaba and Kingsway RSS
Replacement of 11 kV bus sections - Grant Road, Sewree, Parel, Kingsway, Prabhadevi, Mahalaxmi, Dharavi, Worli, Wadala, Mahim, KEM and Nair Hospital RSS
Replacement / Installation of Capacitors - Cumballa Hill, Kingsway, Wadala, Worli Dairy, Sitaladevi and Sewree RSS.
Replacement / Installation of Reactors - Cumballa Hill, Kingsway, Masjid, Hutatma Chowk, Grant Road, Kussara, Mahalaxmi and Sewree RSS.
Replacement / Installation of Battery Set and charger - Grant Road, Nariman Point, Ballard Estate, Colaba, Hutatma Chowk, Mazgaon Dock and Nestle RSS. Mahalaxmi (only Battery Set)
Replacement Fire Fighting System (WM Type) - Love Grove, Naval Dock RSS.
Replacement Fire Fighting System (CO_2 Type) - Sitaladevi, Sion Fort, Hutatma Chowk, Mahim Causeway, Byculla, Sewree, Khetwadi RSS.</td></tr>
<tr><td>3</td><td>Objective / Justification</td><td>i) 24x7 power supply for consumers in Mumbai City.
(ii) reduction of AT&C losses/maintaining of existing low level of AT&C losses of the BEST Undertaking
(iii) To maintain reliability and quality of Electric Supply to the Consumers.</td></tr>
<tr><td>4</td><td>Estimated Cost</td><td>Rs. 40.60 Crore</td></tr>
<tr><td>5</td><td>In-principle approval accorded</td><td>Rs. 40.60 Crore</td></tr>
<tr><td>6</td><td>Cost benefit analysis</td><td>Benefits of Rs 0.74 Crores in the 2nd year, going up to Rs.5.02 Crores in the 6th year</td></tr>
<tr><td>7</td><td>Approved Phasing</td><td>
<table>
<tr><th>S. N.</th><th>Particulars</th><th>FY 2019-20</th><th>FY 2020-21</th><th>FY 2021-22</th><th>FY 2022-23</th><th>FY 2023-24</th><th>FY 2024-25</th></tr>
<tr><td>1</td><td>Capital Expenditure in Rs. Cr</td><td>15.78</td><td>8.75</td><td>8.52</td><td>2.32</td><td>1.61</td><td>3.62</td></tr>
<tr><td>2</td><td>Capitalisation in Rs Cr</td><td>15.78</td><td>8.75</td><td>8.52</td><td>2.32</td><td>1.61</td><td>3.62</td></tr>
<tr><td>3</td><td>IDC</td><td colspan="6">NIL (shall be considered after execution of the project at time of tariff Petition)</td></tr>
</table>
</td></tr>
<tr><td>8</td><td>Proposed Funding Arrangement</td><td>Debt Equity Ratio is 70:30.</td></tr>
</table>

B. Observations / Comments on FR

1.	**Prudence of Investment / Technical Justification**	To meet increasing load in existing areas of supply. Build & maintain adequate redundancy in the system 24x7 power supply for consumers in Mumbai City. Reduction of AT&C losses/maintaining of existing low level of AT&C losses of the BEST Undertaking To maintain reliability and quality of Electric Supply to the Consumers..
2.	**Reasonability of Cost Estimate**	It is observed that BEST is following the open-tender Competitive Bidding approach for procurement of materials and services. The contract is awarded to lowest quoted bidder. The competitive approach ensures the least cost approach for execution of capital expenditure schemes.
3.	**Comments on Cost Benefit Analysis**	Benefits of Rs 0.74 Crores in the 2nd year, going up to Rs.5.02 Crores in the 6th year
4.	**Discrepancy / Shortcomings Observed**	Complied by BEST.
5.	**Remarks / Specific Comments, if any**	The scheme is technically justified.

MAHARASHTRA ELECTRICITY REGULATORY COMMISSION

Appendix –A

DESCRIPTION	TOTAL COST	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
allation of additional Power Transformers, 16 MVA, 33/11kV and associated ipments at Nepean sea RSS and Kingsway RSS (Qty-2).	13.03	6.56	3.46	3.01			
olacement / Installation of 33/11kV, 16 MVA Power Transformer at Grant Rd. RSS r-1)	1.89	1.89					
tallation of additional 1 no. of 33kV, 1500 MVA RMU at Avighna, 33/0.415 kV S (Qty-1).	0.98	0.98					
olacement / Installation of 33kV, 1500 MVA, AIS Bus Section at Elphiston Mill S (Qty-2).	0.98		0.98				
olacement of 33kV, 1500 MVA primary switchgears at Mazgaon Dock (1 no.), n Fort (2 nos.), Colaba (1 no.), Nepean Sea (2 nos), Kingsway 2 nos.), Mahim (os), Dharavi (3 nos.) (QTY-13)	2.46		0.88	0.00	0.78	0.22	0.58
olacement of 11 KV Bus Section, 350 MVA at Grant Rd (4), Sewree RSS, Parel S, (3 nos.each), Dharavi (2), Wadala (2), Kingsway (3), Mahim (2), Prabhadevi KEM(1), Worli(2), Mahalaxmi(3), Nair Hosp.(1) (Qty- 29 nos.).	12.70	2.83	1.56	4.35	0.61	0.78	2.58
placement / Installation of Capacitors at Cumballa Hill RSS, Kingsway RSS, dala RSS, Worli Dairy, Sitaladevi (1 no. each) and Sewree RSS (2 nos) (Qty- 7 .).	0.76			0.29	0.18	0.29	
olacement / Installation of Reactors at Masjid RSS, Hutatma Chowk RSS, Grant ad, Cumballa Hill RSS, Kingsway RSS, Kussara RSS, Mahalaxmi RSS (1 no. each) Sewree RSS (2 nos.each). (Qty-9).	2.29			0.75	0.75	0.32	0.47
olacement / Installation of Battery and charger at Grant Road, Nariman Point RSS, lard Estate RSS, Colaba RSS, Hutatma Chowk RSS, Mazgaon Dock RSS, aravi, Apollo (Qty-8)	0.68	0.48	0.08	0.12			
olacement Fire Fighting System at Love Grove RSS, Naval Dock RSS (Water Mist pe, Qty-2).	3.04	3.04					
placement Fire Fighting System at Sitaladevi RSS, Sion Fort RSS, Hutatma owk RSS, Mahim Causeway RSS, Byculla RSS, Sewree RSS, Khetwadi RSS (CO2 pe Qty-7).	1.79		1.79				
TOTAL	**40.60**	**15.78**	**8.75**	**8.52**	**2.32**	**1.61**	**3.62**

MAHARASHTRA ELECTRICITY REGULATORY COMMISSION

महाराष्ट्र विद्युत नियामक आयोग
Maharashtra Electricity Regulatory Commission

MERC/CAPEX/2022-23/0556

Date: 14 November, 2022

To,
The General Manager,
B.E.S.T. Undertaking,
BEST Bhavan, BEST Marg,
Colaba, Mumbai-400001.

Subject: In-principle clearance for the DPR of BEST for "Revamping of existing Receiving Substations during FY 2020-21 to FY 2022-23" for In-principle approval of the Commission and Post facto approval of capitalization during FY 2019-20"(Rs. 56.07 Cr).

Sir,

This has reference to your submitted DPR for "Revamping of existing Receiving Substations during FY 2019-20 to FY 2024-25" for In-principle approval of the Commission and Post facto approval of capitalization during FY 2019-20. The said scheme has been evaluated with reference to the guidelines circulated by the Commission on 9 February, 2005.

1. I am directed to convey the 'in-principle' clearance of the scheme. The particulars of the scheme as approved are outlined in the Annexure "A" and Appendix "A" attached.

2. No escalation in the unit cost has been considered.

3. The IDC shall be considered after execution of the project at time of MYT/MTR tariff Petition.

4. Please note that this in-principle approval should not be construed as final approval for ARR purpose and the scheme will be open for scrutiny during the tariff determination process/ARR review, particularly in the context of actual cost incurred, scope and objective achieved, etc., ex-post after implementation of the Scheme. BEST will be required to submit the status of implementation of the scheme with cost incurred till date, likely completion date, etc. along with its ARR Petition or during the tariff determination process at the appropriate time.

5. BEST should submit half yearly progress reports by 20th day of the first month of next half year giving the status of implementation of the Scheme in terms of expenditure incurred and item wise physical progress achieved during the implementation of the Scheme.

6. Assets created after execution of the Scheme should be maintained separately in the Asset Register.

7. Income from the Scrapped material shall be considered as other income shall be shown separately at the time of MYT/MTR Tariff Petitions.

8. Immediately after completion/commissioning of the scheme, BESTshould communicate to the Commission the date of completion of the scheme, actual cost incurred, escalation in cost, if any, with reasons, the scope and objectives of the scheme and to what extent they have been achieved, etc., so as to facilitate a comparison between the benefits envisaged at the in-principle clearance and the actual benefits.

9. BEST shall endeavour to complete the project within the stipulated time frame. Further, if BEST fails to initiate the work, including tendering process if any, within period of one year from the date of in-principle approval, the scheme shall be deemed to be cancelled. Thereafter, BEST will have to take a fresh look at the scheme and be required to obtain revised in-principle approval of the Commission with justification for delay.

10. Major scope of work shall be executed through competitive bidding process only.

11. It directed to keep in detail all records of its distribution assets and shall ensure that the future DPRs shall be associated with detail asset information.

Yours faithfully,

(Dr. Rajendra G. Ambekar)
Executive Director, MERC

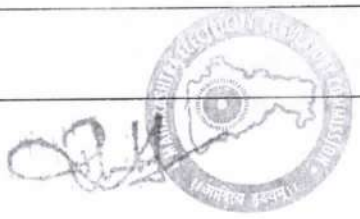
Encl: Annexure "A" and Appendix "A"

-13-

Annexure "A"

Feasibility Report for Capital Investment Scheme for BEST

Sl. No.	Particulars	Details
1	Title (Name of Scheme)	**Revamping of existing Receiving Substations during FY 2019-20 to FY 2022-23**
2	Brief Scope of work	• Replacement of 10/12.5 MVA Power Transformers at Sitaladevi RSS Tr. No. 4, Byculla RSS Tr. No. 1 & 3 (Qty-3 Nos.) • Replacement of 33 kV switchgears at Mahim Causeway RSS(Qty-3 Nos.) • Diversion of 33 kV feeder cables of RSS viz.Wadala RSS (T/F. No. 1 & 3), Kingsway RSS (T/F. No. 2), Raoli Hill RSS (T/F. No.2), Sion Fort RSS (T/F. No. 2), Pratiksha Nagar (T/F. No. 1), Lodha Crown T6 (T/F. No. 1) from TPC Dharavi RS to TPC Antop Hill RS and laying of additional cables for proposed Pratiksha Nagar RSS (T/F2), Lodha Crown T6 (T/F2), Lodha Crown T10 (T/F1&2) and New RSS commissioning at Dosti Acres (Qty. 16.961 Kms. • Replacement of 33 kV cable from TPC Parel RS to Marathon Futurex along with additional cables. (5.722 Kms.) • Replacement & diversion of 33 kV cable pert portion of Cumballa Hill RSS (T/F 1, 2 & 4) and laying additional one no. of 33 kV cable for Apollo Mill RSS (T/F 2) (Qty. 7.761 Kms.) • Diversion & replacement of EHV Cables of Sitaladevi RSS (T/F 1, 2, 3 & 4), VSNL RSS and VSNL HV consumer from T. H. Kataria Marg ROB below Western Railway Tracks (Qty. 2.210 Kms, Included HDD Cost)) • Diversion& replacement of EHV Cables of part portion of 33 kV feeders DBA1→ Futurex 33 kV HT Room LHS & DBA2→ Futurex 33kV HT Room RHS below Western Railway Tracks (Delisle ROB) (Qty. 3.420 Kms, Included HDD Cost))
3	Objective / Justification	i. To meet increasing load in existing areas of supply. ii. Build & maintain adequate redundancy in the system iii. 24x7 power supply for consumers in Mumbai City. iv. Reduction of AT&C losses/maintaining of existing low level of AT&C losses of the BEST Undertaking v. To maintain reliability and quality of Electric Supply to the Consumers.
4	Estimated Cost	Rs. 56.22 Crore
5	In-principle approval accorded	Rs. 56.07 Crore



<table>
<tr><td>7</td><td>Approved Phasing</td><td>
<table>
<tr><th>Sr. No.</th><th>Particulars</th><th>Total</th><th>FY 2019-20</th><th>FY 2020-21</th><th>FY 2021-22</th><th>FY 2022-23</th></tr>
<tr><td>1</td><td>Capital Expenditure in Rs Cr</td><td>56.07</td><td>8.84</td><td>11.84</td><td>15.77</td><td>19.62</td></tr>
<tr><td>2</td><td>Capitalisation in Rs Cr</td><td>56.07</td><td>8.84</td><td>11.84</td><td>6.02</td><td>29.37</td></tr>
</table>
</td></tr>
<tr><td>8</td><td>Proposed Funding Arrangement</td><td>Debt Equity Ratio is 70:30.</td></tr>
</table>

B. Observations / Comments on FR

1.	**Prudence of Investment / Technical Justification**	**To meet increasing load in existing areas of supply. Build & maintain adequate redundancy in the system 24x7 power supply for consumers in Mumbai City. Reduction of AT&C losses/maintaining of existing low level of AT&C losses of the BEST Undertaking To maintain reliability and quality of Electric Supply to the Consumers..**
2.	**Reasonability of Cost Estimate**	It is observed that BEST is following the open-tender Competitive Bidding approach for procurement of materials and services. The contract is awarded to lowest quoted bidder. The competitive approach ensures the least cost approach for execution of capital expenditure schemes.
3.	**Comments on Cost Benefit Analysis**	Benefits of Rs 0.28 Crores in the 1st year, going up to Rs.1.64 Crores in the 4th year
4.	**Discrepancy / Shortcomings Observed**	Complied by BEST.
5.	**Remarks / Specific Comments, if any**	The scheme is technically justified.

Appendix – "A"

Cost Abstract

Sr. No.	Name of Scheme	Approved Cost in Rs Cr
1.	Replacement of 10/12.5 MVA Power Transformers at Sitaladevi RSS Tr. No. 4, Byculla RSS Tr. No. 1 & 3 (Qty-3 Nos.)	**5.09**
2.	Replacement of 33 kV switchgears at Mahim Causeway RSS(Qty-3 Nos.)	**0.59**
3.	Diversion of 33 kV feeder cables of RSS viz.Wadala RSS (T/F. No. 1 & 3), Kingsway RSS (T/F. No. 2), Raoli Hill RSS (T/F. No.2), Sion Fort RSS (T/F. No. 2), Pratiksha Nagar (T/F. No. 1), Lodha Crown T6 (T/F. No. 1) from TPC Dharavi RS to TPC Antop Hill RS and laying of additional cables for proposed Pratiksha Nagar RSS (T/F2), Lodha Crown T6 (T/F2), Lodha Crown T10 (T/F1&2) and New RSS commissioning at Dosti Acres (Qty. 16.961 Kms.	**22.55**
4.	Replacement of 33 kV cable from TPC Parel RS to Marathon Futurex along with additional cables. (5.722 Kms.)	**8.51**
5.	Replacement & diversion of 33 kV cable pert portion of Cumballa Hill RSS (T/F 1, 2 & 4) and laying additional one no. of 33 kV cable for Apollo Mill RSS (T/F 2) (Qty. 7.761 Kms.)	**10.92**
6	Diversion & replacement of EHV Cables of Sitaladevi RSS (T/F 1, 2, 3 & 4), VSNL RSS and VSNL HV consumer from T. H. Kataria Marg ROB below Western Railway Tracks (Qty. 2.210 Kms, Included HDD Cost)):	**3.47**
7	Diversion& replacement of EHV Cables of part portion of 33 kV feeders DBA1→ Futurex 33 kV HT Room LHS & DBA2→ Futurex 33kV HT Room RHS below Western Railway Tracks (Delisle ROB) (Qty. 3.420 Kms, Included HDD Cost))	**4.94**
	Grant total	**56.07**

महाराष्ट्र विद्युत नियामक आयोग
Maharashtra Electricity Regulatory Commission

सत्यमेव जयते

MERC/CAPEX/2021-22/ 552

Date: 15 December, 2021

To,
The General Manager,
B.E.S.T. Undertaking,
BEST Bhavan, BEST Marg,
Colaba, Mumbai-400001.

Subject: In-principle clearance for the DPR of BEST for "Commissioning of New Distribution Substations (DSS) and Revamping of existing Distribution Substationsfor FY 2020-21 to FY 2024-25"(Rs. 150 Cr).

Sir,

This has reference to your submitted DPR for "Commissioning of New Distribution Substations (DSS) and Revamping of existing Distribution Substationsfor FY 2020-21 to FY 2024-25", for in-principle approval to the Commission. The said scheme has been evaluated with reference to the guidelines circulated by the Commission on 9 February, 2005.

1. I am directed to convey the 'in-principle' clearance of the scheme. The particulars of the scheme as approved are outlined in the Annexure "A" and Appendix "A" attached.

2. No escalation in the unit cost has been considered.

3. The IDC shall be considered after execution of the project at time of MYT/MTR tariff Petition.

4. Please note that this in-principle approval should not be construed as final approval for ARR purpose and the scheme will be open for scrutiny during the tariff determination process/ARR review, particularly in the context of actual cost incurred, scope and objective achieved, etc., ex-post after implementation of the Scheme. BEST will be required to submit the status of implementation of the scheme with cost incurred till date, likely completion date, etc. along with its ARR Petition or during the tariff determination process at the appropriate time.

5. BEST should submit half yearly progress reports by 20th day of the first month of next half year giving the status of implementation of the Scheme in terms of expenditure incurred and item wise physical progress achieved during the implementation of the Scheme.

6. Assets created after execution of the Scheme should be maintained separately in the Asset Register.

7. Income from the Scrapped material shall be considered as other income shall be shown separately at the time of MYT/MTR Tariff Petitions.

8. Immediately after completion/commissioning of the scheme, BESTshould communicate to the Commission the date of completion of the scheme, actual cost incurred, escalation in cost, if any, with reasons, the scope and objectives of the scheme and to what extent they have been achieved, etc., so as to facilitate a comparison between the benefits envisaged at the in-principle clearance and the actual benefits.

9. BEST shall endeavour to complete the project within the stipulated time frame. Further, if BEST fails to initiate the work, including tendering process if any, within period of one year from the date of in-principle approval, the scheme shall be deemed to be cancelled. Thereafter, BEST will have to take a fresh look at the scheme and be required to obtain revised in-principle approval of the Commission with justification for delay.

10. Major scope of work shall be executed through competitive bidding process only.

11. It directed to keep in detail all records of its distribution assets in detail and shall ensure that the future DPRs shall be associated with detail asset information.

Yours faithfully,

(Dr. Rajendra G. Ambekar)
Executive Director, MERC

Encl: Annexure "A" and Appendix "A"

Annexure "A"

Feasibility Report for Capital Investment Scheme for BEST

<table>
<tr><th>Sl. No.</th><th>Particulars</th><th>Details</th></tr>
<tr><td>1</td><td>Title (Name of Scheme)</td><td>Commissioning of New Distribution Substations (DSS) and Revamping of existing Distribution Substations for FY 2020-21 to FY 2024-25</td></tr>
<tr><td>2</td><td>Brief Scope of work</td><td>• Commissioning of New DSS (40 nos./year)
• Installation of Additional Distribution transformers (DTs) and replacement of transformers with higher capacity and age old DTs at existing DSS (30Nos/year)
• Replacement of OCBs by VCBs at existing DSS (25 nos./year).
• Remodeling of dilapidated DSS (Relocation-10 nos./year)</td></tr>
<tr><td>3</td><td>Objective / Justification</td><td>i. To meet increasing load in existing areas of supply.
ii. Build & maintain adequate redundancy in the system
iii. 24x7 power supply for consumers in Mumbai City.
iv. Reduction of AT&C losses/maintaining of existing low level of AT&C losses of the BEST Undertaking
v. To maintain reliability and quality of Electric Supply to the Consumers.</td></tr>
<tr><td>4</td><td>Estimated Cost</td><td>Rs. 152.3 Crore</td></tr>
<tr><td>5</td><td>In-principle approval accorded</td><td>Rs. 150 Crore</td></tr>
<tr><td>6</td><td>1.1.1
Cost benefit analysis</td><td>Benefits of Rs 2.60 Crores in the 1st year, going up to Rs.23.09 Crores in the 5th year</td></tr>
<tr><td>7</td><td>Approved Phasing</td><td>
<table>
<tr><th>S. N.</th><th>Particulars</th><th>FY 20-21</th><th>FY 21-22</th><th>FY 22-23</th><th>FY 23-24</th><th>FY 24-25</th></tr>
<tr><td>1</td><td>Capital Expenditure</td><td>30.2</td><td>29.95</td><td>29.95</td><td>29.95</td><td>29.95</td></tr>
<tr><td>2</td><td>Capitalisation</td><td>30.2</td><td>29.95</td><td>29.95</td><td>29.95</td><td>29.95</td></tr>
<tr><td>3</td><td>IDC</td><td colspan="5">NIL (shall be considered after execution of the project at time of MYT/MTR tariff Petition)</td></tr>
</table>
</td></tr>
<tr><td>8</td><td>Proposed Funding Arrangement</td><td>Debt Equity Ratio is 70:30.</td></tr>
</table>

B. Observations / Comments on FR

1.	**Prudence of Investment / Technical Justification**	**To meet increasing load in existing areas of supply. Build & maintain adequate redundancy in the system 24x7 power supply for consumers in Mumbai City. Reduction of AT&C losses/maintaining of existing low level of AT&C losses of the BEST Undertaking To maintain reliability and quality of Electric Supply to the Consumers..**
2.	**Reasonability of Cost Estimate**	It is observed that BEST is following the open-tender Competitive Bidding approach for procurement of materials and services. The contract is awarded to lowest quoted bidder. The competitive approach ensures the least cost approach for execution of capital expenditure schemes.
3.	**Comments on Cost Benefit Analysis**	Benefits of Rs 2.26 Crores in the 1st year, going up to Rs.23.09 Crores in the 5th year
4.	**Discrepancy / Shortcomings Observed**	Complied by BEST.
5.	**Remarks / Specific Comments, if any**	The scheme is technically justified. BEST's expenditure phasing in the DPR proposal was starting from FY 20-21 to FY 24-25. As the year FY 2020-21 has been lapsed, the expenditure is shifted one year ahead i.e. starting from FY 21-22 to FY 25-26.

Appendix – "A"

Cost Abstract

Sr. No.	Item Description	FY2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
A	Commissioning of DSS (40 nos/year)	17.49	17.49	17.49	17.49	17.49
B	Augmentation/Replacement of Transformers (30 nos./year)*	5.24	4.99	4.99	4.99	4.99
C	Remodeling of DSS (10 nos./year)	4.78	4.78	4.78	4.78	4.78
D	Replacement of OCBs by VCBs (25 nos. of DSS/year)	2.69	2.69	2.69	2.69	2.69
	Total = Rs. 150 Crs	**30.20**	**29.95**	**29.95**	**29.95**	**29.95**

**For FY 20-21, Augmentation/Replacement of Transformers Qty is 32 Nos*

MERC/CAPEX/2020-21/ Date: 22 June, 2020

To,
The General Manager,
B.E.S.T. Undertaking,
BEST Bhavan, BEST Marg,
Colaba, Mumbai-400001.

Subject: In-principle clearance for the DPR of BEST for "Laying of HV and LV Cable and associated equipments for FY 2020-21 to FY 2024-25"(Rs 246.20 Cr)

Sir,

This has reference to your submitted DPR for "Laying of HV and LV Cable and associated equipments", for in-principle approval to the Commission. The said scheme has been evaluated with reference to the guidelines circulated by the Commission on 9 February, 2005.

1. I am directed to convey the 'in-principle' clearance of the scheme. The particulars of the scheme as approved are outlined in the Annexure "A" and Appendix "A" attached.

2. No escalation in the unit cost has been considered.

3. The IDC shall be considered after execution of the project at time of tariff Petition.

4. Please note that this in-principle approval should not be construed as final approval for ARR purpose and the scheme will be open for scrutiny during the tariff determination process/ARR review, particularly in the context of actual cost incurred, scope and objective achieved, etc., ex-post after implementation of the Scheme. BESTwill be required to submit the status of implementation of the scheme with cost incurred till date, likely completion date, etc. along with its ARR Petition or during the tariff determination process at the appropriate time.

5. BEST should submit half yearly progress reports by 20th day of the first month of next half year giving the status of implementation of the Scheme in terms of expenditure incurred and item wise physical progress achieved during the implementation of the Scheme.

6. Assets created after execution of the Scheme should be maintained separately in the Asset Register.

7. Income from the Scrapped material shall be considered as other income shall be shown separately at the time of MYT/MTR Tariff Petitions.

8. Immediately after completion/commissioning of the scheme, BEST should communicate to the Commission the date of completion of the scheme, actual cost incurred, escalation in cost, if any, with reasons, the scope and objectives of the scheme and to what extent they have been achieved, etc., so as to facilitate a comparison between the benefits envisaged at the in-principle clearance and the actual benefits.

9. BEST shall endeavour to complete the project within the stipulated time frame. Further, if BEST fails to initiate the work, including tendering process if any, within period of one year from the date of in-principle approval, the scheme shall be deemed to be cancelled. Thereafter, BEST will have to take a fresh look at the scheme and be required to obtain revised in-principle approval of the Commission with justification for delay.

10. Major scope of work shall be executed through competitive bidding process only.

Yours faithfully,

Sd/-
(Rajendra G. Ambekar)
Executive Director, MERC

Encl: Annexure "A" and Appendix "A"

Feasibility Report for Capital Investment Scheme for BEST

<table>
<tr><th>Sl. No.</th><th>Particulars</th><th>Details</th></tr>
<tr><td>1</td><td>Title (Name of Scheme)</td><td>Laying of HV and LV Cable and associated equipments for FY 2020-21 to FY 2024-25</td></tr>
<tr><td>2</td><td>Brief Scope of work</td><td>• Laying of HV cable (25 KM per year)
• Laying of LV cables (56 KM per year)
• Installation of Auxillary Distribution Feeders (135 Nos per Year)
• Laying of service cables and installation of associated equipments.(40 KM per year)</td></tr>
<tr><td>3</td><td>Objective / Justification</td><td>• To increase the reach to consumers.
• To enhance the last mile connectivity
• To improve network flexibility.</td></tr>
<tr><td>4</td><td>Estimated Cost</td><td>Rs. 246.20 Crore</td></tr>
<tr><td>5</td><td>In-principle approval accorded</td><td>Rs. 246.20 Crore</td></tr>
<tr><td>6</td><td>Cost benefit analysis</td><td>Benefits of Rs 2.26Crores in the 1st year, going up to Rs.23.09Crores in the 5th year</td></tr>
<tr><td>7</td><td>Approved Phasing</td><td>
<table>
<tr><th>S. N.</th><th>Particulars</th><th>FY 2020-21</th><th>FY 2021-22</th><th>FY 2022-23</th><th>FY 2023-24</th><th>FY 2024-25</th></tr>
<tr><td>1</td><td>Capital Expenditure in Rs Cr</td><td>49.24</td><td>49.24</td><td>49.24</td><td>49.24</td><td>49.24</td></tr>
<tr><td>2</td><td>Capitalisation in Rs Cr</td><td>49.24</td><td>49.24</td><td>49.24</td><td>49.24</td><td>49.24</td></tr>
<tr><td>3</td><td>IDC</td><td colspan="5">NIL (shall be considered after execution of the project at time of tariff Petition)</td></tr>
</table>
</td></tr>
<tr><td>8</td><td>Proposed Funding Arrangement</td><td>Debt Equity Ratio is 70:30.</td></tr>
</table>

B. Observations / Comments on FR

1.	**Prudence of Investment / Technical Justification**	• To meet increasing load in existing areas of supply. • Build & maintain adequate redundancy in the system • 24x7 power supply for consumers in Mumbai City. • Reduction of AT&C losses/maintaining of existing low level of AT&C losses of the BEST Undertaking • To maintain reliability and quality of Electric Supply to the Consumers..
2.	**Reasonability of Cost Estimate**	It is observed that BEST is following the open-tender Competitive Bidding approach for procurement of materials and services. The contract is awarded to lowest quoted bidder. The competitive approach ensures the least cost approach for execution of capital expenditure schemes.
3.	**Comments on Cost Benefit Analysis**	Benefits of Rs 2.26 Crores in the 1st year, going up to Rs.23.09 Crores in the 5th year
4.	**Discrepancy / Shortcomings Observed**	Complied by BEST.
5.	**Remarks / Specific Comments, if any**	The scheme is technically justified.

Appendix –A
Cost Abstract

Sr. No.	Item Description	CABLE TYPE	Rs. Crore PER KM	Per Year QTY in KM	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
A	**HV CABLE**		UNIT COST		CAPITAL EXPENTITURE (In CRORE)				
1	Laying of 11 KV HV Cables	AL, XLPE	0.2566	**25.000**	**6.41**	**6.41**	**6.41**	**6.41**	**6.41**
B	**LVCABLE**								
1	Laying of 1.1 KV 4CX300 SQ.MM CABLE	AL, XLPE	0.2061	36.000	7.42	7.42	7.42	7.42	7.42
2	Laying of 1.1 KV 4CX120 SQ.MM CABLE	AL, XLPE	0.1349	5.500	0.74	0.74	0.74	0.74	0.74
3	Laying of 1.1 KV 4CX70 SQ.MM CABLE	AL, XLPE	0.1232	1.000	0.12	0.12	0.12	0.12	0.12
4	Laying of 1.1 KV 4CX25 SQ.MM CABLE	AL, XLPE	0.1042	2.500	0.26	0.26	0.26	0.26	0.26
5	Laying of 1.1 KV 2CX25 SQ.MM CABLE	AL, XLPE	0.1003	0.500	0.05	0.05	0.05	0.05	0.05
6	Laying of 1.1 KV 2CX50 SQ.MM CABLE	AL, XLPE	0.1051	1.000	0.11	0.11	0.11	0.11	0.11
7	Laying of 1.1 KV 3CX95 SQ.MM CABLE	AL, XLPE	0.1195	0.500	0.06	0.06	0.06	0.06	0.06
8	Laying of 1.1 KV 1CX400 SQ.MM CABLE	CU. XLPE	0.2920	9.000	2.63	2.63	2.63	2.63	2.63
	TOTAL OF B			**56.000**	**11.39**	**11.39**	**11.39**	**11.39**	**11.39**
C	**R I Cost (HV+LV)**		0.7708	**24.27**	**18.71**	**18.71**	**18.71**	**18.71**	**18.71**
D	**Auxiliary Distribution Pillars (ADP)**								
1	6 WAY ADP	-	0.0087	95	0.83	0.83	0.83	0.83	0.83
2	10 WAY ADP	-	0.0110	30	0.33	0.33	0.33	0.33	0.33
3	12 WAY ADP	-	0.0125	10	0.12	0.12	0.12	0.12	0.12
	TOTAL OF D			**135**	**1.28**	**1.28**	**1.28**	**1.28**	**1.28**
E	**SERVICE CABLE (QTY IN KM)**								
1	Laying of 1.1 KV 4CX300 SQ.MM CABLE	AL, XLPE	0.2061	26.000	5.36	5.36	5.36	5.36	5.36
2	Laying of 1.1 KV 4CX120 SQ.MM CABLE	AL, XLPE	0.1349	4.000	0.54	0.54	0.54	0.54	0.54
3	Laying of 1.1 KV 4CX70 SQ.MM CABLE	AL, XLPE	0.1232	2.000	0.25	0.25	0.25	0.25	0.25
4	Laying of 1.1 KV 4CX25 SQ.MM CABLE	AL, XLPE	0.1042	2.800	0.29	0.29	0.29	0.29	0.29
5	Laying of 1.1 KV 2CX25 SQ.MM CABLE	AL, XLPE	0.1003	5.200	0.52	0.52	0.52	0.52	0.52
	TOTAL OF E			**40.000**	**6.96**	**6.96**	**6.96**	**6.96**	**6.96**
F	**R I Cost (SERVICE CABLE) (kms)**	-	0.7708	**5.830**	**4.49**	**4.49**	**4.49**	**4.49**	**4.49**
	GRAND TOTAL (A+B+C+D+E+F) in Cr	**246.2**			**49.24**	**49.24**	**49.24**	**49.24**	**49.24**

महाराष्ट्र विद्युत नियामक आयोग
Maharashtra Electricity Regulatory Commission

MERC/CAPEX/2023-24/0023 **Date: 09 January, 2024**

To,
The General Manager,
BEST Undertaking,
2nd Floor, Backbay Veej Bhavan,
149/150, Gen J. Bhosale Marg,
Nariman Point, Mumbai 400 021.

Subject :-BEST DPR for Implementation of of various schemes under RDSS (Rs 1711.21 Crore)

Sir,

1. This has reference to your submitted DPR, for in principle approval to the Commission. The said scheme has been evaluated with reference to the Capex Regulations, 2022
2. I am directed to convey the 'in-principle' clearance of the scheme for the cost of Rs.1720.14 Crs under MERC (Approval of capital Invest Scheme) Regulations 2022. The particulars of the scheme as approved are outlined in the Annexure "A" and Appendix "A" attached.
3. Please note that this in-principle approval should not be construed as final approval for ARR purpose and the scheme will be open for scrutiny during the tariff determination process/ARR review, particularly in the context of actual cost incurred, scope and objective achieved etc., ex-post after implementation of the Scheme. BEST will be required to submit the status of implementation of the scheme with cost incurred till date, likely completion date, etc. along with its ARR Petition or during the tariff determination process at the appropriate time.
4. BEST should submit half yearly progress reports by 20th day of the first month of next half year giving the status of implementation of the Scheme in terms of expenditure incurred and item wise physical progress achieved during the implementation of the Scheme.
5. Assets created after execution of the Scheme should be maintained separately in the Asset Register.

6. Immediately after completion/commissioning of the scheme, BEST should communicate to the Commission the date of completion of the scheme, actual cost incurred, escalation in cost, if any, with reasons, the scope and objectives of the scheme and to what extent they have been achieved, etc., so as to facilitate a comparison between the benefits envisaged at the in-principle clearance and the actual benefits.

7. BEST shall endeavor to complete the project within the stipulated time frame. Further, if BEST fails to initiate the work, including tendering process if any, within a period of one year from the date of in-principle approval, the scheme shall be deemed to be cancelled. Thereafter, BEST will have to take a fresh look at the scheme and be required to obtain revised in-principle approval of the Commission with justification for delay.

8. BEST to ensure that the income realization from scrap material shall be treated as per accounting principles.

9. BEST to submit the utilization report of credited equipment, if any, along with the six monthly report till all equipment's are reused.

10. Major scope of work shall be executed through competitive bidding process only.

Yours faithfully,

(Dr. Rajendra G. Ambekar)
Executive Director, MERC

Encl: Annexure "A" and Appendix "A"

Annexure A

<table>
<tr><td>Name of the scheme</td><td>BEST DPR for Implementation of of various schemes under RDSS</td></tr>
<tr><td>Estimated cost proposed by BEST (Revised)</td><td>Rs. 1711.21Crore</td></tr>
<tr><td>In-principle approval accorded</td><td>Rs. 1711.21 Crore</td></tr>
<tr><td>Cost benefit</td><td>a) Loss reduction
b) Addnl. Revenue generation
c) Improvement in billing accuracy
d) Improved service restoration and higher reliability of supply
e) Outage management and real time data
f) Availability of information and online services
g) Improvement in quality of services</td></tr>
<tr><td>Scope of the works in brief</td><td>
<table>
<tr><td>Particulars</td><td>Additional</td><td>Replacement</td><td>Total</td></tr>
<tr><td>Power Transformers 33/11 KV in Nos</td><td>2</td><td>18</td><td>20</td></tr>
<tr><td>33 kV, 1500 MVA Primary Switchgears in Nos</td><td>1</td><td>17</td><td>18</td></tr>
<tr><td>11 kV,350 MVA Secondary Switchgears in Nos</td><td>1</td><td>31</td><td>32</td></tr>
<tr><td>33 KV Cable in KM</td><td>20</td><td>100</td><td>120</td></tr>
<tr><td>DSS 666 Nos</td><td></td><td>666</td><td>666</td></tr>
<tr><td>Replacement of SF6 RMUs</td><td></td><td>104</td><td>104</td></tr>
<tr><td>Replacement of Oil Filled RMUs by SF6 RMUs</td><td></td><td>95</td><td>95</td></tr>
<tr><td>Replacement of Oil Type switchgears by VCB</td><td></td><td>1726</td><td>1726</td></tr>
<tr><td>11 KV Cable in KM</td><td></td><td>200</td><td>200</td></tr>
<tr><td>LV Cable in KM</td><td></td><td>50</td><td>50</td></tr>
<tr><td>Meter Boards</td><td></td><td>74666</td><td>74666</td></tr>
<tr><td>ADMS for 870 DSS</td><td>1</td><td></td><td>1</td></tr>
<tr><td>ERP IT/ OT</td><td>1</td><td></td><td>1</td></tr>
</table>
</td></tr>
</table>

Objectives/Justification	a) Loss reduction b) Additional Revenue generation c) Improvement in billing accuracy d) Improved service restoration and higher reliability of supply e) Outage management and real time data f) Availability of information and online services g) Improvement in quality of services
Funding arrangement	Funding arrangement for execution of these schemes is 70:30 Debts Equity, as per MYT Regulations and Grant from Central Governmen under RDSS.
Time frame/phasing out of expenditure	**(Amount in Rs. Crs)**

DPR Years	Total	FY 22-23	FY 23-24	FY 24-25
Capex	1711.21	429.73	736.94	544.54
Capitalization	1711.21	429.73	736.94	544.54
IDC		Nill		

Observations / Comments on Feasibility Report

1.	Prudence of Investment / Technical Justification	1. For loss reduction 2. For improvement in reliability
2.	Reasonability of Cost Estimate	BEST has carried out open tender process for allotment of the work contract and followed least cost option process
3.	Comments on Cost Benefit Analysis	a) Loss reduction b) Additional Revenue generation c) Improvement in billing accuracy d) Improved service restoration and higher reliability of supply e) Outage management and real time data f) Availability of information and online services g) Improvement in quality of services
4.	Discrepancy/Shortcomings Observed	Compiled by BEST
5.	Remarks/Specific Comments if any	Based on technical scrutiny and scope suggested by BEST, the scheme seems to be technically and commercially prudent.

Appendix A

RSS:-

Sr. No.	Name of Scheme	Cost in Cr.	FY 2023-24		FY 2024-25		FY 2025-26		Total QTY	Total Cost (in
			QTY (in No.)	Cost (in Cr.)	QTY (in No.)	Cost (in Cr.)	QTY (in No.)	Cost (in Cr.)		
A	Installation of Additional 33/11 kV, 16 MVA T/F (1 No.) at Pratiksha Nara RSS and 33/11-6.6 kV, 16 MVA T/F at Naval Dock RSS (1 No.) (Qty-2)	7.16	1	2.84	1	4.32			2	
B	Replacement of Transformers:								0	
B	Replacement of 22/11 kV, 10/12.5 MVA T/Fs with 33/11 kV, 16 MVA T/Fs at RSS viz. Mahalaxmi (2 Nos.), Sitaladevi (1 No.), Mazgaon Dock (2 Nos.), Sewree (2 Nos.), Kussara (1 No.), KEM Hosp (1 No.), Naval Dock (2 Nos.) Apollo (3 Nos.), Hutatma Chowk (3 No.) & Mahim (1 No.) (Qty-18 Nos.)	49.83	0		9	24.92	9	24.92	18	
C	Replacement of 33 kV, 1500 MVA Primary Switchgears viz. Mazgaon Dock (1 No.), Mumbadevi (2 Nos.), Mahim (2 Nos.), Masjid (1 No.), KEM Hospital (1 No.), Nair Hospital (1 No.), Kingsway (2 Nos.) Apollo (1 No.), Prabhadevi (2 Nos.), Nestle (1 No.), Ballard Estate (3 Nos.)& Colaba (1 No.) (Qty-18 Nos.)	4.65	5	1.29	7	1.81	6	1.55	18	
D	Replacement of 11 kV, 350 MVA Secondary Switchgears viz. Mahim causeway (2 Nos.), Grant Road (4 Nos.), Mahalaxmi (1 No.), Prabhadevi (2 Nos.), Kussara (2 Nos.), Apollo (2 Nos.), Dharavi (2 Nos.), Sewree (2 Nos.), Esplanade (3 Nos.), Mahim (2 Nos.), Wadala (2 Nos.), Malhar Hill (2 Nos.), KEM Hospital (1 No.), Worli (2 Nos.), Nair Hospital (1 No.) & Mahalaxmi (2 Nos.) (Qty-32 Nos.)	38.15	7	8.35	13	15.50	12	14.31	32	
E	Replacement / Laying of old /outlived 22/33 kV, 3CX300 SQ MM Cu XLPE Cable (120 KM)	405.12	32.5	109.72	50	168.80	37.5	126.60		
F	PMA Charges	3.05		0.68		1.32		1.05		
	GRAND TOTAL	507.96		122.87		216.66		168.42		
	MVA Added	MVA	16		70		18			
				122.87		216.66		168.42		50

DSS:-

Sr. No.	Name of Scheme	Cost in Cr.	FY 2023-24		FY 2024-25		FY 2025-26		Total QTY	Total Cost (in Cr.)
			QTY (in No.)	Cost (in Cr.)	QTY (in No.)	Cost (in Cr.)	QTY (in No.)	Cost (in Cr.)		
A	Replacement of DTs (Qty-666 Nos.)	**210.16**	200	63.11	233	73.52	233	73.52	666	**210.16**
B	Replacement of SF_6 RMUs (which are not caompatible for Distribution Automation) (Qty-104 Nos.)	**11.25**	30	3.25	34	3.68	40	4.33	104	**11.25**
C	Replacement of Oil Filled RMUs by SF_6 RMUs caompatible for Distribution Automation) (Qty-95 Nos.)	**9.43**	29	2.88	36	3.57	30	2.98	95	**9.43**
D	Replacement of Oil Type switchgears by VCB switchgears compaible for Distribution Automation) (Qty-396 Nos.)	**101.14**	76	19.41	160	40.86	160	40.86	396	**101.14**
E	Replacement /Additional of 11 kV HV weak/old cable with 3CX240 SQ Mm XLPE cable (200 KM)	**268.35**	40	53.67	80	107.34	80	107.34	200	**268.35**
F	Replacement /Additional of 1.1 kV LV weak/old cable with 4CX300 SQ Mm XLPE cable (50 KM)	**90.61**	10	18.12	20	36.25	20	36.25	50	90.61
G	PMA Charges	**5.88**		1.36		2.26		2.26		**5.88**
	GRAND TOTAL	**696.81**		**161.80**		**267.48**		**267.54**		**696.81**

Auxiliary Components: -

DETAILS OF BREAK-UP OF TOTAL CONTRACTUAL VALUE OF INDIVIDUAL OFFER										
COST SHEET OF AUXILIARY COMPONENT ;S OF THE CONSUMER METERS										
Sr. No.	Description	Unit	Qty	Basic Rate Material	Basic Rate Labour	Gross Rate with GST	Item wise Total Cost in Rs.Cr	FY 2023-24	FY 2024-25	FY 2025-26
A	B	C	D	E	F	G =1.18*(E+F)	H =D*G			
1.01	Refurbishment of Meter Boards (1050 x 1050 X 19 mm i.e. 42"x 42") with facility to install 15 Nos. of Single Phase Meter, Wire and 63 Amps MCB.	Nos.	19190	8093.33	4034.36	14310.66	27.46			
2	Refurbishment of Meter Boards (1050 x 700 X 19 mm i.e. 42"x 28") with facility to install 4 Nos. of Three Phase Meter, Wire and 100 Amps MCB.	Nos.	26168	8749.32	3128.03	14015.28	36.68			
3	Refurbishment of 10 Way wooden Circuit Boxes for Flutment supply with facility to install 10 Nos. of Single Phase Meter, Wire and 40 Amps MCB.	Nos.	3140	15676.67	2386.80	21314.89	6.69			
4	Refurbishment of water Tight Aluminium Meter Box with Cover Type along with supply of and remaking of the cable gland.	Nos.	26168	2836.33	795.60	4285.68	11.22			
					Contractual Value		82.05	24.61	28.72	28.72
	PMA Charges						3.42	1.02	1.2	1.2
	Grand Total in Rs Cr						85.47	25.63	29.92	29.92

ADMS

SR. NO.	PARTICULARS	Gross Total with GST (in Rs Cr.)	FY 2023-24	FY 2024-25	FY 2025-26
1	SCADA/DMS Control Center : C1 - Servers / Workstation Hardware , Storage & Backup Devices, Switches, Data Centre Router, Security system (DMZ), Software for Control Centre (For Main & Standby Server) & Mandatory Spares	11.573			
2	SCADA/DI IS DR Control Centre D1 - Server/ workstation Hardware, Storage & Backup Devices, Switches, Routers,	10.724			
3	RTUs, Software for LDMS, Test Equipments for RTU & Mandatory Additional Spares	11.303			
4	FRTUs, Test Equipments for FRTU & Mandatory Additional Spares	11.024			
5	MPLS, GPRS & Mandatory Additional Spares	10.478			
6	Main Equipments - Control centre, Main Equipments - DR Centre, For RTU/Data Concentrator/Communication Eqpts. FRTU, Remote VDU location & Mandatory Additional Spares.	4.289			
7	FPI, Control/power/Communication cable for RSS and DSS and mandatory Additional Spares	25.948			
8	IED Replacement & Mandatory Additional Spares	20.747			
9	Comprehensive Facility Management System	45.704			
10	Project Management Cost (Inclusive of GST)	30.358			
	Total	**182.15**	**87.37**	**53.65**	**41.13**
	PMA Charges	**1.89**	**0.9**	**0.56**	**0.43**
	Total In Rs Cr	**184.04**	**88.27**	**54.21**	**41.56**

ERP IT/OT

ERP, BILLING SOFTWARE AND IT/OT ENABLEMENT										
									Cost in Rs.Cr	
SR. NO.	PARTICULARS	UNIT	QTY	TOTAL COST	FY 2023-24		FY 2024-25		FY 2025-26	
					QTY	Cost	QTY	Cost	QTY	Cost
1	Part IT System Implementation Phase Cost	No.	1	162.05	-	31.02600213	-	131.02	-	
2	IT System - ATS Cost (For 2 Years)	No.	1	26.46	-		-	13.23	-	13.23
3	Cloud Service Provider (CSP) Cost (For 2 Years)	No.	1	8.15	-		-	4.07	-	4.07
4	FMS services Cost (for 2 years)	No.	1	28.12	-		-	14.06	-	14.06
5	Operations & Maintenance (O&M) Services Cost (For 2 Years)	No.	1	11.16	-		-	5.58	-	5.58
	TOTAL			235.93		31.03		167.97		36.94
7	PMA Charges			1.00		0.13		0.71		0.16
	GRAND TOTAL in Rs Cr		-	236.93		31.16		168.68		37.10

Consolidated DPR

Sr No	Particulars	Total Capex in Rs Cr	FY 2023-24	FY 2024-25	FY 2025-26
1	RSS	504.91	122.19	215.34	167.37
2	DSS	690.93	160.44	265.22	265.28
3	Auxiliary Components	82.05	24.61	28.72	28.72
4	ADMS	182.15	87.37	53.65	41.13
5	ERP	235.93	31.03	167.96	36.94
6	PMA	15.24	4.09	6.05	5.1
	Total in Rs Cr	**1711.21**	**429.73**	**736.94**	**544.54**



4th. QTR Capex & Capitalisation for F.Y. 2023-24

Sr.No.	Project Code	MERC Approval No.	MERC Approval Date	MERC Approved Cost	Cumulative Expenditure Incurred till beginning of the Year	Capital Expenditure Capitalised	Opening CWIP FY 23-24	Investment during the year up to Mar.24	Capital Work in Progress				Closing CWIP
									Works Capitalised upto Mar-24	Interest Capitalised	Expenses Capitalised	Total Capitalisation	
	FY 2023-24												
	a) DPR Schemes												
	(i) In-principle approved by MERC												
	New RSS												
1	BEST/ FY16/01	MERC/CAPEX/FY2016-17 00770 dtd.	28.09.2016	82.23	22.98	16.80	6.18	0.85	0.83			0.83	0.02
2	BEST/ FY21/01	MERC/CAPEX/FY2020-21/	16.07.2020	27.40	0.09	0.09	0.00	-0.09	-0.09			-0.09	0.00
	Augmentation/Replacement at Existing RSS												
3	BEST/ FY16/02	MERC/TECH_V/CAP/DPR/20122013/02688	22.02.2013	36.63	**14.20**	**14.20**	0.00	0.00	0.00			0.00	0.00
4	BEST/ FY17/02	MERC/CAPEX/2017-18/4706	16.11.2017	64.09	**34.16**	**34.16**	0.00	5.37	5.37			5.37	0.00
5	BEST/ FY18/02	MERC/CAPEX/2017-18/4706	16.11.2017	58.86	**7.29**	**7.29**	0.00	1.96	1.96			1.96	0.00
6	BEST/FY 18/02A	MERC/CAPEX/2019-20/135	10.05.2019	15.58	**15.48**	**15.48**	0.00	0.00	0.00			0.00	0.00
7	BEST/ FY20/02	MERC/CAPEX/2020-21/553	15.12.2021	40.60	**27.80**	**27.80**	0.00	2.38	2.38			2.38	0.00
	IPDS/BEST/ FY15-16/01	MERC/CAPEX/2019-20/418 (L & T PART)	26.07.2019	92.40	**88.21**	**88.21**	0.00	0.00	0.00			0.00	0.00
	IPDS/BEST/ FY15-16/01	BEST PART	26.07.2019	25.69	**14.14**	**14.14**	0.00	0.00	0.00			0.00	0.00
9	BEST/ FY21/02	MERC/CAPEX/2022-23/0556	14.11.2022	56.07	**27.35**	**27.35**	0.00	0.01	0.01			0.01	0.00
	New DSS & Aug. & Alt. to exist. DSS												
	Extension of Distribution Network												
10	BEST/ FY21/03	MERC/CAPEX/2020-21/552	15.12.2021	150.00	**74.88**	**74.88**	0.00	38.18	38.18			38.18	0.00
11	BEST/ FY21/04	MERC/CAPEX/2020-21	22.06.20	246.20	**158.53**	**158.53**	0.00	48.05	48.05			48.05	0.00
	SCADA,BPA & Distribution Automation												
12	BEST/ FY18/08A	MERC/CAPEX/2017-18/4759	22.11.17	13.12	0.00	0.00	0.00	0.00	0.00			0.00	0.00
13	BEST/ FY18/08B	MERC/CAPEX/2017-18/4886	13.12.2017	9.22	0.45	0.45	0.00	0.00	0.00			0.00	0.00
	Energy Meter												
14	BEST/FY19/06	MERC/CAPEX/2019-20/1110	28.11.2019	30.19	**29.26**	**29.26**	0.00	0.00	0.00			0.00	0.00
15	IPDS/BEST/ FY2015-16/01	MERC/CAPEX/2019-20/116	18.04.2019	12.94	12.90	12.90	0.00	0.00	0.00			0.00	0.00
16	BEST/ FY23/06		DPR NOT Approved	0	**0.00**	**0.00**	0.00	0.00	0.00			0.00	0.00
17	RDSS/BEST/ FY2023-24/01 (R)	MERC/CAPEX/2023-24/0023 DTD. 09.01.2024	RSS Part	504.91	0.00	0.00	0.00	12.99	12.99			12.99	0.00
			DSS Part	690.93	0.00	0.00	0.00	0.00	0.00			0.00	0.00
			ADMS	182.15	0.00	0.00	0.00	0.00	0.00			0.00	0.00
			Aux. Equipments	82.05	0.00	0.00	0.00	0.01	0.01			0.01	0.00
			ERP	235.93	0.00	0.00	0.00	0.00	0.00			0.00	0.00
			PMA	15.24	0.00	0.00	0.00	0.00	0.00			0.00	0.00
	b) Non-DPR Schemes												
17	Revamping of RSS & other schemes (Non-DPR)	-	-		**14.07**	**12.11**	1.96	2.59	2.10			2.10	0.49
18	BPA		-		**0.03**	**0.03**	0.00	0.00	0.00			0.00	0.00
19	Street Lighting (lamps & Cables)	-	-		**6.69**	**6.69**	0.00	3.51	3.51			3.51	0.00
20	Furniture, Office Eq., Tools, Civil Engg. Works, Motor Vehicle etc.	-	-		**2.01**	**2.01**	0.00	0.26	0.26			0.26	0.00
21	GFA				**18.90**	**18.90**	0.00	13.16	13.16			13.16	0.00
	Total			**2672.43**	**569.42**	**561.28**	**8.14**	**129.23**	**128.72**	**0.00**	**0.00**	**128.72**	**0.51**
								137.37				**137.37**	

Annexure-B

F.Y.	2020-21	2021-22	2022-23	2023-24	2024-25
sale in Mus	4643.66	4683.78	4537.98	4772.81	5023.20
RoE projected	129.45	130.37	139.11	143.82	148.72
RoE/ unit	0.279	0.278	0.307	0.301	0.296

Particulars	Unit	Value	Value	Value	Value	Value
Total capacity added by additional Tr.	MVA	**16.00**	0.00	0.00	0.00	**32.00**
Average Power Factor		0.9900	0.9900	0.9900	0.9900	0.9900
Current RSS Load factor		62.05%	62.56%	60.04%	59.64%	58.01%
RoE/ unit	Rs.	0.279	0.278	0.307	0.301	0.296

Calculation of loading rates

loading trend	1st year	2nd year	3rd year	4th year	5th year
loading percentages	20.00%	30.00%	40.00%	50.00%	58.01%

Revenue due to additional sales

Particulars	F.Y. 2020-21	F.Y. 2021-22	F.Y. 2022-23	F.Y. 2023-24	F.Y. 2024-25
Cumulative capacity commissioned (MVA)	**16.00**	**16.00**	**16.00**	**16.00**	**48.00**
Incremental loading	20.00%	30.00%	40.00%	50.00%	58.01%
Distribution losses	3.82%	4.63%	4.18%	4.12%	4.18%
System power factor	0.9900	0.9900	0.9900	0.9900	0.9900
Additional sales (MU)	26.69	39.70	53.18	66.52	130.31
RoE per Unit (Rs/ unit)	0.279	0.278	0.307	0.301	0.296
Total adduitional revenue (Rs. Crore)	0.74	1.11	1.63	2.00	3.86

Capitalisation schedule

Particulars	TOTAL	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Capital Expenditure for the scheme (Rs. Cro	27.40	5.97	7.46	5.71	5.26	3.00
Amount proposed to be capitalized	27.40	5.97	7.46	5.71	5.26	3.00

Before the
MAHARASHTRA ELECTRICITY REGULATORY COMMISSION
World Trade Centre, Centre No.1, 13th Floor, Cuffe Parade, Mumbai – 400 005
Tel. No. 022- 22163964/ 65/ 69 Fax No. 022 - 22163976
Email: mercindia@merc.gov.in
Website: www.merc.gov.in

CASE No. 212 of 2022

In the matter of

Petition of Brihanmumbai Electric Supply and Transport Undertaking (BEST) for Truing-up of Aggregate Revenue Requirement (ARR) for FY 2019-20, FY 2020-21 and FY 2021-22, Provisional Truing-up of ARR FY 2022-23 and revised ARR & Tariff for FY 2023-24 and FY 2024-25

Coram
Sanjay Kumar, Chairperson
I. M. Bohari, Member
Mukesh Khullar, Member

Date: 31 March, 2023

ORDER

In accordance with Regulation 5 of the Maharashtra Electricity Regulatory Commission (Multi-Year Tariff) Regulations, 2019 ('**MYT Regulations, 2019**'), Brihanmumbai Electric Supply and Transport Undertaking (BEST) has filed its Mid Term Review Petition for Truing-up of Aggregate Revenue Requirement (ARR) for FY 2019-20, 2020-21 and FY 2021-22, Provisional Truing-up of ARR for FY 2022-23 and revised ARR & Tariff for FY 2023-24 and FY 2024-25. The original Petition was filed on 30 November, 2019 and the revised Petition after incorporating the replies to the data gaps was filed on 17 January, 2023.

The Petition has been filed in accordance with MERC (Multi Year Tariff) Regulations, 2015 ("**MYT Regulations, 2015**"), for Truing-up of ARR for FY 2019-20 and in accordance with MYT Regulations, 2019, for Truing-up of ARR of FY 2020-21 and FY 2021-22, Provisional Truing-up of ARR for FY 2022-23 and revised ARR and Tariff for FY 2023-24 and FY 2024-25.

The Commission, in exercise of the powers vested in it under Sections 61 and 62 of the Electricity Act (**EA**), 2003 and all other powers enabling it in this behalf, and after taking into consideration the submissions made by BEST and suggestions/objections received during the public consultation process, and all other relevant material, has approved the Truing-up of ARR for FY 2019-20, FY 2020-21 and FY 2021-22, Provisional Truing-up of ARR for FY 2022-23 and revised ARR and Tariff for FY 2023-24 and FY 2024-25 in this Order.

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Consumer Category & Consumption Slab	FY 2023-24			FY 2024-25		
	MYT Order	MTR Petition	Approved in this Order	MYT Order	MTR Petition	Approved in this Order
LT - II (b) Commercial - >20 & <=50 kW	210.69	172.24	179.30	210.39	173.74	188.26
LT - II (c) Commercial - >50	369.24	358.23	365.40	368.70	358.23	372.71
LT - III (A) Industry (upto 20 kW)	43.14	105.74	112.08	43.08	105.74	118.81
LT-III (b) Industrial	90.12	79.81	83.80	89.99	79.81	87.99
LT - IV (A) Public Services - (Govt. Hosp. & Edu. Institutions)	57.03	61.40	61.40	57.45	61.40	61.40
LT - IV (B) Public Services - Others	183.68	178.82	187.76	183.43	178.82	197.15
LT-V (A) Agriculture-Pumpsets	-	-	-	-	-	-
LT-V (B) Agriculture- Others	-	0.05	0.05	-	0.05	0.05
LT VI Vehicle Charging	0.58	22.72	20.90	0.72	28.40	24.03
Sub-total	**4,052.71**	**3,944.89**	**4,086.73**	**4,084.90**	**3,988.10**	**4.283.37**
Total	**4,771.37**	**4,592.22**	**4,786.55**	**4,816.71**	**4,635.43**	**5,038.14**

*-HT Sales in kVAH and LT in kWH

6.2.12 The Commission approves Energy Sales of 4,786.55 MU for FY 2023-24 and 5,038.14 MU for FY 2024-25 respectively.

6.3 Distribution Losses and Energy Balance

BEST's Submission

6.3.1 BEST submitted that it has been taking various initiatives such as continuous vigilance activities, raids, consumer awareness on theft and energy conservation, legal actions against theft incidences and faulty meter replacements. Through these initiatives BEST has been able to consistently maintain its distribution losses in the range of 4 % to 5% which are almost near to the technical minimum of the network. The present distribution losses are one of the lowest in the country. It is appreciable that reducing losses at higher loss levels are far easier than reducing losses at efficient levels. BEST's distribution losses are at most efficient levels and BEST has proposed to reduce it.

6.3.2 BEST has achieved a distribution loss of 4.63% for the FY 2021-22. BEST

has projected reduction in distribution loss for the remaining years of the control period by 0.1% each year vis-à-vis 4.63% achieved by BEST for FY 2021-22.

6.3.3 BEST submitted that the Intra-State Transmission (InSTS) loss of 3.18% has been considered while estimating the energy balance for FY 2023-24 & FY 2024-25 as approved by the Commission in MYT order.

6.3.4 Based on the target distribution loss proposed by BEST and Transmission loss of 3.18%, BEST has estimated the revised energy requirement for FY 2023-24 and FY 2024-25 is given in the table below:

Table 227 : Revised Energy Balance for the FY 2023-24 and FY 2024-25, as submitted by BEST

Particulars	Unit	FY 2023-24		FY 2024-25	
		MYT Order	Revised Projections	MYT Order	Revised Projections
Energy sales to consumers	MU's	4,771.37	4,579.60	4,816.71	4,622.81
Distribution Losses	MU's	208.14	212.28	210.12	209.23
Distribution Losses	%	4.18%	4.43%	4.18%	4.33%
Energy Input at Distribution Periphery	MU's	4,979.44	4,791.88	5,026.75	4,832.04
Intra State Transmission Losses	MU's	163.55	157.39	165.10	158.71
Intra State Transmission Losses	%	3.18%	3.18%	3.18%	3.18%
Total Power Purchase at G<>T Periphery	MU's	5,142.99	4,949.26	5,191.85	4,990.74

Commission's Analysis and Ruling

6.3.5 BEST has projected reduction in distribution loss for the remaining years of the control period by 0.1% each year vis-à-vis 4.63% achieved by BEST for FY 2021-22 and accordingly projected Distribution Loss of 4.43% and 4.33% for FY 2023-24 and FY 2024-25 respectively.

6.3.6 Though the Distribution Loss are slightly higher in FY 2021-22, BEST has achieved lower losses in FY 2020-21 then 4.18% approved by the Commission.

6.3.7 The Commission is of the view that there is scope for reduction of Distribution loss considering the replacement of electromechanical Meters and many such other measures. The Commission has approved capital expenditure schemes for replacement of such meters, development of substations, revamping of existing receiving substations, extension and improvement of distribution network, etc. the benefit of which would accrue to consumers. The Commission directs BEST to continue its efforts in bringing down the Distribution losses to the lowest possible levels and ensure that performance does not deteriorate beyond the levels already achieved in the past.

6.3.8 In MYT Order, the Commission has approved Distribution loss target of 4.18% for FY 2023-24 and FY 2024-25. The Commission while approving the Distribution Loss for FY 2022-23 in this Order has already held that to maintain consistency in its approach, the Commission has decided not to restate the loss trajectory as approved in the MYT Order.

6.3.9 In view of the above, the Commission for the purpose of the present approvals has retained the Distribution loss target at 4.18% for FY 2023-24 and FY 2024-25 as given in the Table below:

Table 228: Distribution Loss Trajectory for FY 2023-24 and FY 2024-25, as approved by the Commission (MU)

Particulars	FY 2023-24			FY 2024-25		
	MYT Order	MTR Petition	Approved in this Order	MYT Order	MTR Petition	Approved in this Order
Distribution loss (%)	4.18%	4.43%	4.18%	4.18%	4.33%	4.18%

6.3.10 For the computation of Energy Balance, the Commission has considered the InSTS Loss of 3.18%, as approved in the InSTS order in Case No. 284 of 2022 vide dated 31 March, 2023. Accordingly, it has computed the Energy Balance for FY 2023-24 and FY 2024-25 as shown in the Table below:

Table 229: Distribution Loss Trajectory for FY 2023-24 and FY 2024-25, as approved by the Commission (MU)

Particulars	FY 2023-24			FY 2024-25		
	MYT Order	MTR Petition	Approved in this Order	MYT Order	MTR Petition	Approved in this Order
Sales (MU)	4,771.37	4,579.60	4,772.81	4,816.71	4,622.81	5,023.20
Distribution loss (%)	4.18%	4.43%	4.18%	4.18%	4.33%	4.18%
Energy Requirement at T-D interface (MU)	4,979.52	4,791.88	4,981.02	5,026.83	4,832.04	5,242.33
Intra-state Transmission loss (%)	3.18%	3.18%	3.18%	3.18%	3.18%	3.18%
Energy Requirement at G-T interface (MU)	**5,143.07**	**4,949.26**	**5,144.61**	**5,191.94**	**4,990.74**	**5,414.52**

6.3.11 Accordingly, the Commission approves energy requirement at G<>T interface of 5,144.61 MU for FY 2023-24 and 5,414.52 MU for FY 2024-25, respectively.

6.4 Power Purchase Expenses

BEST's Submission

6.4.1 BEST has estimated energy requirement for FY 2023-24 and FY 2024-25.

Commission for FY 2023-24 and FY 2024-25 is shown in the Table below:

Table 270: Provision for Bad and Doubtful Debts for FY 2023-24 and FY 2024-25, as approved by the Commission (Rs. Crore)

Particulars	MYT Order	MTR Petition	Approved in this Order	Wire Business	Supply Business
FY 2023-24					
Provision for Doubtful debts	6.74	9.18	7.97	0.80	7.18
FY 2024-25					
Provision for Doubtful debts	6.74	7.58	7.97	0.80	7.18

6.14.4 The Commission approves the Provision for Bad and Doubtful Debts of Rs. 7.97 Crore for FY 2023-24 and FY 2024-25 respectively.

6.15 Return on Equity

BEST's Submission

6.15.1 BEST has calculated Return on equity as per Regulations 29 of MYT Regulations, 2019. For the purpose of arriving at the Regulatory Equity at the beginning of the year, BEST has considered the closing equity of previous year. As impact of replacement/retirement of assets, BEST has reduced the Equity to the extent of 30% of the GFA of the assets that have been projected to be retired during the year as per Regulation 27 of MYT Regulations, 2019. The details are as presented in the table below:

Table 271 : Revised Return on Equity for Wires Business for FY 2023-24 and FY 2024-25, as submitted by BEST (Rs. Crore)

Particulars	FY 2023-24		FY 2024-25	
	MYT Order	MTR Petition	MYT Order	MTR Petition
Regulatory Equity at the beginning of the year	836.77	895.35	841.80	1,051.38
Capitalisation during the year	-	579.23	-	525.94
Equity portion of capitalisation during the year	15.71	173.77	15.68	157.78
Reduction in Equity Capital on account of retirement / replacement of assets	10.67	17.73	10.67	17.73
Regulatory Equity at the end of the year	841.81	1,051.38	846.81	1,191.43
Return on Equity Computation				
Base Rate of Return on Equity	14.00%	14.00%	14.00%	14.00%
Pretax Return on Equity after considering effective Tax rate	-	-	-	-
Return on Regulatory Equity at the beginning of the year	117.15	125.35	117.85	147.19
Return on Regulatory Equity addition during the year	0.35	10.92	0.35	9.80
Total Return on Equity	**117.50**	**136.27**	**118.20**	**157.00**

Table 272 : Revised Return on Equity for Supply Business for FY 2023-24 and FY 2024-25, as submitted by BEST (Rs. Crore)

Particulars	FY 2023-24		FY 2024-25	
	MYT Order	MTR Petition	MYT Order	MTR Petition
Regulatory Equity at the beginning of the year	92.97	99.48	93.53	116.82
Capitalisation during the year	-	64.36	-	58.44
Equity portion of capitalisation during the year	1.75	19.31	1.74	17.53
Reduction in Equity Capital on account of retirement / replacement of assets	1.19	1.97	1.19	1.97
Regulatory Equity at the end of the year	93.53	116.82	94.09	132.38
Return on Equity Computation				
Base Rate of Return on Equity	15.50%	15.50%	15.50%	15.50%
Pre-tax Return on Equity after considering effective Tax rate	-	-	-	-
Return on Regulatory Equity at the beginning of the year	14.41	15.42	14.50	18.11
Return on Regulatory Equity addition during the year	0.04	1.34	0.04	1.21
Total Return on Equity	**14.45**	**16.76**	**14.54**	**19.31**

6.15.2 BEST has requested the Commission to approve the projected Return on Equity as submitted by BEST. Any variation in above expenses will be claimed on actual basis at the time of Truing-up.

Commission's Analysis and Ruling

6.15.3 In absence of non-applicability of Income Tax as BEST being Local Authority, the Commission has computed RoE at 14% and 15.5% of the equity for Wires Business and Supply Businesses, respectively, in accordance with the MYT Regulations, 2019

6.15.4 The Commission has computed RoE in accordance with Regulation 29 of the MYT Regulations, 2019, based on opening equity, addition of equity as per approved capitalisation and weighted average rate of RoE based on allocation of assets to the wires and supply business.

6.15.5 To determine the equity eligible for return as per the Regulations, the Commission has considered the closing equity for FY 2022-23 approved in this Order on provisional Truing-up, as the opening equity for FY 2023-24. The addition in equity has been considered equal to the equity component of asset addition during the year. The impact of the replacement of assets is considered by reducing the equity to the extent of 30 % of the GFA of the assets that have been retired during the year.

6.15.6 The RoE approved by the Commission for FY 2023-24 and FY 2024-25 is

shown in Table below:

Table 273: Return on Equity for FY 2023-24 and FY 2024-25, as approved by the Commission (Rs. Crore)

Particulars	FY 2023-24				FY 2024-25			
	MTR Petition	Approved in this Order	Wire Business	Supply Business	MTR Petition	Approved in this Order	Wire Business	Supply Business
Regulatory Equity at the beginning of the year	994.83	997.77	898.00	99.78	1,168.21	1,034.99	931.50	103.50
Equity portion of capitalisation during the year	193.08	43.13	38.82	4.31	175.31	37.95	34.16	3.80
Reduction in Equity Capital on account of retirement / replacement of assets	19.70	5.91	5.32	0.59	19.70	5.91	5.32	0.59
Regulatory Equity at the end of the year	**1,168.21**	**1,034.99**	**931.50**	**103.50**	**1,323.82**	**1,067.04**	**960.33**	**106.70**
Return on Regulatory Equity at the beginning of the year	140.77	141.18	125.72	15.47	165.30	146.45	130.41	16.04
Return on Regulatory Equity addition during the year	12.27	2.63	2.35	0.29	11.01	2.27	2.02	0.25
Total Return on Equity	**153.03**	**143.82**	**128.06**	**15.75**	**176.31**	**148.72**	**132.43**	**16.29**

6.15.7 The Commission approves the Return on Equity of Rs. 143.82 Crore for FY 2023-24 and Rs. 148.72 Crore for FY 2024-25, respectively.

6.16 Return as Interest on Internal Funds

BEST's Submission

6.16.1 BEST has submitted the Interest on internal funds as under:

Table 274 : Revised Return on Internal Funds for FY 2023-24 and FY 2024-25, as submitted by BEST (Rs. Crore)

Particulars	FY 2023-24		FY 2024-25	
	MYT Order	MTR Petition	MYT Order	MTR Petition
Return on Internal Fund	5.28	5.28	5.28	5.28

6.16.2 BEST requested the Commission to approve the Return as Interest on Internal funds as submitted by BEST.

Commission's Analysis and Ruling

6.16.3 The Appellate Tribunal of Electricity, in its Judgment dated 27 August, 2007 in Appeal No. 13 of 2007 had directed the Commission to take into

Sr. No.	DESCRIPTION	Unit	2019-20	2020-21	2021-22	2022-23	2023-24
I.	**Energy Purchase Details**						
1	Units Purchased at T&D	in MUs	4790.60	3926.96	4266.59	4678.68	4944.06
2	Cost of Energy	Rs. in Crores	2445.19	2317.29	2803.51	3774.99	3166.41
3	F.A. Paid to Tatas	Rs. in Crores	99.75	100.75	100.75	101.75	102.75
3	Average Cost Per Unit Purchased at T&D	in Paise / Unit	510.41	590.10	657.09	806.85	640.45
II.	**Energy Sale Details**						
1	Units Sold	in MUs	4569.34	3776.84	4068.97	4483.32	4740.15
2	Income from Sale of Energy	Rs. in Crores	3466.68	2792.74	2995.19	3527.52	4188.89
3	Average Selling Rate Per Unit Sold	in Paise / Unit	758.68	739.44	736.11	786.81	883.70
III.	**Surplus**						
1	Revenue Surplus	Rs. in Crores	1021.49	475.46	191.68	-247.48	1022.48
2	Revenue Surplus Per unit Purchased	in Paise / Unit	213.23	121.07	44.93	-52.90	206.81
3	Electricity Duty Collected for Govt. of Maharashtra	Rs. in Crores	563.27	444.76	467.82		
IV.	**Average Distribution Loss**	**%**	4.62	3.82	4.63	4.18	4.12
V.	Stystem Load Factor	%	58.97	62.05	62.56	60.04	59.64
	Co-incident Maximum Demand	in MVA	936.81	729.80	786.38	898.54	955.96
	Receiving Sub-stations						
	No. of Receiving Sub-stations		64	64	64	65	65
	No. of Power Transformers		152	153	153	155	155
	Capacity of Power Transformers	in MVA	2255	2283	2289	2321	2327
	Distribution Sub-stations						
	No. of Distribution Sub-stations		2428	2451	2477	2507	2538
	No. of Distribution Transformers		3264	3298	3334	3430	3470
	Capacity of Distribution Transformers	in MVA	2645	2682	2717	2842	2892

F.Y.	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
sale in Mus	4569.34	3776.84	4068.97	4483.32	4772.81	5038.14
RoE projected	140.93	129.45	130.37	139.11	143.82	148.72
RoE/ unit	0.308	0.343	0.320	0.310	0.301	0.295

Calculation of loading rates

loading trend	1st year	2nd year	3rd year	4th year	5th year
loading percentages	20.00%	30.00%	40.00%	50.00%	58.01%

Revenue due to additional sales

Particulars	F.Y. 2019-20	F.Y. 2020-21	F.Y. 2021-22	F.Y. 2022-23	F.Y. 2023-24	F.Y. 2024-25
Cumulative capacity commissioned (MVA)	**0.00**	**16.00**	**32.00**	**32.00**	**32.00**	**32.00**
Incremental loading	0.00%	20.00%	30.00%	40.00%	50.00%	58.01%
Distribution losses	4.62%	3.82%	4.63%	4.18%	4.18%	4.18%
System power factor	0.9900	0.9900	0.9900	0.9900	0.9900	0.9900
Additional sales (MU)	0.00	26.69	92.63	132.96	172.85	183.50
RoE per Unit (Rs/ unit)	0.308	0.343	0.320	0.310	0.301	0.295
Total adduitional revenue (Rs. Crore)	0.00	0.91	2.97	4.13	5.21	5.42

Capitalisation schedule

Particulars	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	Total
Capital Expenditure for the scheme (Rs. Cr)	15.78	8.75	8.52	2.32	1.61	3.62	**40.60**
Amount proposed to be capitalized	15.78	8.75	8.52	2.32	1.61	3.62	**40.60**

Table 307: Proposed Tariff for FY 2023-24 and FY 2024-25, as submitted by BEST

Category	Components of tariff FY 2023-24					Components of tariff FY 2024-25				
	Fixed Charges	Demand Charges	Energy Charges	Wheeling Charges	Average Billing Rate	Fixed Charges	Demand Charges	Energy Charges	Wheeling Charges	Average Billing Rate
	Rs./Month	Rs./KVA/ month	Rs./kVAh or Rs.kWh			Rs./Month	Rs./KVA/ month	Rs./kVAh or Rs.kWh		
HT Category										
HT - I Industry	-	470.00	6.12	0.84	8.69	-	480.00	6.19	0.92	8.88
HT - II Commercial	-	470.00	6.08	0.84	10.09	-	480.00	6.14	0.92	10.33
HT - III Group Housing	-	470.00	6.33	0.84	8.73	-	480.00	6.40	0.92	8.94
HT - IV (A) Railways	-	470.00	5.70	0.84	12.97	-	480.00	5.76	0.92	13.38
HT - V (A) Public services (Govt. Hospital & Educational Institutions)	-	470.00	5.82	0.84	8.48	-	480.00	5.93	0.92	8.71
HT - V (B) Public services (Others)	-	470.00	6.39	0.84	9.41	-	480.00	6.45	0.92	9.62
HT - VI Electrical Vehicle	-	70.00	4.99	0.84	-	-	70.00	4.99	0.92	-
LT Category										
LT - I (A) Residential (BPL)	11.00	-	1.22	2.26	3.70	12.00	-	1.23	2.48	3.95
LT - I (B) Residential										
0-100	110.00	-	1.90	2.26	4.73	120.00	-	1.92	2.48	5.02
101-300	160.00	-	4.77	2.26	7.99	170.00	-	4.81	2.48	8.30
301-500	160.00	-	7.83	2.26	10.51	170.00	-	7.88	2.48	10.81
501<	200.00	-	9.53	2.26	11.97	210.00	-	9.60	2.48	12.27
LT - II (a) Commercial	560.00	-	5.25	2.26	9.56	580.00	-	5.29	2.48	9.88
LT - II (b) Commercial >20 & <=50 kW	-	470.00	5.01	2.26	14.34	-	480.00	5.03	2.48	15.08
LT - II (c) Commercial >50	-	470.00	5.36	2.26	14.51	-	480.00	5.38	2.48	15.16
LT - III (A) Industry (upto 20 kW)	560.00	-	4.78	2.26	7.57	580.00	-	4.83	2.48	7.87
LT-III (b) Industrial	-	470.00	5.07	2.26	11.82	-	480.00	5.12	2.48	12.39
LT - IV (A) Public Services - Govt. Hosp. & Edu. Institutions)	560.00	-	5.47	2.26	7.80	580.00	-	5.58	2.48	8.13
LT - IV (B) Public Services - Others	560.00	-	5.47	2.26	8.00	580.00	-	5.53	2.48	8.28
LT-V (A) Agriculture- Pumpsets	-	50.00	2.34	2.26	-	-	60.00	2.37	2.48	-
LT-V (B) Agriculture- Others	-	120.00	3.76	2.26	6.05	-	130.00	3.80	2.48	6.28
LT VI Vehicle Charging	-	70.00	4.03	2.26	6.29	-	80.00	4.03	2.48	6.51

2. Revamping of existing Distribution Substations- Installation of Additional Distribution transformers (DTs) and replacement of transformers with higher capacity, replacement of ONAN type DTs with Dry Type DTs and replacement of age old DTS at existing DSS (25 nos.) :-

The augmentation of DSS has been undertaken based on clearances and permits issued by Municipal Corporation of Greater Mumbai (MCGM) and availability of sufficient space in existing DSS for installation of such equipments. The capacities of DSS are planned to be augmented either by installation of additional DTs or remodelling of DSS or by replacing the DTs with higher capacity DTs. Based on the requisitions received, BEST has proposed to add 49.21 MVA to 55.76 MVA capacities during the FY 2020-21 to FY2024-25 respectively.

Table no 12 : Capacity addition by new DSS and augmenting the existing DSS

Sr. No.	Rating kVA	FY 2020-21 No. of Tr. added				FY 2021-22 No. of Tr. added				FY 2022-23 No. of Tr. added				FY 2023-24 No. of Tr. added				FY 2024-25 No. of Tr. added			
		New DSS	Add. DT.	Higher cap.	MVA added	New DSS	Add .DT.	Higher cap.	MVA added	New DSS	Add .DT.	Higher cap.	MVA added	New DSS	Add .DT.	Higher cap.	MVA added	New DSS	Add .DT.	Higher cap.	MVA added
1	630	21	2	1	14.72	22	2	1	15.35	22	2	1	15.350	22	2	1	15.35	23	2	1	15.98
2	995	12	2	19	20.865	12	2	20	21.23	13	2	20	22.225	13	2	21	22.59	14	2	22	23.95
3	1600	7	0	4	13.62	7	0	4	13.62	7	0	5	14.225	8	0	5	15.825	8	0	5	15.825
MVA Add		36.37	3.25	9.59		37.00	3.25	9.95		38.00	3.25	10.56		39.60	3.25	10.92		41.22	3.25	11.29	
Total DT No.		40	4	24		41	4	25		42	4	26		43	4	27		45	4	28	
MVA Add		**49.205**				**50.20**				**51.800**				**53.765**				**55.755**			

Annexure-C

NEWLY COMMISSIONED DSS DURING FY 2023-24 (Table-A)

SR. No.	NAME OF THE DSS	No. of X'ers	Capacity	MVA Added	Month of Installation
1	SKY FOREST DSS	2	1600	3.2	Apr-23
2	MINERVA TOWER DSS	1	630	0.63	Apr-23
		1	1600	1.6	Apr-23
3	PARIJAT DSS	1	630	0.63	Apr-23
4	ARANYA 'C' TOWER DSS	1	1600	1.6	May-23
5	LODHA COMMERCIAL TOWER NO. 5 HV DSS	0	0	0	May-23
6	EV CHARGING NO. 1 DSS	2	1600	3.2	May-23
7	RENAISSANCE DSS	1	1600	1.6	Jun-23
8	WHISPERING HEIGHT DSS	1	2000	2	Jun-23
9	RIDDHI SIDDHI DSS	1	630	0.63	Jul-23
10	GALA ALTEZZA DSS	1	630	0.63	Aug-23
11	DHOBIGHAT NO. 2 DSS	1	630	0.63	Aug-23
12	DHOBIGHAT NO. 4 DSS	1	995	0.995	Aug-23
13	RAMESHWAR DSS	1	995	0.995	Sep-23
14	ARANYA SOUTH TOWER DSS	1	630	0.63	Nov-23
		1	995	0.995	Nov-23
15	LODHA VISTA DSS	1	995	0.995	Jan-24
16	ANTOP HILL MHADA DSS	1	995	0.995	Jan-24
17	SANGHVI HOSPITAL HV DSS	0	0	0	Feb-24
18	MTHL HV DSS	0	0	0	Feb-24
19	SWA-GRIHA CHSL DSS	2	995	1.99	Mar-24
20	Arab Building DSS	1	630	0.63	Apr-23
21	Shreepati Diamond DSS	1	1600	1.6	May-23
22	Arihant DSS	1	630	0.63	Jun-23
23	Mumbai central EV charging DSS	4	1600	6.4	Jul-23
24	Siddhant DSS.	1	995	0.995	Aug-23
25	Dada maharaj DSS	2	630	1.26	Sep-23
26	ABWA DSS	1	995	0.995	Jan-24
27	Square Construction	1	995	0.995	Feb-24
28	Bushra Heights	1	995	0.995	Feb-24
29	Coastal Road Priyadarshni HV DSS	--	--	0.00	Oct-23
30	Coastal Road Girgaon HV DSS	--	--	0.00	Feb-24
	TOTAL	**34**		**38.445**	**MVA**

REPLACEMENT OF X'ERS (HIGHER CAPACITY) DURING FY 2023-24 (Table-B)

SR. No.	NAME OF THE DSS	New Capacity	Old Capacity	Added Capacity	Month of Installation
1	FOSBERY ROAD DSS	995	630	365	Apr-23
2	ANANT BHAVAN DSS	995	630	365	Jun-23
3	TANTIA INDUSTRIAL ESTATE DSS	**1600**	995	605	Oct-23
		1600	995	605	
4	URBANIA REALTY LLP	995	630	365	Oct-23
5	ARANYA NORTH TOWER	1600	630	970	Nov-23
6	ARIHANT DEVELOPERS	995	630	365	Dec-23
7	PAREL ST STAND DSS	1600	995	605	Jan-24
8	Ashiyana DSS	995	630	365	Apr-23
9	Sindhi Lane DSS	995	630	365	Jun-23
10	Chandan Signature DSS.	995	630	365	Aug-23
11	Mid Colaba	995	400	595	Nov-23
12	Indian National Theater	995	630	365	Nov-23
13	Chatrapati Shivaji Marg (Transformer No 1)	1600	630	970	Dec-23
14	Chatrapati Shivaji Marg (Transformer No 2)	1600	995	605	Dec-23
15	Ekalavya DSS	995	630	365	Jan-24
		19550	**11310**	**8.24**	

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REMODELLING OF DSS DURING FY 2023-24 (Table-C)

SR. No.	NAME OF THE DSS	No. of X'ers	Capacity In kVA	Month of Installation	
1	DHARAVI ROAD DSS	2	1600 (ONAN)	Feb-24	
	COTTON AVENUE DSS	0	0	Feb-24	
2	Wadibunder DSS	1	630 (ONAN)	May-23	
3	Sangeeta DSS	1	630 (ONAN)	Nov-23	
4	Mumbadevi School DSS	1	1600 (ONAN)	Dec-23	

INSTALLATION OF ADDITIONAL X'ERS DURING FY 2023-24 (Table-D)

SR. No.	NAME OF THE DSS	No. of X'ers Installed	Capacity (in KVA)	Added Capacity	Month of Installation
1	BORICHA MARG ANNEX	1	995	1.00	Nov-23
2	BEAU MONDE DSS	1	1600	1.60	Mar-24
3	Rare Villa DSS	1	630	0.63	Nov-23
4	Mid Colaba (Transformer No 2)	1	995	1.00	Dec-23
		4		**4.22**	

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REPLACEMENT OF X'ERS (UNDER FAULT & 25 YEARS ABOVE) DURING FY 2023-24
(Table-E)

SR. No.	NAME OF THE DSS	New Installed X'er (kVA)	Old Replaced X'er (kVA)	Added Capacity	Month
1	ELITE RESIDENCY DSS	630	630	0	Apr-23
2	DHORWADI DSS	995	995	0	Apr-23
3	MOOSA KILLEDAR STREET DSS	630	630	0	Jun-23
4	WORLI INDUSTRIES DSS	995	995	0	Jun-23
5	RAHUL NAGAR DSS	630	630	0	Jun-23
6	PODDAR COLLEGE DSS	995	630	365	Jun-23
7	MEALLABLE IRON DSS	630	630	0	Jul-23
8	MAHALAXMI FLATNO. 1 DSS	995	630	365	Jul-23
9	WORLI DHOBIGHAT DSS	630	630	0	Jul-23
10	WORLI WEST DSS	630	630	0	Jul-23
11	RAOLI CAMP (W) DSS	995	995	0	Jul-23
12	AL RAZA DSS	630	630	0	Aug-23
13	SHAH INDUSTRIAL ESTATE DSS	1600	1600	0	Aug-23
14	S. M. ROAD DSS	995	995	0	Aug-23
15	JUBILEE BLOCK DSS	995	995	0	Sep-23
16	ALTIA NO. 2 DSS	1600	1600	0	Oct-23
17	SEWREE ROAD WEST DSS	630	630	0	Oct-23
18	BYCULLA FIRE BRIGADE DSS	630	630	0	Oct-23
19	CHOWNEY GULLY NORTH DSS	630	630	0	Nov-23
20	WADALA PUMPING DSS	630	630	0	Dec-23
21	Fergusson Annex DSS	630	630	0	May-23
22	Sammet Shikhar DSS	630	630	0	Jul-23
23	Mulji jetha DSS	995	995	0	Jul-23
24	Mumbadevi Static DSS	995	995	0	Jul-23
25	Rajram Mohan Roy DSS.	995	995	0	Nov-23
26	Wadiya Hospital DSS	1600	1600	0	Mar-24
27	Wilson Road	1600	1600	0	Mar-24
28	Imperial Tower South	630	630	0	Mar-24
29	Nabiullah New DSS.	1600	1600	0	Nov-23
30	Nabiullah New DSS.	1600	1600	0	Dec-23
		28370	**27640**	**0.73**	
NET ADDITION 0.6 MVA					

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ANNEXURE-12

PART-A

DEPRECIATION FOR THE YEAR 2015-16

LAND

YEAR	DEP. PROVIDED UPTO	BALANCE YEAR	ASSET USED UPTO THE YEAR	ESTIMATED LIFE OF ASSETS	BAL.YEAR FOR DEP. TO BE PROVIDED	BOOK VALUE AS ON 31.03.2015	IDC	WRITE OFF DURING THE YEAR	ASSET TRANSFER	BALANCE VALUE OF ASSETS	GOVT. GRANT	CABEL CAPITAL CONN. FEES	NET ASSETS VALUE AS ON 31.03.15	RATE OF DEP.	DEP. PROVISION FOR YEAR 2015-16	CUMM.DEP. PROVIDED UPTO 2014-15	CUMM. DEP. PROVIDED UPTO 2015-16	REMARK
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
		(2-1)							(7-8-9-/+10)			(11-12-13)			(14*15)		(16+17)	
	2013	2013	50	50	0	22953418	0	0	0	2.3E+07	0	0	2.3E+07	1.80%	0	0	0	
1947	2013	66	50	50	0	60798	0	0	0	60798	0	0	60798	1.80%	0	0	0	
1948	2013	65	50	50	0	416779	0	0	0	416779	0	0	416779	1.80%	0	0	0	

DEPRECIATION FOR THE YEAR 2022-23 LIFE : 50 YRS RATE OF DEP : 1.80%

BUILDING

FR. 1993-94 LIFE : 45 YRS RATE OF DEP : 2%

YEAR	BOOK VALUE AS ON 01.04.2021	WRITE OFF DURING THE YEAR	BALANCE VALUE OF ASSETS	NET ASSETS VALUE AS ON 31.03.22	RATE OF DEP.	DEP. PROVISION FOR YEAR 2022-23	CUMM.DEP. PROVIDED UPTO 2021-22	CUMM. DEP. PROVIDED UPTO 2022-23	TOTAL % OF DEP PROVIDED UP TO 2022-23
1	7	9	11	14	15	16	17	18	
			(7-8-9-/+10)	(11-12-13)		(14*15)		(16+17)	
1946	3689254	0	3689254	3689254	1.80%	0	3320329	3320329	90
1947	60798	0	60798	60798	1.80%	0	54718	54718	90
1948	416779	0	416779	416779	1.80%	0	375101	375101	90
1949	523698	0	523698	523698	1.80%	0	471328	471328	90
1950	104638	0	104638	104638	1.80%	0	94174	94174	90
1951	64828	0	64828	64828	1.80%	0	58345	58345	90
1952	28438	0	28438	28438	1.80%	0	25594	25594	90
1953	59705	0	59705	59705	1.80%	0	53735	53735	90
1954	86307	0	86307	86307	1.80%	0	77676	77676	90
1955	509635	0	509635	509635	1.80%	0	458672	458672	90
1956	464918	0	464918	464918	1.80%	0	418426	418426	90
1957	596871	0	596871	596871	1.80%	0	537184	537184	90
1958	390151	0	390151	390151	1.80%	0	351136	351136	90
1959	594712	0	594712	594712	1.80%	0	535241	535241	90
1960	582821	0	582821	582821	1.80%	0	524539	524539	90
1961	465046	0	465046	465046	1.80%	0	418541	418541	90
1962	584093	0	584093	584093	1.80%	0	525684	525684	90
1963	548657	0	548657	548657	1.80%	0	493791	493791	90
1964	742423	0	742423	742423	1.80%	0	668181	668181	90
1965	657964	0	657964	657964	1.80%	0	592168	592168	90
1966	878027	0	878027	878027	1.80%	0	790224	790224	90
1967	1354879	0	1354879	1354879	1.80%	0	1219391	1219391	90
1968	1523688	0	1523688	1523688	1.80%	0	1371319	1371319	90
1969	1988858	0	1988858	1988858	1.80%	0	1789972	1789972	90
1970	598128	0	598128	598128	1.80%	0	538315	538315	90
1971	2076824	0	2076824	2076824	1.80%	0	1869142	1869142	90
1972	1883242	0	1883242	1883242	1.80%	0	1694918	1694918	90
1973	548044	0	548044	548044	3.34%	0	493240	493240	90
1974	1762733	0	1762733	1762733	3.34%	0	1586460	1586460	90
1975	3094136	0	3094136	3094136	3.34%	0	2784723	2784723	90
1976	729262	0	729262	729262	3.34%	0	656336	656336	90
1977	1076731	0	1076731	1076731	3.34%	0	969058	969058	90
1978	942140	0	942140	942140	3.34%	0	847926	847926	90
1979	1135276	0	1135276	1135276	3.34%	0	1021748	1021748	90
1980	494826	0	494826	494826	3.34%	0	445343	445343	90
1981	863390	0	863390	863390	3.34%	6907	770144	777051	90
1982	1900520	0	1900520	1900520	3.34%	49413	1661054	1710467	90
1983	2046003	0	2046003	2046003	3.34%	68337	1751379	1819715	89
1984	4549574	0	4549574	4549574	3.34%	151956	3812543	3964499	87
1985	3541022	0	3541022	3541022	3.34%	118270	2903638	3021908	85
1986	11474970	0	11474970	11474970	3.34%	383264	9202926	9586190	84
1987	6254060	0	6254060	6254060	3.34%	208886	4903183	5112069	82
1988	17539190	0	17539190	17539190	3.34%	585809	13435020	14020828	80
1989	39063097	0	39063097	39063097	3.34%	1304707	29219197	30523904	78
1990	23074264	0	23074264	23074264	3.34%	770680	16844213	17614893	76
1991	29057187	0	29057187	29057187	3.34%	970510	20688717	21659227	75
1992	27386962	0	27386962	27386962	3.34%	914725	19006552	19921276	73
1993	44715994	0	44715994	44715994	3.34%	1493514	31927220	33420734	75
1994	54723367	44562	54678805	54678805	3.34%	1826272	37947091	39773363	73
1995	15210779	0	15210779	15210779	3.34%	508040	10252065	10760105	71
1996	17549616	0	17549616	17549616	3.34%	586157	11477449	12063606	69
1997	19737275	0	19737275	19737275	3.34%	659225	12513432	13172657	67
1998	20316674	0	20316674	20316674	3.34%	678577	12474438	13153015	65
1999	17675030	0	17675030	17675030	3.34%	590346	10498968	11089314	63
2000	12342068	0	12342068	12342068	3.34%	412225	7084347	7496572	61
2001	5121950	0	5121950	5121950	3.34%	171073	2837560	3008633	59
2002	3432871	0	3432871	3432871	3.34%	114658	1833153	1947811	57
2003	4107328	0	4107328	4107328	3.34%	137185	2111167	2248351	55
2004	2857785	0	2857785	2857785	3.34%	95450	1411746	1507196	53
2005	12945755	0	12945755	12945755	3.34%	432388	6136288	6568676	51
2006	18835475	0	18835475	18835475	3.34%	629105	8551306	9180411	49
2007	18467732	0	18467732	18467732	3.34%	616822	8014996	8631818	47
2008	12815056	0	12815056	12815056	3.34%	428023	5305433	5733456	45
2009	35455280	0	35455280	35455280	3.34%	1184206	13969380	15153587	43
2010	36732835	0	36732835	36732835	3.34%	1226877	13738080	14964957	41
2011	35334694	0	35334694	35334694	3.34%	1180179	11801788	12981967	37
2012	39840121	0	39840121	39840121	3.34%	1330660	11975940	13306600	33
2013	35295322	0	35295322	35295322	3.34%	1178864	9430910	10609774	30
2014	13561052	0	13561052	13561052	3.34%	452939	3170574	3623513	27
2015	35578074	0	35578074	35578074	3.34%	1188308	7129846	8318154	23
2016	17536579	0	17536579	17536579	3.34%	585722	2928609	3514331	20
2017	45662057	0	45662057	45662057	3.34%	1525113	6100450	7625563	17
2018	5571383	0	5571383	5571383	3.34%	186084	558252	744337	13
2019	8295033	0	8295033	8295033	3.34%	277054	554109	831163	10
2020	9121875	0	9121875	9121875	3.34%	304671	304671	609341	7
2021	27310109	0	27310109	27310109	3.34%	912158	0	912158	3
TOTAL :	824157938	44562	824113375	824113375		26445357	404370511	430815868	

DEPRECIATION FOR THE YEAR 2022- MERC ORDER : LIFE 27 YEARS

BUILDING - CASH COL

FROM : 2011 - 12 LIFE : 20 YRS

RATE OF DEP. : 3.34% RATE OF DEP. : 4.50 %

YEAR	BOOK VALUE AS ON 01.04.2022	BALANCE VALUE OF ASSETS	NET ASSETS VALUE AS ON 31.03.22	RATE OF DEP.	DEP. PROVISION FOR YEAR 2022-23	CUMM.DEP. PROVIDED UPTO 2021-22	CUMM. DEP. PROVIDED UPTO 2022-23	TOTAL % OF DEP PROVIDED UP TO 2022-23
1	7	11	14	15	16	17	18	
		(7-8-9-/+10)	(11-12-13)		(14*15)		(16+17)	
1973	22844	22844	22844	3.34%	0	20560	20560	90
2002	110355	110355	110355	3.34%	3686	86518	90204	82
2003	0	0	0	3.34%	0	0	0	#DIV/0!
2004	0	0	0	3.34%	0	0	0	#DIV/0!
2005	0	0	0	3.34%	0	0	0	#DIV/0!
2006	0	0	0	3.34%	0	0	0	#DIV/0!
2007	0	0	0	3.34%	0	0	0	#DIV/0!
2008	0	0	0	3.34%	0	0	0	#DIV/0!
2009	16267	16267	16267	3.34%	543	7629	8173	50
2010	0	0	0	3.34%	0	0	0	#DIV/0!
2011	0	0	0	3.34%	0	0	0	#DIV/0!
2012	0	0	0	3.34%	0	0	0	#DIV/0!
2013	0	0	0	3.34%	0	0	0	#DIV/0!
2014	0	0	0	3.34%	0	0	0	#DIV/0!
2015	0	0	0	3.34%	0	0	0	#DIV/0!
2016	0	0	0	3.34%	0	0	0	#DIV/0!
2017	0	0	0	3.34%	0	0	0	#DIV/0!
2018	0	0	0	3.34%	0	0	0	#DIV/0!
2019	0	0	0	3.34%	0	0	0	#DIV/0!
2020	0	0	0	3.34%	0	0	0	#DIV/0!
2021	0	0	0	3.34%	0	0	0	#DIV/0!
TOTAL:	149466	149466	149466		4229	114707	118936	

DEPRECIATION FOR THE YEAR 2022-23

MOTOR VEHICLES

LIFE : 8 YRS.

RATE OF DEP.: 11.25%

YEAR	BOOK VALUE AS ON 01.04.2021	BALANCE VALUE OF ASSETS	NET ASSETS VALUE AS ON 31.03.2022	RATE OF DEP.	DEP. PROVISION FOR YEAR 2022-23	CUMM.DEP. PROVIDED UPTO 2021-22	CUMM. DEP. PROVIDED UPTO 2022-23	TOTAL % OF DEP PROVIDED UP TO 2022-23
1	7	11	14	15	16	17	18	
		(7-8-9-/+10)	(11-12-13)		(14*15)		(16+17)	
1992	162127	162127	162127	12.86%	0	145914	145914	90
1993	80761	80761	80761	11.25%	0	72685	72685	90
1994	0	0	0	11.25%	0	0	0	#DIV/0!
1995	0	0	0	11.25%	0	0	0	#DIV/0!
1996	0	0	0	11.25%	0	0	0	#DIV/0!
1997	0	0	0	11.25%	0	0	0	#DIV/0!
1998	209635	209635	209635	11.25%	0	188672	188672	90
1999	0	0	0	11.25%	0	0	0	#DIV/0!
2000	0	0	0	11.25%	0	0	0	#DIV/0!
2001	1142677	1142677	1142677	11.25%	0	1028409	1028409	90
2002	0	0	0	11.25%	0	0	0	#DIV/0!
2003	9049117	9049117	9049117	11.25%	0	8144205	8144205	90
2004	6905758	6905758	6905758	11.25%	0	6215182	6215182	90
2005	3603828	3603828	3603828	11.25%	0	3243445	3243445	90
2006	6982199	6982199	6982199	11.25%	0	6283979	6283979	90
2007	20628410	20628410	20628410	11.25%	0	18565569	18565569	90
2008	13518482	13518482	13518482	11.25%	0	12166634	12166634	90
2009	33858641	33858641	33858641	11.25%	0	30472777	30472777	90
2010	6825688	6825688	6825688	11.25%	0	6143119	6143119	90
2011	10192665	10192665	10192665	11.25%	0	9173399	9173399	90
2012	0	0	0	11.25%	0	0	0	#DIV/0!
2013	0	0	0	11.25%	0	0	0	#DIV/0!
2014	4325118	4325118	4325118	11.25%	486576	3406030	3892606	90
2015	1255040	1255040	1255040	11.25%	141192	847152	988344	79
2016	9961570	9961570	9961570	11.25%	1120677	5603383	6724060	68
2017	2061074	2061074	2061074	11.25%	231871	927483	1159354	56
2018	2800000	2800000	2800000	11.25%	315000	945000	1260000	45
2019	3199996	3199996	3199996	11.25%	360000	719999	1079999	34
2020	1503910	1503910	1503910	11.25%	169190	169190	338380	23
2021	0	0	0	11.25%	0	0	0	#DIV/0!
TOTAL :	138266695	138266695	138266695		2824505	114462226	117286731	

DEPRECIATION FOR THE YEAR 2022-23 FROM 1993-94

MACHINE TOOLS

LIFE : 18 \ LIFE : 20 YRS.

RATE OF DEP : 5% RATE OF DEP.: 4.5%

YEAR	BOOK VALUE AS ON 01.04.2021	WRITE OFF DURING THE YEAR 2021-22	BALANCE VALUE OF ASSETS	NET ASSETS VALUE AS ON 31.03.22	RATE OF DEP.	DEP. PROVISION FOR YEAR 2022-23	CUMM.DEP. PROVIDED UPTO 2021-22	CUMM. DEP. PROVIDED UPTO 2022-23	TOTAL % OF DEP PROVIDED UP TO 2022-23
1	7	9	11	14	15	16	17	18	
			(7-8-9-/+10)	(11-12-13)		(14*15)		(16+17)	
1981	0	0	0	0	4.5%	0	0	0	#DIV/0!
1982	120347	0	120347	120347	4.5%	0	108312	108312	90
1983	74164	0	74164	74164	4.5%	0	66748	66748	90
1984	0	0	0	0	4.5%	0	0	0	#DIV/0!
1985	113751	0	113751	113751	4.5%	0	102376	102376	90
1986	0	0	0	0	4.5%	0	0	0	#DIV/0!
1987	662135	0	662135	662135	4.5%	0	595922	595922	90
1988	42938	0	42938	42938	4.5%	0	38644	38644	90
1989	75128	0	75128	75128	4.5%	0	67615	67615	90
1990	134208	0	134208	134208	4.5%	0	120787	120787	90
1991	2414553	0	2414553	2414553	4.5%	0	2173097	2173097	90
1992	1640360	0	1640360	1640360	4.5%	0	1476324	1476324	90
1993	11846632	0	11846632	11846632	5%	0	10661969	10661969	90
1994	1693038	141127	1551911	1551911	5%	0	1396720	1396720	90
1995	1305662	0	1305662	1305662	5%	0	1175096	1175096	90
1996	921701	0	921701	921701	5%	0	829531	829531	90
1997	4169286	0	4169286	4169286	5%	0	3752357	3752357	90
1998	710792	0	710792	710792	5.28%	0	639713	639713	90
1999	15402420	0	15402420	15402420	5.28%	0	13862178	13862178	90
2000	5350395	140003	5210392	5210392	5.28%	0	4689353	4689353	90
2001	1526141	0	1526141	1526141	5.28%	0	1373527	1373527	90
2002	244777	0	244777	244777	5.28%	0	220299	220299	90
2003	1180391	0	1180391	1180391	5.28%	0	1062352	1062352	90
2004	1239150	0	1239150	1239150	5.28%	0	1115235	1115235	90
2005	3973468	0	3973468	3973468	5.28%	87416	3488705	3576121	90
2006	8773924	0	8773924	8773924	5.28%	463263	7264809	7728072	88
2007	32475216	0	32475216	32475216	5.28%	1714691	25265718	26980409	83
2008	11378503	17506	11360997	11360997	5.28%	599861	8270806	8870667	78
2009	8701904	9216	8692688	8692688	5.28%	458974	5893643	6352617	73
2010	14786642	88218	14698424	14698424	5.28%	776077	9230610	10006687	68
2011	53990720	0	53990720	53990720	5.28%	2850710	28507100	31357810	58
2012	27356662	0	27356662	27356662	5.28%	1444432	12999886	14444318	53
2013	3312195	0	3312195	3312195	5.28%	174884	1399071	1573955	48
2014	1786992	0	1786992	1786992	5.28%	94353	660472	754825	42
2015	5292384	0	5292384	5292384	5.28%	279438	1676627	1956065	37
2016	41842236	0	41842236	41842236	5.28%	2209270	11046350	13255620	32
2017	1936615	0	1936615	1936615	5.28%	102253	409013	511266	26
2018	19960167	0	19960167	19960167	5.28%	1053897	3161690	4215587	21
2019	6745466	0	6745466	6745466	5.28%	356161	712321	1068482	16
2020	56885739	0	56885739	56885739	5.28%	3003567	3003567	6007134	11
2021	47143715	0	47143715	47143715	5.28%	2489188	0	2489188	5
TOTAL :	397210517	396071	396814446	396814446		18158435	168518545	186676979	

DEPRECIATION FOR THE YEAR 20 MERC ORDER : LIFE 14 YEARS FROM 1993-94

FURNITURE

FROM : 2011-12 LIFE : 18 YRS LIFE : 20 YRS.

RATE OF DEP. : 6.33% RATE OF DEP : 5% RATE OF DEP.: 4.5%

YEAR	BOOK VALUE AS ON 01.04.2021	WRITE OFF DURING THE YEAR	BALANCE VALUE OF ASSETS	NET ASSETS VALUE AS ON 31.03.22	RATE OF DEP.	DEP. PROVISION FOR YEAR 2022-23	CUMM.DEP. PROVIDED UPTO 2021-22	CUMM. DEP. PROVIDED UPTO 2022-23	TOTAL % OF DEP PROVIDED UP TO 2022-23
1	7	9	11	14	15	16	17	18	
			(7-8-9-/+10)	(11-12-13)		(14*15)		(16+17)	
1975	0	0	0	0	4.5%	0	0	0	#DIV/0!
1976	15914	0	15914	15914	4.5%	0	14323	14323	90
1977	0	0	0	0	4.5%	0	0	0	#DIV/0!
1978	21368	0	21368	21368	4.5%	0	19231	19231	90
1979	21532	0	21532	21532	4.5%	0	19379	19379	90
1980	8115	0	8115	8115	4.5%	0	7304	7304	90
1981	4905	0	4905	4905	4.5%	0	4415	4415	90
1982	14290	0	14290	14290	4.5%	0	12861	12861	90
1983	-18421	0	-18421	-18421	4.5%	0	-16579	-16579	90
1984	122294	0	122294	122294	4.5%	0	110065	110065	90
1985	80338	0	80338	80338	4.5%	0	72304	72304	90
1986	48065	3105	44960	44960	4.5%	0	40464	40464	90
1987	86009	0	86009	86009	4.5%	0	77408	77408	90
1988	101599	0	101599	101599	4.5%	0	91439	91439	90
1989	165429	0	165429	165429	4.5%	0	148886	148886	90
1990	6115	0	6115	6115	4.5%	0	5504	5504	90
1991	66216	0	66216	66216	4.5%	0	59594	59594	90
1992	101562	0	101562	101562	4.5%	0	91406	91406	90
1993	-11336	0	-11336	-11336	5%	0	-10202	-10202	90
1994	0	0	0	0	5%	0	0	0	#DIV/0!
1995	0	0	0	0	5%	0	0	0	#DIV/0!
1996	0	0	0	0	5%	0	0	0	#DIV/0!
1997	0	0	0	0	6.33%	0	0	0	#DIV/0!
1998	0	0	0	0	6.33%	0	0	0	#DIV/0!
1999	9526	0	9526	9526	6.33%	0	8574	8574	90
2000	0	0	0	0	6.33%	0	0	0	#DIV/0!
2001	3067810	0	3067810	3067810	6.33%	0	2761028	2761028	90
2002	0	0	0	0	6.33%	0	0	0	#DIV/0!
2003	2800652	0	2800652	2800652	6.33%	0	2520586	2520586	90
2004	12712684	0	12712684	12712684	6.33%	0	11441416	11441416	90
2005	534620	0	534620	534620	6.33%	0	481158	481158	90
2006	236228	0	236228	236228	6.33%	0	212605	212605	90
2007	154750	0	154750	154750	6.33%	2631	136644	139275	90
2008	1018747	0	1018747	1018747	6.33%	64487	848616	913103	90
2009	0	0	0	0	6.33%	0	0	0	#DIV/0!
2010	375247	0	375247	375247	6.33%	23753	275056	298809	80
2011	0	0	0	0	6.33%	0	0	0	#DIV/0!
2012	1535968	0	1535968	1535968	6.33%	97227	875041	972268	63
2013	12431	0	12431	12431	6.33%	787	6295	7082	57
2014	61875	0	61875	61875	6.33%	3917	27417	31334	51
2015	172655	0	172655	172655	6.33%	10929	65574	76503	44
2016	99675	0	99675	99675	6.33%	6309	31547	37857	38
2017	472000	0	472000	472000	6.33%	29878	119510	149388	32
2018	1710892	0	1710892	1710892	6.33%	108299	324898	433198	25
2019	814380	0	814380	814380	6.33%	51550	103101	154651	19
2020	41814	0	41814	41814	6.33%	2647	2647	5294	13
2021	403522	0	403522	403522	6.33%	25543	0	25543	6
TOTAL:	27069470	3105	27066365	27066365		427957	20989514	21417471	

DEPRECIATION FOR THE YEAR 2(MERC ORDER : LIFE 9 YEARS FROM 1993-94

ROOM A.C.

FROM : 2011-12 LIFE : 5 YRS LIFE : 7 YRS.

RATE OF DEP. : 9.50% RATE IF DEP : 18% RATE OF DEP.: 12.86 %

YEAR	BOOK VALUE AS ON 01.04.2021	WRITE OFF DURING THE YEAR 2021-22	BALANCE VALUE OF ASSETS	NET ASSETS VALUE AS ON 31.03.22	RATE OF DEP.	DEP. PROVISION FOR YEAR 2022-23	CUMM.DEP. PROVIDED UPTO 2021-22	CUMM. DEP. PROVIDED UPTO 2022-23	TOTAL % OF DEP PROVIDED UP TO 2022-23
1	7	9	11	14	15	16	17	18	
			(7-8-9-/+10)	(11-12-13)		(14*15)		(16+17)	
1992	286759	57820	228939	228939	12.86%	0	206045	206045	90
1993	207916	0	207916	207916	18%	0	187125	187125	90
1994	232437	0	232437	232437	18%	0	209193	209193	90
1995	468919	0	468919	468919	18%	0	422027	422027	90
1996	160629	18248	142381	142381	18%	0	128143	128143	90
1997	252849	0	252849	252849	18%	0	227564	227564	90
1998	670244	0	670244	670244	18%	0	603220	603220	90
1999	185286	59280	126006	126006	18%	0	113405	113405	90
2000	58024	0	58024	58024	18%	0	52221	52221	90
2001	2321960	0	2321960	2321960	18%	0	2089764	2089764	90
2002	15631	0	15631	15631	18%	0	14068	14068	90
2003	593263	0	593263	593263	18%	0	533937	533937	90
2004	296297	0	296297	296297	18%	0	266667	266667	90
2005	152370	0	152370	152370	18%	0	137133	137133	90
2006	311246	0	311246	311246	18%	0	280121	280121	90
2007	2294061	33800	2260261	2260261	18%	0	2034235	2034235	90
2008	2879983	0	2879983	2879983	18%	0	2591985	2591985	90
2009	1258115	0	1258115	1258115	9.50%	0	1132304	1132304	90
2010	0	0	0	0	9.50%	0	0	0	#DIV/0!
2011	1287285	0	1287285	1287285	9.50%	0	1158557	1158557	90
2012	450029	0	450029	450029	9.50%	20252	384775	405027	90
2013	605073	0	605073	605073	9.50%	57482	459855	517337	86
2014	297587	0	297587	297587	9.50%	28271	197895	226166	76
2015	48500	0	48500	48500	9.50%	4608	27645	32253	67
2016	3181007	0	3181007	3181007	9.50%	302196	1510978	1813174	57
2017	2842320	0	2842320	2842320	9.50%	270020	1080082	1350102	48
2018	1128582	0	1128582	1128582	9.50%	107215	321646	428861	38
2019	572485	0	572485	572485	9.50%	54386	108772	163158	29
2020	0	0	0	0	9.50%	0	0	0	#DIV/0!
2021	1603066	0	1603066	1603066	9.50%	152291	0	152291	10
TOTAL :	24661923	169148	24492775	24492775		996721	16479362	17476083	

DEPRECIATION FOR THE YEAR 2022-23 LIFE : 7 YRS. RATE OF DEP.: 12.86 %

PERSONAL COMPUTER

FROM : 1993-94 LIFE : 5 YRS. RATE OF DEP.: 18 %

YEAR	BOOK VALUE AS ON 01.04.2021	WRITE OFF DURING THE YEAR 2021-22	BALANCE VALUE OF ASSETS	NET ASSETS VALUE AS ON 31.03.22	RATE OF DEP.	DEP. PROVISION FOR YEAR 2022-23	CUMM.DEP. PROVIDED UPTO 2021-22	CUMM. DEP. PROVIDED UPTO 2022-23	TOTAL % OF DEP PROVIDED UP TO 2022-23
1	7	9	11	3	15	16	17	18	
			(7-8-9-/+10)	(11-12-13)		(14*15)		(16+17)	
1995	55826	0	55826	55826	12.86%	0	50243	50243	90
1996	508997	0	508997	508997	12.86%	0	458097	458097	90
1997	3329768	0	3329768	3329768	12.86%	0	2996791	2996791	90
1998	506157	0	506157	506157	12.86%	0	455541	455541	90
1999	1254293	0	1254293	1254293	12.86%	0	1128864	1128864	90
2000	3570148	0	3570148	3570148	12.86%	0	3213133	3213133	90
2001	1898348	0	1898348	1898348	12.86%	0	1708513	1708513	90
2002	10600501	0	10600501	10600501	12.86%	0	9540451	9540451	90
2003	6406342	0	6406342	6406342	12.86%	0	5765708	5765708	90
2004	2179076	0	2179076	2179076	12.86%	0	1961168	1961168	90
2005	445681	98280	347401	347401	15%	0	312661	312661	90
2006	20265165	75000	20190165	20190165	15%	0	18171149	18171149	90
2007	4860578	0	4860578	4860578	15%	0	4374520	4374520	90
2008	3257010	13520	3243490	3243490	15%	0	2919141	2919141	90
2009	24143714	376008	23767706	23767706	15%	0	21390935	21390935	90
2010	25153048	336927	24816121	24816121	15%	0	22334509	22334509	90
2011	10888752	381322	10507430	10507430	15%	0	9456687	9456687	90
2012	8676282	623768	8052514	8052514	15%	0	7247263	7247263	90
2013	7006709	695620	6311089	6311089	15%	0	5679980	5679980	90
2014	763834	0	763834	763834	15%	0	687451	687451	90
2015	1955823	0	1955823	1955823	15%	0	1760241	1760241	90
2016	13156591	0	13156591	13156591	15%	1973489	9867443	11840932	90
2017	1391934	0	1391934	1391934	15%	208790	835160	1043950	75
2018	17495482	0	17495482	17495482	15%	2624322	7872967	10497289	60
2019	6976048	0	6976048	6976048	15%	1046407	2092814	3139222	45
2020	9678856	0	9678856	9678856	15%	1451828	1451828	2903657	30
2021	4261218	0	4261218	4261218	15%	639183	0	639183	15
TOTAL :	190686180	2600445	188085735	188085735.4		7944019	143733258	151677278	

DEPRECIATION FOR THE \ MERC ORDER : LIFE 6 YEARS

ELECTRONIC EC FROM : 2011-12 LIFE : 12 YRS.

RATE OF DEP.: 15% RATE OF DEP.: 7.5 %

YEAR	BOOK VALUE AS ON 01.04.2021	BALANCE VALUE OF ASSETS	NET ASSETS VALUE AS ON 31.03.22	RATE OF DEP.	DEP. PROVISION FOR YEAR 2022-23	CUMM.DEP. PROVIDED UPTO 2021-22	CUMM. DEP. PROVIDED UPTO 2022-23	TOTAL % OF DEP PROVIDED UP TO 2022-23
1	7	11	14	15	16	17	18	
		(7-8-9-/+10)	(11-12-13)		(14*15)		(16+17)	
1991	697248	697248	697248	7.5%	0	627523	627523	90
1992	537281	537281	537281	7.5%	0	483553	483553	90
1993	285348	285348	285348	7.5%	0	256813	256813	90
1994	0	0	0	7.5%	0	0	0	#DIV/0!
1995	0	0	0	7.5%	0	0	0	#DIV/0!
1996	963206	963206	963206	7.5%	0	866886	866886	90
1997	38331	38331	38331	7.5%	0	34498	34498	90
1998	0	0	0	7.5%	0	0	0	#DIV/0!
1999	729367	729367	729367	7.5%	0	656430	656430	90
2000	138818	138818	138818	7.5%	0	124936	124936	90
2001	0	0	0	7.5%	0	0	0	#DIV/0!
2002	0	0	0	7.5%	0	0	0	#DIV/0!
2003	0	0	0	15%	0	0	0	#DIV/0!
2004	0	0	0	15%	0	0	0	#DIV/0!
2005	0	0	0	15%	0	0	0	#DIV/0!
2006	60451	60451	60451	15%	0	54406	54406	90
2007	780567	780567	780567	15%	0	702510	702510	90
2008	37500	37500	37500	15%	0	33750	33750	90
2009	0	0	0	15%	0	0	0	#DIV/0!
2010	0	0	0	15%	0	0	0	#DIV/0!
2011	0	0	0	15%	0	0	0	#DIV/0!
2012	0	0	0	15%	0	0	0	#DIV/0!
2013	0	0	0	15%	0	0	0	#DIV/0!
2014	0	0	0	15%	0	0	0	#DIV/0!
2015	24995	24995	24995	15%	0	22496	22496	90
2016	0	0	0	15%	0	0	0	#DIV/0!
2017	332628	332628	332628	15%	49894	199577	249471	75
2018	99199	99199	99199	15%	14880	44640	59519	60
2019	101200	101200	101200	15%	15180	30360	45540	45
2020	554719	554719	554719	15%	83208	83208	166416	30
2021	0	0	0	15%	0	0	0	#DIV/0!
TOTAL :	5380858	5380858	5380858		163162	4221585	4384747	

DEPRECIATION FOR THE YEAR 2022- MERC ORDER : LIFE 6 YEARS

ELECTRONIC EQUIPME

EFFECTIVE FROM 2011-12 LIFE : 12 YRS.

RATE OF DEP : 15% RATE OF DEP.: 7.5 %

YEAR	BOOK VALUE AS ON 01.04.2021	BALANCE VALUE OF ASSETS	NET ASSETS VALUE AS ON 31.03.22	RATE OF DEP.	DEP. PROVISION FOR YEAR 2022-23	CUMM.DEP. PROVIDED UPTO 2021-22	CUMM. DEP. PROVIDED UPTO 2022-23	TOTAL % OF DEP PROVIDED UP TO 2022-23
1	7	11	14	15	16	17	18	
		(7-8-9-/+10)	(11-12-13)		(14*15)		(16+17)	
1994	885814	885814	885814	7.50%	0	797233	797233	90
1995	396816	396816	396816	7.50%	0	357134	357134	90
1996	90664	90664	90664	7.50%	0	81598	81598	90
1997	0	0	0	7.50%	0	0	0	#DIV/0!
1998	0	0	0	7.50%	0	0	0	#DIV/0!
1999	4615618	4615618	4615618	7.50%	0	4154056	4154056	90
2000	0	0	0	7.50%	0	0	0	#DIV/0!
2001	3271811	3271811	3271811	7.50%	0	2944630	2944630	90
2002	0	0	0	7.50%	0	0	0	#DIV/0!
2003	0	0	0	15%	0	0	0	#DIV/0!
2004	0	0	0	15%	0	0	0	#DIV/0!
2005	0	0	0	15%	0	0	0	#DIV/0!
2006	0	0	0	15%	0	0	0	#DIV/0!
2007	838761	838761	838761	15%	0	754885	754885	90
2008	6940844	6940844	6940844	15%	0	6246760	6246760	90
2009	0	0	0	15%	0	0	0	#DIV/0!
2010	0	0	0	15%	0	0	0	#DIV/0!
2011	0	0	0	15%	0	0	0	#DIV/0!
2012	0	0	0	15%	0	0	0	#DIV/0!
2013	0	0	0	15%	0	0	0	#DIV/0!
2014	0	0	0	15%	0	0	0	#DIV/0!
2015	0	0	0	15%	0	0	0	#DIV/0!
2016	0	0	0	15%	0	0	0	#DIV/0!
2017	0	0	0	15%	0	0	0	#DIV/0!
2018	1194160	1194160	1194160	15%	179124	537372	716496	60
2019	5165947	5165947	5165947	15%	774892	1549784	2324676	45
2020	3496489	3496489	3496489	15%	524473	524473	1048947	30
2021	522150	522150	522150	15%	78323	0	78323	15
TOTAL :	27419074	27419074	2.7E+07		1556812	17947925	19504737	

DEPRECIATION FOR THE YEAR 2022-23

MERC ORDER : LIFE 6 YEARS

CYCLOSTYLE MACHINE

EFFECTIVE FROM : 2011-1 LIFE : 10 YRS.

RATE OF DEP : 15% RATE OF DEP.: 9 %

YEAR	BOOK VALUE AS ON 31.03.2022	WRITE OFF DURING THE YEAR 2021-22	BALANCE VALUE OF ASSETS	NET ASSETS VALUE AS ON 31.03.22	RATE OF DEP.	DEP. PROVISION FOR YEAR 2022-23	CUMM.DEP. PROVIDED UPTO 2021-22	CUMM. DEP. PROVIDED UPTO 2022-23	TOTAL % OF DEP PROVIDED UP TO 2022-23
1	7	9	11	14	15	16	17	18	
			(7-8-9-/+10)	(11-12-13)		(14*15)		(16+17)	
1999	407910	0	407910	407910	9%	0	367119	367119	90
2000	65966	0	65966	65966	9%	0	59369	59369	90
2001	0	0	0	0	9%	0	0	0	#DIV/0!
2002	0	0	0	0	9%	0	0	0	#DIV/0!
2003	329227	0	329227	329227	9%	0	296304	296304	90
2004	90664	0	90664	90664	9%	0	81598	81598	90
2005	0	0	0	0	15%	0	0	0	#DIV/0!
2006	60948	60948	0	0	15%	0	0	0	#DIV/0!
2007	304875	1	304874	304874	15%	0	274388	274388	90
2008	0	0	0	0	15%	0	0	0	#DIV/0!
2009	0	0	0	0	15%	0	0	0	#DIV/0!
2010	0	0	0	0	15%	0	0	0	#DIV/0!
2011	0	0	0	0	15%	0	0	0	#DIV/0!
2012	0	0	0	0	15%	0	0	0	#DIV/0!
2013	0	0	0	0	15%	0	0	0	#DIV/0!
2014	0	0	0	0	15%	0	0	0	#DIV/0!
2015	0	0	0	0	15%	0	0	0	#DIV/0!
2016	229909	0	229909	229909	15%	34486	172432	206918	90
2017	0	0	0	0	15%	0	0	0	#DIV/0!
2018	0	0	0	0	15%	0	0	0	#DIV/0!
2019	0	0	0	0	15%	0	0	0	#DIV/0!
2020	0	0	0	0	15%	0	0	0	#DIV/0!
2021	0	0	0	0	15%	0	0	0	#DIV/0!
TOTAL :	1489499	60949	1428550	1428550		34486	1251210	1285696	

DEPRECIATION FOR THE YEAR 2022-23 | MERC ORDER : LIFE 17 YEARS | LIFE : 40 YRS. | RATE OF DEP.: 2.25 %

CABLE AND MAINS

FROM 2011-12 | FROM 1994-95 : LIFE 35 YRS | RATE OF DEP.: 2.57 %

RATE OF DEP : 5.28 %

YEAR	BOOK VALUE AS ON 01.04.2021	IDC	WRITE OFF DURING THE YEAR	BALANCE VALUE OF ASSETS	GOVT. GRANT	CABEL CAPITAL CONN. FEES	NET ASSETS VALUE AS ON 31.03.22	RATE OF DEP.	DEP. PROVISION FOR YEAR 2022-23	CUMM.DEP. PROVIDED UPTO 2021-22	CUMM. DEP. PROVIDED UPTO 2022-23	TOTAL % OF DEP PROVIDED UP TO 2022-23
1	7	8	9	11	12	13	14	15	16	17	18	
				(7-8-9-/+10)			(11-12-13)		(14*15)		(16+17)	
1970	0	0	0	0	0	0	0	2.25%	0	0	0	#DIV/0!
1971	10913649	0	1.1E+07	0	0	0	0	2.25%	0	0	0	#DIV/0!
1972	9554388	0	292225	9262163	0	0	9262163	2.25%	0	8335946	8335946	90
1973	8388173	0	0	8388173	0	0	8388173	2.25%	0	7549356	7549356	90
1974	9775861	0	0	9775861	0	0	9775861	2.25%	0	8798275	8798275	90
1975	11717400	0	0	11717400	0	0	11717400	2.25%	0	10545660	10545660	90
1976	12169915	0	0	12169915	0	0	12169915	2.25%	0	10952924	10952924	90
1977	10555702	0	0	10555702	0	0	10555702	2.25%	0	9500132	9500132	90
1978	15618582	0	0	15618582	0	0	15618582	2.25%	0	14056724	14056724	90
1979	16167097	0	0	16167097	0	0	16167097	2.25%	0	14550387	14550387	90
1980	17141932	0	0	17141932	0	0	17141932	2.25%	0	15427739	15427739	90
1981	38669778	0	0	38669778	0	0	38669778	5.28%	0	34802800	34802800	90
1982	20135132	0	0	20135132	0	0	20135132	5.28%	0	18121619	18121619	90
1983	32013692	0	0	32013692	0	0	32013692	5.28%	0	28812323	28812323	90
1984	56205363	0	0	56205363	0	0	56205363	5.28%	0	50584827	50584827	90
1985	20951406	0	0	20951406	0	0	20951406	5.28%	0	18856265	18856265	90
1986	25666672	0	0	25666672	0	0	25666672	5.28%	0	23100005	23100005	90
1987	29320556	0	0	29320556	0	0	29320556	5.28%	0	26388500	26388500	90
1988	42934990	0	0	42934990	0	0	42934990	5.28%	0	38641490	38641490	90
1989	51170798	0	0	51170798	0	0	51170798	5.28%	0	46053718	46053718	90
1990	112338620	0	0	112338620	0	0	112338620	5.28%	0	101104758	101104758	90
1991	117991103	0	0	117991103	0	0	117991103	5.28%	0	106191993	106191993	90
1992	161085823	0	0	161085823	0	0	161085823	5.28%	0	144977241	144977241	90
1993	188440938	0	0	188440938	0	0	188440938	5.28%	0	169596844	169596844	90
1994	103116417	0	0	103116417	0	0	103116417	5.28%	0	92804775	92804775	90
1995	136271320	0	0	136271320	0	0	136271320	5.28%	0	122644188	122644188	90
1996	165331500	0	0	165331500	0	0	165331500	5.28%	0	148798350	148798350	90
1997	133851938	0	0	133851938	0	0	133851938	5.28%	0	120466744	120466744	90
1998	180219938	0	0	180219938	0	0	180219938	5.28%	2198683	159999261	162197944	90
1999	199606604	0	0	199606604	0	0	199606604	5.28%	7565090	172080853	179645943	90
2000	185817677	0	0	185817677	0	0	185817677	5.28%	9811173	155417905	165229078	89
2001	231338388	0	0	231338388	0	0	231338388	5.28%	12214667	187546031	199760698	86
2002	134074537	0	0	134074537	0	0	134074537	5.28%	7079136	105248512	112327647	84
2003	137624296	0	0	137624296	24900000	0	112724296	5.28%	5951843	85591558	91543401	81
2004	147542001	0	0	147542001	45000000	0	102542001	5.28%	5414218	75224812	80639030	79
2005	189880044	0	0	189880044	30478000	31203547	128198497	5.28%	6768881	90751716	97520597	76
2006	185714645	0	0	185714645	52500000	63603184	69611461	5.28%	3675485	47488939	51164424	74
2007	328836997	0	0	328836997	0	87843484	240993513	5.28%	12724457	158212241	170936699	71
2008	339749784	0	0	339749784	14500000	97282148	227967636	5.28%	12036691	143801985	155838676	68
2009	633684236	0	0	633684236	7700000	111065274	514918962	5.28%	27187721	311577464	338765185	66
2010	648019778	0	0	648019778	0	95892048	552127730	5.28%	29152344	319902807	349055151	63
2011	547276581	0	0	547276581	0	77752227	469524354	5.28%	24790886	247908859	272699745	58
2012	437999829	0	0	437999829	0	83678305	354321524	5.28%	18708176	168373588	187081765	53
2013	454864867	0	0	454864867	0	82438615	372426252	5.28%	19664106	157312849	176976955	48
2014	760370625	0	0	760370625	0	97996029	662374596	5.28%	34973379	244813651	279787029	42
2015	630618543	0	0	630618543	0	100652529	529966014	5.28%	27982206	167893233	195875439	37
2016	612149371	0	0	612149371	0	100566763	511582608	5.28%	27011562	135057808	162069370	32
2017	433581675	0	0	433581675	0	121227194	312354481	5.28%	16492317	65969266	82461583	26
2018	860376873	0	0	860376873	95036460	106947375	658393037	5.28%	34763152	104289457	139052610	21
2019	869730250	0	0	869730250	114865195	77581531	677283524	5.28%	35760570	71521141	107281711	16
2020	768300622	0	0	768300622	0	60924424	707376198	5.28%	37349463	37349463	74698927	11
2021	525903198	11871	0	525915069	0	77143777	448771292	5.28%	23695124	0	23695124	5
TOTAL :	12000780104	11871	1.1E+07	11989586101	384979655	1473798454	10130807992		442971330	4804996981	5247968311	

DEPRECIATION FOR THE YEAR 2022-23 MERC ORDER: LIFE 17 LIFE : 20 YEARS RATE OF DEP.: 4.50 %

DISTRIBUTION PILLARS

FROM 2011-12

RATE OF DEP : 5.28 %

YEAR	BOOK VALUE AS ON 01.04.2021	WRITE OFF DURING THE YEAR 2021-22	BALANCE VALUE OF ASSETS	GOVT. GRANT	NET ASSETS VALUE AS ON 31.03.22	RATE OF DEP.	DEP. PROVISION FOR YEAR 2022-23	CUMM.DEP. PROVIDED UPTO 2021-22	CUMM. DEP. PROVIDED UPTO 2022-23	TOTAL % OF DEP PROVIDED UP TO 2022-23
1	7	9	11	12	14	15	16	17	18	
			(7-8-9-/+10)		(11-12-13)		(14*15)		(16+17)	
1989	0	0	0	0	0	4.50%	0	0	0	#DIV/0!
1990	1893390	33500	1859890	0	1859890	4.50%	0	1673901	1673901	90
1991	1633534	123200	1510334	0	1510334	4.50%	0	1359301	1359301	90
1992	1917274	78110	1839164	0	1839164	4.50%	0	1655248	1655248	90
1993	2798122	180800	2617322	0	2617322	4.50%	0	2355590	2355590	90
1994	2002245	64800	1937445	0	1937445	4.50%	0	1743701	1743701	90
1995	2621117	140700	2480417	0	2480417	4.50%	0	2232375	2232375	90
1996	4138267	241300	3896967	0	3896967	4.50%	0	3507270	3507270	90
1997	3793072	224200	3568872	0	3568872	5.28%	0	3211985	3211985	90
1998	5396660	133460	5263200	0	5263200	5.28%	0	4736880	4736880	90
1999	5757636	733640	5023996	0	5023996	5.28%	0	4521596	4521596	90
2000	9069959	117920	8952039	0	8952039	5.28%	0	8056835	8056835	90
2001	11057645	11960	11045685	0	11045685	5.28%	0	9941117	9941117	90
2002	10466677	203120	10263557	0	10263557	5.28%	0	9237202	9237202	90
2003	14232814	5700	14227114	0	14227114	5.28%	0	12804403	12804403	90
2004	14645059	74700	14570359	0	14570359	5.28%	174844	12938478	13113322	90
2005	10047180	23000	10024180	2177000	7847180	5.28%	414331	6615173	7029504	90
2006	12889540	20800	12868740	5000000	7868740	5.28%	415469	6279255	6694724	85
2007	16596214	21400	16574814	0	16574814	5.28%	875150	12480835	13355985	81
2008	13399882	21600	13378282	0	13378282	5.28%	706373	9471824	10178197	76
2009	17678694	6020	17672674	0	17672674	5.28%	933117	11716983	12650100	72
2010	10932739	0	10932739	0	10932739	5.28%	577249	6756433	7333681	67
2011	35492854	0	35492854	0	35492854	5.28%	1874023	18740227	20614249	58
2012	22743279	0	22743279	0	22743279	5.28%	1200845	10807606	12008451	53
2013	15964974	0	15964974	0	15964974	5.28%	842951	6743605	7586556	48
2014	15629790	0	15629790	0	15629790	5.28%	825253	5776770	6602023	42
2015	16483950	0	16483950	0	16483950	5.28%	870353	5222115	6092468	37
2016	18620147	0	18620147	0	18620147	5.28%	983144	4915719	5898862	32
2017	16764406	0	16764406	0	16764406	5.28%	885161	3540643	4425803	26
2018	22435692	0	22435692	0	22435692	5.28%	1184605	3553814	4738418	21
2019	17805956	0	17805956	924520	16881436	5.28%	891340	1782680	2674019	16
2020	18179881	0	18179881	0	18179881	5.28%	959898	959898	1919795	11
2021	24422597	0	24422597	0	24422597	5.28%	0	959898	959898	4
TOTAL :	397511245	2459930	395051315	8101520	386949795		14614104	196299356	210913460	

DEPRECIATION FOR THE MERC ORDER : LIFE 17 YEARS LIFE : 15 YEARS RATE OF DEP.: 6 %

STREET LIGHTII FROM 2011-12

RATE OF DEP : 5.28 %

YEAR	BOOK VALUE AS ON 01.04.2021	BALANCE VALUE OF ASSETS	GOVT. GRANT	NET ASSETS VALUE AS ON 31.03.22	RATE OF DEP.	DEP. PROVISION FOR YEAR 2022-23	CUMM.DEP. PROVIDED UPTO 2022-22	CUMM. DEP. PROVIDED UPTO 2022-23	TOTAL % OF DEP PROVIDED UP TO 2022-23
1	7	11	12	14	15	16	17	18	
		(7-8-9-/+10)		(11-12-13)		(14*15)		(16+17)	
1971	375761	375761	0	375761	6%	0	338185	338185	90
1972	1177831	1177831	0	1177831	6%	0	1060048	1060048	90
1973	850089	850089	0	850089	6%	0	765080	765080	90
1974	1567871	1567871	0	1567871	6%	0	1411084	1411084	90
1975	1299075	1299075	0	1299075	6%	0	1169168	1169168	90
1976	2212095	2212095	0	2212095	6%	0	1990886	1990886	90
1977	1602022	1602022	0	1602022	6%	0	1441820	1441820	90
1978	1525598	1525598	0	1525598	6%	0	1373038	1373038	90
1979	2499870	2499870	0	2499870	6%	0	2249883	2249883	90
1980	2002230	2002230	0	2002230	6%	0	1802007	1802007	90
1981	2051265	2051265	0	2051265	6%	0	1846139	1846139	90
1982	1782839	1782839	0	1782839	6%	0	1604555	1604555	90
1983	3226813	3226813	0	3226813	6%	0	2904132	2904132	90
1984	707349	707349	0	707349	6%	0	636614	636614	90
1985	2274839	2274839	0	2274839	6%	0	2047355	2047355	90
1986	3203576	3203576	0	3203576	6%	0	2883218	2883218	90
1987	1281264	1281264	0	1281264	6%	0	1153138	1153138	90
1988	1490104	1490104	0	1490104	6%	0	1341094	1341094	90
1989	1678337	1678337	0	1678337	6%	0	1510503	1510503	90
1990	2508215	2508215	0	2508215	6%	0	2257394	2257394	90
1991	1436087	1436087	0	1436087	6%	0	1292478	1292478	90
1992	11847318	11847318	0	11847318	6%	0	10662586	10662586	90
1993	13353615	13353615	0	13353615	6%	0	12018254	12018254	90
1994	14030878	14030878	0	14030878	6%	0	12627790	12627790	90
1995	19405026	19405026	0	19405026	6%	0	17464523	17464523	90
1996	9675990	9675990	0	9675990	6%	0	8708391	8708391	90
1997	35435043	35435043	0	35435043	6%	0	31891539	31891539	90
1998	46681393	46681393	0	46681393	6%	0	42013254	42013254	90
1999	20891589	20891589	0	20891589	6%	0	18802430	18802430	90
2000	24031153	24031153	0	24031153	6%	0	21628038	21628038	90
2001	34093868	34093868	0	34093868	5.28%	0	30684481	30684481	90
2002	48386819	48386819	0	48386819	5.28%	0	43548137	43548137	90
2003	18891836	18891836	0	18891836	5.28%	0	17002652	17002652	90
2004	29098079	29098079	0	29098079	5.28%	0	26188272	26188272	90
2005	11575967	11575967	0	11575967	5.28%	0	10418371	10418371	90
2006	10808482	10808482	0	10808482	5.28%	129702	9597932	9727634	90
2007	3051851	3051851	0	3051851	5.28%	161138	2526933	2688070	88
2008	7663048	7663048	0	7663048	5.28%	404609	5885221	6289830	82
2009	13592326	13592326	0	13592326	5.28%	717675	9623367	10341042	76
2010	16304978	16304978	0	16304978	5.28%	860903	10565626	11426529	70
2011	16338193	16338193	0	16338193	5.28%	862657	8626566	9489222	58
2012	7088085	7088085	0	7088085	5.28%	374251	3368258	3742509	53
2013	5556338	5556338	0	5556338	5.28%	293375	2346997	2640372	48
2014	48578223	48578223	0	48578223	5.28%	2564930	17954511	20519441	42
2015	15569846	15569846	0	15569846	5.28%	822088	4932527	5754615	37
2016	18235339	18235339	0	18235339	5.28%	962826	4814129	5776955	32
2017	18077317	18077317	0	18077317	5.28%	954482	3817929	4772412	26
2018	368275181	368275181	73815497	294459684	5.28%	15547471	46642414	62189885	21
2019	553783762	553783762	185730094	368053668	5.28%	19433234	38866467	58299701	16
2020	49874571	49874571	0	49874571	5.28%	2633377	2633377	5266755	11
2021	95876543	95876543	0	95876543	5.28%	5062281	0	5062281	5
TOTAL :	1622825786	1622825786	259545591	1363280195		51784998	508938789	560723787	

DEPRECIATION FOR THE YEAR 2022- MERC ORDER : LIFE 17 YEARS LIFE : 15 YEARS RATE OF DEP.: 6 %

METERS (CONVENTIO FROM 2011-12

RATE OF DEP : 5.28 %

YEAR	BOOK VALUE AS ON 01.04.2021	WRITE OFF DURING THE YEAR 2021-22	BALANCE VALUE OF ASSETS	GOVT. GRANT	NET ASSETS VALUE AS ON 31.03.22	RATE OF DEP.	DEP. PROVISION FOR YEAR 2022-23	CUMM.DEP. PROVIDED UPTO 2021-22	CUMM. DEP. PROVIDED UPTO 2022-23	TOTAL % OF DEP PROVIDED UP TO 2022-23
1	7	9	11	12	14	15	16	17	18	
			(7-8-9-/+10)		(11-12-13)		(14*15)		(16+17)	
1994	0	0	0	0	0	6%	0	0	0	#DIV/0!
1995	0	0	0	0	0	6%	0	0	0	0
1996	0	0	0	0	0	6%	0	0	0	#DIV/0!
1997	14207453	14207453	0	0	0	6%	0	-1	-1	0
1998	37099005	37099005	0	0	0	6%	0	0	0	#DIV/0!
1999	39168909	7329830	31839079	0	31839079	6%	0	28655171	28655171	90
2000	45007000	0	45007000	0	45007000	6%	0	40506300	40506300	90
2001	49820192	0	49820192	0	49820192	5.28%	0	44838173	44838173	90
2002	26588512	0	26588512	0	26588512	5.28%	0	23929660	23929660	90
2003	45752708	0	45752708	8200000	37552708	5.28%	0	33797437	33797437	90
2004	26813967	0	26813967	8200000	18613967	5.28%	0	16752570	16752570	90
2005	33382472	0	33382472	7075000	26307472	5.28%	0	23676725	23676725	90
2006	52581078	0	52581078	23750000	28831078	5.28%	345973	25601997	25947970	90
2007	28461442	0	28461442	0	28461442	5.28%	1502764	23566074	25068838	88
2008	14912906	0	14912906	3000000	11912906	5.28%	629001	9149112	9778113	82
2009	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2010	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2011	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2012	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2013	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2014	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2015	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2016	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2017	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2018	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2019	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2020	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2021	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
TOTAL :	413795644	58636288	355159356	50225000	304934356		2477739	270473219	272950958	

DEPRECIATION FOR THE YEAR 2022-23 MERC ORDER : LIFE 8 YEARS LIFE : 15 YEARS RATE OF DEP.: 6 %

METERS (ELECTRONIC)

FROM 2011-12 22-23 LIFE 10 YRS RATE OF DEP. : 9%

RATE OF DEP : 11.25 %

YEAR	BOOK VALUE AS ON 01.04.2021	WRITE OFF DURING THE YEAR 2021-22	BALANCE VALUE OF ASSETS	GOVT. GRANT	NET ASSETS VALUE AS ON 31.03.22	RATE OF DEP.	DEP. PROVISION FOR YEAR 2022-23	CUMM.DEP. PROVIDED UPTO 2021-22	CUMM. DEP. PROVIDED UPTO 2022-23	TOTAL % OF DEP PROVIDED UP TO 2022-23
1	7	9	11	12	14	15	16	17	18	
			(7-8-9-/+10)		(11-12-13)		(14*15)		(16+17)	
2000	0	0	0	0	0	6%	0	0	0	0
2001	34082874	10061253	24021622	0	24021622	11.25%	0	21619460	21619460	90
2002	48063259	7807812	40255448	0	40255448	11.25%	0	36229902	36229902	90
2003	15300374	5118809	10181565	12800000	-2618435	11.25%	0	-2356591	-2356591	90
2004	50587402	0	50587402	25600000	24987402	11.25%	0	22488661	22488661	90
2005	15932540	696439	15236100	7075000	8161100	11.25%	0	7344991	7344991	90
2006	17442783	3613613	13829170	23750000	-9920830	11.25%	0	-8928746	-8928746	90
2007	6210365	55484	6154881	0	6154881	11.25%	0	5539392	5539392	90
2008	9139660	6263213	2876447	3000000	-123553	11.25%	0	-111199	-111199	90
2009	24662746	10287299	14375447	2000000	12375447	11.25%	0	11137902	11137902	90
2010	41839260	5508347	36330913	0	36330913	11.25%	0	32697822	32697822	90
2011	0	0	0	0	0	11.25%	0	0	0	90
2012	142215311	26354905	115860406	0	115860406	11.25%	0	104274365	104274365	90
2013	96385159	21165	96363994	0	96363994	11.25%	0	86727595	86727595	90
2014	117592914	7644900	109948014	0	109948014	11.25%	12369152	86584061	98953213	90
2015	73930862	1392829	72538033	0	72538033	11.25%	8160529	48963173	57123702	79
2016	94246678	1475007	92771671	0	92771671	11.25%	10436813	52184065	62620878	68
2017	98840358	162300	98678058	0	98678058	11.25%	11101282	44405126	55506408	56
2018	122375176	342770	122032406	41720343	80312063	11.25%	9035107	27105321	36140428	45
2019	179173788	377478	178796310	32942044	145854266	11.25%	16408605	32817210	49225815	34
2020	62960296	0	62960296	0	62960296	11.25%	7083033	7083033	14166067	23
2021	146232442	0	146232442	0	146232442	9.00%	13160920	0	13160920	9
TOTAL :	1397214247	87183623	1310030624	148887387	1161143237		87755440	615805542	703560982	

DEPRECIATION FOR THE YEAR 20222 MERC ORDER LIFE : 6 YEARS RATE OF DEP.: 15 %

BUSINESS PROCESS AUTOMATION

YEAR	BOOK VALUE AS ON 01.04.2021	BALANCE VALUE OF ASSETS	GOVT. GRANT	NET ASSETS VALUE AS ON 31.03.22	RATE OF DEP.	DEP. PROVISION FOR YEAR 2022-23	CUMM.DEP. PROVIDED UPTO 2021-22	CUMM. DEP. PROVIDED UPTO 20222-23	TOTAL % OF DEP PROVIDED UP TO 2022-23
1	7	11	12	14	15	16	17	18	
		(7-8-9-/+10)		(11-12-13)		(14*15)		(16+17)	
2010	316100000	316100000	0	316100000	15%	0	284490000	284490000	90
2011	39532722	39532722	0	39532722	15%	0	35579450	35579450	90
2012	64685052	64685052	0	64685052	15%	0	58216547	58216547	90
2013	60000000	60000000	0	60000000	15%	0	54000000	54000000	90
2014	0	0	0	0	15%	0	0	0	#DIV/0!
2015	8342289	8342289	0	8342289	15%	0	7508060	7508060	90
2016	187500	187500	0	187500	15%	28125	140625	168750	90
2017	75000	75000	0	75000	15%	11250	45000	56250	75
2018	1754025	1754025	0	1754025	15%	263104	789311	1052415	60
2019	1017066	1017066	0	1017066	15%	152560	305120	457680	45
2020	3875066	3875066	0	3875066	15%	581260	581260	1162520	30
2021	4764983	4764983	0	4764983	15%	714747	0	714747	15
TOTAL :	500333703	500333703	0	500333703		1751046	441655373	443406419	

DEPRECIATION FOR THE YEAR 2022-23 FROM 1994-95 LIFE : 25 YEARS PAST : 1947 LIFE : 20 YEARS

SWITCHGEARS

RATE OF DEP : 3.60% RATE OF DEP : 4.50 %

YEAR	BOOK VALUE AS ON 01.04.2021	WRITE OFF DURING THE YEAR 2021-22	BALANCE VALUE OF ASSETS	GOVT. GRANT	NET ASSETS VALUE AS ON 31.03.22	RATE OF DEP.	DEP. PROVISION FOR YEAR 2022-23	CUMM.DEP. PROVIDED UPTO 2021-22	CUMM. DEP. PROVIDED UPTO 2022-23	TOTAL % OF DEP PROVIDED UP TO 2022-23
1	7	9	11	12	14	15	16	17	18	
			(7-8-9-/+10)		(11-12-13)		(14*15)		(16+17)	
1966	2178431	0	2178431	0	2178431	4.50%	0	1960587	1960587	90
1967	1458243	11041	1447202	0	1447202	4.50%	0	1302482	1302482	90
1968	2800556	0	2800556	0	2800556	4.50%	0	2520500	2520500	90
1969	1810513	0	1810513	0	1810513	4.50%	0	1629462	1629462	90
1970	771699	0	771699	0	771699	4.50%	0	694529	694529	90
1971	987179	0	987179	0	987179	4.50%	0	888461	888461	90
1972	5525257	0	5525257	0	5525257	4.50%	0	4972732	4972732	90
1973	959253	4782	954472	0	954472	4.50%	0	859024	859024	90
1974	2449570	0	2449570	0	2449570	4.50%	0	2204613	2204613	90
1975	4836088	0	4836088	0	4836088	4.50%	0	4352479	4352479	90
1976	3341126	0	3341126	0	3341126	4.50%	0	3007014	3007014	90
1977	1161983	0	1161983	0	1161983	4.50%	0	1045785	1045785	90
1978	1167912	0	1167912	0	1167912	4.50%	0	1051121	1051121	90
1979	1100156	0	1100156	0	1100156	4.50%	0	990140	990140	90
1980	295799	0	295799	0	295799	4.50%	0	266216	266216	90
1981	5306352	0	5306352	0	5306352	4.50%	0	4775717	4775717	90
1982	5448053	79202	5368852	0	5368852	4.50%	0	4831966	4831966	90
1983	2994507	0	2994507	0	2994507	4.50%	0	2695057	2695057	90
1984	12601217	0	12601217	0	12601217	4.50%	0	11341096	11341096	90
1985	24498309	0	24498309	0	24498309	4.50%	0	22048478	22048478	90
1986	14049383	0	14049383	0	14049383	4.50%	0	12644445	12644445	90
1987	52050932	0	52050932	0	52050932	4.50%	0	46845839	46845839	90
1988	84562060	0	84562060	0	84562060	4.50%	0	76105854	76105854	90
1989	78131801	44158	78087644	0	78087644	4.50%	0	70278879	70278879	90
1990	48831730	303251	48528479	0	48528479	4.50%	0	43675631	43675631	90
1991	104264404	0	104264404	0	104264404	4.50%	0	93837964	93837964	90
1992	146276966	572376	145704590	0	145704590	4.50%	0	131134132	131134132	90
1993	178461846	2174407	176287439	0	176287439	4.50%	0	158658695	158658695	90
1994	186726970	662400	186064570	0	186064570	5.28%	0	167458112	167458112	90
1995	113316307	1542537	111773770	0	111773770	5.28%	0	100596393	100596393	90
1996	95894698	794709	95099988	0	95099988	5.28%	0	85589990	85589990	90
1997	98174235	530570	97643665	0	97643665	5.28%	0	87879299	87879299	90
1998	409380606	898695	408481911	0	408481911	5.28%	0	367633719	367633719	90
1999	144725536	0	144725536	0	144725536	5.28%	0	130252983	130252983	90
2000	51997151	152595	51844556	0	51844556	5.28%	0	46660100	46660100	90
2001	61263867	661407	60602460	0	60602460	5.28%	0	54542214	54542214	90
2002	88881350	1939143	86942207	0	86942207	5.28%	1043306	77204680	78247986	90
2003	179329147	392700	178936447	32700000	146236447	5.28%	7019349	124593453	131612802	90
2004	185534563	540500	184994063	57000000	127994063	5.28%	6758087	104443155	111201242	87
2005	210478018	0	210478018	41363000	169115018	5.28%	8929273	131909714	140838987	83
2006	207472113	310665	207161448	90000000	117161448	5.28%	6186124	87168117	93354242	80
2007	473416210	1697918	471718292	600000	471118292	5.28%	24875046	333551751	358426797	76
2008	384874536	3571991	381302545	16700000	364602545	5.28%	19251014	245012910	264263924	72
2009	218271780	0	218271780	2700000	215571780	5.28%	11382190	137103652	148485842	69
2010	328175487	0	328175487	0	328175487	5.28%	17327666	196905292	214232958	65
2011	227716134	0	227716134	0	227716134	5.28%	12023412	120234119	132257531	58
2012	136268674	0	136268674	0	136268674	5.28%	7194986	64754874	71949860	53
2013	168787484	0	168787484	0	168787484	5.28%	8911979	71295833	80207812	48
2014	228701478	0	228701478	0	228701478	5.28%	12075438	84528066	96603504	42
2015	189884676	0	189884676	0	189884676	5.28%	10025911	60155465	70181376	37
2016	231221455	0	231221455	0	231221455	5.28%	12208493	61042464	73250957	32
2017	173331522	0	173331522	0	173331522	5.28%	9151904	36607617	45759522	26
2018	224297319	0	224297319	0	224297319	5.28%	11842898	35528695	47371594	21
2019	323664652	0	323664652	70539232	253125420	5.28%	13365022	26730044	40095067	16
2020	189533998	0	189533998	0	189533998	5.28%	10007395	10007395	20014790	11
2021	188970073	0	189069147	0	189069147	5.28%	9982851	0	9982851	5
TOTAL :	6508611364	16885046	6491825392	311602232	6180223160		219562345	3756009003	3975571348	

DEPRECIATION FOR THE YEAR 2022-23

PAST : 1947 LIFE : 35 YEARS

TRANSFORMER

RATE OF DEP : 2.57 %

FROM 1994-95 LIFE : 25 YEARS RATE OF DEP : 3.60%

YEAR	BOOK VALUE AS ON 01.04.2021	IDC	WRITE OFF DURING THE YEAR 2021-22	BALANCE VALUE OF ASSETS	GOVT. GRANT	NET ASSETS VALUE AS ON 31.03.22	RATE OF DEP.	DEP. PROVISION FOR YEAR 2022-23	CUMM.DEP. PROVIDED UPTO 2021-22	CUMM. DEP. PROVIDED UPTO 2022-23	TOTAL % OF DEP PROVIDED UP TO 2022-23
1	7	8	9	11	12	14	15	16	17	18	
				(7-8-9-/+10)		(11-12-13)		(14*15)		(16+17)	
1948	118043	0	0	118043	0	118043	2.57%	0	106239	106239	90
1949	393459	0	0	393459	0	393459	2.57%	0	354113	354113	90
1950	35070	0	0	35070	0	35070	2.57%	0	31563	31563	90
1951	116886	0	0	116886	0	116886	2.57%	0	105197	105197	90
1952	77694	0	0	77694	0	77694	2.57%	0	69925	69925	90
1953	374990	0	0	374990	0	374990	2.57%	0	337491	337491	90
1954	22531	0	0	22531	0	22531	2.57%	0	20278	20278	90
1955	-2211537	0	0	-2211537	0	-2211537	2.57%	0	-1990383	-1990383	90
1956	0	0	0	0	0	0	2.57%	0	0	0	#DIV/0!
1957	364808	0	0	364808	0	364808	2.57%	0	328327	328327	90
1958	-756981	0	0	-756981	0	-756981	2.57%	0	-681283	-681283	90
1959	52171	0	0	52171	0	52171	2.57%	0	46954	46954	90
1960	1139739	0	0	1139739	0	1139739	2.57%	0	1025765	1025765	90
1961	-2599572	0	0	-2599572	0	-2599572	2.57%	0	-2339615	-2339615	90
1962	141426	0	0	141426	0	141426	2.57%	0	127283	127283	90
1963	183135	0	22950	160185	0	160185	2.57%	0	144167	144167	90
1964	114126	0	0	114126	0	114126	2.57%	0	102713	102713	90
1965	-183484	0	0	-183484	0	-183484	2.57%	0	-165136	-165136	90
1966	309882	0	0	309882	0	309882	2.57%	0	278894	278894	90
1967	686285	0	0	686285	0	686285	2.57%	0	617656	617656	90
1968	1351913	0	26200	1325713	0	1325713	2.57%	0	1193142	1193142	90
1969	1380151	0	0	1380151	0	1380151	2.57%	0	1242136	1242136	90
1970	115387	0	0	115387	0	115387	2.57%	0	103848	103848	90
1971	670727	0	0	670727	0	670727	2.57%	0	603655	603655	90
1972	307610	0	0	307610	0	307610	2.57%	0	276849	276849	90
1973	0	0	0	0	0	0	2.57%	0	0	0	0
1974	1369818	0	0	1369818	0	1369818	2.57%	0	1232836	1232836	90
1975	1344384	0	0	1344384	0	1344384	2.57%	0	1209946	1209946	90
1976	470	0	0	470	0	470	2.57%	0	423	423	90
1977	365036	0	0	365036	0	365036	2.57%	0	328533	328533	90
1978	1300129	0	0	1300129	0	1300129	2.57%	0	1170116	1170116	90
1979	413420	0	163172	250247	0	250247	2.57%	0	225223	225223	90
1980	0	0	0	0	0	0	2.57%	0	0	0	#DIV/0!
1981	8062616	0	191099	7871517	0	7871517	2.57%	0	7084365	7084365	90
1982	5664139	0	0	5664139	0	5664139	2.57%	0	5097728	5097728	90
1983	3563945	0	285526	3278419	0	3278419	2.57%	0	2950577	2950577	90
1984	2304248	0	70465	2233783	0	2233783	2.57%	0	2010404	2010404	90
1985	3593436	0	0	3593436	0	3593436	5.28%	0	3234092	3234092	90
1986	7129357	0	80165	7049192	0	7049192	5.28%	0	6344273	6344273	90
1987	3653031	0	0	3653031	0	3653031	5.28%	0	3287728	3287728	90
1988	1693695	0	1357318	336377	0	336377	5.28%	0	302739	302739	90
1989	18334541	0	243800	18090741	0	18090741	5.28%	0	16281667	16281667	90
1990	23967558	0	503000	23464558	0	23464558	5.28%	0	21118102	21118102	90
1991	11127540	0	209273	10918268	0	10918268	5.28%	0	9826441	9826441	90
1992	64079744	0	2280246	61799498	0	61799498	5.28%	0	55619549	55619549	90
1993	65036653	0	1262700	63773953	0	63773953	5.28%	0	57396557	57396557	90
1994	40619896	0	617618	40002278	0	40002278	5.28%	0	36002050	36002050	90
1995	32322691	0	0	32322691	0	32322691	5.28%	0	29090422	29090422	90
1996	216504197	0	1149503	215354695	0	215354695	5.28%	0	193819225	193819225	90
1997	130511568	0	1144860	129366708	0	129366708	5.28%	0	116430037	116430037	90
1998	209522333	0	0	209522333	0	209522333	5.28%	0	188570100	188570100	90
1999	103861998	0	0	103861998	0	103861998	5.28%	0	93475798	93475798	90
2000	75399236	0	939800	74459436	0	74459436	5.28%	0	67013492	67013492	90
2001	88882526	0	1597990	87284536	0	87284536	5.28%	0	78556083	78556083	90
2002	106219852	0	1276277	104943575	0	104943575	5.28%	1259323	93189895	94449218	90
2003	64501802	0	0	64501802	11800000	52701802	5.28%	2529686	44901935	47431622	90
2004	146735900	0	0	146735900	44800000	101935900	5.28%	5382216	83179694	88561910	87
2005	102367262	0	619900	101747362	20681500	81065862	5.28%	4280278	63231372	67511650	83
2006	128614466	0	0	128614466	55000000	73614466	5.28%	3886844	54769163	58656007	80
2007	445257553	0	0	445257553	600000	444657553	5.28%	23477919	314817548	338295466	76
2008	246928535	0	0	246928535	10700000	236228535	5.28%	12472867	158745576	171218442	72
2009	178813794	0	0	178813794	2200000	176613794	5.28%	9325208	112326373	121651581	69
2010	255598811	0	0	255598811	0	255598811	5.28%	13495617	153359287	166854904	65
2011	111382068	0	0	111382068	0	111382068	5.28%	5880973	58809732	64690705	58
2012	166905888	0	0	166905888	0	166905888	5.28%	8812631	79313678	88126309	53
2013	139163531	0	0	139163531	0	139163531	5.28%	7347834	58782675	66130510	48
2014	256664275	0	0	256664275	0	256664275	5.28%	13551874	94863116	108414990	42
2015	220889720	0	0	220889720	0	220889720	5.28%	11662977	69977863	81640841	37
2016	107130646	0	0	107130646	0	107130646	5.28%	5656498	28282491	33938989	32
2017	126712854	0	0	126712854	0	126712854	5.28%	6690439	26761755	33452193	26
2018	253396310	0	0	253396310	53143197	200253113	5.28%	10573364	31720093	42293457	21
2019	429539880	0	0	429539880	155875654	273664226	5.28%	14449471	28898942	43348413	16
2020	171989719	0	0	171989719	0	171989719	5.28%	9081057	9081057	18162114	11
2021	144821916	99273	0	144921189	0	144921189	5.28%	7651839	0	7651839	5
TOTAL :	4926467446	99273	14041861	4912524858	354800351	4557724507		177468915	2564630532	2742099446	

DEPRECIATION FOR THE YEAR 202: MERC ORDER : LIFE 6 YEARS LIFE : 12 YEARS

SCADA

FROM 2011-12 RATE OF DEP :7.50%

RATE OF DEP : 15 %

YEAR	BOOK VALUE AS ON 01.04.2021	BALANCE VALUE OF ASSETS	GOVT. GRANT	NET ASSETS VALUE AS ON 31.03.22	RATE OF DEP.	DEP. PROVISION FOR YEAR 2022-23	CUMM.DEP. PROVIDED UPTO 2021-22	CUMM. DEP. PROVIDED UPTO 2022-23	TOTAL % OF DEP PROVIDED UP TO 2022-23
1	7	11	12	14	15	16	17	18	
		(7-8-9-/+10)		(11-12-13)		(14*15)		(16+17)	
2001	113465411	113465411	0	113465411	7.50%	0	102118870	102118870	90
2002	42372935	42372935	0	42372935	7.50%	0	38135642	38135642	90
2003	0	0	0	0	15%	0	0	0	#DIV/0!
2004	0	0	0	0	15%	0	0	0	#DIV/0!
2005	0	0	0	0	15%	0	0	0	#DIV/0!
2006	0	0	0	0	15%	0	0	0	#DIV/0!
2007	0	0	0	0	15%	0	0	0	#DIV/0!
2008	0	0	0	0	15%	0	0	0	#DIV/0!
2009	15597509	15597509	0	15597509	15%	0	14037758	14037758	90
2010	29964040	29964040	0	29964040	15%	0	26967636	26967636	90
2011	6575457	6575457	0	6575457	15%	0	5917911	5917911	90
2012	174384544	174384544	0	174384544	15%	0	156946090	156946090	90
2013	600000	600000	0	600000	15%	0	540000	540000	90
2014	25090125	25090125	0	25090125	15%	0	22581113	22581113	90
2015	8297243	8297243	0	8297243	15%	0	7467519	7467519	90
2016	21909143	21909143	0	21909143	15%	3286372	16431858	19718229	90
2017	19953228	19953228	0	19953228	15%	2992984	11971937	14964921	75
2018	0	0	0	0	15%	0	0	0	#DIV/0!
2019	-89586	-89586	0	-89586	15%	-13438	-26876	-40314	45
2020	0	0	0	0	15%	0	0	0	#DIV/0!
2021	0	0	0	0	15%	0	0	0	#DIV/0!
TOTAL :	458120050	458120050	0	458120050		6265918	403089457	409355375	

DEPRECIATION FOR THE YEAR 2022-23 LIFE : 10 YEARS

BATTERIES

22-23 RATE OF DEP : 9 %

18% FROM 1994-95 LIFE : 5 YEARS RATE OF DEP : 18%

YEAR	BOOK VALUE AS ON 01.04.2021	WRITE OFF DURING THE YEAR 2021-22	BALANCE VALUE OF ASSETS	GOVT. GRANT	NET ASSETS VALUE AS ON 31.03.22	RATE OF DEP.	DEP. PROVISION FOR YEAR 2022-23	CUMM. DEP. PROVIDED UPTO 2021-22	CUMM. DEP. PROVIDED UPTO 2022-23	TOTAL % OF DEP PROVIDED UP TO 2022-23
1	7	9	11	12	14	15	16	17	18	
			(7-8-9-/+10)		(11-12-13)		(14*15)		(16+17)	
1989	2055	0	2055	0	2055	9%	0	1850	1850	90
1990	428864	0	428864	0	428864	9%	0	385978	385978	90
1991	0	0	0	0	0	9%	0	0	0	#DIV/0!
1992	395	0	395	0	395	9%	0	356	356	90
1993	106722	0	106722	0	106722	9%	0	96050	96050	90
1994	0	0	0	0	0	18%	0	0	0	#DIV/0!
1995	607422.25	0	607422	0	607422	18%	0	546680	546680	90
1996	44570	0	44570	0	44570	18%	0	40113	40113	90
1997	390674	0	390674	0	390674	18%	0	351607	351607	90
1998	371549	0	371549	0	371549	18%	0	334394	334394	90
1999	4921	0	4921	0	4921	18%	0	4429	4429	90
2000	1282890	0	1282890	0	1282890	18%	0	1154601	1154601	90
2001	6654785	293120	6361665	0	6361665	18%	0	5725499	5725499	90
2002	510007	149058	360950	0	360950	18%	0	324855	324855	90
2003	1847699.5	0	1847700	0	1847700	18%	0	1662930	1662930	90
2004	3159591	0	3159591	0	3159591	18%	0	2843632	2843632	90
2005	1881947	0	1881947	0	1881947	18%	0	1693752	1693752	90
2006	4003238	144063	3859176	0	3859176	18%	0	3473258	3473258	90
2007	2728145	0	2728145	0	2728145	18%	0	2455331	2455331	90
2008	643820	0	643820	0	643820	18%	0	579438	579438	90
2009	401150	0	401150	0	401150	5.28%	0	361035	361035	90
2010	8941196	0	8941196	0	8941196	5.28%	107294	7939782	8047076	90
2011	7142155	0	7142155	0	7142155	5.28%	377106	3771058	4148164	58
2012	9167826	230000	8937826	0	8937826	5.28%	471917	4247255	4719172	53
2013	5932726	0	5932726	0	5932726	5.28%	313248	2505983	2819231	48
2014	15654021	0	15654021	0	15654021	5.28%	826532	5785726	6612258	42
2015	11613220	0	11613220	0	11613220	5.28%	613178	3679068	4292246	37
2016	3822093	0	3822093	0	3822093	5.28%	201807	1009033	1210839	32
2017	6303908	0	6303908	0	6303908	5.28%	332846	1331385	1664232	26
2018	1442032	0	1442032	0	1442032	5.28%	76139	228418	304557	21
2019	14400851	0	14400851	150851	14250000	5.28%	752400	1504800	2257200	16
2020	9009137	0	9009137	0	9009137	5.28%	475682	475682	951365	11
2021	13299583	0	13299583	0	13299583	18.00%	2393925	0	2393925	18
TOTAL :	131799193	816240	130982953	150851	130832102		6942075	#######	#######	

DEPRECIATION FOR THE YEAR 202 MERC ORDER : LIFE 17 YEARS LIFE : 10 YEARS

CAPACITORS

FROM 2011-12 RATE OF DEP :9 %

RATE OF DEP : 5.28 %

YEAR	BOOK VALUE AS ON 01.04.2021	IDC	BALANCE VALUE OF ASSETS	GOVT. GRANT	NET ASSETS VALUE AS ON 31.03.22	RATE OF DEP.	DEP. PROVISION FOR YEAR 2022-23	CUMM.DEP. PROVIDED UPTO 2021-22	CUMM. DEP. PROVIDED UPTO 2022-23	TOTAL % OF DEP PROVIDED UP TO 2022-23
1	7	8	11	12	14	15	16	17	18	
			(7-8-9-/+10)		(11-12-13)		(14*15)		(16+17)	
2001	0	0	0	0	0	9%	0	0	0	0
2002	3245920	0	3245920	0	3245920	9%	0	2921328	2921328	90
2003	4721610.8	0	4721611	0	4721611	9%	0	4249450	4249450	90
2004	14502387	0	14502387	0	14502387	9%	0	#######	#######	90
2005	647939	0	647939	0	647939	5.28%	0	583145	583145	90
2006	11319	0	11319	0	11319	5.28%	0	10187	10187	90
2007	19009834	0	19009834	0	19009834	5.28%	0	#######	#######	90
2008	3976507	0	3976507	0	3976507	5.28%	47718	3531138	3578856	90
2009	3156963	0	3156963	0	3156963	5.28%	166688	2519256	2685944	85
2010	16089136	0	16089136	0	16089136	5.28%	849506	#######	#######	76
2011	16316545	0	16316545	0	16316545	5.28%	861514	8615136	9476649	58
2012	6136188	0	6136188	0	6136188	5.28%	323991	2915916	3239907	53
2013	6053230	0	6053230	0	6053230	5.28%	319611	2556884	2876495	48
2014	10728845	0	10728845	0	10728845	5.28%	566483	3965381	4531864	42
2015	10432479	0	10432479	0	10432479	5.28%	550835	3305009	3855844	37
2016	17820039	0	17820039	0	17820039	5.28%	940898	4704490	5645388	32
2017	8604750	0	8604750	0	8604750	5.28%	454331	1817323	2271654	26
2018	3741572	0	3741572	0	3741572	5.28%	197555	592665	790220	21
2019	10875101	0	10875101	3615733	7259368	5.28%	383295	766589	1149884	16
2020	3326469	0	3326469	0	3326469	5.28%	175638	175638	351275	11
2021	7513342	89782	7603124	0	7603124	5.28%	401445	0	401445	5
TOTAL :	166910176	89782	166999958	3615733	163384225		6239506	#######	#######	

DEPRECIATION FOR TH MERC ORDER : LIFE 17 YEARS LIFE : 7 YEARS

D.E.A. ON HIF FROM 2011-12 RATE OF DEP : 12.86 %

RATE OF DEP : 5.28 %

YEAR	BOOK VALUE AS ON 01.04.2021	BALANCE VALUE OF ASSETS	GOVT. GRANT	NET ASSETS VALUE AS ON 31.03.22	RATE OF DEP.	DEP. PROVISION FOR YEAR 2022-23	CUMM.DEP. PROVIDED UPTO 2021-22	CUMM. DEP. PROVIDED UPTO 2022-23	TOTAL % OF DEP PROVIDED UP TO 2022-23
1	7	11	12	14	15	16	17	18	
		(7-8-9-/+10)		(11-12-13)		(14*15)		(16+17)	
1986	77814	77814	0	77814	12.86%	0	70033	70033	90
1987	0	0	0	0	12.86%	0	0	0	#DIV/0!
1988	0	0	0	0	12.86%	0	0	0	#DIV/0!
1989	176571	176571	0	176571	12.86%	0	158914	158914	90
1990	66151	66151	0	66151	12.86%	0	59536	59536	90
1991	1628	1628	0	1628	12.86%	0	1465	1465	90
1992	-814	-814	0	-814	12.86%	0	-733	-733	90
1993	1154	1154	0	1154	12.86%	0	1039	1039	90
1994	0	0	0	0	12.86%	0	0	0	#DIV/0!
1995	0	0	0	0	12.86%	0	0	0	#DIV/0!
1996	0	0	0	0	12.86%	0	0	0	#DIV/0!
1997	0	0	0	0	12.86%	0	0	0	#DIV/0!
1998	0	0	0	0	12.86%	0	0	0	#DIV/0!
1999	0	0	0	0	12.86%	0	0	0	#DIV/0!
2000	0	0	0	0	12.86%	0	0	0	#DIV/0!
2001	0	0	0	0	12.86%	0	0	0	#DIV/0!
2002	0	0	0	0	12.86%	0	0	0	#DIV/0!
2003	0	0	0	0	12.86%	0	0	0	#DIV/0!
2004	0	0	0	0	12.86%	0	0	0	#DIV/0!
2005	0	0	0	0	12.86%	0	0	0	#DIV/0!
2006	97425	97425	0	97425	12.86%	0	87683	87683	90
2007	0	0	0	0	12.86%	0	0	0	#DIV/0!
2008	0	0	0	0	12.86%	0	0	0	#DIV/0!
2009	0	0	0	0	12.86%	0	0	0	#DIV/0!
2010	0	0	0	0	12.86%	0	0	0	#DIV/0!
2011	0	0	0	0	5.28%	0	0	0	#DIV/0!
2012	0	0	0	0	5.28%	0	0	0	#DIV/0!
2013	0	0	0	0	5.28%	0	0	0	#DIV/0!
2014	0	0	0	0	5.28%	0	0	0	#DIV/0!
2015	0	0	0	0	5.28%	0	0	0	#DIV/0!
2016	0	0	0	0	5.28%	0	0	0	#DIV/0!
2017	0	0	0	0	5.28%	0	0	0	#DIV/0!
2018	0	0	0	0	5.28%	0	0	0	#DIV/0!
2019	0	0	0	0	5.28%	0	0	0	#DIV/0!
2020	0	0	0	0	5.28%	0	0	0	#DIV/0!
2021	0	0	0	0	5.28%	0	0	0	#DIV/0!
TOTAL :	419929	419929	0	419929		0	377936	377936	

DEPRECIATION FOR TH MERC ORDER : LIFE 17 YEARS LIFE : 1 YEARS

LOOSE TOOLS FROM : 2011-12 RATE OF DEP : 90 %

RATE OF DEP.: 5.28%

YEAR	BOOK VALUE AS ON 01.04.2021	BALANCE VALUE OF ASSETS	NET ASSETS VALUE AS ON 31.03.22	RATE OF DEP.	DEP. PROVISION FOR YEAR 2022-23	CUMM.DEP. PROVIDED UPTO 2021-22	CUMM. DEP. PROVIDED UPTO 2022-23	TOTAL % OF DEP PROVIDED UP TO 2022-23
1	7	11	14	15	16	17	18	
		(7-8-9-/+10)	(11-12-13)		(14*15)		(16+17)	
1980	207131	207131	207131	90%	0	186418	186418	90
1981	0	0	0	90%	0	0	0	#DIV/0!
1982	5080	5080	5080	90%	0	4572	4572	90
1983	1069016	1069016	1069016	90%	0	962114	962114	90
1984	-1077774	-1077774	-1E+06	90%	0	-969997	-969997	90
1985	57103	57103	57103	90%	0	51393	51393	90
1986	16290	16290	16290	90%	0	14661	14661	90
1987	54640	54640	54640	90%	0	49176	49176	90
1988	95093	95093	95093	90%	0	85584	85584	90
1989	40883	40883	40883	90%	0	36795	36795	90
1990	94539	94539	94539	90%	0	85085	85085	90
1991	4343601	4343601	4343601	90%	0	3909241	3909241	90
1992	30747	30747	30747	90%	0	27672	27672	90
1993	-5101356	-5101356	-5E+06	90%	0	-4591220	########	90
1994	35034	35034	35034	90%	0	31531	31531	90
1995	-68947	-68947	-68947	90%	0	-62052	-62052	90
1996	120515	120515	120515	90%	0	108464	108464	90
1997	82983	82983	82983	90%	0	74685	74685	90
1998	-72471	-72471	-72471	90%	0	-65224	-65224	90
1999	303622	303622	303622	90%	0	273260	273260	90
2000	206852	206852	206852	90%	0	186167	186167	90
2001	51500	51500	51500	90%	0	46350	46350	90
2002	393168	393168	393168	90%	0	353851	353851	90
2003	84857	84857	84857	90%	0	76371	76371	90
2004	7218	7218	7218	90%	0	6496	6496	90
2005	0	0	0	90%	0	0	0	#DIV/0!
2006	0	0	0	90%	0	0	0	#DIV/0!
2007	0	0	0	90%	0	0	0	#DIV/0!
2008	0	0	0	90%	0	0	0	#DIV/0!
2009	0	0	0	90%	0	0	0	#DIV/0!
2010	0	0	0	90%	0	0	0	#DIV/0!
2011	0	0	0	5.28%	0	0	0	#DIV/0!
2012	0	0	0	5.28%	0	0	0	#DIV/0!
2013	0	0	0	5.28%	0	0	0	#DIV/0!
2014	0	0	0	5.28%	0	0	0	#DIV/0!
2015	0	0	0	5.28%	0	0	0	#DIV/0!
2016	0	0	0	5.28%	0	0	0	#DIV/0!
2017	0	0	0	5.28%	0	0	0	#DIV/0!
2018	0	0	0	5.28%	0	0	0	#DIV/0!
2019	0	0	0	5.28%	0	0	0	#DIV/0!
2020	0	0	0	5.28%	0	0	0	#DIV/0!
2021	0	0	0	5.28%	0	0	0	#DIV/0!
TOTAL :	979324	979324	979324		0	881392	881392	

DEPRECIATION FOR THE YEAR 2022-23

LIFE : 10 YEARS

OFFICE EQUIPMENTS

RATE OF DEP : 9 %

FROM 1994-95 LIFE : 18 YEARS RATE OF DEP : 5%

YEAR	BOOK VALUE AS ON 01.04.2021	WRITE OFF DURING THE YEAR 2022-23	BALANCE VALUE OF ASSETS	NET ASSETS VALUE AS ON 31.03.22	RATE OF DEP.	DEP. PROVISION FOR YEAR 2022-23	CUMM.DEP. PROVIDED UPTO 2021-22	CUMM. DEP. PROVIDED UPTO 2022-23	TOTAL % OF DEP PROVIDED UP TO 2022-23
1	7	9	11	14	15	16	17	18	
			(7-8-9-/+10)	(11-12-13)		(14*15)		(16+17)	
1981	0	0	0	0	9%	0	0	0	#DIV/0!
1982	109008	0	109008	109008	9%	0	98107	98107	90
1983	39013	0	39013	39013	9%	0	35112	35112	90
1984	32576	0	32576	32576	9%	0	29318	29318	90
1985	204157	0	204157	204157	9%	0	183741	183741	90
1986	33187.46	0	33187	33187	9%	0	29868	29868	90
1987	191169.07	0	191169	191169	9%	0	172052	172052	90
1988	948.81	0	949	949	9%	0	854	854	90
1989	0	0	0	0	9%	0	0	0	#DIV/0!
1990	0	0	0	0	9%	0	0	0	#DIV/0!
1991	110075	0	110075	110075	9%	0	99068	99068	90
1992	347849	0	347849	347849	9%	0	313064	313064	90
1993	0	0	0	0	5%	0	0	0	#DIV/0!
1994	0	0	0	0	5%	0	0	0	#DIV/0!
1995	0	0	0	0	5%	0	0	0	#DIV/0!
1996	0	0	0	0	5%	0	0	0	#DIV/0!
1997	2352	0	2352	2352	5%	0	2117	2117	90
1998	122352	0	122352	122352	6.33%	0	110117	110117	90
1999	674564.41	0	674564	674564	6.33%	0	607107	607107	90
2000	23096	0	23096	23096	6.33%	0	20787	20787	90
2001	0	0	0	0	6.33%	0	0	0	#DIV/0!
2002	2717	0	2717	2717	6.33%	0	2445	2445	90
2003	3397819	0	3397819	3397819	6.33%	0	3058037	3058037	90
2004	2544858	0	2544858	2544858	6.33%	0	2290373	2290373	90
2005	3258371	338000	2920371	2920371	6.33%	0	2628334	2628334	90
2006	410000	0	410000	410000	6.33%	0	369000	369000	90
2007	27800	0	27800	27800	6.33%	473	24547	25020	90
2008	0	0	0	0	6.33%	0	0	0	#DIV/0!
2009	1335726	0	1335726	1335726	6.33%	84551	1045873	1130425	85
2010	3156042	0	3156042	3156042	6.33%	199777	2313379	2513156	80
2011	503655	14589	489066	489066	6.33%	30958	309579	340537	70
2012	548165	0	548165	548165	6.33%	34699	312290	346988	63
2013	6550985	0	6550985	6550985	6.33%	414677	3317419	3732096	57
2014	268993	0	268993	268993	6.33%	17027	119191	136218	51
2015	181304	0	181304	181304	6.33%	11477	68859	80336	44
2016	3034985	0	3034985	3034985	6.33%	192115	960573	1152687	38
2017	0	0	0	0	6.33%	0	0	0	#DIV/0!
2018	109540	0	109540	109540	6.33%	6934	20802	27736	25
2019	0	0	0	0	6.33%	0	0	0	#DIV/0!
2020	0	0	0	0	6.33%	0	0	0	#DIV/0!
2021	34482	0	34482	34482	6.33%	2183	0	2183	6
TOTAL :	27255789	352589	26903200	26903200		994871	#######	#######	

SUMMARY OF PROVISION OF DEPRECIATION ON ASSETS OF SUPPLY DIVISION
FOR THE YEAR 2022-23

ASSETS DESCREPTION	BOOK VALUE AS ON 01.04.2021	IDC	WRITE OFF DURING THE YEAR 2021-22	BALANCE VALUE OF ASSETS	GOVT. GRANT	CABEL CAPITAL CONN. FEES	NET ASSETS VALUE AS ON 31.03.22	DEP. PROVISION FOR YEAR 2022-23
1	7		8	10	11	12	13	15
				(7-8-/+9)			(10-11-12)	(13*14)
LAND	22953418	0	0	22953418	0	0	22953418	0
BUILDING	824157938	0	44562	824113375	0	0	824113375	26445357
BLDG CASH COLLN PORT CWK	149466	0	0	149466	0	0	149466	4229
MOTOR VEHICLE	138266695	0	0	138266695	0	0	138266695	2824505
MACHINE TOOLS	397210517	0	396071	396814446	0	0	396814446	18158435
FURNITURE	27069470	0	3105	27066365	0	0	27066365	427957
ROOM A.C.	24661923	0	169148	24492775	0	0	24492775	996721
PERSONAL COMPUTER	190686180	0	2600445	188085735	0	0	188085735	7944019
ELECTRONIC EQUIP	5380858	0	0	5380858	0	0	5380858	163162
ELECTRONIC EQUIP SEPRATED M.T.	27419074	0	0	27419074	0	0	27419074	1556812
CYCLOSTYLE MACH	1489499	0	60949	1428550	0	0	1428550	34486
CABLE & MAINS	12000780104	11871	11205874	11989586101	384979655	1473798454	10130807992	442971330
DIST PILLARS	397511245	0	2459930	395051315	8101520	0	386949795	14614104
ST LTG LAMPS	1622825786	0	0	1622825786	259545591	0	1363280195	51784998
METERS (CONVENTIONAL)	413795644	0	58636288	355159356	50225000	0	304934356	2477739
METERS (ELECTRONICS)	1397214247	0	87183623	1310030624	148887387	0	1161143237	87755440
BUSINESS PROC AUTOMATION	500333703	0	0	500333703	0	0	500333703	1751046
SWITCHGEARS	6508611364	99074	16885046	6491825392	311602232	0	6180223160	219562345
TRANSFORMER	4926467446	99273	14041861	4912524858	354800351	0	4557724507	177468915
SCADA	458120050	0	0	458120050	0	0	458120050	6265918
BATTERIES	131799193	0	816240	130982953	150851	0	130832102	6942075
CAPACITORS	166910176	89782	0	166999958	3615733	0	163384225	6239506
DEA ON HIRE	419929	0	0	419929	0	0	419929	0
LOOSE TOOLS	979324	0	0	979324	0	0	979324	0
OFFICE EQUIPMENTS	27255789	0	352589	26903200	0	0	26903200	994871
TOTAL :	30212469039	300000	194855732	30017913307	1521908320	1473798454	27022206533	1077383968

DETAILS OF E-6 WISE ASSETS GROUPING - SUPPLY DIVISION

DEPRECITION PROVISION FOR THE YEAR 2022-23

ASSETS DESCREPTION	BOOK VALUE AS ON 01.04.2021	IDC	WRITE OFF DURING THE YEAR 2021-22	BALANCE VALUE OF ASSETS	GOVT. GRANT	CABEL CAPITAL CONN. FEES	NET ASSETS VALUE AS ON 31.03.22	DEP. PROVISION FOR YEAR 2022-23
LAND	**22953418**	**0**	**0**	**22953418**	**0**	**0**	**22953418**	**0**
BUILDING	824157938	0	44562	824113375	0	0	824113375	26445357
BLDG CASH COLL CHOK	149466	0	0	149466	0	0	149466	4229
BUILDINGS	**824307404**	**0**	**44562**	**824262841**	**0**	**0**	**824262841**	**26449586**
BUSINESS PROCESSH AUTOMATION	500333703	0	0	500333703	0	0	500333703	1751046
SWITCHGEARS	6508611364	99074	16885046	6491825392	311602232	0	6180223160	219562345
TRANSFORMER	4926467446	99273	14041861	4912524858	354800351	0	4557724507	177468915
SCADA	458120050	0	0	458120050	0	0	458120050	6265918
BATTERIES	131799193	0	816240	130982953	150851	0	130832102	6942075
CAPACITORS	166910176	89782	0	166999958	3615733	0	163384225	6239506
PLANT & MACHINERY	**12692241932**	**288129**	**31743147**	**12660786914**	**670169167**	**0**	**11990617747**	**418229804**
CABLE & MAINS	12000780104	11871	11205874	11989586101	384979655	1473798454	10130807992	442971330
DIST PILLARS	397511245	0	2459930	395051315	8101520	0	386949795	14614104
CABLE & MAINS	**12398291349**	**11871**	**13665804**	**12384637416**	**393081175**	**1473798454**	**10517757787**	**457585434**
METERS (CONVENTIONAL)	413795644	0	58636288	355159356	50225000	0	304934356	2477739
METERS (ELECTRONICS)	1397214247	0	87183623	1310030624	148887387	0	1161143237	87755440
METERS AND INSTALLATIONS	**1811009891**	**0**	**145819911**	**1665189980**	**199112387**	**0**	**1466077593**	**90233178**
STREET LIGHTING LAMPS	**1622825786**	**0**	**0**	**1622825786**	**259545591**	**0**	**1363280195**	**51784998**
D.E.A. ON HIRE	**419929**	**0**	**0**	**419929**	**0**	**0**	**419929**	**0**
MOTOR VEHICLES	**138266695**	**0**	**0**	**138266695**	**0**	**0**	**138266695**	**2824505**
MACHINE TOOLS	397210517	0	396071	396814446	0	0	396814446	18158435
ELECTRONIC EQUIP SEPRATED M.T.	27419074	0	0	27419074	0	0	27419074	1556812
LOOSE TOOLS	979324	0	0	979324	0	0	979324	0
TOOLS AND EQUIPMENTS	**425608915**	**0**	**396071**	**425212844**	**0**	**0**	**425212844**	**19715246**
FURNITURE	27069470	0	3105	27066365	0	0	27066365	427957
ROOM A.C.	24661923	0	169148	24492775	0	0	24492775	996721
PERSONAL COMPUTER	190686180	0	2600445	188085735	0	0	188085735	7944019
ELECTRONIC EQUIP	5380858	0	0	5380858	0	0	5380858	163162
CYCLOSTYLE MACH	1489499	0	60949	1428550	0	0	1428550	34486
OFFICE EQUIPMENTS	27255789	0	352589	26903200	0	0	26903200	994871
FURNITURE AND OFFICE EQUIPMENTS	**276543720**	**0**	**3186236**	**273357483**	**0**	**0**	**273357483**	**10561216**
TOTAL :	**30212469039**	**300000**	**194855732**	**30017913307**	**1521908320**	**1473798454**	**27022206533**	**1077383968**

SUMMARY OF DEPRECIATION CHARGED ON ASSETS OF SUPPLY DIVISION
DURING FINANCIAL YEAR 2022-23

ASSETS DESCREPTION	BOOK VALUE AS ON 01.04.2021	BALANCE VALUE OF ASSETS (after w/off & other adjustments)	NET ASSETS VALUE AS ON 31.03.21 (after GOVT. grant & Capital conn fees	DEP. CHARGED FOR YEAR 2022-23
1	7	10	13	15
		(7-8-/+9)	(10-11-12)	(13*14)
LAND	22953418	22953418	22953418	0
BUILDING	824157938	824113375	824113375	26445357
BLDG CASH COLLN PORT CWK	149466	149466	149466	4229
MOTOR VEHICLE	138266695	138266695	138266695	2824505
MACHINE TOOLS	397210517	396814446	396814446	18158435
FURNITURE	27069470	27066365	27066365	427957
ROOM A.C.	24661923	24492775	24492775	996721
PERSONAL COMPUTER	190686180	188085735	188085735	7944019
ELECTRONIC EQUIP	5380858	5380858	5380858	163162
ELECTRONIC EQUIP SEPRATED M.T.	27419074	27419074	27419074	1556812
CYCLOSTYLE MACH	1489499	1428550	1428550	34486
CABLE & MAINS	12000780104	11989586101	10130807992	442971330
DIST PILLARS	397511245	395051315	386949795	14614104
ST LTG LAMPS	1622825786	1622825786	1363280195	51784998
METERS (CONVENTIONAL)	413795644	355159356	304934356	2477739
METERS (ELECTRONICS)	1397214247	1310030624	1161143237	87755440
BUSINESS PROC AUTOMATION	500333703	500333703	500333703	1751046
SWITCHGEARS	6508611364	6491825392	6180223160	219562345
TRANSFORMER	4926467446	4912524858	4557724507	177468915
SCADA	458120050	458120050	458120050	6265918
BATTERIES	131799193	130982953	130832102	6942075
CAPACITORS	166910176	166999958	163384225	6239506
DEA ON HIRE	419929	419929	419929	0
LOOSE TOOLS	979324	979324	979324	0
OFFICE EQUIPMENTS	27255789	26903200	26903200	994871
TOTAL : OF SUPPLY DIVISION	30212469039	30017913307	27022206533	1077383968
ADD : SHARE OF GEN. ADM.@50% (31292622.00)				15646311
TOTAL :				1093030279

Received Government Grant distributed proportionatly in the year 2020-2021

IPDS Grant Received Rs.568813229/- Less 189900000/- consider in 2019-20
balance Grant Rs.378913229/- Distributed Proportionatly to Concern Assets.

				378913229.00
ASSETS		IPDS EXP		PROPORTIONATE
METERS ELECTONIC		62540000.00	62540000.00	32826592.05
CABLE	2910	99280978.73		
	2911	35632921.60		
	2913	207885.42		
	2935	45350423.75		
	2924	37597726.00	218069935.50	114462628.9
TRANSFORMER	2903	252798326.45		
	2930	43129381.34	295927707.79	155329359.4
SWITCHGEAR	2901	32449908.60		
	2902	17250068.76		
	2904	57611303.99		
	2905	9223426.77		
	2908	2775112.00		
	2914	293321.79		
	2915	12007614.00		
	2921	0.00		
	2931	2306971.00	133917726.91	70292014.54
CAPACITOR	2906	6864418.00	6864418.00	3603061.23
BATTERIES	2907	2816388.00	2816388.00	1478292.61
PILARS	2932	1647575.81		
	2937	107612.95	1755188.76	921280.227
			721891364.96	378913229.00

ANNEXURE-12

PART-B

DEPRECIATION FOR THE YEAR 2013-14

LAND

YEAR	BOOK VALUE AS ON 31.03.2013	WRITE OFF DURING THE YEAR	ASSET TRANSFER	BALANCE VALUE OF ASSETS	GOVT. GRANT	NET ASSETS VALUE AS ON 31.03.13	RATE OF DEP.	DEP. PROVISION FOR YEAR 2013-14	CUMM.DEP. PROVIDED UPTO 2012-13	CUMM. DEP. PROVIDED UPTO 2013-14	REMARK
1	7	8	9	10	11	13	14	15	16	17	
				(7-8-/+9)		(10-11-12)		(13*14)		(16+15)	
TOTAL :	0	0	0	0	0	0		0	0	0	

DEPRECIATION FOR THE YEAR 2022-23

MERC ORDER : LIFE 27 YEARS

LIFE : 45 YEARS

BUILDING

FROM : 2011-12

RATE OF DEP : 2%

RATE OF DEP : 3.34%

YEAR	BOOK VALUE AS ON 31.03.2022	WRITE OFF DURING THE YEAR	BALANCE VALUE OF ASSETS	GOVT. GRANT	NET ASSETS VALUE AS ON 31.03.22	RATE OF DEP.	DEP. PROVISION FOR YEAR 2022-23	CUMM.DEP. PROVIDED UPTO 2021-22	CUMM. DEP. PROVIDED UPTO 2022-23	TOTAL % OF DEP PROVIDED UP TO 2022
1	7	8	10	11	13	14	15	16	17	
			(7-8-/+9)		(10-11-12)		(13*14)		(16+15)	
1946	3581944	0	3581944	0	3581944	2%	0	3223750	3223750	90
1947	141019	0	141019	0	141019	2%	0	126917	126917	90
1948	14407	0	14407	0	14407	2%	0	12966	12966	90
1949	71813	0	71813	0	71813	2%	0	64632	64632	90
1950	197567	0	197567	0	197567	2%	0	177810	177810	90
1951	340880	0	340880	0	340880	2%	0	306792	306792	90
1952	815879	0	815879	0	815879	2%	0	734291	734291	90
1953	481538	0	481538	0	481538	2%	0	433384	433384	90
1954	95470	0	95470	0	95470	2%	0	85923	85923	90
1955	217964	0	217964	0	217964	2%	0	196168	196168	90
1956	1543151	0	1543151	0	1543151	2%	0	1388836	1388836	90
1957	1525611	0	1525611	0	1525611	2%	0	1373050	1373050	90
1958	497308	0	497308	0	497308	2%	0	447577	447577	90
1959	1226363	0	1226363	0	1226363	2%	0	1103727	1103727	90
1960	1113878	0	1113878	0	1113878	2%	0	1002490	1002490	90
1961	1880151	0	1880151	0	1880151	2%	0	1692136	1692136	90
1962	2776044	0	2776044	0	2776044	2%	0	2498440	2498440	90
1963	1356809	0	1356809	0	1356809	2%	0	1221128	1221128	90
1964	826541	0	826541	0	826541	2%	0	743887	743887	90
1965	255812	0	255812	0	255812	2%	0	230231	230231	90
1966	301079	0	301079	0	301079	2%	0	270971	270971	90
1967	1079310	0	1079310	0	1079310	2%	0	971379	971379	90
1968	400485	0	400485	0	400485	2%	0	360437	360437	90
1969	1397125	0	1397125	0	1397125	2%	0	1257413	1257413	90
1970	697402	0	697402	0	697402	2%	0	624224	624224	90
1971	1686597	0	1686597	0	1686597	2%	0	1517937	1517937	90
1972	2339512	0	2339512	0	2339512	2%	0	2105561	2105561	90
1973	2411311	0	2411311	0	2411311	2%	0	2170180	2170180	90
1974	1145455	0	1145455	0	1145455	2%	0	1030910	1030910	90
1975	1178382	0	1178382	0	1178382	2%	0	1060544	1060544	90
1976	500185	0	500185	0	500185	2%	0	450167	450167	90
1977	7157914	0	7157914	0	7157914	3.34%	0	6442123	6442123	90
1978	6883580	0	6883580	0	6883580	3.34%	0	6195222	6195222	90
1979	368085	0	368085	0	368085	3.34%	0	331276	331276	90
1980	781042	0	781042	0	781042	3.34%	0	702937	702937	90
1981	364429	0	364429	0	364429	3.34%	0	327986	327986	90
1982	-227602	0	-227602	0	-227602	3.34%	0	-204842	-204842	90
1983	1121912	0	1121912	0	1121912	3.34%	0	1009721	1009721	90
1984	2964297	0	2964297	0	2964297	3.34%	17785	2650082	2667867	90
1985	9314721	0	9314721	0	9314721	3.34%	242183	8141066	8383249	90
1986	4606890	0	4606890	0	4606890	3.34%	153870	3934284	4088154	89
1987	9708667	0	9708667	0	9708667	3.34%	324269	8097028	8421298	87
1988	20411846	0	20411846	0	20411846	3.34%	681756	16615243	17296998	85
1989	10603374	0	10603374	0	10603374	3.34%	354153	8419079	8773232	83
1990	6365514	0	6365514	0	6365514	3.34%	212608	4926908	5139516	81
1991	22484854	0	22484854	0	22484854	3.34%	750994	16953580	17704574	79
1992	24204055	0	24204055	0	24204055	3.34%	808415	17765776	18574192	77
1993	77298026	0	77298026	0	77298026	3.34%	2581754	55190791	57772545	75
1994	110032650	0	110032650	0	110032650	3.34%	3675091	76362659	80037750	73
1995	20021983	0	20021983	0	20021983	3.34%	668734	13494817	14163551	71
1996	23416339	0	23416339	0	23416339	3.34%	782106	15314286	16096391	69
1997	90149592	0	90149592	0	90149592	3.34%	3010996	57154841	60165838	67
1998	113651012	0	113651012	0	113651012	3.34%	3795944	69781721	73577665	65
1999	106754679	0	106754679	0	106754679	3.34%	3565606	63412279	66977886	63
2000	44283153	0	44283153	0	44283153	3.34%	1479057	25418530	26897587	61
2001	19939515	0	19939515	0	19939515	3.34%	665980	11046491	11712471	59
2002	2066618	0	2066618	0	2066618	3.34%	69025	1103574	1172599	57
2003	462208	0	462208	0	462208	3.34%	15438	237575	253013	55
2004	392398	0	392398	0	392398	3.34%	13106	193845	206951	53
2005	0	0	0	0	0	3.34%	0	0	0	#DIV/0!
2006	0	0	0	0	0	3.34%	0	0	0	#DIV/0!
2007	453488	0	453488	0	453488	3.34%	15146	196814	211960	47
2008	125400	0	125400	0	125400	3.34%	4188	51916	56104	45
2009	0	0	0	0	0	3.34%	0	0	0	#DIV/0!
2010	0	0	0	0	0	3.34%	0	0	0	#DIV/0!
2011	0	0	0	0	0	3.34%	0	0	0	#DIV/0!
2012	31600	0	31600	0	31600	3.34%	1055	9499	10554	33
2013	3908429	0	3908429	0	3908429	3.34%	130542	1044332	1174874	30
2014	869861	0	869861	0	869861	3.34%	29053	203374	232427	27
2015	3597926	0	3597926	0	3597926	3.34%	120171	721024	841195	23
2016	2530202	0	2530202	0	2530202	3.34%	84509	422544	507052	20
2017	1660275	0	1660275	0	1660275	3.34%	55453	221813	277266	17
2018	180433	0	180433	0	180433	3.34%	6026	18079	24106	13
2019	0	0	0	0	0	3.34%	0	0	0	#DIV/0!
2020	3200000	0	3200000	0	3200000	3.34%	106880	106880	213760	7
2021	0	0	0	0	0	3.34%	0	0	0	#DIV/0!
TOTAL :	784236357	0	784236357	0	784236357		24421895	522899008	547320903	

DEPRECIATION FOR THE YEAR 2022-23

MERC ORDER : LIFE 17 YEARS

STATIC ROOM A.C.

FROM : 2011-2012 LIFE : 15 YRS

RATE OF DEP : 5.28% RATE OF DEP. : 6 %

YEAR	BOOK VALUE AS ON 31.03.2022	WRITE OFF DURING THE YEAR 2021-22	BALANCE VALUE OF ASSETS	GOVT. GRANT	NET ASSETS VALUE AS ON 31.03.22	RATE OF DEP.	DEP. PROVISION FOR YEAR 2022-23	CUMM.DEP. PROVIDED UPTO 2021-22	CUMM. DEP. PROVIDED UPTO 2022-23	TOTAL % OF DEP PROVIDED UP TO 2022-23
1	7	8	10	11	13	14	15	16	17	
			(7-8-/+9)		(10-11-12)		(13*14)		(16+15)	
1978	14000	0	14000	0	14000	6%	0	12600	12600	90
1979	22502	0	22502	0	22502	6%	0	20252	20252	90
1980	0	0	0	0	0	6%	0	0	0	#DIV/0!
1981	0	0	0	0	0	6%	0	0	0	#DIV/0!
1982	474787	0	474787	0	474787	6%	0	427308	427308	90
1983	0	0	0	0	0	6%	0	0	0	#DIV/0!
1984	0	0	0	0	0	6%	0	0	0	#DIV/0!
1985	2491	0	2491	0	2491	6%	0	2242	2242	90
1986	170765	0	170765	0	170765	6%	0	153689	153689	90
1987	791175	0	791175	0	791175	6%	0	712058	712058	90
1988	497820	0	497820	0	497820	6%	0	448038	448038	90
1989	0	0	0	0	0	6%	0	0	0	#DIV/0!
1990	0	0	0	0	0	6%	0	0	0	#DIV/0!
1991	341014	0	341014	0	341014	6%	0	306913	306913	90
1992	132450	23309	109141	0	109141	6%	0	98227	98227	90
1993	-22953	0	-22953	0	-22953	6%	0	-20658	-20658	90
1994	0	0	0	0	0	6%	0	0	0	#DIV/0!
1995	0	0	0	0	0	6%	0	0	0	#DIV/0!
1996	0	0	0	0	0	6%	0	0	0	#DIV/0!
1997	0	0	0	0	0	6%	0	0	0	#DIV/0!
1998	0	0	0	0	0	6%	0	0	0	#DIV/0!
1999	0	0	0	0	0	6%	0	0	0	#DIV/0!
2000	0	0	0	0	0	6%	0	0	0	#DIV/0!
2001	0	0	0	0	0	6%	0	0	0	#DIV/0!
2002	0	0	0	0	0	6%	0	0	0	#DIV/0!
2003	0	0	0	0	0	6%	0	0	0	#DIV/0!
2004	0	0	0	0	0	6%	0	0	0	#DIV/0!
2005	0	0	0	0	0	6%	0	0	0	#DIV/0!
2006	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2007	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2008	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2009	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2010	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2011	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2012	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2013	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2014	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2015	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2016	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2017	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2018	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2019	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2020	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2021	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
TOTAL:	2424051	23309	2400742	0	2400742		0	2160668	2160668	

DEPRECIATION FOR THE YEAR 2022-23

MERC ORDER

MOTOR VEHICLES

FROM : 2011-12 LIFE : 8 YRS.

RATE OF DEP : 11.25% RATE OF DEP.: 11.25%

YEAR	BOOK VALUE AS ON 31.03.2022	WRITE OFF DURING THE YEAR	BALANCE VALUE OF ASSETS	GOVT. GRANT	NET ASSETS VALUE AS ON 31.03.22	RATE OF DEP.	DEP. PROVISION FOR YEAR 2022-23	CUMM.DEP. PROVIDED UPTO 2021-22	CUMM. DEP. PROVIDED UPTO 2022-23	TOTAL % OF DEP PROVIDED UP TO 2022-23
1	7	8	10	11	13	14	15	16	17	
			(7-8-/+9)		(10-11-12)		(13*14)		(16+15)	
1982	20597	0	20597	0	20597	11.25%	0	18537	18537	90
1983	294325	0	294325	0	294325	11.25%	0	264893	264893	90
1984	130037	0	130037	0	130037	11.25%	0	117033	117033	90
1985	90429	0	90429	0	90429	11.25%	0	81386	81386	90
1986	0	0	0	0	0	11.25%	0	0	0	#DIV/0!
1987	251142	0	251142	0	251142	11.25%	0	226028	226028	90
1988	319831	0	319831	0	319831	11.25%	0	287848	287848	90
1989	169537	0	169537	0	169537	11.25%	0	152583	152583	90
1990	156408	0	156408	0	156408	11.25%	0	140767	140767	90
1991	0	0	0	0	0	11.25%	0	0	0	#DIV/0!
1992	24215	0	24215	0	24215	11.25%	0	21794	21794	90
1993	5435922	0	5435922	0	5435922	11.25%	0	4892330	4892330	90
1994	136897	0	136897	0	136897	11.25%	0	123207	123207	90
1995	640296	0	640296	0	640296	11.25%	0	576266	576266	90
1996	460825	0	460825	0	460825	11.25%	0	414743	414743	90
1997	601437	0	601437	0	601437	11.25%	0	541293	541293	90
1998	0	0	0	0	0	11.25%	0	0	0	#DIV/0!
1999	0	0	0	0	0	11.25%	0	0	0	#DIV/0!
2000	0	0	0	0	0	11.25%	0	0	0	#DIV/0!
2001	852668	0	852668	0	852668	11.25%	0	767401	767401	90
2002	6673427	0	6673427	0	6673427	11.25%	0	6006084	6006084	90
2003	4507074	0	4507074	0	4507074	11.25%	0	4056366	4056366	90
2004	925439	745730	179709	0	179709	11.25%	0	161738	161738	90
2005	2572613	0	2572613	0	2572613	11.25%	0	2315352	2315352	90
2006	877500	0	877500	0	877500	11.25%	0	789750	789750	90
2007	0	0	0	0	0	11.25%	0	0	0	#DIV/0!
2008	940806	0	940806	0	940806	11.25%	0	846725	846725	90
2009	3744089	0	3744089	0	3744089	11.25%	0	3369680	3369680	90
2010	0	0	0	0	0	11.25%	0	0	0	#DIV/0!
2011	2914684	0	2914684	0	2914684	11.25%	0	2623216	2623216	90
2012	0	0	0	0	0	11.25%	0	0	0	#DIV/0!
2013	805406	0	805406	0	805406	11.25%	0	724865	724865	90
2014	0	0	0	0	0	11.25%	0	0	0	#DIV/0!
2015	0	0	0	0	0	11.25%	0	0	0	#DIV/0!
2016	792162	0	792162	0	792162	11.25%	89118	445591	534709	68
2017	0	0	0	0	0	11.25%	0	0	0	#DIV/0!
2018	0	0	0	0	0	11.25%	0	0	0	#DIV/0!
2019	1599998	0	1599998	0	1599998	11.25%	180000	360000	539999	34
2020	3123816	0	3123816	0	3123816	11.25%	351429	351429	702859	23
2021	979780	0	979780	0	979780	11.25%	110225	0	110225	11
TOTAL :	40041359	745730	3.9E+07	0	39295630		730773	30676905	31407678	

DEPRECIATION FOR THE YEAR 2022-23

MERC ORDER : LIFE 17 YEARS

TOOLS & EQUIPMENTS

FROM : 2011-12 LIFE : 18 YRS.

RATE OF DEP :5.28% RATE OF DEP.: 5%

YEAR	BOOK VALUE AS ON 31.03.2022	WRITE OFF DURING THE YEAR	BALANCE VALUE OF ASSETS	GOVT. GRANT	NET ASSETS VALUE AS ON 31.03.22	RATE OF DEP.	DEP. PROVISION FOR YEAR 2022-23	CUMM.DEP. PROVIDED UPTO 2021-22	CUMM. DEP. PROVIDED UPTO 2022-23	TOTAL % OF DEP PROVIDED UP TO 2022-23
1	7	8	10	11	13	14	15	16	17	
			(7-8-/+9)		(10-11-12)		(13*14)		(16+15)	
1970	1812	0	1812	0	1812	5%	0	1631	1631	90
1971	37644	0	37644	0	37644	5%	0	33880	33880	90
1972	50899	0	50899	0	50899	5%	0	45809	45809	90
1973	19494	0	19494	0	19494	5%	0	17545	17545	90
1974	41285	0	41285	0	41285	5%	0	37157	37157	90
1975	725	0	725	0	725	5%	0	653	653	90
1976	37637	0	37637	0	37637	5%	0	33873	33873	90
1977	40051	0	40051	0	40051	5%	0	36046	36046	90
1978	3025	0	3025	0	3025	5%	0	2723	2723	90
1979	84363	0	84363	0	84363	5%	0	75927	75927	90
1980	88844	0	88844	0	88844	5%	0	79960	79960	90
1981	16246	0	16246	0	16246	5%	0	14621	14621	90
1982	69785	0	69785	0	69785	5%	0	62807	62807	90
1983	2511	0	2511	0	2511	5%	0	2260	2260	90
1984	51446	0	51446	0	51446	5%	0	46301	46301	90
1985	1564682	0	1564682	0	1564682	5%	0	1408214	1408214	90
1986	27285	0	27285	0	27285	5%	0	24557	24557	90
1987	-2088831	0	-2088831	0	-2E+06	5%	0	-1879948	-1879948	90
1988	0	0	0	0	0	5%	0	0	0	#DIV/0!
1989	4301	0	4301	0	4301	5%	0	3871	3871	90
1990	37708	0	37708	0	37708	5%	0	33937	33937	90
1991	0	0	0	0	0	5%	0	0	0	#DIV/0!
1992	145011	0	145011	0	145011	5%	0	130510	130510	90
1993	101770	0	101770	0	101770	5%	0	91593	91593	90
1994	223554	0	223554	0	223554	5%	0	201199	201199	90
1995	0	0	0	0	0	5%	0	0	0	#DIV/0!
1996	0	0	0	0	0	5%	0	0	0	#DIV/0!
1997	0	0	0	0	0	5%	0	0	0	#DIV/0!
1998	183841	0	183841	0	183841	5%	0	165457	165457	90
1999	128198	0	128198	0	128198	5.28%	0	115378	115378	90
2000	51304	0	51304	0	51304	5.28%	0	46174	46174	90
2001	36504	0	36504	0	36504	5.28%	0	32854	32854	90
2002	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2003	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2004	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2005	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2006	295239	0	295239	0	295239	5.28%	15589	244458	260047	88
2007	15456	0	15456	0	15456	5.28%	816	12025	12841	83
2008	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2009	15751	0	15751	0	15751	5.28%	832	10679	11511	73
2010	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2011	214200	0	214200	0	214200	5.28%	11310	113098	124407	58
2012	22218	0	22218	0	22218	5.28%	1173	10558	11731	53
2013	1201920	0	1201920	0	1201920	5.28%	63461	507691	571152	48
2014	21924	0	21924	0	21924	5.28%	1158	8103	9261	42
2015	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2016	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2017	17366	0	17366	0	17366	5.28%	917	3668	4585	26
2018	189980	0	189980	0	189980	5.28%	10031	30093	40124	21
2019	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2020	12600	0	12600	0	12600	5.28%	665	665	1331	11
2021	12600	0	12600	0	12600	5.28%	665	0	665	5
TOTAL :	2980348	0	2980348	0	2980348		106617	1806023	1912640	

DEPRECIATION FOR THE YEAR 2022-23

MERC ORDER : LIFE 14 YEARS

FURNITURE & OFFICE EQUIPMENTS

FROM 2011-12 LIFE : 18 YRS.

RATE OF DEP : 6.33% RATE OF DEP.: 5%

YEAR	BOOK VALUE AS ON 31.03.2022	WRITE OFF DURING THE YEAR	ASSET TRANSFER	BALANCE VALUE OF ASSETS	GOVT. GRANT	NET ASSETS VALUE AS ON 31.03.2022	RATE OF DEP.	DEP. PROVISION FOR YEAR 2022-23	CUMM.DEP. PROVIDED UPTO 2021-22	CUMM. DEP. PROVIDED UPTO 2022-23	TOTAL % OF DEP PROVIDED UP TO 2022-23
1	7	8	9	10	11	13	14	15	16	17	
				(7-8-/+9)		(10-11-12)		(13*14)		(16+15)	
1970	62492	0	0	62492	0	62492	5%	0	56243	56243	90
1971	145047	0	0	145047	0	145047	5%	0	130542	130542	90
1972	11403	0	0	11403	0	11403	5%	0	10263	10263	90
1973	47971	0	0	47971	0	47971	5%	0	43174	43174	90
1974	35999	0	0	35999	0	35999	5%	0	32399	32399	90
1975	94349	0	0	94349	0	94349	5%	0	84914	84914	90
1976	239685	0	0	239685	0	239685	5%	0	215717	215717	90
1977	106729	0	0	106729	0	106729	5%	0	96056	96056	90
1978	99970	6375	0	93595	0	93595	5%	0	84235	84235	90
1979	96530	0	0	96530	0	96530	5%	0	86877	86877	90
1980	178447	0	0	178447	0	178447	5%	0	160602	160602	90
1981	69941	0	0	69941	0	69941	5%	0	62947	62947	90
1982	304410	0	0	304410	0	304410	5%	0	273969	273969	90
1983	172075	3300	0	168775	0	168775	5%	0	151898	151898	90
1984	285671.25	0	0	285671	0	285671	5%	0	257104	257104	90
1985	272177	0	0	272177	0	272177	5%	0	244959	244959	90
1986	306431	0	0	306431	0	306431	5%	0	275788	275788	90
1987	-29515	0	0	-29515	0	-29515	5%	0	-26564	-26564	90
1988	415354	0	0	415354	0	415354	5%	0	373819	373819	90
1989	603115	0	0	603115	0	603115	5%	0	542804	542804	90
1990	99977	14079	0	85898	0	85898	5%	0	77308	77308	90
1991	593062.83	0	0	593063	0	593063	5%	0	533757	533757	90
1992	-233317	0	0	-233317	0	-233317	5%	0	-209985	-209985	90
1993	0	0	0	0	0	0	5%	0	0	0	#DIV/0!
1994	-311390	0	0	-311390	0	-311390	5%	0	-280251	-280251	90
1995	15728.24	0	0	15728	0	15728	5%	0	14155	14155	90
1996	17848	0	0	17848	0	17848	5%	0	16063	16063	90
1997	88045	0	0	88045	0	88045	5%	0	79241	79241	90
1998	73972	0	0	73972	0	73972	6.33%	0	66574	66574	90
1999	70189.4	0	0	70189	0	70189	6.33%	0	63170	63170	90
2000	512524	0	0	512524	0	512524	6.33%	0	461272	461272	90
2001	432419	0	0	432419	0	432419	6.33%	0	389177	389177	90
2002	171691	0	0	171691	0	171691	6.33%	0	154522	154522	90
2003	26951	0	0	26951	0	26951	6.33%	0	24256	24256	90
2004	1767727	0	0	1767727	0	1767727	6.33%	0	1590955	1590955	90
2005	141261	0	0	141261	0	141261	6.33%	0	127135	127135	90
2006	366521	0	0	366521	0	366521	6.33%	0	329869	329869	90
2007	821847	3910	0	817937	0	817937	6.33%	13971	722172	736143	90
2008	295597	0	0	295597	0	295597	6.33%	18711	246232	264944	90
2009	983090	0	0	983090	0	983090	6.33%	62230	769759	831989	85
2010	351459	0	0	351459	0	351459	6.33%	22247	257619	279867	80
2011	501625	0	0	501625	0	501625	6.33%	31753	317529	349281	70
2012	33139	0	0	33139	0	33139	6.33%	2098	18879	20977	63
2013	213212	0	0	213212	0	213212	6.33%	13496	107970	121467	57
2014	1215514	0	0	1215514	0	1215514	6.33%	76942	538594	615536	51
2015	106892	0	0	106892	0	106892	6.33%	6766	40597	47364	44
2016	96188	0	0	96188	0	96188	6.33%	6089	30444	36532	38
2017	0	0	0	0	0	0	6.33%	0	0	0	#DIV/0!
2018	409969	0	0	409969	0	409969	6.33%	25951	77853	103804	25
2019	120304	0	0	120304	0	120304	6.33%	7615	15230	22846	19
2020	23458	0	0	23458	0	23458	6.33%	1485	1485	2970	13
2021	810312	0	0	810312	0	810312	6.33%	51293	0	51293	6
TOTAL:	13334096	27664	0	13306432	0	13306432		340647	9739328	10079975	

DEPRECIATION FOR THE YEAR 2022-23

MERC ORDER : LIFE 9 YEARS

ROOM A.C.

FROM 2011-12 LIFE : 7 YRS.

RATE OF DEP : 9.50% RATE OF DEP.: 12.86 %

YEAR	BOOK VALUE AS ON 31.03.2022	WRITE OFF DURING THE YEAR 2021-22	BALANCE VALUE OF ASSETS	GOVT. GRANT	NET ASSETS VALUE AS ON 31.03.2022	RATE OF DEP.	DEP. PROVISION FOR YEAR 2022-23	CUMM.DEP. PROVIDED UPTO 2021-22	CUMM. DEP. PROVIDED UPTO 2022-23	TOTAL % OF DEP PROVIDED UP TO 2022-23
1	7	8	10	11	13	14	15	16	17	
			(7-8-/+9)		(10-11-12)		(13*14)		(16+15)	
2001	10003	0	10003	0	10003	12.86%	0	9003	9003	90
2002	18600	0	18600	0	18600	12.86%	0	16740	16740	90
2003	93376	0	93376	0	93376	12.86%	0	84034	84034	90
2004	0	0	0	0	0	12.86%	0	0	0	0
2005	156903	0	156903	0	156903	12.86%	0	141212	141212	90
2006	117604	0	117604	0	117604	12.86%	0	105844	105844	90
2007	57250	0	57250	0	57250	9.50%	0	51525	51525	90
2008	194234	17173	177061	0	177061	9.50%	0	159355	159355	90
2009	207558	0	207558	0	207558	9.50%	0	186802	186802	90
2010	292796	0	292796	0	292796	9.50%	0	263516	263516	90
2011	248266	25136	223130	0	223130	9.50%	0	200817	200817	90
2012	121416	86613	34803	0	34803	9.50%	1566	29757	31323	90
2013	183317	0	183317	0	183317	9.50%	17415	139321	156736	86
2014	79650	0	79650	0	79650	9.50%	7567	52967	60534	76
2015	341369	0	341369	0	341369	9.50%	32430	194580	227010	67
2016	206319	0	206319	0	206319	9.50%	19600	98002	117602	57
2017	737187	0	737187	0	737187	9.50%	70033	280131	350164	48
2018	91450	0	91450	0	91450	9.50%	8688	26063	34751	38
2019	393033	0	393033	0	393033	9.50%	37338	74676	112014	29
2020	94700	0	94700	0	94700	9.50%	8997	8997	17993	19
2021	500501	0	500501	0	500501	9.50%	47548	0	47548	10
TOTAL :	4145532	128922	4016610	0	4016610		251181	2123342	2374523	

DEPRECIATION FOR THE YEAR 2022-23 | MERC ORDER : | LIFE : 7 YRS. | RATE OF DEP.: 12.86 %

PERSONAL COMPUTER

FROM 2011-12 | FROM : | LIFE : 6 YRS. | RATE OF DEP.: 15 %

RATE OF DEP ; 15% | 2005-06

YEAR	BOOK VALUE AS ON 31.03.2022	WRITE OFF DURING THE YEAR	BALANCE VALUE OF ASSETS	GOVT. GRANT	NET ASSETS VALUE AS ON 31.03.2022	RATE OF DEP.	DEP. PROVISION FOR YEAR 2022-23	CUMM.DEP. PROVIDED UPTO 2021-22	CUMM. DEP. PROVIDED UPTO 2022-23	TOTAL % OF DEP PROVIDED UP TO 2022-23
1	7	8	10	11	13	14	15	16	17	
			(7-8-/+9)		(10-11-12)		(13*14)		(16+15)	
2007	78563	0	78563	0	78563	15%	0	70706	70706	90
2008	175623	113270	62353	0	62353	15%	0	56118	56118	90
2009	3678284.3	0	3678284	0	3678284	15%	0	3310456	3310456	90
2010	1439527	0	1439527	0	1439527	15%	0	1295574	1295574	90
2011	668776	0	668776	0	668776	15%	0	601898	601898	90
2012	3092720	0	3092720	0	3092720	15%	0	2783448	2783448	90
2013	6178652	131697	6046955	0	6046955	15%	0	5442260	5442260	90
2014	3732350	0	3732350	0	3732350	15%	0	3359115	3359115	90
2015	5403892	0	5403892	0	5403892	15%	0	4863503	4863503	90
2016	13394136	0	13394136	0	13394136	15%	2009120	10045602	12054722	90
2017	3856372	0	3856372	0	3856372	15%	578456	2313823	2892279	75
2018	5711545	0	5711545	0	5711545	15%	856732	2570195	3426927	60
2019	2825965	0	2825965	0	2825965	15%	423895	847790	1271684	45
2020	2981341	0	2981341	0	2981341	15%	447201	447201	894402	30
2021	4560209	0	4560209	0	4560209	15%	684031	0	684031	15
TOTAL :	57777954	244967	57532987	0	57532987		4999435	38007688	43007123	

DEPRECIATION FOR THE YEAR 2022-23

MERC ORDER : LIFE 6 YEARS

CYCLOSTYLE MACHINE

FROM 2011-12

LIFE : 10 YRS.

RATE OF DEP.: 9 %

YEAR	BOOK VALUE AS ON 31.03.2022	WRITE OFF DURING THE YEAR 2021-22	BALANCE VALUE OF ASSETS	GOVT. GRANT	NET ASSETS VALUE AS ON 31.03.22	RATE OF DEP.	DEP. PROVISION FOR YEAR 2022-23	CUMM.DEP. PROVIDED UPTO 2021-22	CUMM. DEP. PROVIDED UPTO 2022-23	TOTAL % OF DEP PROVIDED UP TO 2022-23
1	7	8	10	11	13	14	15	16	17	
			(7-8-/+9)		(10-11-12)		(13*14)		(16+15)	
1997	356311	0	356311	0	356311	9%	0	320680	320680	90
1998	0	0	0	0	0	9%	0	0	0	#DIV/0!
1999	0	0	0	0	0	9%	0	0	0	#DIV/0!
2000	0	0	0	0	0	9%	0	0	0	#DIV/0!
2001	111	0	111	0	111	9%	0	100	100	90
2002	0	0	0	0	0	9%	0	0	0	#DIV/0!
2003	0	0	0	0	0	9%	0	0	0	#DIV/0!
2004	0	0	0	0	0	9%	0	0	0	#DIV/0!
2005	0	0	0	0	0	15%	0	0	0	#DIV/0!
2006	0	0	0	0	0	15%	0	0	0	#DIV/0!
2007	0	0	0	0	0	15%	0	0	0	#DIV/0!
2008	0	0	0	0	0	15%	0	0	0	#DIV/0!
2009	57289	0	57289	0	57289	15%	0	51560	51560	90
2010	42525	0	42525	0	42525	15%	0	38273	38273	90
2011	65875	0	65875	0	65875	15%	0	59288	59288	90
2012	0	0	0	0	0	15%	0	0	0	#DIV/0!
2013	0	0	0	0	0	15%	0	0	0	#DIV/0!
2014	0	0	0	0	0	15%	0	0	0	#DIV/0!
2015	147375	0	147375	0	147375	15%	0	132638	132638	90
2016	821420	0	821420	0	821420	15%	123213	616065	739278	90
2017	193536	0	193536	0	193536	15%	29030	116122	145152	75
2018	0	0	0	0	0	15%	0	0	0	#DIV/0!
2019	313290	0	313290	0	313290	15%	46994	93987	140981	45
2020	0	0	0	0	0	15%	0	0	0	#DIV/0!
2021	0	0	0	0	0	15%	0	0	0	#DIV/0!
TOTAL :	1997732	0	1997732	0	1997732		199237	1428711	1627948	

DEPRECIATION FOR THE YEAR 2022-23

MERC ORDER : LIFE 6 YEARS

ELECTRONIC EQUIPMENTS (SEPERATED FROM C

FROM : 2011-12 LIFE : 12 YRS.

RATE OF DEP. : 15% RATE OF DEP.: 7.5 %

YEAR	BOOK VALUE AS ON 31.03.2022	WRITE OFF DURING THE YEAR 2021-22	BALANCE VALUE OF ASSETS	GOVT. GRANT	NET ASSETS VALUE AS ON 31.03.22	RATE OF DEP.	DEP. PROVISION FOR YEAR 2022-23	CUMM.DEP. PROVIDED UPTO 2021-22	CUMM. DEP. PROVIDED UPTO 2022-23	TOTAL % OF DEP PROVIDED UP TO 2022-23
1	7	8	10	11	13	14	15	16	17	
			(7-8-/+9)		(10-11-12)		(13*14)		(16+15)	
2000	16676	0	16676	0	16676	7.5%	0	15008	15008	90
2001	12940	0	12940	0	12940	7.5%	0	11646	11646	90
2002	0	0	0	0	0	7.5%	0	0	0	#DIV/0!
2003	162441	0	162441	0	162441	15%	0	146197	146197	90
2004	0	0	0	0	0	15%	0	0	0	#DIV/0!
2005	16944	0	16944	0	16944	15%	0	15250	15250	90
2006	14950	0	14950	0	14950	15%	0	13455	13455	90
2007	5840	0	5840	0	5840	15%	0	5256	5256	90
2008	47210	0	47210	0	47210	15%	0	42489	42489	90
2009	0	0	0	0	0	15%	0	0	0	#DIV/0!
2010	0	0	0	0	0	15%	0	0	0	#DIV/0!
2011	0	0	0	0	0	15%	0	0	0	#DIV/0!
2012	0	0	0	0	0	15%	0	0	0	#DIV/0!
2013	0	0	0	0	0	15%	0	0	0	#DIV/0!
2014	0	0	0	0	0	15%	0	0	0	#DIV/0!
2015	0	0	0	0	0	15%	0	0	0	#DIV/0!
2016	0	0	0	0	0	15%	0	0	0	#DIV/0!
2017	146849	0	146849	0	146849	15%	22027	88109	110137	75
2018	262661	0	262661	0	262661	15%	39399	118197	157597	60
2019	19989	0	19989	0	19989	15%	2998	5997	8995	45
2020	0	0	0	0	0	15%	0	0	0	#DIV/0!
2021	0	0	0	0	0	15%	0	0	0	#DIV/0!
TOTAL :	706500	0	706500	0	706500		64425	461604	526029	

DEPRECIATION FOR THE YEAR 2022-23 MERC ORDER : LIFE 17 YEARS LIFE : 10 YRS. RATE OF DEP.: 9 %

PLANT & MACHINERY (EDP- FROM : 2011-12 FROM 2005 - LIFE : 6 YRS. RATE OF DEP.: 15 %

RATE OF DEP. : 5.28%

YEAR	BOOK VALUE AS ON 31.03.2022	WRITE OFF DURING THE YEAR	BALANCE VALUE OF ASSETS	GOVT. GRANT	NET ASSETS VALUE AS ON 31.03.22	RATE OF DEP.	DEP. PROVISION FOR YEAR 2022-23	CUMM.DEP. PROVIDED UPTO 2021-22	CUMM. DEP. PROVIDED UPTO 2022-23	TOTAL % OF DEP PROVIDED UP TO 2022-23
1	7	8	10	11	13	14	15	16	17	
			(7-8-/+9)		(10-11-12)		(13*14)		(16+15)	
1982	1982337	0	1982337	0	1982337	9%	0	1784103	1784103	90
1983	595068	0	595068	0	595068	9%	0	535561	535561	90
1984	1155443	0	1155443	0	1155443	9%	0	1039899	1039899	90
1985	1061569	0	1061569	0	1061569	9%	0	955412	955412	90
1986	-454962	0	-454962	0	-454962	9%	0	-409466	-409466	90
1987	505465	0	505465	0	505465	9%	0	454919	454919	90
1988	400206	0	400206	0	400206	9%	0	360185	360185	90
1989	1287766	0	1287766	0	1287766	9%	0	1158989	1158989	90
1990	154270	0	154270	0	154270	9%	0	138843	138843	90
1991	0	0	0	0	0	9%	0	0	0	#DIV/0!
1992	-505236	0	-505236	0	-505236	9%	0	-454712	-454712	90
1993	20000	0	20000	0	20000	9%	0	18000	18000	90
1994	264186	0	264186	0	264186	9%	0	237767	237767	90
1995	362268	0	362268	0	362268	9%	0	326041	326041	90
1996	372132	0	372132	0	372132	9%	0	334919	334919	90
1997	1887	0	1887	0	1887	9%	0	1698	1698	90
1998	5908095	985691	4922404	0	4922404	9%	0	4430164	4430164	90
1999	7301476	0	7301476	0	7301476	9%	0	6571328	6571328	90
2000	2169517	0	2169517	0	2169517	9%	0	1952565	1952565	90
2001	320598	0	320598	0	320598	9%	0	288538	288538	90
2002	0	0	0	0	0	9%	0	0	0	#DIV/0!
2003	145925	0	145925	0	145925	9%	0	131333	131333	90
2004	256500	0	256500	0	256500	9%	0	230850	230850	90
2005	178454	0	178454	0	178454	15%	0	160608	160608	90
2006	179499	0	179499	0	179499	15%	0	161549	161549	90
2007	968958	0	968958	0	968958	15%	0	872062	872062	90
2008	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2009	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2010	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2011	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2012	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2013	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2014	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2015	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2016	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2017	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2018	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2019	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2020	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2021	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
TOTAL :	24631421	985691	23645730	0	23645730		0	21281157	21281157	

DEPRECIATION FOR THE YEAR 2022-23 MERC ORDER : LIFE 17 YEARS

PLANT & MACHINERY (STORES DEPART

FROM : 2011-12 LIFE : 22 YRS.

RATE OF DEP. : 5.28% RATE OF DEP.: 4.09 %

YEAR	BOOK VALUE AS ON 31.03.2022	WRITE OFF DURING THE YEAR 2021-22	BALANCE VALUE OF ASSETS	GOVT. GRANT	NET ASSETS VALUE AS ON 31.03.22	RATE OF DEP.	DEP. PROVISION FOR YEAR 2022-23	CUMM.DEP. PROVIDED UPTO 2021-22	CUMM. DEP. PROVIDED UPTO 2022-23	TOTAL % OF DEP PROVIDED UP TO 2022-23
1	7	8	10	11	3	14	15	16	17	
			(7-8-/+9)		(10-11-12)		(13*14)		(16+15)	
1988	237359	0	237359	0	237359	4.09%	0	213623	213623	90
1989	0	0	0	0	0	4.09%	0	0	0	#DIV/0!
1990	0	0	0	0	0	4.09%	0	0	0	#DIV/0!
1991	0	0	0	0	0	4.09%	0	0	0	#DIV/0!
1992	0	0	0	0	0	4.09%	0	0	0	#DIV/0!
1993	0	0	0	0	0	4.09%	0	0	0	#DIV/0!
1994	0	0	0	0	0	4.09%	0	0	0	#DIV/0!
1995	0	0	0	0	0	4.09%	0	0	0	#DIV/0!
1996	0	0	0	0	0	4.09%	0	0	0	#DIV/0!
1997	0	0	0	0	0	4.09%	0	0	0	#DIV/0!
1998	0	0	0	0	0	4.09%	0	0	0	#DIV/0!
1999	0	0	0	0	0	4.09%	0	0	0	#DIV/0!
2000	0	0	0	0	0	4.09%	0	0	0	#DIV/0!
2001	0	0	0	0	0	4.09%	0	0	0	#DIV/0!
2002	0	0	0	0	0	4.09%	0	0	0	#DIV/0!
2003	0	0	0	0	0	4.09%	0	0	0	#DIV/0!
2004	0	0	0	0	0	4.09%	0	0	0	#DIV/0!
2005	0	0	0	0	0	4.09%	0	0	0	#DIV/0!
2006	0	0	0	0	0	4.09%	0	0	0	#DIV/0!
2007	0	0	0	0	0	4.09%	0	0	0	#DIV/0!
2008	0	0	0	0	0	4.09%	0	0	0	#DIV/0!
2009	0	0	0	0	0	4.09%	0	0	0	#DIV/0!
2010	0	0	0	0	0	4.09%	0	0	0	#DIV/0!
2011	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2012	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2013	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2014	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2015	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2016	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2017	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2018	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2019	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2020	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2021	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
TOTAL :	237359	0	237359	0	237359		0	213623	213623	

DEPRECIATION FOR THE YEAR 2022-23

MERC ORDER : LIFE 17 YEARS

SECURITY EQUIPMENT

FROM : 2011-12 LIFE : 100 YRS.

RATE OF DEP. : 5.28 RATE OF DEP.: 0.90 %

YEAR	BOOK VALUE AS ON 31.03.2022	WRITE OFF DURING THE YEAR 2021-22	BALANCE VALUE OF ASSETS	GOVT. GRANT	NET ASSETS VALUE AS ON 31.03.22	RATE OF DEP.	DEP. PROVISION FOR YEAR 2022-23	CUMM.DEP. PROVIDED UPTO 2021-22	CUMM. DEP. PROVIDED UPTO 2022-23	TOTAL % OF DEP PROVIDED UP TO 2022-23
1	7	8	10	11	13	14	15	16	17	
			(7-8-/+9)		(10-11-12)		(13*14)		(16+15)	
1992	1059000	0	1059000	0	1059000	5.28%	55915	749772	805687	76
1993	2071350	0	2071350	0	2071350	5.28%	109367	1447874	1557241	75
1994	28000	0	28000	0	28000	5.28%	1478	19320	20798	74
1995	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
1996	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
1997	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
1998	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
1999	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2000	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2001	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2002	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2003	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2004	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2005	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2006	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2007	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2008	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2009	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2010	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2011	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2012	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2013	102038	0	102038	0	102038	5.28%	5388	43101	48488	48
2014	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2015	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2016	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2017	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2018	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2019	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2020	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2021	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
TOTAL :	3260388	0	3260388	0	3260388		172148	2260067	2432215	

DEPRECIATION FOR THE YEAR 2022-23

FAX MACHINE

LIFE : 6 YRS.

RATE OF DEP.: 15 %

YEAR	BOOK VALUE AS ON 01.04.2021	WRITE OFF DURING THE YEAR	BALANCE VALUE OF ASSETS	GOVT. GRANT	NET ASSETS VALUE AS ON 31.03.22	RATE OF DEP.	DEP. PROVISION FOR YEAR 2022-23	CUMM.DEP. PROVIDED UPTO 2021-22	CUMM. DEP. PROVIDED UPTO 2022-23	TOTAL % OF DEP PROVIDED UP TO 2022-23
1	7	8	10	11	13	14	15	16	17	
			(7-8-/+9)		(10-11-12)		(13*14)		(16+15)	
1999	22030	0	22030	0	22030	15%	0	19827	19827	90
2011	17430	0	17430	0	17430	15%	0	15687	15687	90
2012	38450	0	38450	0	38450	15%	0	34605	34605	90
2013	37550	0	37550	0	37550	15%	0	33795	33795	90
2014	0	0	0	0	0	15%	0	0	0	#DIV/0!
2015	62055	0	62055	0	62055	15%	0	55850	55850	90
2016	41763	0	41763	0	41763	15%	6264	31322	37587	90
2017	0	0	0	0	0	15%	0	0	0	#DIV/0!
2018	0	0	0	0	0	15%	0	0	0	#DIV/0!
2019	0	0	0	0	0	15%	0	0	0	#DIV/0!
2020	0	0	0	0	0	15%	0	0	0	#DIV/0!
2021	0	0	0	0	0	15%	0	0	0	#DIV/0!
TOTAL :	219278	0	219278	0	219278		6264	191086	197350	

SUMMARY OF PROVISION OF DEPRECIATION ON ASSETS OF GENERAL ADMINISTRATION DIVISION
FOR THE YEAR 2022-23

ASSETS DESCREPTION	BOOK VALUE AS ON 01.04.2021	WRITE OFF DURING THE YEAR 2021-22	ASSET TRANSFER	BALANCE VALUE OF ASSETS	GOVT. GRANT	NET ASSETS VALUE AS ON 31.03.22	DEP. PROVISION FOR YEAR 2022-23
1	7	8	9	10	11	13	15
				(7-8-/+9)		(10-11-12)	(13*14)
LAND	41129691			41129691		41129691	0
BUILDING	784236357	0	0	784236357	0	784236357	24421895
STATIC ROOM A.C.	2424051	23309	0	2400742	0	2400742	0
MOTOR VEHICLE	40041359	745730	0	39295630	0	39295630	730773
TOOLS & EQUIPMENT	2980348	0	0	2980348	0	2980348	106617
FURNITURE & OFF.EQUIP.	13334096	27664	0	13306432	0	13306432	340647
ROOM A.C.	4145532	128922	0	4016610	0	4016610	251181
PERSONAL COMPUTER	57777954	244967	0	57532987	0	57532987	4999435
CYCLOSTYLE MACHINE	1997732	0	0	1997732	0	1997732	199237
ELECTRONIC EQUIPMENT	706500	0	0	706500	0	706500	64425
PL & MACH. EDP.	24631421	985691	0	23645730	0	23645730	0
PL & MACH STOCK	237359	0	0	237359	0	237359	0
SECURITY EQUIPMENT	3260388	0	0	3260388	0	3260388	172148
FAX MACHINE	219278	0	0	219278	0	219278	6264
TOTAL :	977122066	2156283	0	974965783	0	974965783	31292622

DETAILS OF E-6 WISE ASSETS GROUPING - GENERAL ADMINISTRATION DIVISION

ASSETS DESCREPTION	BOOK VALUE AS ON 01.04.2021	WRITE OFF DURING THE YEAR 2021-22	ASSET TRANSFER	BALANCE VALUE OF ASSETS	GOVT. GRANT	NET ASSETS VALUE AS ON 31.03.22	DEP. PROVISION FOR YEAR 2022-23
LAND	**41129691**	**0**	**0**	**41129691**	**0**	**41129691**	**0**
BUILDING	784236357	0	0	784236357	0	784236357	24421895
STATIC ROOM A.C.	2424051	23309	0	2400742	0	2400742	0
BUILDINGS	**786660408**	**23309**	**0**	**786637099**	**0**	**786637099**	**24421895**
MOTOR VEHICLES	**40041359**	**745730**	**0**	**39295630**	**0**	**39295630**	**730773**
PL & MACH EDP	24631421	985691	0	23645730	0	23645730	0
PL & MACH STOCK	237359	0	0	237359	0	237359	0
PLANT AND MACHINERY	**24868780**	**985691**	**0**	**23883089**	**0**	**23883089**	**0**
FURNITURE & OFF. EQUIP.	13334096	27664	0	13306432	0	13306432	340647
ROOM A.C.	4145532	128922	0	4016610	0	4016610	251181
PERSONAL COMPUTER	57777954	244967	0	57532987	0	57532987	4999435
CYCLOSTYLE MACHINE	1997732	0	0	1997732	0	1997732	199237
ELECTRONIC EQUIPMENT	706500	0	0	706500	0	706500	64425
FAX MACHINE	219278	0	0	219278	0	219278	6264
FURNITURE AND OFFICE EQUIPMENTS	**78181092**	**401553**	**0**	**77779539**	**0**	**77779539**	**5861189**
TOOLS AND EQUIPMENTS	**2980348**	**0**	**0**	**2980348**	**0**	**2980348**	**106617**
SECURITY EQUIPMENTS	**3260388**	**0**	**0**	**3260388**	**0**	**3260388**	**172148**
TOTAL :	**977122066**	**2156283**	**0**	**974965783**	**0**	**974965783**	**31292622**

ANNEXURE-12

PART-C

DEPRECIATION FOR THE YEAR 2013-14

LAND

YEAR	BOOK VALUE AS ON 31.03.2013	WRITE OFF DURING THE YEAR	ASSET TRANSFER	BALANCE VALUE OF ASSETS	GOVT. GRANT	NET ASSETS VALUE AS ON 31.03.13	RATE OF DEP.	DEP. PROVISION FOR YEAR 2013-14	CUMM.DEP. PROVIDED UPTO 2012-13	CUMM. DEP. PROVIDED UPTO 2013-14	REMARK
1	7	8	9	10	11	13	14	15	16	17	
				(7-8-/+9)		(10-11-12)		(13*14)		(16+15)	
TOTAL :	0	0	0	0	0	0		0	0	0	

DEPRECIATION FOR THE YEAR 2023-24

MERC ORDER : LIFE 27 YEARS

LIFE : 45 YEARS

BUILDING

FROM : 2011-12

RATE OF DEP : 2%

RATE OF DEP : 3.34%

YEAR	BOOK VALUE AS ON 31.03.2023	WRITE OFF DURING THE YEAR 2022-23	ASSET TRANSFER	BALANCE VALUE OF ASSETS	NET ASSETS VALUE AS ON 31.03.23	RATE OF DEP.	DEP. PROVISION FOR YEAR 2023-24	CUMM.DEP. PROVIDED UPTO 2022-23	CUMM. DEP. PROVIDED UPTO 2023-24	TOTAL % OF DEP PROVIDED UP TO 2023-24
1	7	8	9	10	13	14	15	16	17	
				(7-8-/+9)	(10-11-12)		(13*14)		(16+15)	
1946	3581944	0	0	3581944	3581944	2%	0	3223750	3223750	90
1947	141019	0	0	141019	141019	2%	0	126917	126917	90
1948	14407	0	0	14407	14407	2%	0	12966	12966	90
1949	71813	0	0	71813	71813	2%	0	64632	64632	90
1950	197567	0	0	197567	197567	2%	0	177810	177810	90
1951	340880	0	0	340880	340880	2%	0	306792	306792	90
1952	815879	0	0	815879	815879	2%	0	734291	734291	90
1953	481538	0	0	481538	481538	2%	0	433384	433384	90
1954	95470	0	0	95470	95470	2%	0	85923	85923	90
1955	217964	0	0	217964	217964	2%	0	196168	196168	90
1956	1543151	0	0	1543151	1543151	2%	0	1388836	1388836	90
1957	1525611	0	0	1525611	1525611	2%	0	1373050	1373050	90
1958	497308	0	0	497308	497308	2%	0	447577	447577	90
1959	1226363	0	0	1226363	1226363	2%	0	1103727	1103727	90
1960	1113878	0	0	1113878	1113878	2%	0	1002490	1002490	90
1961	1880151	0	0	1880151	1880151	2%	0	1692136	1692136	90
1962	2776044	0	0	2776044	2776044	2%	0	2498440	2498440	90
1963	1356809	0	0	1356809	1356809	2%	0	1221128	1221128	90
1964	826541	0	0	826541	826541	2%	0	743887	743887	90
1965	255812	0	0	255812	255812	2%	0	230231	230231	90
1966	301079	0	0	301079	301079	2%	0	270971	270971	90
1967	1079310	0	0	1079310	1079310	2%	0	971379	971379	90
1968	400485	0	0	400485	400485	2%	0	360437	360437	90
1969	1397125	0	0	1397125	1397125	2%	0	1257413	1257413	90
1970	697402	0	0	697402	697402	2%	0	624224	624224	90
1971	1686597	0	0	1686597	1686597	2%	0	1517937	1517937	90
1972	2339512	0	0	2339512	2339512	2%	0	2105561	2105561	90
1973	2411311	0	0	2411311	2411311	2%	0	2170180	2170180	90
1974	1145455	0	0	1145455	1145455	2%	0	1030910	1030910	90
1975	1178382	0	0	1178382	1178382	2%	0	1060544	1060544	90
1976	500185	0	0	500185	500185	2%	0	450167	450167	90
1977	7157914	0	0	7157914	7157914	3.34%	0	6442123	6442123	90
1978	6883580	0	0	6883580	6883580	3.34%	0	6195222	6195222	90
1979	368085	0	0	368085	368085	3.34%	0	331276	331276	90
1980	781042	0	0	781042	781042	3.34%	0	702937	702937	90
1981	364429	0	0	364429	364429	3.34%	0	327986	327986	90
1982	-227602	0	0	-227602	-227602	3.34%	0	-204842	-204842	90
1983	1121912	0	0	1121912	1121912	3.34%	0	1009721	1009721	90
1984	2964297	0	0	2964297	2964297	3.34%	0	2667867	2667867	90
1985	9314721	0	0	9314721	9314721	3.34%	0	8383249	8383249	90
1986	4606890	0	0	4606890	4606890	3.34%	58047	4088154	4146201	90
1987	9708667	0	0	9708667	9708667	3.34%	316503	8421298	8737801	90
1988	20411846	0	0	20411846	20411846	3.34%	681756	17296998	17978754	88
1989	10603374	0	0	10603374	10603374	3.34%	354153	8773232	9127384	86
1990	6365514	0	0	6365514	6365514	3.34%	212608	5139516	5352124	84
1991	22484854	0	0	22484854	22484854	3.34%	750994	17704574	18455568	82
1992	24204055	0	0	24204055	24204055	3.34%	808415	18574192	19382607	80
1993	77298026	0	0	77298026	77298026	3.34%	2581754	57772545	60354299	78
1994	110032650	0	0	110032650	110032650	3.34%	3675091	80037750	83712840	76
1995	20021983	0	0	20021983	20021983	3.34%	668734	14163551	14832285	74
1996	23416339	0	0	23416339	23416339	3.34%	782106	16096391	16878497	72
1997	90149592	0	0	90149592	90149592	3.34%	3010996	60165838	63176834	70
1998	113651012	0	0	113651012	113651012	3.34%	3795944	73577665	77373609	68
1999	106754679	0	0	106754679	106754679	3.34%	3565606	66977886	70543492	66
2000	44283153	0	0	44283153	44283153	3.34%	1479057	26897587	28376644	64
2001	19939515	0	0	19939515	19939515	3.34%	665980	11712471	12378451	62
2002	2066618	0	0	2066618	2066618	3.34%	69025	1172599	1241624	60
2003	462208	0	0	462208	462208	3.34%	15438	253013	268450	58
2004	392398	0	0	392398	392398	3.34%	13106	206951	220057	56
2005	0	0	0	0	0	3.34%	0	0	0	#DIV/0!
2006	0	0	0	0	0	3.34%	0	0	0	#DIV/0!
2007	453488	0	0	453488	453488	3.34%	15146	211960	227107	50
2008	125400	0	0	125400	125400	3.34%	4188	56104	60292	48
2009	0	0	0	0	0	3.34%	0	0	0	#DIV/0!
2010	0	0	0	0	0	3.34%	0	0	0	#DIV/0!
2011	0	0	0	0	0	3.34%	0	0	0	#DIV/0!
2012	31600	0	0	31600	31600	3.34%	1055	10554	11610	37
2013	3908429	0	0	3908429	3908429	3.34%	130542	1174874	1305415	33
2014	869861	0	0	869861	869861	3.34%	29053	232427	261480	30
2015	3597926	0	0	3597926	3597926	3.34%	120171	841195	961366	27
2016	2530202	0	0	2530202	2530202	3.34%	84509	507052	591561	23
2017	1660275	0	0	1660275	1660275	3.34%	55453	277266	332719	20
2018	180433	0	0	180433	180433	3.34%	6026	24106	30132	17
2019	0	0	0	0	0	3.34%	0	0	0	#DIV/0!
2020	3200000	0	0	3200000	3200000	3.34%	106880	213760	320640	10
2021	0	0	0	0	0	3.34%	0	0	0	#DIV/0!
2022	400000	0	0	400000	400000	3.34%	13360	0	13360	3
TOTAL :	784636357	0	0	784636357	784636357		24071697	547320903	571392601	

DEPRECIATION FOR THE YEAR 2023-24

MERC ORDER : LIFE 17 YEARS

STATIC ROOM A.C.

FROM : 2011-2012 LIFE : 15 YRS

RATE OF DEP : 5.28% RATE OF DEP. : 6 %

YEAR	BOOK VALUE AS ON 31.03.2023	WRITE OFF DURING THE YEAR 2022-23	ASSET TRANSFER	BALANCE VALUE OF ASSETS	NET ASSETS VALUE AS ON 31.03.23	RATE OF DEP.	DEP. PROVISION FOR YEAR 2023-24	CUMM.DEP. PROVIDED UPTO 2022-23	CUMM. DEP. PROVIDED UPTO 2023-24	TOTAL % OF DEP PROVIDED UP TO 2023-24
1	7	8	9	10	13	14	15	16	17	
				(7-8-/+9)	(10-11-12)		(13*14)		(16+15)	
1978	14000	0	0	14000	14000	6%	0	12600	12600	90
1979	22502	20065	0	2437	2437	6%	0	2193	2193	90
1980	0	0	0	0	0	6%	0	0	0	#DIV/0!
1981	0	0	0	0	0	6%	0	0	0	#DIV/0!
1982	474787	0	0	474787	474787	6%	0	427308	427308	90
1983	0	0	0	0	0	6%	0	0	0	#DIV/0!
1984	0	0	0	0	0	6%	0	0	0	#DIV/0!
1985	2491	0	0	2491	2491	6%	0	2242	2242	90
1986	170765	152483	0	18282	18282	6%	0	16454	16454	90
1987	791175	0	0	791175	791175	6%	0	712058	712058	90
1988	497820	0	0	497820	497820	6%	0	448038	448038	90
1989	0	0	0	0	0	6%	0	0	0	#DIV/0!
1990	0	0	0	0	0	6%	0	0	0	#DIV/0!
1991	341014	0	0	341014	341014	6%	0	306913	306913	90
1992	86188	33351	0	52837	52837	6%	0	47553	47553	90
1993	0	0	0	0	0	6%	0	0	0	#DIV/0!
1994	0	0	0	0	0	6%	0	0	0	#DIV/0!
1995	0	0	0	0	0	6%	0	0	0	#DIV/0!
1996	0	0	0	0	0	6%	0	0	0	#DIV/0!
1997	0	0	0	0	0	6%	0	0	0	#DIV/0!
1998	0	0	0	0	0	6%	0	0	0	#DIV/0!
1999	0	0	0	0	0	6%	0	0	0	#DIV/0!
2000	0	0	0	0	0	6%	0	0	0	#DIV/0!
2001	0	0	0	0	0	6%	0	0	0	#DIV/0!
2002	0	0	0	0	0	6%	0	0	0	#DIV/0!
2003	0	0	0	0	0	6%	0	0	0	#DIV/0!
2004	0	0	0	0	0	6%	0	0	0	#DIV/0!
2005	0	0	0	0	0	6%	0	0	0	#DIV/0!
2006	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2007	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2008	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2009	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2010	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2011	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2012	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2013	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2014	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2015	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2016	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2017	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2018	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2019	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2020	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2021	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2022	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
TOTAL:	2400742.02	205899	0	2194843.5	2194843.5		0	1975359	1975359	

DEPRECIATION FOR THE YEAR 2023-24

MERC ORDER

MOTOR VEHICLES

FROM : 2011-12 LIFE : 8 YRS.

RATE OF DEP : 11.25% RATE OF DEP.: 11.25%

YEAR	BOOK VALUE AS ON 31.03.2023	WRITE OFF DURING THE YEAR	ASSET TRANSFER	BALANCE VALUE OF ASSETS	NET ASSETS VALUE AS ON 31.03.23	RATE OF DEP.	DEP. PROVISION FOR YEAR 2023-24	CUMM.DEP. PROVIDED UPTO 2022-23	CUMM. DEP. PROVIDED UPTO 2023-24	TOTAL % OF DEP PROVIDED UP TO 2023-24
1	7	8	9	10	13	14	15	16	17	
				(7-8-/+9)	(10-11-12)		(13*14)		(16+15)	
1982	20597	0	0	20597	20597	11.25%	0	18537	18537	90
1983	294325	0	0	294325	294325	11.25%	0	264893	264893	90
1984	130037	0	0	130037	130037	11.25%	0	117033	117033	90
1985	90429	0	0	90429	90429	11.25%	0	81386	81386	90
1986	0	0	0	0	0	11.25%	0	0	0	#DIV/0!
1987	251142	0	0	251142	251142	11.25%	0	226028	226028	90
1988	319831	0	0	319831	319831	11.25%	0	287848	287848	90
1989	169537	0	0	169537	169537	11.25%	0	152583	152583	90
1990	156408	0	0	156408	156408	11.25%	0	140767	140767	90
1991	0	0	0	0	0	11.25%	0	0	0	#DIV/0!
1992	24215	0	0	24215	24215	11.25%	0	21794	21794	90
1993	5435922	0	0	5435922	5435922	11.25%	0	4892330	4892330	90
1994	136897	0	0	136897	136897	11.25%	0	123207	123207	90
1995	640296	0	0	640296	640296	11.25%	0	576266	576266	90
1996	460825	0	0	460825	460825	11.25%	0	414743	414743	90
1997	601437	0	0	601437	601437	11.25%	0	541293	541293	90
1998	0	0	0	0	0	11.25%	0	0	0	#DIV/0!
1999	0	0	0	0	0	11.25%	0	0	0	#DIV/0!
2000	0	0	0	0	0	11.25%	0	0	0	#DIV/0!
2001	852668	0	0	852668	852668	11.25%	0	767401	767401	90
2002	6673427	0	0	6673427	6673427	11.25%	0	6006084	6006084	90
2003	4507074	1754185	0	2752888	2752888	11.25%	0	2477600	2477600	90
2004	179709	179709	0	0	0	11.25%	0	0	0	38
2005	2572613	426563	0	2146050	2146050	11.25%	0	1931445	1931445	90
2006	877500	477302	0	400198	400198	11.25%	0	360178	360178	90
2007	0	0	0	0	0	11.25%	0	0	0	#DIV/0!
2008	940806	0	0	940806	940806	11.25%	0	846725	846725	90
2009	3744089	0	0	3744089	3744089	11.25%	0	3369680	3369680	90
2010	0	0	0	0	0	11.25%	0	0	0	#DIV/0!
2011	2914684	0	0	2914684	2914684	11.25%	0	2623216	2623216	90
2012	0	0	0	0	0	11.25%	0	0	0	#DIV/0!
2013	805406	0	0	805406	805406	11.25%	0	724865	724865	90
2014	0	0	0	0	0	11.25%	0	0	0	#DIV/0!
2015	0	0	0	0	0	11.25%	0	0	0	#DIV/0!
2016	792162	0	0	792162	792162	11.25%	89118	534709	623828	79
2017	0	0	0	0	0	11.25%	0	0	0	#DIV/0!
2018	0	0	0	0	0	11.25%	0	0	0	#DIV/0!
2019	1599998	0	0	1599998	1599998	11.25%	180000	539999	719999	45
2020	3123816	0	0	3123816	3123816	11.25%	351429	702859	1054288	34
2021	979780	0	0	979780	979780	11.25%	110225	110225	220451	23
2022	0	0	0	0	0	11.25%	0	0	0	#DIV/0!
TOTAL :	39295630	2837759	0	3.6E+07	36457870		730773	28853695	29584467	

DEPRECIATION FOR THE YEAR 2023-24

MERC ORDER : LIFE 17 YEARS

TOOLS & EQUIPMENTS

FROM : 2011-12 LIFE : 18 YRS.

RATE OF DEP :5.28% RATE OF DEP.: 5%

YEAR	BOOK VALUE AS ON 31.03.2023	WRITE OFF DURING THE YEAR 2023-24	ASSET TRANSFER	BALANCE VALUE OF ASSETS	NET ASSETS VALUE AS ON 31.03.23	RATE OF DEP.	DEP. PROVISION FOR YEAR 2023-24	CUMM.DEP. PROVIDED UPTO 2022-23	CUMM. DEP. PROVIDED UPTO 2023-24	TOTAL % OF DEP PROVIDED UP TO 2023-24
1	7	8	9	10	13	14	15	16	17	
				(7-8-/+9)	(10-11-12)		(13*14)		(16+15)	
1970	1812	0	0	1812	1812	5%	0	1631	1631	90
1971	37644	0	0	37644	37644	5%	0	33880	33880	90
1972	50899	0	0	50899	50899	5%	0	45809	45809	90
1973	19494	0	0	19494	19494	5%	0	17545	17545	90
1974	41285	0	0	41285	41285	5%	0	37157	37157	90
1975	725	0	0	725	725	5%	0	653	653	90
1976	37637	0	0	37637	37637	5%	0	33873	33873	90
1977	40051	0	0	40051	40051	5%	0	36046	36046	90
1978	3025	0	0	3025	3025	5%	0	2723	2723	90
1979	84363	0	0	84363	84363	5%	0	75927	75927	90
1980	88844	0	0	88844	88844	5%	0	79960	79960	90
1981	16246	0	0	16246	16246	5%	0	14621	14621	90
1982	69785	0	0	69785	69785	5%	0	62807	62807	90
1983	2511	0	0	2511	2511	5%	0	2260	2260	90
1984	51446	0	0	51446	51446	5%	0	46301	46301	90
1985	1564682	0	0	1564682	1564682	5%	0	1408214	1408214	90
1986	27285	0	0	27285	27285	5%	0	24557	24557	90
1987	-2088831	0	0	-2088831	-2E+06	5%	0	-1879948	-1879948	90
1988	0	0	0	0	0	5%	0	0	0	#DIV/0!
1989	4301	0	0	4301	4301	5%	0	3871	3871	90
1990	37708	0	0	37708	37708	5%	0	33937	33937	90
1991	0	0	0	0	0	5%	0	0	0	#DIV/0!
1992	145011	0	0	145011	145011	5%	0	130510	130510	90
1993	101770	0	0	101770	101770	5%	0	91593	91593	90
1994	223554	0	0	223554	223554	5%	0	201199	201199	90
1995	0	0	0	0	0	5%	0	0	0	#DIV/0!
1996	0	0	0	0	0	5%	0	0	0	#DIV/0!
1997	0	0	0	0	0	5%	0	0	0	#DIV/0!
1998	183841	0	0	183841	183841	5%	0	165457	165457	90
1999	128198	0	0	128198	128198	5.28%	0	115378	115378	90
2000	51304	0	0	51304	51304	5.28%	0	46174	46174	90
2001	36504	0	0	36504	36504	5.28%	0	32854	32854	90
2002	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2003	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2004	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2005	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2006	295239	0	0	295239	295239	5.28%	5669	260047	265716	90
2007	15456	0	0	15456	15456	5.28%	816	12841	13657	88
2008	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2009	15751	0	0	15751	15751	5.28%	832	11511	12342	78
2010	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2011	214200	0	0	214200	214200	5.28%	11310	124407	135717	63
2012	22218	0	0	22218	22218	5.28%	1173	11731	12904	58
2013	1201920	0	0	1201920	1201920	5.28%	63461	571152	634614	53
2014	21924	0	0	21924	21924	5.28%	1158	9261	10418	48
2015	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2016	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2017	17366	0	0	17366	17366	5.28%	917	4585	5502	32
2018	189980	0	0	189980	189980	5.28%	10031	40124	50155	26
2019	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2020	12600	0	0	12600	12600	5.28%	665	1331	1996	16
2021	12600	0	0	12600	12600	5.28%	665	665	1331	11
2022	150000	0	0	150000	150000	5.28%	7920	0	7920	5
TOTAL :	3130348	0	0	3130348	3130348		104617	1912640	2017257	

DEPRECIATION FOR THE YEAR 2023-24

MERC ORDER : LIFE 14 YEARS

FURNITURE & OFFICE EQUIPMENTS

FROM 2011-12 LIFE : 18 YRS.

RATE OF DEP : 6.33% RATE OF DEP.: 5%

YEAR	BOOK VALUE AS ON 31.03.2023	WRITE OFF DURING THE YEAR 2023-24	ASSET TRANSFER	BALANCE VALUE OF ASSETS	NET ASSETS VALUE AS ON 31.03.2023	RATE OF DEP.	DEP. PROVISION FOR YEAR 2023-24	CUMM.DEP. PROVIDED UPTO 2022-23	CUMM. DEP. PROVIDED UPTO 2023-24	TOTAL % OF DEP PROVIDED UP TO 2023-24
1	7	8	9	10	13	14	15	16	17	
				(7-8-/+9)	(10-11-12)		(13*14)		(16+15)	
1970	62492	0	0	62492	62492	5%	0	56243	56243	90
1971	145047	0	0	145047	145047	5%	0	130542	130542	90
1972	11403	0	0	11403	11403	5%	0	10263	10263	90
1973	47971	0	0	47971	47971	5%	0	43174	43174	90
1974	35999	0	0	35999	35999	5%	0	32399	32399	90
1975	94349	0	0	94349	94349	5%	0	84914	84914	90
1976	239685	0	0	239685	239685	5%	0	215717	215717	90
1977	106729	0	0	106729	106729	5%	0	96056	96056	90
1978	93595	5090	0	88505	88505	5%	0	79654	79654	90
1979	96530	0	0	96530	96530	5%	0	86877	86877	90
1980	178447	0	0	178447	178447	5%	0	160602	160602	90
1981	69941	0	0	69941	69941	5%	0	62947	62947	90
1982	304410	0	0	304410	304410	5%	0	273969	273969	90
1983	168775	0	0	168775	168775	5%	0	151898	151898	90
1984	285671	0	0	285671	285671	5%	0	257104	257104	90
1985	272177	0	0	272177	272177	5%	0	244959	244959	90
1986	276916	0	0	276916	276916	5%	0	275788	275788	90
1987	0	0	0	0	0	5%	0	0	0	#DIV/0!
1988	415354	0	0	415354	415354	5%	0	373819	373819	90
1989	603115	0	0	603115	603115	5%	0	542804	542804	90
1990	85898	0	0	85898	85898	5%	0	77308	77308	90
1991	48356	15859	0	32497	32497	5%	0	29247	29247	90
1992	0	0	0	0	0	5%	0	0	0	#DIV/0!
1993	0	0	0	0	0	5%	0	0	0	#DIV/0!
1994	0	0	0	0	0	5%	0	0	0	#DIV/0!
1995	15728	0	0	15728	15728	5%	0	14155	14155	90
1996	17848	0	0	17848	17848	5%	0	16063	16063	90
1997	88045	0	0	88045	88045	5%	0	79241	79241	90
1998	73972	0	0	73972	73972	6.33%	0	66574	66574	90
1999	70189	0	0	70189	70189	6.33%	0	63170	63170	90
2000	512524	38500	0	474024	474024	6.33%	0	426622	426622	90
2001	432419	0	0	432419	432419	6.33%	0	389177	389177	90
2002	171691	0	0	171691	171691	6.33%	0	154522	154522	90
2003	26951	0	0	26951	26951	6.33%	0	24256	24256	90
2004	1767727	0	0	1767727	1767727	6.33%	0	1590955	1590955	90
2005	141261	0	0	141261	141261	6.33%	0	127135	127135	90
2006	366521	0	0	366521	366521	6.33%	0	329869	329869	90
2007	817937	0	0	817937	817937	6.33%	0	736143	736143	90
2008	295597	0	0	295597	295597	6.33%	1094	264944	266038	90
2009	983090	0	0	983090	983090	6.33%	52792	831989	884781	90
2010	351459	0	0	351459	351459	6.33%	22247	279867	302114	86
2011	501625	0	0	501625	501625	6.33%	31753	349281	381034	76
2012	33139	0	0	33139	33139	6.33%	2098	20977	23075	70
2013	213212	0	0	213212	213212	6.33%	13496	121467	134963	63
2014	1215514	0	0	1215514	1215514	6.33%	76942	615536	692478	57
2015	106892	0	0	106892	106892	6.33%	6766	47364	54130	51
2016	96188	0	0	96188	96188	6.33%	6089	36532	42621	44
2017	0	0	0	0	0	6.33%	0	0	0	#DIV/0!
2018	409969	0	0	409969	409969	6.33%	25951	103804	129755	32
2019	120304	0	0	120304	120304	6.33%	7615	22846	30461	25
2020	23458	0	0	23458	23458	6.33%	1485	2970	4455	19
2021	810312	0	0	810312	810312	6.33%	51293	51293	102585	13
2022	130794	0	0	130794	130794	6.33%	8279	0	8279	6
TOTAL:	13437226	59449	0	13377777	13377777		307900	10053034	10360934	

DEPRECIATION FOR THE YEAR 2023-24

MERC ORDER : LIFE 9 YEARS

ROOM A.C.

FROM 2011-12 LIFE : 7 YRS.

RATE OF DEP : 9.50% RATE OF DEP.: 12.86 %

YEAR	BOOK VALUE AS ON 31.03.2023	WRITE OFF DURING THE YEAR 2023-24	ASSET TRANSFER	BALANCE VALUE OF ASSETS	NET ASSETS VALUE AS ON 31.03.2023	RATE OF DEP.	DEP. PROVISION FOR YEAR 2023-24	CUMM.DEP. PROVIDED UPTO 2022-23	CUMM. DEP. PROVIDED UPTO 2023-24	TOTAL % OF DEP PROVIDED UP TO 2023-24
1	7	8	9	10	13	14	15	16	17	
				(7-8-/+9)	(10-11-12)		(13*14)		(16+15)	
2001	10003	0	0	10003	10003	12.86%	0	9003	9003	90
2002	18600	0	0	18600	18600	12.86%	0	16740	16740	90
2003	93376	0	0	93376	93376	12.86%	0	84034	84034	90
2004	0	0	0	0	0	12.86%	0	0	0	0
2005	156903	26574	0	130329	130329	12.86%	0	117295	117295	90
2006	117604	0	0	117604	117604	12.86%	0	105844	105844	90
2007	57250	0	0	57250	57250	9.50%	0	51525	51525	90
2008	177061	0	0	177061	177061	9.50%	0	159355	159355	90
2009	207558	0	0	207558	207558	9.50%	0	186802	186802	90
2010	292796	0	0	292796	292796	9.50%	0	263516	263516	90
2011	223130	29500	0	193630	193630	9.50%	0	174267	174267	90
2012	34803	0	0	34803	34803	9.50%	0	31323	31323	90
2013	183317	0	0	183317	183317	9.50%	8249	156736	164985	90
2014	79650	0	0	79650	79650	9.50%	7567	60534	68101	86
2015	341369	0	0	341369	341369	9.50%	32430	227010	259440	76
2016	206319	0	0	206319	206319	9.50%	19600	117602	137202	67
2017	737187	0	0	737187	737187	9.50%	70033	350164	420197	57
2018	91450	0	0	91450	91450	9.50%	8688	34751	43439	48
2019	393033	0	0	393033	393033	9.50%	37338	112014	149353	38
2020	94700	0	0	94700	94700	9.50%	8997	17993	26990	29
2021	500501	0	0	500501	500501	9.50%	47548	47548	95095	19
2022	959336	0	0	959336	959336	9.50%	91137	0	91137	10
TOTAL :	4975946	56074	0	4919872	4919872		331586	2324056	2655641	

DEPRECIATION FOR THE YEAR 2023-24 MERC ORDER : LIFE : 7 YRS. RATE OF DEP.: 12.86 %

PERSONAL COMPUTER

FROM 2011-12 FROM : LIFE : 6 YRS. RATE OF DEP.: 15 %
RATE OF DEP ; 15% 2005-06

YEAR	BOOK VALUE AS ON 31.03.2023	WRITE OFF DURING THE YEAR 2022-23	ASSET TRANSFER	BALANCE VALUE OF ASSETS	NET ASSETS VALUE AS ON 31.03.2023	RATE OF DEP.	DEP. PROVISION FOR YEAR 2023-24	CUMM.DEP. PROVIDED UPTO 2022-23	CUMM. DEP. PROVIDED UPTO 2023-24	TOTAL % OF DEP PROVIDED UP TO 2023-24
1	7	8	9	10	13	14	15	16	17	
				(7-8-/+9)	(10-11-12)		(13*14)		(16+15)	
2007	78563	0	0	78563	78563	15%	0	70706	70706	90
2008	62353	0	0	62353	62353	15%	0	56118	56118	90
2009	3678284	480706	0	3197578	3197578	15%	0	2877821	2877821	90
2010	1439527	357373	0	1082154	1082154	15%	0	973938	973938	90
2011	668776	668776	0	0	0	15%	0	0	0	#DIV/0!
2012	3092720	3092720	0	0	0	15%	0	0	0	#DIV/0!
2013	6046955	4594342	0	1452613	1452613	15%	0	1307352	1307352	90
2014	3732350	90592	0	3641758	3641758	15%	0	3277582	3277582	90
2015	5403892	1027332	0	4376560	4376560	15%	0	3938904	3938904	90
2016	13394136	0	0	13394136	13394136	15%	0	12054722	12054722	90
2017	3856372	0	0	3856372	3856372	15%	578456	2892279	3470735	90
2018	5711545	0	0	5711545	5711545	15%	856732	3426927	4283658	75
2019	2825965	0	0	2825965	2825965	15%	423895	1271684	1695579	60
2020	2981341	0	0	2981341	2981341	15%	447201	894402	1341603	45
2021	4560209	0	0	4560209	4560209	15%	684031	684031	1368063	30
2022	5882956	0	0	5882956	5882956	15%	882443	0	882443	15
TOTAL :	63415943	1E+07	0	53104102	53104102		3872758	33726466	37599224	

DEPRECIATION FOR THE YEAR 2023-24

MERC ORDER : LIFE 6 YEARS

CYCLOSTYLE MACHINE

FROM 2011-12

LIFE : 10 YRS.

RATE OF DEP.: 9 %

YEAR	BOOK VALUE AS ON 31.03.2023	WRITE OFF DURING THE YEAR 2022-23	ASSET TRANSFER	BALANCE VALUE OF ASSETS	NET ASSETS VALUE AS ON 31.03.23	RATE OF DEP.	DEP. PROVISION FOR YEAR 2023-24	CUMM.DEP. PROVIDED UPTO 2022-23	CUMM. DEP. PROVIDED UPTO 2023-24	TOTAL % OF DEP PROVIDED UP TO 2023-24
1	7	8	9	10	13	14	15	16	17	
				(7-8-/+9)	(10-11-12)		(13*14)		(16+15)	
1997	356311	0	0	356311	356311	9%	0	320680	320680	90
1998	0	0	0	0	0	9%	0	0	0	#DIV/0!
1999	0	0	0	0	0	9%	0	0	0	#DIV/0!
2000	0	0	0	0	0	9%	0	0	0	#DIV/0!
2001	111	0	0	111	111	9%	0	100	100	90
2002	0	0	0	0	0	9%	0	0	0	#DIV/0!
2003	0	0	0	0	0	9%	0	0	0	#DIV/0!
2004	0	0	0	0	0	9%	0	0	0	#DIV/0!
2005	0	0	0	0	0	15%	0	0	0	#DIV/0!
2006	0	0	0	0	0	15%	0	0	0	#DIV/0!
2007	0	0	0	0	0	15%	0	0	0	#DIV/0!
2008	0	0	0	0	0	15%	0	0	0	#DIV/0!
2009	57289	0	0	57289	57289	15%	0	51560	51560	90
2010	42525	0	0	42525	42525	15%	0	38273	38273	90
2011	65875	0	0	65875	65875	15%	0	59288	59288	90
2012	0	0	0	0	0	15%	0	0	0	#DIV/0!
2013	0	0	0	0	0	15%	0	0	0	#DIV/0!
2014	0	0	0	0	0	15%	0	0	0	#DIV/0!
2015	147375	0	0	147375	147375	15%	0	132638	132638	90
2016	821420	0	0	821420	821420	15%	0	739278	739278	90
2017	193536	0	0	193536	193536	15%	29030	145152	174182	90
2018	0	0	0	0	0	15%	0	0	0	#DIV/0!
2019	313290	0	0	313290	313290	15%	46994	140981	187974	60
2020	0	0	0	0	0	15%	0	0	0	#DIV/0!
2021	0	0	0	0	0	15%	0	0	0	#DIV/0!
2022	0	0	0	0	0	15%	0	0	0	#DIV/0!
TOTAL :	1997732	0	0	1997732	1997732		76024	1627948	1703972	

DEPRECIATION FOR THE YEAR 2023-24 MERC ORDER : LIFE 6 YEARS

ELECTRONIC EQUIPMENTS (SEPERATED FROM O

FROM : 2011-12 LIFE : 12 YRS.

RATE OF DEP. : 15% RATE OF DEP.: 7.5 %

YEAR	BOOK VALUE AS ON 31.03.2023	WRITE OFF DURING THE YEAR 2022-23	ASSET TRANSFER	BALANCE VALUE OF ASSETS	NET ASSETS VALUE AS ON 31.03.23	RATE OF DEP.	DEP. PROVISION FOR YEAR 2023-24	CUMM.DEP. PROVIDED UPTO 2022-23	CUMM. DEP. PROVIDED UPTO 2023-24	TOTAL % OF DEP PROVIDED UP TO 2023-24
1	7	8	9	10	13	14	15	16	17	
				(7-8-/+9)	(10-11-12)		(13*14)		(16+15)	
2000	16676	0	0	16676	16676	7.5%	0	15008	15008	90
2001	12940	0	0	12940	12940	7.5%	0	11646	11646	90
2002	0	0	0	0	0	7.5%	0	0	0	#DIV/0!
2003	162441	0	0	162441	162441	15%	0	146197	146197	90
2004	0	0	0	0	0	15%	0	0	0	#DIV/0!
2005	16944	0	0	16944	16944	15%	0	15250	15250	90
2006	14950	0	0	14950	14950	15%	0	13455	13455	90
2007	5840	0	0	5840	5840	15%	0	5256	5256	90
2008	47210	0	0	47210	47210	15%	0	42489	42489	90
2009	0	0	0	0	0	15%	0	0	0	#DIV/0!
2010	0	0	0	0	0	15%	0	0	0	#DIV/0!
2011	0	0	0	0	0	15%	0	0	0	#DIV/0!
2012	0	0	0	0	0	15%	0	0	0	#DIV/0!
2013	0	0	0	0	0	15%	0	0	0	#DIV/0!
2014	0	0	0	0	0	15%	0	0	0	#DIV/0!
2015	0	0	0	0	0	15%	0	0	0	#DIV/0!
2016	0	0	0	0	0	15%	0	0	0	#DIV/0!
2017	146849	0	0	146849	146849	15%	22027	110137	132164	90
2018	262661	0	0	262661	262661	15%	39399	157597	196996	75
2019	19989	0	0	19989	19989	15%	2998	8995	11993	60
2020	0	0	0	0	0	15%	0	0	0	#DIV/0!
2021	0	0	0	0	0	15%	0	0	0	#DIV/0!
2022	369500000	0	0	369500000	369500000	15%	55425000	0	55425000	15
TOTAL :	370206500	0	0	370206500	370206500		55489425	526029	56015453	

DEPRECIATION FOR THE YEAR 2023-24 LIFE : 10 YRS. RATE OF DEP.: 9 %

PLANT & MACHINERY (EDP-IN HOUSE COMPUTER FROM 2005 - LIFE : 6 YRS. RATE OF DEP.: 15 %

YEAR	BOOK VALUE AS ON 31.03.2023	WRITE OFF DURING THE YEAR 2023-24	ASSET TRANSFER	BALANCE VALUE OF ASSETS	NET ASSETS VALUE AS ON 31.03.23	RATE OF DEP.	DEP. PROVISION FOR YEAR 2023-24	CUMM.DEP. PROVIDED UPTO 2022-23	CUMM. DEP. PROVIDED UPTO 2023-24	TOTAL % OF DEP PROVIDED UP TO 2023-24
1	7	8	9	10	13	14	15	16	17	
				(7-8-/+9)	(10-11-12)		(13*14)		(16+15)	
1982	1982337	0	0	1982337	1982337	9%	0	1784103	1784103	90
1983	595068	0	0	595068	595068	9%	0	535561	535561	90
1984	1155443	0	0	1155443	1155443	9%	0	1039899	1039899	90
1985	1061569	0	0	1061569	1061569	9%	0	955412	955412	90
1986	-454962	0	0	-454962	-454962	9%	0	-409466	-409466	90
1987	505465	0	0	505465	505465	9%	0	454919	454919	90
1988	400206	0	0	400206	400206	9%	0	360185	360185	90
1989	1287766	0	0	1287766	1287766	9%	0	1158989	1158989	90
1990	154270	0	0	154270	154270	9%	0	138843	138843	90
1991	0	0	0	0	0	9%	0	0	0	#DIV/0!
1992	-505236	0	0	-505236	-505236	9%	0	-454712	-454712	90
1993	20000	0	0	20000	20000	9%	0	18000	18000	90
1994	264186	0	0	264186	264186	9%	0	237767	237767	90
1995	362268	0	0	362268	362268	9%	0	326041	326041	90
1996	372132	0	0	372132	372132	9%	0	334919	334919	90
1997	1887	0	0	1887	1887	9%	0	1698	1698	90
1998	4922404	0	0	4922404	4922404	9%	0	4430164	4430164	90
1999	7301476	0	0	7301476	7301476	9%	0	6571328	6571328	90
2000	2169517	0	0	2169517	2169517	9%	0	1952565	1952565	90
2001	320598	0	0	320598	320598	9%	0	288538	288538	90
2002	0	0	0	0	0	9%	0	0	0	#DIV/0!
2003	145925	0	0	145925	145925	9%	0	131333	131333	90
2004	256500	0	0	256500	256500	9%	0	230850	230850	90
2005	178454	0	0	178454	178454	15%	0	160608	160608	90
2006	179499	0	0	179499	179499	15%	0	161549	161549	90
2007	968958	0	0	968958	968958	15%	0	872062	872062	90
2008	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2009	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2010	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2011	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2012	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2013	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2014	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2015	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2016	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2017	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2018	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2019	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2020	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2021	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2022	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
TOTAL :	23645730	0	0	23645730	23645730		0	21281157	21281157	

DEPRECIATION FOR THE YEAR 2023-24 MERC ORDER : LIFE 17 YEARS

PLANT & MACHINERY (STORES DEPART

FROM : 2011-12 LIFE : 22 YRS.

RATE OF DEP. : 5.28% RATE OF DEP.: 4.09 %

YEAR	BOOK VALUE AS ON 31.03.2022	WRITE OFF DURING THE YEAR 2022-23	ASSET TRANSFER	BALANCE VALUE OF ASSETS	NET ASSETS VALUE AS ON 31.03.23	RATE OF DEP.	DEP. PROVISION FOR YEAR 2023-24	CUMM.DEP. PROVIDED UPTO 2022-23	CUMM. DEP. PROVIDED UPTO 2023-24	TOTAL % OF DEP PROVIDED UP TO 2023-24
1	7	8	9	10	3	14	15	16	17	
				(7-8-/+9)	(10-11-12)		(13*14)		(16+15)	
1988	237359	0	0	237359	237359	4.09%	0	213623	213623	90
1989	0	0	0	0	0	4.09%	0	0	0	#DIV/0!
1990	0	0	0	0	0	4.09%	0	0	0	#DIV/0!
1991	0	0	0	0	0	4.09%	0	0	0	#DIV/0!
1992	0	0	0	0	0	4.09%	0	0	0	#DIV/0!
1993	0	0	0	0	0	4.09%	0	0	0	#DIV/0!
1994	0	0	0	0	0	4.09%	0	0	0	#DIV/0!
1995	0	0	0	0	0	4.09%	0	0	0	#DIV/0!
1996	0	0	0	0	0	4.09%	0	0	0	#DIV/0!
1997	0	0	0	0	0	4.09%	0	0	0	#DIV/0!
1998	0	0	0	0	0	4.09%	0	0	0	#DIV/0!
1999	0	0	0	0	0	4.09%	0	0	0	#DIV/0!
2000	0	0	0	0	0	4.09%	0	0	0	#DIV/0!
2001	0	0	0	0	0	4.09%	0	0	0	#DIV/0!
2002	0	0	0	0	0	4.09%	0	0	0	#DIV/0!
2003	0	0	0	0	0	4.09%	0	0	0	#DIV/0!
2004	0	0	0	0	0	4.09%	0	0	0	#DIV/0!
2005	0	0	0	0	0	4.09%	0	0	0	#DIV/0!
2006	0	0	0	0	0	4.09%	0	0	0	#DIV/0!
2007	0	0	0	0	0	4.09%	0	0	0	#DIV/0!
2008	0	0	0	0	0	4.09%	0	0	0	#DIV/0!
2009	0	0	0	0	0	4.09%	0	0	0	#DIV/0!
2010	0	0	0	0	0	4.09%	0	0	0	#DIV/0!
2011	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2012	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2013	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2014	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2015	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2016	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2017	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2018	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2019	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2020	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2021	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2022	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
TOTAL :	237359	0	0	237359	237359		0	213623	213623	

DEPRECIATION FOR THE YEAR 2023-24

MERC ORDER : LIFE 17 YEARS

SECURITY EQUIPMENT

FROM : 2011-12

LIFE : 100 YRS.

RATE OF DEP. : 5.28

RATE OF DEP.: 0.90 %

YEAR	BOOK VALUE AS ON 31.03.2023	WRITE OFF DURING THE YEAR 2022-23	ASSET TRANSFER	BALANCE VALUE OF ASSETS	NET ASSETS VALUE AS ON 31.03.23	RATE OF DEP.	DEP. PROVISION FOR YEAR 2023-24	CUMM.DEP. PROVIDED UPTO 2022-23	CUMM. DEP. PROVIDED UPTO 2023-24	TOTAL % OF DEP PROVIDED UP TO 2023-24
1	7	8	9	10	13	14	15	16	17	
				(7-8-/+9)	(10-11-12)		(13*14)		(16+15)	
1992	1059000	0	0	1059000	1059000	5.28%	55915	805687	861602	81
1993	2071350	0	0	2071350	2071350	5.28%	109367	1557241	1666608	80
1994	28000	0	0	28000	28000	5.28%	1478	20798	22277	80
1995	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
1996	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
1997	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
1998	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
1999	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2000	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2001	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2002	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2003	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2004	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2005	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2006	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2007	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2008	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2009	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2010	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2011	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2012	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2013	102038	0	0	102038	102038	5.28%	5388	48488	53876	53
2014	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2015	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2016	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2017	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2018	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2019	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2020	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2021	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2022	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
TOTAL :	3260388	0	0	3260388	3260388		172148	2432215	2604363	

DEPRECIATION FOR THE YEAR 2023-24

FAX / XEROX MACHINE

LIFE : 6 YRS.

RATE OF DEP.: 15 %

YEAR	BOOK VALUE AS ON 01.04.2022	WRITE OFF DURING THE YEAR	ASSET TRANSFER	BALANCE VALUE OF ASSETS	NET ASSETS VALUE AS ON 31.03.23	RATE OF DEP.	DEP. PROVISION FOR YEAR 2023-24	CUMM.DEP. PROVIDED UPTO 2022-23	CUMM. DEP. PROVIDED UPTO 2023-24	TOTAL % OF DEP PROVIDED UP TO 2023-24
1	7	8	9	10	13	14	15	16	17	
				(7-8-/+9)	(10-11-12)		(13*14)		(16+15)	
1999	22030	0	0	22030	22030	15%	0	19827	19827	90
2011	17430	0	0	17430	17430	15%	0	15687	15687	90
2012	38450	0	0	38450	38450	15%	0	34605	34605	90
2013	37550	0	0	37550	37550	15%	0	33795	33795	90
2014	0	0	0	0	0	15%	0	0	0	#DIV/0!
2015	62055	17955	0	44100	44100	15%	0	39690	39690	126.6429
2016	41763	0	0	41763	41763	15%	0	37587	37587	90
2017	0	0	0	0	0	15%	0	0	0	#DIV/0!
2018	0	0	0	0	0	15%	0	0	0	#DIV/0!
2019	0	0	0	0	0	15%	0	0	0	#DIV/0!
2020	0	0	0	0	0	15%	0	0	0	#DIV/0!
2021	0	0	0	0	0	15%	0	0	0	#DIV/0!
2022	898099	0	0	898099	898099	15%	134715	0	134715	15
TOTAL :	1117377	17955	0	1099422	1099422		134715	181191	315906	

SUMMARY OF PROVISION OF DEPRECIATION ON ASSETS OF GENERAL ADMINISTRATION DIVISION
FOR THE YEAR 2023-24

ASSETS DESCREPTION	BOOK VALUE AS ON 01.04.2022	WRITE OFF DURING THE YEAR 2022-23	ASSET TRANSFER	BALANCE VALUE OF ASSETS	GOVT. GRANT	NET ASSETS VALUE AS ON 31.03.23	DEP. PROVISION FOR YEAR 2023-24
1	7	8	9	10	11	13	15
				(7-8-/+9)		(10-11-12)	(13*14)
LAND	41129691			41129691		41129691	0
BUILDING	784636357	0	0	784636357	0	784636357	24071697
STATIC ROOM A.C.	2400742.02	205899	0	2194843	0	2194843	0
MOTOR VEHICLE	39295630	2837759	0	36457870	0	36457870	730773
TOOLS & EQUIPMENT	3130348	0	0	3130348	0	3130348	104617
FURNITURE & OFF.EQUIP.	13437226	59449	0	13377777	0	13377777	307900
ROOM A.C.	4975946	56074	0	4919872	0	4919872	331586
PERSONAL COMPUTER	63415943	10311841	0	53104102	0	53104102	3872758
CYCLOSTYLE MACHINE	1997732	0	0	1997732	0	1997732	76024
ELECTRONIC EQUIPMENT	370206500	0	0	370206500	0	370206500	55489425
PL & MACH. EDP.	23645730	0	0	23645730	0	23645730	0
PL & MACH STOCK	237359	0	0	237359	0	237359	0
SECURITY EQUIPMENT	3260388	0	0	3260388	0	3260388	172148
FAX MACHINE	1117377	17955	0	1099422	0	1099422	134715
TOTAL :	1352886968	13488978	0	1339397990	0	1339397990	85291643

DETAILS OF E-6 WISE ASSETS GROUPING - GENERAL ADMINISTRATION DIVISION

ASSETS DESCREPTION	BOOK VALUE AS ON 01.04.2022	WRITE OFF DURING THE YEAR 2022-23	ASSET TRANSFER	BALANCE VALUE OF ASSETS	GOVT. GRANT	NET ASSETS VALUE AS ON 31.03.23	DEP. PROVISION FOR YEAR 2023-24
LAND	**41129691**	**0**	**0**	**41129691**	**0**	**41129691**	**0**
BUILDING	784636357	0	0	784636357	0	784636357	24071697
STATIC ROOM A.C.	2400742.02	205899	0	2194843	0	2194843	0
BUILDINGS	**787037099**	**205899**	**0**	**786831201**	**0**	**786831201**	**24071697**
MOTOR VEHICLES	**39295630**	**2837759**	**0**	**36457870**	**0**	**36457870**	**730773**
PL & MACH EDP	23645730	0	0	23645730	0	23645730	0
PL & MACH STOCK	237359	0	0	237359	0	237359	0
PLANT AND MACHINERY	**23883089**	**0**	**0**	**23883089**	**0**	**23883089**	**0**
FURNITURE & OFF. EQUIP.	13437226	59449	0	13377777	0	13377777	307900
ROOM A.C.	4975946	56074	0	4919872	0	4919872	331586
PERSONAL COMPUTER	63415943	10311841	0	53104102	0	53104102	3872758
CYCLOSTYLE MACHINE	1997732	0	0	1997732	0	1997732	76024
ELECTRONIC EQUIPMENT	370206500	0	0	370206500	0	370206500	55489425
FAX MACHINE	1117377	17955	0	1099422	0	1099422	134715
FURNITURE AND OFFICE EQUIPMENTS	**455150724**	**10445320**	**0**	**444705404**	**0**	**444705404**	**60212408**
TOOLS AND EQUIPMENTS	**3130348**	**0**	**0**	**3130348**	**0**	**3130348**	**104617**
SECURITY EQUIPMENTS	**3260388**	**0**	**0**	**3260388**	**0**	**3260388**	**172148**
TOTAL :	**1352886968**	**13488978**	**0**	**1339397990**	**0**	**1339397990**	**85291643**

ANNEXURE-12

PART-D

DEPRECIATION FOR THE YEAR 2015-16

LAND

YEAR	DEP. PROVIDED UPTO	BALANCE YEAR	ASSET USED UPTO THE YEAR	ESTIMATED LIFE OF ASSETS	BAL.YEAR FOR DEP. TO BE PROVIDED	BOOK VALUE AS ON 31.03.2015	IDC	WRITE OFF DURING THE YEAR	ASSET TRANSFER	BALANCE VALUE OF ASSETS	GOVT. GRANT	CABEL CAPITAL CONN. FEES	NET ASSETS VALUE AS ON 31.03.15	RATE OF DEP.	DEP. PROVISION FOR YEAR 2015-16	CUMM.DEP. PROVIDED UPTO 2014-15	CUMM. DEP. PROVIDED UPTO 2015-16	REMARK
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
		(2-1)							(7-8-9-/+10)			(11-12-13)			(14*15)		(16+17)	
	2013	2013	50	50	0	22953418	0	0	0	2.3E+07	0	0	2.3E+07	1.80%	0	0	0	
1947	2013	66	50	50	0	60798	0	0	0	60798	0	0	60798	1.80%	0	0	0	
1948	2013	65	50	50	0	416779	0	0	0	416779	0	0	416779	1.80%	0	0	0	

DEPRECIATION FOR THE YEAR 2023-24

LIFE : 50 YRS RATE OF DEP : 1.80%

BUILDING

FR. 1993-94 LIFE : 45 YRS RATE OF DEP : 2%

YEAR	BOOK VALUE AS ON 01.04.2022	IDC	WRITE OFF DURING THE YEAR	ASSET TRANSFER	BALANCE VALUE OF ASSETS	NET ASSETS VALUE AS ON 31.03.23	RATE OF DEP.	DEP. PROVISION FOR YEAR 2023-24	CUMM.DEP. PROVIDED UPTO 2022-23	CUMM. DEP. PROVIDED UPTO 2023-24	TOTAL % OF DEP PROVIDED UP TO 2023-24
1	7	8	9	10	11	14	15	16	17	18	
					(7-8-9-/+10)	(11-12-13)		(14*15)		(16+17)	
1946	3689254	0	0	0	3689254	3689254	1.80%	0	3320329	3320329	90
1947	60798	0	0	0	60798	60798	1.80%	0	54718	54718	90
1948	416779	0	0	0	416779	416779	1.80%	0	375101	375101	90
1949	523698	0	0	0	523698	523698	1.80%	0	471328	471328	90
1950	104638	0	0	0	104638	104638	1.80%	0	94174	94174	90
1951	64828	0	0	0	64828	64828	1.80%	0	58345	58345	90
1952	28438	0	0	0	28438	28438	1.80%	0	25594	25594	90
1953	59705	0	0	0	59705	59705	1.80%	0	53735	53735	90
1954	86307	0	0	0	86307	86307	1.80%	0	77676	77676	90
1955	509635	0	0	0	509635	509635	1.80%	0	458672	458672	90
1956	464918	0	0	0	464918	464918	1.80%	0	418426	418426	90
1957	596871	0	0	0	596871	596871	1.80%	0	537184	537184	90
1958	390151	0	0	0	390151	390151	1.80%	0	351136	351136	90
1959	594712	0	0	0	594712	594712	1.80%	0	535241	535241	90
1960	582821	0	0	0	582821	582821	1.80%	0	524539	524539	90
1961	465046	0	0	0	465046	465046	1.80%	0	418541	418541	90
1962	584093	0	0	0	584093	584093	1.80%	0	525684	525684	90
1963	548657	0	0	0	548657	548657	1.80%	0	493791	493791	90
1964	742423	0	0	0	742423	742423	1.80%	0	668181	668181	90
1965	657964	0	0	0	657964	657964	1.80%	0	592168	592168	90
1966	878027	0	0	0	878027	878027	1.80%	0	790224	790224	90
1967	1354879	0	0	0	1354879	1354879	1.80%	0	1219391	1219391	90
1968	1523688	0	0	0	1523688	1523688	1.80%	0	1371319	1371319	90
1969	1988858	0	0	0	1988858	1988858	1.80%	0	1789972	1789972	90
1970	598128	0	0	0	598128	598128	1.80%	0	538315	538315	90
1971	2076824	0	0	0	2076824	2076824	1.80%	0	1869142	1869142	90
1972	1883242	0	0	0	1883242	1883242	1.80%	0	1694918	1694918	90
1973	548044	0	0	0	548044	548044	3.34%	0	493240	493240	90
1974	1762733	0	0	0	1762733	1762733	3.34%	0	1586460	1586460	90
1975	3094136	0	0	0	3094136	3094136	3.34%	0	2784723	2784723	90
1976	729262	0	0	0	729262	729262	3.34%	0	656336	656336	90
1977	1076731	0	0	0	1076731	1076731	3.34%	0	969058	969058	90
1978	942140	0	0	0	942140	942140	3.34%	0	847926	847926	90
1979	1135276	0	0	0	1135276	1135276	3.34%	0	1021748	1021748	90
1980	494826	0	0	0	494826	494826	3.34%	0	445343	445343	90
1981	863390	0	0	0	863390	863390	3.34%	0	777051	777051	90
1982	1900520	0	0	0	1900520	1900520	3.34%	0	1710467	1710467	90
1983	2046003	0	0	0	2046003	2046003	3.34%	21688	1819715	1841403	90
1984	4549574	0	0	0	4549574	4549574	3.34%	130118	3964499	4094617	90
1985	3541022	0	0	0	3541022	3541022	3.34%	118270	3021908	3140178	89
1986	11474970	0	0	0	11474970	11474970	3.34%	383264	9586190	9969454	87
1987	6254060	0	0	0	6254060	6254060	3.34%	208886	5112069	5320954	85
1988	17539190	0	0	0	17539190	17539190	3.34%	585809	14020828	14606637	83
1989	39063097	0	0	0	39063097	39063097	3.34%	1304707	30523904	31828611	81
1990	23074264	0	0	0	23074264	23074264	3.34%	770680	17614893	18385574	80
1991	29057187	0	0	0	29057187	29057187	3.34%	970510	21659227	22629737	78
1992	27386962	0	0	0	27386962	27386962	3.34%	914725	19921276	20836001	76
1993	44715994	0	0	0	44715994	44715994	3.34%	1493514	33420734	34914248	78
1994	54678805	0	0	0	54678805	54678805	3.34%	1826272	39773363	41599635	76
1995	15210779	0	0	0	15210779	15210779	3.34%	508040	10760105	11268145	74
1996	17549616	0	0	0	17549616	17549616	3.34%	586157	12063606	12649763	72
1997	19737275	0	0	0	19737275	19737275	3.34%	659225	13172657	13831882	70
1998	20316674	0	0	0	20316674	20316674	3.34%	678577	13153015	13831592	68
1999	17675030	0	0	0	17675030	17675030	3.34%	590346	11089314	11679660	66
2000	12342068	0	0	0	12342068	12342068	3.34%	412225	7496572	7908797	64
2001	5121950	0	0	0	5121950	5121950	3.34%	171073	3008633	3179707	62
2002	3432871	0	0	0	3432871	3432871	3.34%	114658	1947811	2062469	60
2003	4107328	0	0	0	4107328	4107328	3.34%	137185	2248351	2385536	58
2004	2857785	0	0	0	2857785	2857785	3.34%	95450	1507196	1602646	56
2005	12945755	0	0	0	12945755	12945755	3.34%	432388	6568676	7001064	54
2006	18835475	0	0	0	18835475	18835475	3.34%	629105	9180411	9809515	52
2007	18467732	0	0	0	18467732	18467732	3.34%	616822	8631818	9248640	50
2008	12815056	0	0	0	12815056	12815056	3.34%	428023	5733456	6161479	48
2009	35455280	0	0	0	35455280	35455280	3.34%	1184206	15153587	16337793	46
2010	36732835	0	0	0	36732835	36732835	3.34%	1226877	14964957	16191834	44
2011	35334694	0	0	0	35334694	35334694	3.34%	1180179	12981967	14162145	40
2012	39840121	0	0	0	39840121	39840121	3.34%	1330660	13306600	14637260	37
2013	35295322	0	0	0	35295322	35295322	3.34%	1178864	10609774	11788638	33
2014	13561052	0	0	0	13561052	13561052	3.34%	452939	3623513	4076452	30
2015	35578074	0	0	0	35578074	35578074	3.34%	1188308	8318154	9506462	27
2016	17536579	0	0	0	17536579	17536579	3.34%	585722	3514331	4100052	23
2017	45662057	0	0	0	45662057	45662057	3.34%	1525113	7625563	9150676	20
2018	5571383	0	0	0	5571383	5571383	3.34%	186084	744337	930421	17
2019	8295033	0	0	0	8295033	8295033	3.34%	277054	831163	1108217	13
2020	9121875	0	0	0	9121875	9121875	3.34%	304671	609341	914012	10
2021	27310109	0	0	-6237000	21073109	21073109	3.34%	703842	703842	1407684	7
2022	59729458	0	0	0	59729458	59729458	3.34%	1994964	0	1994964	3
TOTAL :	883842833	0	0	-6237000	877605833	877605833		28107199	430607553	458714752	

DEPRECIATION FOR THE YEAR 2023-24 MERC ORDER : LIFE 27 YEARS

BUILDING - CASH COLLECTION PORTABL

FROM : 2011 - 12 LIFE : 20 YRS

RATE OF DEP. : 3.34% RATE OF DEP. : 4.50 %

YEAR	BOOK VALUE AS ON 01.04.2022	IDC	WRITE OFF DURING THE YEAR 2022-23	ASSET TRANSFER	BALANCE VALUE OF ASSETS	NET ASSETS VALUE AS ON 31.03.23	RATE OF DEP.	DEP. PROVISION FOR YEAR 2023-24	CUMM.DEP. PROVIDED UPTO 2022-23	CUMM. DEP. PROVIDED UPTO 2023-24	TOTAL % OF DEP PROVIDED UP TO 2023-24
1	7	8	9	10	11	14	15	16	17	18	
					(7-8-9-/+10	(11-12-13)		(14*15)		(16+17)	
1973	22844		0	0	22844	22844	3.34%	0	20560	20560	90
2002	110355		0	0	110355	110355	3.34%	3686	90204	93890	85
2003	0		0	0	0	0	3.34%	0	0	0	#DIV/0!
2004	0		0	0	0	0	3.34%	0	0	0	#DIV/0!
2005	0		0	0	0	0	3.34%	0	0	0	#DIV/0!
2006	0		0	0	0	0	3.34%	0	0	0	#DIV/0!
2007	0		0	0	0	0	3.34%	0	0	0	#DIV/0!
2008	0		0	0	0	0	3.34%	0	0	0	#DIV/0!
2009	16267		0	0	16267	16267	3.34%	543	8173	8716	54
2010	0		0	0	0	0	3.34%	0	0	0	#DIV/0!
2011	0		0	0	0	0	3.34%	0	0	0	#DIV/0!
2012	0		0	0	0	0	3.34%	0	0	0	#DIV/0!
2013	0		0	0	0	0	3.34%	0	0	0	#DIV/0!
2014	0		0	0	0	0	3.34%	0	0	0	#DIV/0!
2015	0		0	0	0	0	3.34%	0	0	0	#DIV/0!
2016	0		0	0	0	0	3.34%	0	0	0	#DIV/0!
2017	0		0	0	0	0	3.34%	0	0	0	#DIV/0!
2018	0		0	0	0	0	3.34%	0	0	0	#DIV/0!
2019	0		0	0	0	0	3.34%	0	0	0	#DIV/0!
2020	0		0	0	0	0	3.34%	0	0	0	#DIV/0!
2021	0		0	0	0	0	3.34%	0	0	0	#DIV/0!
2022	0		0	0	0	0	3.34%	0	0	0	#DIV/0!
TOTAL:	149466		0	0	149466	149466		4229	118936	123165	

DEPRECIATION FOR THE YEAR 2023-24

MOTOR VEHICLES

LIFE : 8 YRS.

RATE OF DEP.: 11.25%

YEAR	BOOK VALUE AS ON 01.04.2022	IDC	WRITE OFF DURING THE YEAR 2022-23	ASSET TRANSFER	BALANCE VALUE OF ASSETS	NET ASSETS VALUE AS ON 31.03.2023	RATE OF DEP.	DEP. PROVISION FOR YEAR 2023-24	CUMM.DEP. PROVIDED UPTO 2022-23	CUMM. DEP. PROVIDED UPTO 2023-24	TOTAL % OF DEP PROVIDED UP TO 2023-24
1	7	8	9	10	11	14	15	16	17	18	
					(7-8-9-/+10)	(11-12-13)		(14*15)		(16+17)	
1992	162127		0	0	162127	162127	12.86%	0	145914	145914	90
1993	80761		0	0	80761	80761	11.25%	0	72685	72685	90
1994	0		0	0	0	0	11.25%	0	0	0	#DIV/0!
1995	0		0	0	0	0	11.25%	0	0	0	#DIV/0!
1996	0		0	0	0	0	11.25%	0	0	0	#DIV/0!
1997	0		0	0	0	0	11.25%	0	0	0	#DIV/0!
1998	209635		0	0	209635	209635	11.25%	0	188672	188672	90
1999	0		0	0	0	0	11.25%	0	0	0	#DIV/0!
2000	0		0	0	0	0	11.25%	0	0	0	#DIV/0!
2001	1142677		0	0	1142677	1142677	11.25%	0	1028409	1028409	90
2002	0		0	0	0	0	11.25%	0	0	0	#DIV/0!
2003	9049117		1823860	0	7225257	7225257	11.25%	0	6502731	6502731	90
2004	6905758		5527732	0	1378026	1378026	11.25%	0	1240223	1240223	90
2005	3603828		3298966	0	304862	304862	11.25%	0	274376	274376	90
2006	6982199		5339002	0	1643197	1643197	11.25%	0	1478877	1478877	90
2007	20628410		0	0	20628410	20628410	11.25%	0	18565569	18565569	90
2008	13518482		0	0	13518482	13518482	11.25%	0	12166634	12166634	90
2009	33858641		0	0	33858641	33858641	11.25%	0	30472777	30472777	90
2010	6825688		0	0	6825688	6825688	11.25%	0	6143119	6143119	90
2011	10192665		0	0	10192665	10192665	11.25%	0	9173399	9173399	90
2012	0		0	0	0	0	11.25%	0	0	0	#DIV/0!
2013	0		0	0	0	0	11.25%	0	0	0	#DIV/0!
2014	4325118		0	0	4325118	4325118	11.25%	0	3892606	3892606	90
2015	1255040		0	0	1255040	1255040	11.25%	141192	988344	1129536	90
2016	9961570		0	0	9961570	9961570	11.25%	1120677	6724060	7844736	79
2017	2061074		0	0	2061074	2061074	11.25%	231871	1159354	1391225	68
2018	2800000		0	0	2800000	2800000	11.25%	315000	1260000	1575000	56
2019	3199996		0	0	3199996	3199996	11.25%	360000	1079999	1439998	45
2020	1503910		0	0	1503910	1503910	11.25%	169190	338380	507570	34
2021	0		0	0	0	0	11.25%	0	0	0	#DIV/0!
2022	0		0	0	0	0	11.25%	0	0	0	#DIV/0!
TOTAL :	138266695		15989559	0	122277136	122277136		2337929	102896126	105234055	

DEPRECIATION FOR THE YEAR 2023-24

MERC ORDER: LIFE 17 Y FROM 1993-94

MACHINE TOOLS

FROM : 2011-12 LIFE : 18 Y LIFE : 20 YRS.

RATE OF DEP. : 5.28% RATE OF DEP : 5% RATE OF DEP.: 4.5%

YEAR	BOOK VALUE AS ON 01.04.2022	IDC	WRITE OFF DURING THE YEAR 2022-23	ASSET TRANSFER	BALANCE VALUE OF ASSETS	GOVT. GRANT	NET ASSETS VALUE AS ON 31.03.23	RATE OF DEP.	DEP. PROVISION FOR YEAR 2023-24	CUMM.DEP. PROVIDED UPTO 2022-23	CUMM. DEP. PROVIDED UPTO 2023-24	TOTAL % OF DEP PROVIDED UP TO 2023-24
1	7	8	9	10	11	12	14	15	16	17	18	
					(7-8-9-/+10)		(11-12-13)		(14*15)		(16+17)	
1981	0	0	0	0	0	0	0	4.5%	0	0	0	#DIV/0!
1982	120347	0	0	0	120347	0	120347	4.5%	0	108312	108312	90
1983	74164	0	0	0	74164	0	74164	4.5%	0	66748	66748	90
1984	0	0	0	0	0	0	0	4.5%	0	0	0	#DIV/0!
1985	113751	0	0	0	113751	0	113751	4.5%	0	102376	102376	90
1986	0	0	0	0	0	0	0	4.5%	0	0	0	#DIV/0!
1987	662135	0	0	0	662135	0	662135	4.5%	0	595922	595922	90
1988	42938	0	0	0	42938	0	42938	4.5%	0	38644	38644	90
1989	75128	0	0	0	75128	0	75128	4.5%	0	67615	67615	90
1990	134208	0	0	0	134208	0	134208	4.5%	0	120787	120787	90
1991	2414553	0	0	0	2414553	0	2414553	4.5%	0	2173097	2173097	90
1992	1640360	0	0	0	1640360	0	1640360	4.5%	0	1476324	1476324	90
1993	11846632	0	0	0	11846632	0	11846632	5%	0	10661969	10661969	90
1994	1551911	0	0	0	1551911	0	1551911	5%	0	1396720	1396720	90
1995	1305662	0	0	0	1305662	0	1305662	5%	0	1175096	1175096	90
1996	921701	0	0	0	921701	0	921701	5%	0	829531	829531	90
1997	4169286	0	13515	0	4155771	0	4155771	5%	0	3740193	3740193	90
1998	710792	0	0	0	710792	0	710792	5.28%	0	639713	639713	90
1999	15402420	0	0	0	15402420	0	15402420	5.28%	0	13862178	13862178	90
2000	5210392	0	0	0	5210392	0	5210392	5.28%	0	4689353	4689353	90
2001	1526141	0	0	0	1526141	0	1526141	5.28%	0	1373527	1373527	90
2002	244777	0	0	0	244777	0	244777	5.28%	0	220299	220299	90
2003	1180391	0	0	0	1180391	0	1180391	5.28%	0	1062352	1062352	90
2004	1239150	0	93776	0	1145375	0	1145375	5.28%	0	1030837	1030837	90
2005	3973468	0	0	0	3973468	0	3973468	5.28%	0	3576121	3576121	90
2006	8773924	0	0	0	8773924	0	8773924	5.28%	168459	7728072	7896531	90
2007	32475216	0	0	0	32475216	0	32475216	5.28%	1714691	26980409	28695101	88
2008	11360997	0	350999	0	11009998	0	11009998	5.28%	581328	8596607	9177935	83
2009	8692688	0	0	0	8692688	0	8692688	5.28%	458974	6352617	6811591	78
2010	14698424	0	0	0	14698424	0	14698424	5.28%	776077	10006687	10782764	73
2011	53990720	0	0	0	53990720	0	53990720	5.28%	2850710	31357810	34208520	63
2012	27356662	0	0	0	27356662	0	27356662	5.28%	1444432	14444318	15888749	58
2013	3312195	0	0	0	3312195	0	3312195	5.28%	174884	1573955	1748839	53
2014	1786992	0	0	0	1786992	0	1786992	5.28%	94353	754825	849179	48
2015	5292384	0	0	0	5292384	0	5292384	5.28%	279438	1956065	2235503	42
2016	41842236	0	0	0	41842236	0	41842236	5.28%	2209270	13255620	15464890	37
2017	1936615	0	0	0	1936615	0	1936615	5.28%	102253	511266	613520	32
2018	19960167	0	0	0	19960167	0	19960167	5.28%	1053897	4215587	5269484	26
2019	6745466	0	0	0	6745466	0	6745466	5.28%	356161	1068482	1424642	21
2020	56885739	0	0	0	56885739	0	56885739	5.28%	3003567	6007134	9010701	16
2021	47143715	0	0	1490942	48634657	0	48634657	5.28%	2567910	2567910	5135820	11
2022	5716436	0	0	0	5716436	0	5716436	5.28%	301828	0	301828	5
TOTAL :	402530882		458290	1490942	403563535	0	403563535		18138231	186385079	204523310	

DEPRECIATION FOR THE YEAR 2023-24 MERC ORDER : LIFE 14 YEARS FROM 1993-94

FURNITURE

FROM : 2011-12 LIFE : 18 YRS LIFE : 20 YRS.

RATE OF DEP. : 6.33% RATE OF DEP : 5% RATE OF DEP.: 4.5%

YEAR	BOOK VALUE AS ON 31.03.2023	IDC	WRITE OFF DURING THE YEAR 2023-24	ASSET TRANSFER	BALANCE VALUE OF ASSETS	NET ASSETS VALUE AS ON 01.04.23	RATE OF DEP.	DEP. PROVISION FOR YEAR 2023-24	CUMM.DEP. PROVIDED UPTO 2022-23	CUMM. DEP. PROVIDED UPTO 2023-24	TOTAL % OF DEP PROVIDED UP TO 2023-24
1	7	8	9	10	11	14	15	16	17	18	
					(7-8-9-/+10)	(11-12-13)		(14*15)		(16+17)	
1975	0		0	0	0	0	4.5%	0	0	0	#DIV/0!
1976	15914		0	0	15914	15914	4.5%	0	14323	14323	90
1977	0		0	0	0	0	4.5%	0	0	0	#DIV/0!
1978	21368		0	0	21368	21368	4.5%	0	19231	19231	90
1979	21532		0	0	21532	21532	4.5%	0	19379	19379	90
1980	8115		0	0	8115	8115	4.5%	0	7304	7304	90
1981	4905		0	0	4905	4905	4.5%	0	4415	4415	90
1982	14290		0	0	14290	14290	4.5%	0	12861	12861	90
1983	-18421		0	0	-18421	-18421	4.5%	0	-16579	-16579	90
1984	122294		0	0	122294	122294	4.5%	0	110065	110065	90
1985	80338		0	0	80338	80338	4.5%	0	72304	72304	90
1986	44960		0	0	44960	44960	4.5%	0	40464	40464	90
1987	86009		0	0	86009	86009	4.5%	0	77408	77408	90
1988	101599		0	0	101599	101599	4.5%	0	91439	91439	90
1989	165429		0	0	165429	165429	4.5%	0	148886	148886	90
1990	6115		0	0	6115	6115	4.5%	0	5504	5504	90
1991	66216		0	0	66216	66216	4.5%	0	59594	59594	90
1992	101562		0	0	101562	101562	4.5%	0	91406	91406	90
1993	-11336		0	0	-11336	-11336	5%	0	-10202	-10202	90
1994	0		0	0	0	0	5%	0	0	0	#DIV/0!
1995	0		0	0	0	0	5%	0	0	0	#DIV/0!
1996	0		0	0	0	0	5%	0	0	0	#DIV/0!
1997	0		0	0	0	0	6.33%	0	0	0	#DIV/0!
1998	0		0	0	0	0	6.33%	0	0	0	#DIV/0!
1999	9526		0	0	9526	9526	6.33%	0	8574	8574	90
2000	0		0	0	0	0	6.33%	0	0	0	#DIV/0!
2001	3067810		0	0	3067810	3067810	6.33%	0	2761028	2761028	90
2002	0		0	0	0	0	6.33%	0	0	0	#DIV/0!
2003	2800652		0	0	2800652	2800652	6.33%	0	2520586	2520586	90
2004	12712684		0	0	12712684	12712684	6.33%	0	11441416	11441416	90
2005	534620		0	0	534620	534620	6.33%	0	481158	481158	90
2006	236228		0	0	236228	236228	6.33%	0	212605	212605	90
2007	154750		0	0	154750	154750	6.33%	0	139275	139275	90
2008	1018747		0	0	1018747	1018747	6.33%	3769	913103	916872	90
2009	0		0	0	0	0	6.33%	0	0	0	#DIV/0!
2010	375247		0	0	375247	375247	6.33%	23753	298809	322562	86
2011	0		0	0	0	0	6.33%	0	0	0	#DIV/0!
2012	1535968		0	0	1535968	1535968	6.33%	97227	972268	1069495	70
2013	12431		0	0	12431	12431	6.33%	787	7082	7869	63
2014	61875		0	0	61875	61875	6.33%	3917	31334	35250	57
2015	172655		0	0	172655	172655	6.33%	10929	76503	87432	51
2016	99675		0	0	99675	99675	6.33%	6309	37857	44166	44
2017	472000		0	0	472000	472000	6.33%	29878	149388	179266	38
2018	1710892		0	0	1710892	1710892	6.33%	108299	433198	541497	32
2019	814380		0	0	814380	814380	6.33%	51550	154651	206201	25
2020	41814		0	0	41814	41814	6.33%	2647	5294	7940	19
2021	403522		0	0	403522	403522	6.33%	25543	25543	51086	13
2022	839737		0	0	839737	839737	6.33%	53155	0	53155	6
TOTAL:	27906103		0	0	27906103	27906103		417763	21417471	21835234	

DEPRECIATION FOR THE YEAR 2023-24 | MERC ORDER : LIFE 9 YEARS | FROM 1993-94

ROOM A.C.

FROM : 2011-12 | LIFE : 5 YRS | LIFE : 7 YRS.

RATE OF DEP. : 9.50% | RATE IF DEP : 18% | RATE OF DEP.: 12.86 %

YEAR	BOOK VALUE AS ON 01.04.2022	IDC	WRITE OFF DURING THE YEAR	ASSET TRANSFER	BALANCE VALUE OF ASSETS	NET ASSETS VALUE AS ON 31.03.23	RATE OF DEP.	DEP. PROVISION FOR YEAR 2023-24	CUMM.DEP. PROVIDED UPTO 2022-23	CUMM. DEP. PROVIDED UPTO 2023-24	TOTAL % OF DEP PROVIDED UP TO 2023-24
1	7	8	9	10	11	14	15	16	17	18	
					(7-8-9-/+10)	(11-12-13)		(14*15)		(16+17)	
1992	228939	0	14041	0	214898	214898	12.86%	0	193408	193408	90
1993	207916	0	0	0	207916	207916	18%	0	187125	187125	90
1994	232437	0	21490	0	210947	210947	18%	0	189852	189852	90
1995	468919	0	183161	0	285758	285758	18%	0	257182	257182	90
1996	142381	0	0	0	142381	142381	18%	0	128143	128143	90
1997	252849	0	22756	0	230093	230093	18%	0	207084	207084	90
1998	670244	0	0	0	670244	670244	18%	0	603220	603220	90
1999	126006	0	33355	0	92651	92651	18%	0	83386	83386	90
2000	58024	0	0	0	58024	58024	18%	0	52221	52221	90
2001	2321960	0	70413	0	2251547	2251547	18%	0	2026392	2026392	90
2002	15631	0	0	0	15631	15631	18%	0	14068	14068	90
2003	593263	0	0	0	593263	593263	18%	0	533937	533937	90
2004	296297	0	25874	0	270423	270423	18%	0	243380	243380	90
2005	152370	0	0	0	152370	152370	18%	0	137133	137133	90
2006	311246	0	0	0	311246	311246	18%	0	280121	280121	90
2007	2260261	0	40800	0	2219461	2219461	18%	0	1997515	1997515	90
2008	2879983	0	43940	0	2836043	2836043	18%	0	2552439	2552439	90
2009	1258115	0	0	0	1258115	1258115	9.50%	0	1132304	1132304	90
2010	0	0	0	0	0	0	9.50%	0	0	0	#DIV/0!
2011	1287285	0	0	0	1287285	1287285	9.50%	0	1158557	1158557	90
2012	450029	0	0	0	450029	450029	9.50%	0	405027	405027	90
2013	605073	0	0	0	605073	605073	9.50%	27228	517337	544565	90
2014	297587	0	0	0	297587	297587	9.50%	28271	226166	254437	86
2015	48500	0	0	0	48500	48500	9.50%	4608	32253	36860	76
2016	3181007	0	0	0	3181007	3181007	9.50%	302196	1813174	2115370	67
2017	2842320	0	0	0	2842320	2842320	9.50%	270020	1350102	1620122	57
2018	1128582	0	0	0	1128582	1128582	9.50%	107215	428861	536076	48
2019	572485	0	0	0	572485	572485	9.50%	54386	163158	217544	38
2020	0	0	0	0	0	0	9.50%	0	0	0	#DIV/0!
2021	1603066	0	0	0	1603066	1603066	9.50%	152291	152291	304582	19
2022	2571143	0	0	0	2571143	2571143	9.50%	244259	0	244259	10
TOTAL :	27063917	0	455830	0	26608088	26608088		1190473	17065836	18256310	

DEPRECIATION FOR THE YEAR 2023-24 MERC ORDER : LIFE 6 YRS. LIFE : 7 YRS. RATE OF DEP.: 12.86 %

PERSONAL COMPUTER

FROM : 2011-12 FROM : 1993-94 LIFE : 5 YRS. RATE OF DEP.: 18 %

ROD : 15%

YEAR	BOOK VALUE AS ON 01.04.2022	IDC	WRITE OFF DURING THE YEAR 2022-23	ASSET TRANSFER	BALANCE VALUE OF ASSETS	NET ASSETS VALUE AS ON 31.03.23	RATE OF DEP.	DEP. PROVISION FOR YEAR 2023-24	CUMM.DEP. PROVIDED UPTO 2022-23	CUMM. DEP. PROVIDED UPTO 2023-24	TOTAL % OF DEP PROVIDED UP TO 2023-24
1	7	8	9	10	11	3	15	16	17	18	
					(7-8-9-/+10)	(11-12-13)		(14*15)		(16+17)	
1995	55826	0	0	0	55826	55826	12.86%	0	50243	50243	90
1996	508997	0	0	0	508997	508997	12.86%	0	458097	458097	90
1997	3329768	0	0	0	3329768	3329768	12.86%	0	2996791	2996791	90
1998	506157	0	0	0	506157	506157	12.86%	0	455541	455541	90
1999	1254293	0	0	0	1254293	1254293	12.86%	0	1128864	1128864	90
2000	3570148	0	0	0	3570148	3570148	12.86%	0	3213133	3213133	90
2001	1898348	0	0	0	1898348	1898348	12.86%	0	1708513	1708513	90
2002	10600501	0	0	0	10600501	10600501	12.86%	0	9540451	9540451	90
2003	6406342	0	0	0	6406342	6406342	12.86%	0	5765708	5765708	90
2004	2179076	0	0	0	2179076	2179076	12.86%	0	1961168	1961168	90
2005	347401	0	66906	0	280495	280495	15%	0	252446	252446	90
2006	20190165	0	0	0	20190165	20190165	15%	0	18171149	18171149	90
2007	4860578	0	0	0	4860578	4860578	15%	0	4374520	4374520	90
2008	3243490	0	265872	0	2977618	2977618	15%	0	2679856	2679856	90
2009	23767706	0	439181	0	23328525	23328525	15%	0	20995672	20995672	90
2010	24816121	0	1447830	0	23368291	23368291	15%	0	21031462	21031462	90
2011	10507430	0	496610	0	10010820	10010820	15%	0	9009738	9009738	90
2012	8052514.2	0	1075665	0	6976849	6976849	15%	0	6279164	6279164	90
2013	6311088.6	0	874226	0	5436862	5436862	15%	0	4893177	4893177	90
2014	763834	0	291552	0	472282	472282	15%	0	425054	425054	90
2015	1955823	0	0	0	1955823	1955823	15%	0	1760241	1760241	90
2016	13156591	0	10441	0	13146150	13146150	15%	0	11831535	11831535	90
2017	1391934	0	0	0	1391934	1391934	15%	208790	1043950	1252740	90
2018	17495482	0	0	0	17495482	17495482	15%	2624322	10497289	13121611	75
2019	6976048	0	0	0	6976048	6976048	15%	1046407	3139222	4185629	60
2020	9678856	0	0	0	9678856	9678856	15%	1451828	2903657	4355485	45
2021	4261218	0	0	0	4261218	4261218	15%	639183	639183	1278366	30
2022	10758107	0	0	0	10758107	10758107	15%	1613716	0	1613716	15
TOTAL :	198843842	0	4968283	0	193875559	193875559.3		7584247	147205823	154790069	

DEPRECIATION FOR THE YEAR 2023-24 MERC ORDER : LIFE 6 YEARS

ELECTRONIC EQUIPMENTS (SEPERA FROM : 2011-12 LIFE : 12 YRS.

RATE OF DEP.: 15% RATE OF DEP.: 7.5 %

YEAR	BOOK VALUE AS ON 01.04.2022	IDC	WRITE OFF DURING THE YEAR 2022-23	ASSET TRANSFER	BALANCE VALUE OF ASSETS	NET ASSETS VALUE AS ON 31.03.23	RATE OF DEP.	DEP. PROVISION FOR YEAR 2023-24	CUMM.DEP. PROVIDED UPTO 2022-23	CUMM. DEP. PROVIDED UPTO 2023-24	TOTAL % OF DEP PROVIDED UP TO 2023-24
1	7	8	9	10	11	14	15	16	17	18	
					(7-8-9-/+10)	(11-12-13)		(14*15)		(16+17)	
1991	697248	0	0	0	697248	697248	7.5%	0	627523	627523	90
1992	537281	0	0	0	537281	537281	7.5%	0	483553	483553	90
1993	285348	0	0	0	285348	285348	7.5%	0	256813	256813	90
1994	0	0	0	0	0	0	7.5%	0	0	0	#DIV/0!
1995	0	0	0	0	0	0	7.5%	0	0	0	#DIV/0!
1996	963206	0	0	0	963206	963206	7.5%	0	866886	866886	90
1997	38331	0	0	0	38331	38331	7.5%	0	34498	34498	90
1998	0	0	0	0	0	0	7.5%	0	0	0	#DIV/0!
1999	729367	0	0	0	729367	729367	7.5%	0	656430	656430	90
2000	138818	0	0	0	138818	138818	7.5%	0	124936	124936	90
2001	0	0	0	0	0	0	7.5%	0	0	0	#DIV/0!
2002	0	0	0	0	0	0	7.5%	0	0	0	#DIV/0!
2003	0	0	0	0	0	0	15%	0	0	0	#DIV/0!
2004	0	0	0	0	0	0	15%	0	0	0	#DIV/0!
2005	0	0	0	0	0	0	15%	0	0	0	#DIV/0!
2006	60451	0	0	0	60451	60451	15%	0	54406	54406	90
2007	780567	0	0	0	780567	780567	15%	0	702510	702510	90
2008	37500	0	0	0	37500	37500	15%	0	33750	33750	90
2009	0	0	0	0	0	0	15%	0	0	0	#DIV/0!
2010	0	0	0	0	0	0	15%	0	0	0	#DIV/0!
2011	0	0	0	0	0	0	15%	0	0	0	#DIV/0!
2012	0	0	0	0	0	0	15%	0	0	0	#DIV/0!
2013	0	0	0	0	0	0	15%	0	0	0	#DIV/0!
2014	0	0	0	0	0	0	15%	0	0	0	#DIV/0!
2015	24995	0	0	0	24995	24995	15%	0	22496	22496	90
2016	0	0	0	0	0	0	15%	0	0	0	#DIV/0!
2017	332628	0	0	0	332628	332628	15%	49894	249471	299365	90
2018	99199	0	0	0	99199	99199	15%	14880	59519	74399	75
2019	101200	0	0	0	101200	101200	15%	15180	45540	60720	60
2020	554719	0	0	0	554719	554719	15%	83208	166416	249624	45
2021	0	0	0	0	0	0	15%	0	0	0	#DIV/0!
2022	0	0	0	0	0	0	15%	0	0	0	#DIV/0!
TOTAL :	5380858	0	0	0	5380858	5380858		163162	4384747	4547909	

DEPRECIATION FOR THE YEAR 2023-24 MERC ORDER : LIFE 6 YEARS

ELECTRONIC EQUIPMENTS (SEPERATED FRC

EFFECTIVE FROM 2011-12 LIFE : 12 YRS.

RATE OF DEP : 15% RATE OF DEP.: 7.5 %

YEAR	BOOK VALUE AS ON 01.04.2022	IDC	WRITE OFF DURING THE YEAR 2022-23	ASSET TRANSFER	BALANCE VALUE OF ASSETS	NET ASSETS VALUE AS ON 31.03.23	RATE OF DEP.	DEP. PROVISION FOR YEAR 2023-24	CUMM.DEP. PROVIDED UPTO 2022-23	CUMM. DEP. PROVIDED UPTO 2023-24	TOTAL % OF DEP PROVIDED UP TO 2023-24
1	7	8	9	10	11	14	15	16	17	18	
					(7-8-9-/+10)	(11-12-13)		(14*15)		(16+17)	
1994	885814		0	0	885814	885814	7.50%	0	797233	797233	90
1995	396816		0	0	396816	396816	7.50%	0	357134	357134	90
1996	90664		0	0	90664	90664	7.50%	0	81598	81598	90
1997	0		0	0	0	0	7.50%	0	0	0	#DIV/0!
1998	0		0	0	0	0	7.50%	0	0	0	#DIV/0!
1999	4615618		0	0	4615618	4615618	7.50%	0	4154056	4154056	90
2000	0		0	0	0	0	7.50%	0	0	0	#DIV/0!
2001	3271811		0	0	3271811	3271811	7.50%	0	2944630	2944630	90
2002	0		0	0	0	0	7.50%	0	0	0	#DIV/0!
2003	0		0	0	0	0	15%	0	0	0	#DIV/0!
2004	0		0	0	0	0	15%	0	0	0	#DIV/0!
2005	0		0	0	0	0	15%	0	0	0	#DIV/0!
2006	0		0	0	0	0	15%	0	0	0	#DIV/0!
2007	838761		0	0	838761	838761	15%	0	754885	754885	90
2008	6940844		0	0	6940844	6940844	15%	0	6246760	6246760	90
2009	0		0	0	0	0	15%	0	0	0	#DIV/0!
2010	0		0	0	0	0	15%	0	0	0	#DIV/0!
2011	0		0	0	0	0	15%	0	0	0	#DIV/0!
2012	0		0	0	0	0	15%	0	0	0	#DIV/0!
2013	0		0	0	0	0	15%	0	0	0	#DIV/0!
2014	0		0	0	0	0	15%	0	0	0	#DIV/0!
2015	0		0	0	0	0	15%	0	0	0	#DIV/0!
2016	0		0	0	0	0	15%	0	0	0	#DIV/0!
2017	0		0	0	0	0	15%	0	0	0	#DIV/0!
2018	1194160		0	0	1194160	1194160	15%	179124	716496	895620	75
2019	5165947		0	858082	6024029	6024029	15%	903604	2710813	3614417	60
2020	3496489		0	0	3496489	3496489	15%	524473	1048947	1573420	45
2021	522150		0	0	522150	522150	15%	78323	78323	156645	30
2022	0		0	0	0	0	15%	0	0	0	#DIV/0!
TOTAL :	27419074		0	858082	28277156	2.8E+07		1685524	19890873	#######	

DEPRECIATION FOR THE YEAR 2023-24

MERC ORDER : LIFE 6 YEARS

CYCLOSTYLE MACHINE

EFFECTIVE FROM : 2011-12 LIFE : 10 YRS.

RATE OF DEP : 15% RATE OF DEP.: 9 %

YEAR	BOOK VALUE AS ON 01.04.2022	IDC	WRITE OFF DURING THE YEAR 2022-23	ASSET TRANSFER	BALANCE VALUE OF ASSETS	NET ASSETS VALUE AS ON 31.03.23	RATE OF DEP.	DEP. PROVISION FOR YEAR 2023-24	CUMM.DEP. PROVIDED UPTO 2022-23	CUMM. DEP. PROVIDED UPTO 2023-24	TOTAL % OF DEP PROVIDED UP TO 2023-24
1	7	8	9	10	11	14	15	16	17	18	
					(7-8-9-/+10)	(11-12-13)		(14*15)		(16+17)	
1999	407910		0	0	407910	407910	9%	0	367119	367119	90
2000	65966		0	0	65966	65966	9%	0	59369	59369	90
2001	0		0	0	0	0	9%	0	0	0	#DIV/0!
2002	0		0	0	0	0	9%	0	0	0	#DIV/0!
2003	329227		0	0	329227	329227	9%	0	296304	296304	90
2004	90664		0	0	90664	90664	9%	0	81598	81598	90
2005	0		0	0	0	0	15%	0	0	0	#DIV/0!
2006	0		0	0	0	0	15%	0	0	0	#DIV/0!
2007	304874		0	0	304874	304874	15%	0	274388	274388	90
2008	0		0	0	0	0	15%	0	0	0	#DIV/0!
2009	0		0	0	0	0	15%	0	0	0	#DIV/0!
2010	0		0	0	0	0	15%	0	0	0	#DIV/0!
2011	0		0	0	0	0	15%	0	0	0	#DIV/0!
2012	0		0	0	0	0	15%	0	0	0	#DIV/0!
2013	0		0	0	0	0	15%	0	0	0	#DIV/0!
2014	0		0	0	0	0	15%	0	0	0	#DIV/0!
2015	0		0	0	0	0	15%	0	0	0	#DIV/0!
2016	229909		0	0	229909	229909	15%	0	206918	206918	90
2017	0		0	0	0	0	15%	0	0	0	#DIV/0!
2018	0		0	0	0	0	15%	0	0	0	#DIV/0!
2019	0		0	0	0	0	15%	0	0	0	#DIV/0!
2020	0		0	0	0	0	15%	0	0	0	#DIV/0!
2021	0		0	0	0	0	15%	0	0	0	#DIV/0!
2022	0		0	0	0	0	15%	0	0	0	#DIV/0!
TOTAL :	1428550		0	0	1428550	1428550		0	1285696	1285696	

DEPRECIATION FOR THE YEAR 2023-24

MERC ORDER : LIFE 17 YEARS LIFE : 40 YRS. RATE OF DEP.: 2.25 %

CABLE AND MAINS

FROM 2011-12 FROM 1994-95 : LIFE 35 YRS RATE OF DEP.: 2.57 %

RATE OF DEP : 5.28 %

YEAR	BOOK VALUE AS ON 01.04.2022	IDC	WRITE OFF DURING THE YEAR 2022-23	ASSET TRANSFER	BALANCE VALUE OF ASSETS	GOVT. GRANT	CABEL CAPITAL CONN. FEES	NET ASSETS VALUE AS ON 31.03.23	RATE OF DEP.	DEP. PROVISION FOR YEAR 2023-24	CUMM.DEP. PROVIDED UPTO 2022-23	CUMM. DEP. PROVIDED UPTO 2023-24	TOTAL % OF DEP PROVIDED UP TO 2023-24
1	7	8	9	10	11	12	13	14	15	16	17	18	
					(7-8-9-/+10)			(11-12-13)		(14*15)		(16+17)	
1972	9262163	0	9262163	0	0	0	0	0	2.25%	0	0	0	#DIV/0!
1973	8388173	0	0	0	8388173	0	0	8388173	2.25%	0	7549356	7549356	90
1974	9775861	0	0	0	9775861	0	0	9775861	2.25%	0	8798275	8798275	90
1975	11717400	0	0	0	11717400	0	0	11717400	2.25%	0	10545660	10545660	90
1976	12169915	0	0	0	12169915	0	0	12169915	2.25%	0	10952924	10952924	90
1977	10555702	0	0	0	10555702	0	0	10555702	2.25%	0	9500132	9500132	90
1978	15618582	0	0	0	15618582	0	0	15618582	2.25%	0	14056724	14056724	90
1979	16167097	0	0	0	16167097	0	0	16167097	2.25%	0	14550387	14550387	90
1980	17141932	0	0	0	17141932	0	0	17141932	2.25%	0	15427739	15427739	90
1981	38669778	0	0	0	38669778	0	0	38669778	5.28%	0	34802800	34802800	90
1982	20135132	0	0	0	20135132	0	0	20135132	5.28%	0	18121619	18121619	90
1983	32013692	0	0	0	32013692	0	0	32013692	5.28%	0	28812323	28812323	90
1984	56205363	0	0	0	56205363	0	0	56205363	5.28%	0	50584827	50584827	90
1985	20951406	0	0	0	20951406	0	0	20951406	5.28%	0	18856265	18856265	90
1986	25666672	0	0	0	25666672	0	0	25666672	5.28%	0	23100005	23100005	90
1987	29320556	0	0	0	29320556	0	0	29320556	5.28%	0	26388500	26388500	90
1988	42934990	0	0	0	42934990	0	0	42934990	5.28%	0	38641490	38641490	90
1989	51170798	0	0	0	51170798	0	0	51170798	5.28%	0	46053718	46053718	90
1990	112338620	0	0	0	112338620	0	0	112338620	5.28%	0	101104758	101104758	90
1991	117991103	0	0	0	117991103	0	0	117991103	5.28%	0	106191993	106191993	90
1992	161085823	0	0	0	161085823	0	0	161085823	5.28%	0	144977241	144977241	90
1993	188440938	0	0	0	188440938	0	0	188440938	5.28%	0	169596844	169596844	90
1994	103116417	0	0	0	103116417	0	0	103116417	5.28%	0	92804775	92804775	90
1995	136271320	0	0	0	136271320	0	0	136271320	5.28%	0	122644188	122644188	90
1996	165331500	0	0	0	165331500	0	0	165331500	5.28%	0	148798350	148798350	90
1997	133851938	0	0	0	133851938	0	0	133851938	5.28%	0	120466744	120466744	90
1998	180219938	0	0	0	180219938	0	0	180219938	5.28%	0	162197944	162197944	90
1999	199606604	0	0	0	199606604	0	0	199606604	5.28%	0	179645943	179645943	90
2000	185817677	0	0	0	185817677	0	0	185817677	5.28%	2006831	165229078	167235909	90
2001	231338388	0	0	0	231338388	0	0	231338388	5.28%	8443851	199760698	208204549	90
2002	134074537	0	0	0	134074537	0	0	134074537	5.28%	7079136	112327647	119406783	89
2003	137624296	0	0	0	137624296	24900000	0	112724296	5.28%	5951843	91543401	97495244	86
2004	147542001	0	0	0	147542001	45000000	0	102542001	5.28%	5414218	80639030	86053247	84
2005	189880044	0	0	0	189880044	30478000	31203547	128198497	5.28%	6768881	97520597	104289477	81
2006	185714645	0	0	0	185714645	52500000	63603184	69611461	5.28%	3675485	51164424	54839909	79
2007	328836997	0	0	0	328836997	0	87843484	240993513	5.28%	12724457	170936699	183661156	76
2008	339749784	0	0	0	339749784	14500000	97282148	227967636	5.28%	12036691	155838676	167875367	74
2009	633684236	0	0	0	633684236	7700000	111065274	514918962	5.28%	27187721	338765185	365952906	71
2010	648019778	0	0	0	648019778	0	95892048	552127730	5.28%	29152344	349055151	378207495	69
2011	547276581	0	0	0	547276581	0	77752227	469524354	5.28%	24790886	272699745	297490631	63
2012	437999829	0	0	0	437999829	0	83678305	354321524	5.28%	18708176	187081765	205789941	58
2013	454864867	0	0	0	454864867	0	82438615	372426252	5.28%	19664106	176976955	196641061	53
2014	760370625	0	0	0	760370625	0	97996029	662374596	5.28%	34973379	279787029	314760408	48
2015	630618543	0	0	0	630618543	0	100652529	529966014	5.28%	27982206	195875439	223857644	42
2016	612149371	0	0	0	612149371	0	100566763	511582608	5.28%	27011562	162069370	189080932	37
2017	433581675	0	0	0	433581675	0	121227194	312354481	5.28%	16492317	82461583	98953900	32
2018	860376873	0	0	0	860376873	95036460	106947375	658393037	5.28%	34763152	139052610	173815762	26
2019	869730250	0	0	0	869730250	114865195	77581531	677283524	5.28%	35760570	107281711	143042281	21
2020	768300622	0	0	0	768300622	0	60924424	707376198	5.28%	37349463	74698927	112048390	16
2021	525915069	0	0	-446475	525468594	0	77143777	448324817	5.28%	23671550	23671550	47343101	11
2022	768863899	1650577	0	0	770514475	0	103512073	667002402	5.28%	35217727	0	35217727	5
										0			
TOTAL :	12758450000	1650577	9262163	-446475	12750391938	384979655	1577310527	10788101756		456826552	5239608791	5696435343	

DEPRECIATION FOR THE YEAR 2023-24 MERC ORDER: LIFE 17 LIFE : 20 YEARS RATE OF DEP.: 4.50 %

DISTRIBUTION PILLARS

FROM 2011-12

RATE OF DEP : 5.28 %

YEAR	BOOK VALUE AS ON 01.04.2022	IDC	WRITE OFF DURING THE YEAR 2022-23	BALANCE VALUE OF ASSETS	GOVT. GRANT	NET ASSETS VALUE AS ON 31.03.23	RATE OF DEP.	DEP. PROVISION FOR YEAR 2023-24	CUMM.DEP. PROVIDED UPTO 2022-23	CUMM. DEP. PROVIDED UPTO 2023-24	TOTAL % OF DEP PROVIDED UP TO 2023-24
1	7	8	9	11	12	14	15	16	17	18	
				(7-8-9-/+10)		(11-12-13)		(14*15)		(16+17)	
1989	0	0	0	0	0	0	4.50%	0	0	0	#DIV/0!
1990	1859890	0	0	1859890	0	1859890	4.50%	0	1673901	1673901	90
1991	1510334	0	0	1510334	0	1510334	4.50%	0	1359301	1359301	90
1992	1839164	0	0	1839164	0	1839164	4.50%	0	1655248	1655248	90
1993	2617322	0	0	2617322	0	2617322	4.50%	0	2355590	2355590	90
1994	1937445	0	0	1937445	0	1937445	4.50%	0	1743701	1743701	90
1995	2480417	0	0	2480417	0	2480417	4.50%	0	2232375	2232375	90
1996	3896967	0	0	3896967	0	3896967	4.50%	0	3507270	3507270	90
1997	3568872	0	0	3568872	0	3568872	5.28%	0	3211985	3211985	90
1998	5263200	0	0	5263200	0	5263200	5.28%	0	4736880	4736880	90
1999	5023996	0	0	5023996	0	5023996	5.28%	0	4521596	4521596	90
2000	8952039	0	0	8952039	0	8952039	5.28%	0	8056835	8056835	90
2001	11045685	0	0	11045685	0	11045685	5.28%	0	9941117	9941117	90
2002	10263557	0	0	10263557	0	10263557	5.28%	0	9237202	9237202	90
2003	14227114	0	0	14227114	0	14227114	5.28%	0	12804403	12804403	90
2004	14570359	0	0	14570359	0	14570359	5.28%	0	13113322	13113322	90
2005	10024180	0	0	10024180	2177000	7847180	5.28%	32958	7029504	7062462	90
2006	12868740	0	0	12868740	5000000	7868740	5.28%	387142	6694724	7081866	90
2007	16574814	0	0	16574814	0	16574814	5.28%	875150	13355985	14231135	86
2008	13378282	0	0	13378282	0	13378282	5.28%	706373	10178197	10884570	81
2009	17672674	0	0	17672674	0	17672674	5.28%	933117	12650100	13583217	77
2010	10932739	0	0	10932739	0	10932739	5.28%	577249	7333681	7910930	72
2011	35492854	0	0	35492854	0	35492854	5.28%	1874023	20614249	22488272	63
2012	22743279	0	0	22743279	0	22743279	5.28%	1200845	12008451	13209296	58
2013	15964974	0	0	15964974	0	15964974	5.28%	842951	7586556	8429506	53
2014	15629790	0	0	15629790	0	15629790	5.28%	825253	6602023	7427276	48
2015	16483950	0	0	16483950	0	16483950	5.28%	870353	6092468	6962820	42
2016	18620147	0	0	18620147	0	18620147	5.28%	983144	5898862	6882006	37
2017	16764406	0	0	16764406	0	16764406	5.28%	885161	4425803	5310964	32
2018	22435692	0	0	22435692	0	22435692	5.28%	1184605	4738418	5923023	26
2019	17805956	0	0	17805956	924520	16881436	5.28%	891340	2674019	3565359	21
2020	18179881	0	0	18179881	0	18179881	5.28%	959898	1919795	2879693	16
2021	24422597	0	0	24422597	0	24422597	5.28%	1289513	959898	2249411	9
2022	41163047	0	0	41163047	0	41163047	5.28%	0	0	0	5
TOTAL :	436214362	0	0	436214361.6	8101520	428112842		#######	210913460	226232533	

DEPRECIATION FOR THE YEAR 2023-24 MERC ORDER : LIFE 17 YEARS LIFE : 15 YEARS RATE OF DEP.: 6 %

STREET LIGHTING LAMPS

FROM 2011-12

RATE OF DEP : 5.28 %

YEAR	BOOK VALUE AS ON 01.04.2022	IDC	WRITE OFF DURING THE YEAR 2022-23	BALANCE VALUE OF ASSETS	GOVT. GRANT	NET ASSETS VALUE AS ON 31.03.23	RATE OF DEP.	DEP. PROVISION FOR YEAR 2023-24	CUMM.DEP. PROVIDED UPTO 2022-23	CUMM. DEP. PROVIDED UPTO 2023-24	TOTAL % OF DEP PROVIDED UP TO 2023-24
1	7	8	9	11	12	14	15	16	17	18	
				(7-8-9-/+10)		(11-12-13)		(14*15)		(16+17)	
1971	375761	0	0	375761	0	375761	6%	0	338185	338185	90
1972	1177831	0	0	1177831	0	1177831	6%	0	1060048	1060048	90
1973	850089	0	0	850089	0	850089	6%	0	765080	765080	90
1974	1567871	0	0	1567871	0	1567871	6%	0	1411084	1411084	90
1975	1299075	0	0	1299075	0	1299075	6%	0	1169168	1169168	90
1976	2212095	0	0	2212095	0	2212095	6%	0	1990886	1990886	90
1977	1602022	0	0	1602022	0	1602022	6%	0	1441820	1441820	90
1978	1525598	0	0	1525598	0	1525598	6%	0	1373038	1373038	90
1979	2499870	0	0	2499870	0	2499870	6%	0	2249883	2249883	90
1980	2002230	0	0	2002230	0	2002230	6%	0	1802007	1802007	90
1981	2051265	0	0	2051265	0	2051265	6%	0	1846139	1846139	90
1982	1782839	0	0	1782839	0	1782839	6%	0	1604555	1604555	90
1983	3226813	0	0	3226813	0	3226813	6%	0	2904132	2904132	90
1984	707349	0	0	707349	0	707349	6%	0	636614	636614	90
1985	2274839	0	0	2274839	0	2274839	6%	0	2047355	2047355	90
1986	3203576	0	0	3203576	0	3203576	6%	0	2883218	2883218	90
1987	1281264	0	0	1281264	0	1281264	6%	0	1153138	1153138	90
1988	1490104	0	0	1490104	0	1490104	6%	0	1341094	1341094	90
1989	1678337	0	0	1678337	0	1678337	6%	0	1510503	1510503	90
1990	2508215	0	0	2508215	0	2508215	6%	0	2257394	2257394	90
1991	1436087	0	0	1436087	0	1436087	6%	0	1292478	1292478	90
1992	11847318	0	0	11847318	0	11847318	6%	0	10662586	10662586	90
1993	13353615	0	0	13353615	0	13353615	6%	0	12018254	12018254	90
1994	14030878	0	0	14030878	0	14030878	6%	0	12627790	12627790	90
1995	19405026	0	0	19405026	0	19405026	6%	0	17464523	17464523	90
1996	9675990	0	0	9675990	0	9675990	6%	0	8708391	8708391	90
1997	35435043	0	0	35435043	0	35435043	6%	0	31891539	31891539	90
1998	46681393	0	0	46681393	0	46681393	6%	0	42013254	42013254	90
1999	20891589	0	0	20891589	0	20891589	6%	0	18802430	18802430	90
2000	24031153	0	0	24031153	0	24031153	6%	0	21628038	21628038	90
2001	34093868	0	0	34093868	0	34093868	5.28%	0	30684481	30684481	90
2002	48386819	0	0	48386819	0	48386819	5.28%	0	43548137	43548137	90
2003	18891836	0	0	18891836	0	18891836	5.28%	0	17002652	17002652	90
2004	29098079	0	0	29098079	0	29098079	5.28%	0	26188272	26188272	90
2005	11575967	0	0	11575967	0	11575967	5.28%	0	10418371	10418371	90
2006	10808482	0	0	10808482	0	10808482	5.28%	0	9727634	9727634	90
2007	3051851	0	0	3051851	0	3051851	5.28%	58596	2688070	2746666	90
2008	7663048	0	0	7663048	0	7663048	5.28%	404609	6289830	6694439	87
2009	13592326	0	0	13592326	0	13592326	5.28%	717675	10341042	11058716	81
2010	16304978	0	0	16304978	0	16304978	5.28%	860903	11426529	12287431	75
2011	16338193	0	0	16338193	0	16338193	5.28%	862657	9489222	10351879	63
2012	7088085	0	0	7088085	0	7088085	5.28%	374251	3742509	4116760	58
2013	5556338	0	0	5556338	0	5556338	5.28%	293375	2640372	2933746	53
2014	48578223	0	0	48578223	0	48578223	5.28%	2564930	20519441	23084372	48
2015	15569846	0	0	15569846	0	15569846	5.28%	822088	5754615	6576703	42
2016	18235339	0	0	18235339	0	18235339	5.28%	962826	5776955	6739781	37
2017	18077317	0	0	18077317	0	18077317	5.28%	954482	4772412	5726894	32
2018	368275181	0	0	368275181	73815497	294459684	5.28%	#######	62189885	77737357	26
2019	553783762	0	0	553783762	185730094	368053668	5.28%	#######	58299701	77732935	21
2020	49874571	0	0	49874571	0	49874571	5.28%	2633377	5266755	7900132	16
2021	95876543	0	0	95876543	0	95876543	5.28%	5062281	5062281	10124563	11
2022	58807951	0	0	58807951	0	58807951	5.28%	3105060	0	3105060	5
TOTAL :	1681633737	0	0	1681633737	259545591	1422088146		#######	560723787	615381601	

DEPRECIATION FOR THE YEAR 2023-24 MERC ORDER : LIFE 17 YEARS LIFE : 15 YEARS RATE OF DEP.: 6 %

METERS (CONVENTIONAL)

FROM 2011-12

RATE OF DEP : 5.28 %

YEAR	BOOK VALUE AS ON 01.04.2022	IDC	WRITE OFF DURING THE YEAR 2022-23	BALANCE VALUE OF ASSETS	GOVT. GRANT	NET ASSETS VALUE AS ON 31.03.23	RATE OF DEP.	DEP. PROVISION FOR YEAR 2023-24	CUMM.DEP. PROVIDED UPTO 2022-23	CUMM. DEP. PROVIDED UPTO 2023-24	TOTAL % OF DEP PROVIDED UP TO 2023-24
1	7	8	9	11	12	14	15	16	17	18	
				(7-8-9-/+10)		(11-12-13)		(14*15)		(16+17)	
1999	31839079	0	20811105	11027974	0	11027974	6%	0	9925177	9925177	90
2000	45007000	0	0	45007000	0	45007000	6%	0	40506300	40506300	90
2001	49820192	0	0	49820192	0	49820192	5.28%	0	44838173	44838173	90
2002	26588512	0	0	26588512	0	26588512	5.28%	0	23929660	23929660	90
2003	45752708	0	0	45752708	8200000	37552708	5.28%	0	33797437	33797437	90
2004	26813967	0	0	26813967	8200000	18613967	5.28%	0	16752570	16752570	90
2005	33382472	0	0	33382472	7075000	26307472	5.28%	0	23676725	23676725	90
2006	52581078	0	0	52581078	2.4E+07	28831078	5.28%	0	25947970	25947970	90
2007	28461442	0	0	28461442	0	28461442	5.28%	546460	25068838	25615298	90
2008	14912906	0	0	14912906	3000000	11912906	5.28%	629001	9778113	10407115	87
2009	0	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2010	0	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2011	0	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2012	0	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2013	0	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2014	0	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2015	0	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2016	0	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2017	0	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2018	0	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2019	0	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2020	0	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2021	0	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2022	0	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
TOTAL :	355159356	0	20811105	334348251	#######	284123251		1175461	254220964	255396425	

DEPRECIATION FOR THE YEAR 2023-24 MERC ORDER : LIFE 8 YEARS LIFE : 15 YEARS RATE OF DEP.: 6 %

METERS (ELECTRONIC)

FROM 2011-12 22-23 LIFE 10 YRS RATE OF DEP. : 9%

RATE OF DEP : 11.25 %

YEAR	BOOK VALUE AS ON 01.04.2022	WRITE OFF DURING THE YEAR 2022-23	BALANCE VALUE OF ASSETS	GOVT. GRANT	NET ASSETS VALUE AS ON 31.03.23	RATE OF DEP.	DEP. PROVISION FOR YEAR 2023-24	CUMM.DEP. PROVIDED UPTO 2022-23	CUMM. DEP. PROVIDED UPTO 2023-24	TOTAL % OF DEP PROVIDED UP TO 2023-24
1	7	9	11	12	14	15	16	17	18	
			(7-8-9-/+10)		(11-12-13)		(14*15)		(16+17)	
2000	0	0	0	0	0	6%	0	0	0	0
2001	24021622	6266587	17755034	0	17755034	11.25%	0	15979531	15979531	90
2002	40255448	8493649	31761799	0	31761799	11.25%	0	28585617	28585617	90
2003	10181565	4509919	5671647	12800000	-7128353	11.25%	0	-6415518	-6415518	90
2004	50587402	0	50587402	25600000	24987402	11.25%	0	22488661	22488661	90
2005	15236100	402047	14834053	7075000	7759053	11.25%	0	6983148	6983148	90
2006	13829170	3283337	10545833	23750000	-13204167	11.25%	0	-11883750	-11883750	90
2007	6154881	57045	6097836	0	6097836	11.25%	0	5488052	5488052	90
2008	2876447	3572637	-696190	3000000	-3696190	11.25%	0	-3326571	-3326571	90
2009	14375447	9080268	5295179	2000000	3295179	11.25%	0	2965660	2965660	90
2010	36330913	4977204	31353709	0	31353709	11.25%	0	28218339	28218339	90
2011	0	0	0	0	0	11.25%	0	0	0	90
2012	115860406	22804471	93055935	0	93055935	11.25%	0	83750341	83750341	90
2013	96363994	37920	96326074	0	96326074	11.25%	0	86693466	86693466	90
2014	109948014	5161401	104786612	0	104786612	11.25%	0	94307951	94307951	90
2015	72538033	2162512	70375521	0	70375521	11.25%	7917246	55420723	63337969	90
2016	92771671	2387739	90383933	0	90383933	11.25%	10409951	61009154	71419105	79
2017	98678058	452400	98225658	0	98225658	11.25%	11050387	55251933	66302319	67
2018	122032406	445058	121587348	41720343	79867005	11.25%	8985038	35940152	44925190	56
2019	178796310	289927	178506382	32942044	145564338	11.25%	16375988	49127964	65503952	45
2020	62960296	275840	62684456	0	62684456	11.25%	7052001	14104003	21156004	34
2021	146232442	142717	146089725	0	146089725	9.00%	13148075	13148075	26296150	18
2022	10273216	0	10273216	0	10273216	9.00%	924589	0	924589	9
TOTAL :	1320303840	74802679	1245501161	148887387	1096613774		75863276	637836934	713700210	

DEPRECIATION FOR THE YEAR 2023-24 LIFE : 6 YEARS RATE OF DEP.: 15 %

BUSINESS PROCESS AUTOMATION

YEAR	BOOK VALUE AS ON 01.04.2022	IDC	WRITE OFF DURING THE YEAR 2022-23	ASSET TRANSFER	BALANCE VALUE OF ASSETS	NET ASSETS VALUE AS ON 31.03.23	RATE OF DEP.	DEP. PROVISION FOR YEAR 2023-24	CUMM.DEP. PROVIDED UPTO 2022-23	CUMM. DEP. PROVIDED UPTO 2023-24	TOTAL % OF DEP PROVIDED UP TO 2023-24
1	7	8	9	10	11	14	15	16	17	18	
					(7-8-9-/+10)	(11-12-13)		(14*15)		(16+17)	
2010	316100000	0	0	0	316100000	316100000	15%	0	284490000	284490000	90
2011	39532722	0	0	0	39532722	39532722	15%	0	35579450	35579450	90
2012	64685052	0	0	0	64685052	64685052	15%	0	58216547	58216547	90
2013	60000000	0	0	0	60000000	60000000	15%	0	54000000	54000000	90
2014	0	0	0	0	0	0	15%	0	0	0	#DIV/0!
2015	8342289	0	0	0	8342289	8342289	15%	0	7508060	7508060	90
2016	187500	0	0	0	187500	187500	15%	0	168750	168750	90
2017	75000	0	0	0	75000	75000	15%	11250	56250	67500	90
2018	1754025	0	0	0	1754025	1754025	15%	263104	1052415	1315519	75
2019	1017066	0	0	0	1017066	1017066	15%	152560	457680	610240	60
2020	3875066	0	0	0	3875066	3875066	15%	581260	1162520	1743780	45
2021	4764983	0	0	0	4764983	4764983	15%	714747	714747	1429495	30
2022	290822	0	0	0	290822	290822	15%	43623	0	43623	15
TOTAL :	500624525	0	0	0	500624525	500624525		1766544	443406419	445172963	

DEPRECIATION FOR THE YEAR 2023-24 | MERC ORDER : LIFE 17 YEARS | FROM 1994-95 LIFE : 25 YEARS | PAST : 1947 LIFE : 20 YEARS

SWITCHGEARS

FROM 2011-12 | RATE OF DEP : 3.60% | RATE OF DEP : 4.50 %

RATE OF DEP : 5.28 %

YEAR	BOOK VALUE AS ON 01.04.2022	IDC	WRITE OFF DURING THE YEAR 2022-23	ASSET TRANSFER	BALANCE VALUE OF ASSETS	GOVT. GRANT	NET ASSETS VALUE AS ON 31.03.2023	RATE OF DEP.	DEP. PROVISION FOR YEAR 2023-24	CUMM.DEP. PROVIDED UPTO 2022-23	CUMM. DEP. PROVIDED UPTO 2023-24	TOTAL % OF DEP PROVIDED UP TO 2023-24
1	7	8	9	10	11	12	14	15	16	17	18	
					(7-8-9-/+10)		(11-12-13)		(14*15)		(16+17)	
1966	2178431	0	0	0	2178431	0	2178431	4.50%	0	1960587	1960587	90
1967	1447202	0	0	0	1447202	0	1447202	4.50%	0	1302482	1302482	90
1968	2800556	0	0	0	2800556	0	2800556	4.50%	0	2520500	2520500	90
1969	1810513	0	0	0	1810513	0	1810513	4.50%	0	1629462	1629462	90
1970	771699	0	0	0	771699	0	771699	4.50%	0	694529	694529	90
1971	987179	0	0	0	987179	0	987179	4.50%	0	888461	888461	90
1972	5525257	0	66299	0	5458958	0	5458958	4.50%	0	4913063	4913063	90
1973	954472	0	0	0	954472	0	954472	4.50%	0	859024	859024	90
1974	2449570	0	0	0	2449570	0	2449570	4.50%	0	2204613	2204613	90
1975	4836088	0	0	0	4836088	0	4836088	4.50%	0	4352479	4352479	90
1976	3341126	0	0	0	3341126	0	3341126	4.50%	0	3007014	3007014	90
1977	1161983	0	0	0	1161983	0	1161983	4.50%	0	1045785	1045785	90
1978	1167912	0	0	0	1167912	0	1167912	4.50%	0	1051121	1051121	90
1979	1100156	0	42366	0	1057789	0	1057789	4.50%	0	952011	952011	90
1980	295799	0	0	0	295799	0	295799	4.50%	0	266216	266216	90
1981	5306352	0	0	0	5306352	0	5306352	4.50%	0	4775717	4775717	90
1982	5368852	0	0	0	5368852	0	5368852	4.50%	0	4831966	4831966	90
1983	2994507	0	0	0	2994507	0	2994507	4.50%	0	2695057	2695057	90
1984	12601217	0	0	0	12601217	0	12601217	4.50%	0	11341096	11341096	90
1985	24498309	0	0	0	24498309	0	24498309	4.50%	0	22048478	22048478	90
1986	14049383	0	0	0	14049383	0	14049383	4.50%	0	12644445	12644445	90
1987	52050932	0	0	0	52050932	0	52050932	4.50%	0	46845839	46845839	90
1988	84562060	0	14684	0	84547377	0	84547377	4.50%	0	76092638	76092638	90
1989	78087644	0	318200	0	77769444	0	77769444	4.50%	0	69992499	69992499	90
1990	48528479	0	283272	0	48245206	0	48245206	4.50%	0	43420686	43420686	90
1991	104264404	0	107506	0	104156898	0	104156898	4.50%	0	93741209	93741209	90
1992	145704590	0	252600	0	145451990	0	145451990	4.50%	0	130906792	130906792	90
1993	176287439	0	0	0	176287439	0	176287439	4.50%	0	158658695	158658695	90
1994	186064570	0	838967	0	185225603	0	185225603	5.28%	0	166703042	166703042	90
1995	111773770	0	126143	0	111647626	0	111647626	5.28%	0	100482864	100482864	90
1996	95099988	0	72624	0	95027364	0	95027364	5.28%	0	85524628	85524628	90
1997	97643665	0	3101364	0	94542301	0	94542301	5.28%	0	85088071	85088071	90
1998	408481911	0	3255103	0	405226808	0	405226808	5.28%	0	364704126	364704126	90
1999	144725536	0	618151	0	144107385	0	144107385	5.28%	0	129696647	129696647	90
2000	51844556	0	105042	0	51739514	0	51739514	5.28%	0	46565562	46565562	90
2001	60602460	0	0	0	60602460	0	60602460	5.28%	0	54542214	54542214	90
2002	86942207	0	0	0	86942207	0	86942207	5.28%	0	78247986	78247986	90
2003	178936447	0	0	0	178936447	32700000	146236447	5.28%	0	131612802	131612802	90
2004	184994063	0	0	0	184994063	57000000	127994063	5.28%	3993415	111201242	115194657	90
2005	210478018	0	0	0	210478018	41363000	169115018	5.28%	8929273	140838987	149768260	89
2006	207161448	0	0	0	207161448	90000000	117161448	5.28%	6186124	93354242	99540366	85
2007	471718292	0	0	0	471718292	600000	471118292	5.28%	24875046	358426797	383301842	81
2008	381302545	0	0	0	381302545	16700000	364602545	5.28%	19251014	264263924	283514939	78
2009	218271780	0	0	0	218271780	2700000	215571780	5.28%	11382190	148485842	159868032	74
2010	328175487	0	0	0	328175487	0	328175487	5.28%	17327666	214232958	231560624	71
2011	227716134	0	0	0	227716134	0	227716134	5.28%	12023412	132257531	144280942	63
2012	136268674	0	0	0	136268674	0	136268674	5.28%	7194986	71949860	79144846	58
2013	168787484	0	0	0	168787484	0	168787484	5.28%	8911979	80207812	89119792	53
2014	228701478	0	0	0	228701478	0	228701478	5.28%	12075438	96603504	108678942	48
2015	189884676	0	0	0	189884676	0	189884676	5.28%	10025911	70181376	80207287	42
2016	231221455	0	0	0	231221455	0	231221455	5.28%	12208493	73250957	85459450	37
2017	173331522	0	0	0	173331522	0	173331522	5.28%	9151904	45759522	54911426	32
2018	224297319	0	0	0	224297319	0	224297319	5.28%	11842898	47371594	59214492	26
2019	323664652	0	0	-858082	322806571	70539232	252267339	5.28%	13319715	39959146	53278862	21
2020	189533998	0	0	0	189533998	0	189533998	5.28%	10007395	20014790	30022185	16
2021	189069147	0	0	0	189069147	0	189069147	5.28%	9977620	9982851	19960471	11
2022	268037100	1378910	0	0	269416010	0	269416010	5.28%	14225165	0	14225165	5
TOTAL :	6759862492	1378910	9202321	-858082	6751180999	311602232	6439578767		222909646	3967153338	4190062984	

DEPRECIATION FOR THE YEAR 2022-23 MERC ORDER : LIFE 17 YEARS PAST : 1947 LIFE : 35 YEARS

TRANSFORMER

FROM 2011-12 RATE OF DEP : 2.57 %

RATE OF DEP : 5.28 % FROM 1994-95 LIFE : 25 YEARS RATE OF DEP : 3.60%

YEAR	BOOK VALUE AS ON 01.04.2022	IDC	WRITE OFF DURING THE YEAR 2022-23	ASSET TRANSFER	BALANCE VALUE OF ASSETS	GOVT. GRANT	NET ASSETS VALUE AS ON 31.03.23	RATE OF DEP.	DEP. PROVISION FOR YEAR 2023-24	CUMM.DEP. PROVIDED UPTO 2022-23	CUMM. DEP. PROVIDED UPTO 2023-24	TOTAL % OF DEP PROVIDED UP TO 2023-24
1	7	8	9	10	11	12	14	15	16	17	18	
					(7-8-9-/+10)		(11-12-13)		(14*15)		(16+17)	
1948	118043	0	0	0	118043	0	118043	2.57%	0	106239	106239	90
1949	393459	0	0	0	393459	0	393459	2.57%	0	354113	354113	90
1950	35070	0	0	0	35070	0	35070	2.57%	0	31563	31563	90
1951	116886	0	0	0	116886	0	116886	2.57%	0	105197	105197	90
1952	77694	0	0	0	77694	0	77694	2.57%	0	69925	69925	90
1953	374990	0	0	0	374990	0	374990	2.57%	0	337491	337491	90
1954	22531	0	0	0	22531	0	22531	2.57%	0	20278	20278	90
1955	-2211537	0	0	0	-2211537	0	-2211537	2.57%	0	-1990383	-1990383	90
1956	0	0	0	0	0	0	0	2.57%	0	0	0	#DIV/0!
1957	364808	0	0	0	364808	0	364808	2.57%	0	328327	328327	90
1958	-756981	0	0	0	-756981	0	-756981	2.57%	0	-681283	-681283	90
1959	52171	0	0	0	52171	0	52171	2.57%	0	46954	46954	90
1960	1139739	0	0	0	1139739	0	1139739	2.57%	0	1025765	1025765	90
1961	-2599572	0	0	0	-2599572	0	-2599572	2.57%	0	-2339615	-2339615	90
1962	141426	0	0	0	141426	0	141426	2.57%	0	127283	127283	90
1963	160185	0	0	0	160185	0	160185	2.57%	0	144167	144167	90
1964	114126	0	0	0	114126	0	114126	2.57%	0	102713	102713	90
1965	-183484	0	0	0	-183484	0	-183484	2.57%	0	-165136	-165136	90
1966	309882	0	0	0	309882	0	309882	2.57%	0	278894	278894	90
1967	686285	0	21337	0	664948	0	664948	2.57%	0	598453	598453	90
1968	1325713	0	0	0	1325713	0	1325713	2.57%	0	1193142	1193142	90
1969	1380151	0	0	0	1380151	0	1380151	2.57%	0	1242136	1242136	90
1970	115387	0	0	0	115387	0	115387	2.57%	0	103848	103848	90
1971	670727	0	0	0	670727	0	670727	2.57%	0	603655	603655	90
1972	307610	0	19400	0	288210	0	288210	2.57%	0	259389	259389	90
1973	0	0	0	0	0	0	0	2.57%	0	0	0	0
1974	1369818	0	0	0	1369818	0	1369818	2.57%	0	1232836	1232836	90
1975	1344384	0	0	0	1344384	0	1344384	2.57%	0	1209946	1209946	90
1976	470	0	0	0	470	0	470	2.57%	0	423	423	90
1977	365036	0	0	0	365036	0	365036	2.57%	0	328533	328533	90
1978	1300129	0	0	0	1300129	0	1300129	2.57%	0	1170116	1170116	90
1979	250247	0	0	0	250247	0	250247	2.57%	0	225223	225223	90
1980	0	0	0	0	0	0	0	2.57%	0	0	0	#DIV/0!
1981	7871517	0	0	0	7871517	0	7871517	2.57%	0	7084365	7084365	90
1982	5664139	0	0	0	5664139	0	5664139	2.57%	0	5097728	5097728	90
1983	3278419	0	0	0	3278419	0	3278419	2.57%	0	2950577	2950577	90
1984	2233783	0	236553	0	1997230	0	1997230	2.57%	0	1797506	1797506	90
1985	3593436	0	0	0	3593436	0	3593436	5.28%	0	3234092	3234092	90
1986	7049192	0	0	0	7049192	0	7049192	5.28%	0	6344273	6344273	90
1987	3653031	0	0	0	3653031	0	3653031	5.28%	0	3287728	3287728	90
1988	336377	0	251000	0	85377	0	85377	5.28%	0	76839	76839	90
1989	18090741	0	0	0	18090741	0	18090741	5.28%	0	16281667	16281667	90
1990	23464558	0	0	0	23464558	0	23464558	5.28%	0	21118102	21118102	90
1991	10918268	0	0	0	10918268	0	10918268	5.28%	0	9826441	9826441	90
1992	61799498	0	0	0	61799498	0	61799498	5.28%	0	55619549	55619549	90
1993	63773953	0	0	0	63773953	0	63773953	5.28%	0	57396557	57396557	90
1994	40002278	0	0	0	40002278	0	40002278	5.28%	0	36002050	36002050	90
1995	32322691	0	596900	0	31725791	0	31725791	5.28%	0	28553212	28553212	90
1996	215354695	0	2510475	0	212844220	0	212844220	5.28%	0	191559798	191559798	90
1997	129366708	0	0	0	129366708	0	129366708	5.28%	0	116430037	116430037	90
1998	209522333	0	0	0	209522333	0	209522333	5.28%	0	188570100	188570100	90
1999	103861998	0	0	0	103861998	0	103861998	5.28%	0	93475798	93475798	90
2000	74459436	0	0	0	74459436	0	74459436	5.28%	0	67013492	67013492	90
2001	87284536	0	0	0	87284536	0	87284536	5.28%	0	78556083	78556083	90
2002	104943575	0	0	0	104943575	0	104943575	5.28%	0	94449218	94449218	90
2003	64501802	0	0	0	64501802	11800000	52701802	5.28%	0	47431622	47431622	90
2004	146735900	0	0	0	146735900	44800000	101935900	5.28%	3180400	88561910	91742310	90
2005	101747362	0	0	0	101747362	20681500	81065862	5.28%	4280278	67511650	71791927	89
2006	128614466	0	0	0	128614466	55000000	73614466	5.28%	3886844	58656007	62542850	85
2007	445257553	0	0	0	445257553	600000	444657553	5.28%	23477919	338295466	361773385	81
2008	246928535	0	0	0	246928535	10700000	236228535	5.28%	12472867	171218442	183691309	78
2009	178813794	0	0	0	178813794	2200000	176613794	5.28%	9325208	121651581	130976790	74
2010	255598811	0	0	0	255598811	0	255598811	5.28%	13495617	166854904	180350521	71
2011	111382068	0	0	0	111382068	0	111382068	5.28%	5880973	64690705	70571678	63
2012	166905888	0	0	0	166905888	0	166905888	5.28%	8812631	88126309	96938940	58
2013	139163531	0	0	0	139163531	0	139163531	5.28%	7347834	66130510	73478344	53
2014	256664275	0	0	0	256664275	0	256664275	5.28%	13551874	108414990	121966863	48
2015	220889720	0	0	0	220889720	0	220889720	5.28%	11662977	81640841	93303818	42
2016	107130646	0	0	0	107130646	0	107130646	5.28%	5656498	33938989	39595487	37
2017	126712854	0	0	0	126712854	0	126712854	5.28%	6690439	33452193	40142632	32
2018	253396310	0	0	0	253396310	53143197	200253113	5.28%	10573364	42293457	52866822	26
2019	429539880	0	0	0	429539880	155875654	273664226	5.28%	14449471	43348413	57797884	21
2020	171989719	0	0	0	171989719	0	171989719	5.28%	9081057	18162114	27243171	16
2021	144921189	0	0	0	144921189	0	144921189	5.28%	7651839	7651839	15303678	11
2022	188043510	1345287	0	0	189388797	0	189388797	5.28%	9999728	0	9999728	5
TOTAL :	5100568368	1345287	3635664	0	5098277991	354800351	4743477640		181477818	2738827348	2920305167	

DEPRECIATION FOR THE YEAR 2023-24

MERC ORDER : LIFE 6 YEARS LIFE : 12 YEARS

SCADA

FROM 2011-12 RATE OF DEP :7.50%

RATE OF DEP : 15 %

YEAR	BOOK VALUE AS ON 01.04.2022	IDC	WRITE OFF DURING THE YEAR 2022-23	ASSET TRANSFER	BALANCE VALUE OF ASSETS	GOVT. GRANT	NET ASSETS VALUE AS ON 31.03.23	RATE OF DEP.	DEP. PROVISION FOR YEAR 2023-24	CUMM.DEP. PROVIDED UPTO 2022-23	CUMM. DEP. PROVIDED UPTO 2023-24	TOTAL % OF DEP PROVIDED UP TO 2023-24
1	7	8	9	10	11	12	14	15	16	17	18	
					(7-8-9-/+10)		(11-12-13)		(14*15)		(16+17)	
2001	113465411	0	0	0	113465411	0	113465411	7.50%	0	102118870	102118870	90
2002	42372935	0	0	0	42372935	0	42372935	7.50%	0	38135642	38135642	90
2003	0	0	0	0	0	0	0	15%	0	0	0	#DIV/0!
2004	0	0	0	0	0	0	0	15%	0	0	0	#DIV/0!
2005	0	0	0	0	0	0	0	15%	0	0	0	#DIV/0!
2006	0	0	0	0	0	0	0	15%	0	0	0	#DIV/0!
2007	0	0	0	0	0	0	0	15%	0	0	0	#DIV/0!
2008	0	0	0	0	0	0	0	15%	0	0	0	#DIV/0!
2009	15597509	0	0	0	15597509	0	15597509	15%	0	14037758	14037758	90
2010	29964040	0	0	0	29964040	0	29964040	15%	0	26967636	26967636	90
2011	6575457	0	0	0	6575457	0	6575457	15%	0	5917911	5917911	90
2012	174384544	0	0	0	174384544	0	174384544	15%	0	156946090	156946090	90
2013	600000	0	0	0	600000	0	600000	15%	0	540000	540000	90
2014	25090125	0	0	0	25090125	0	25090125	15%	0	22581113	22581113	90
2015	8297243	0	0	0	8297243	0	8297243	15%	0	7467519	7467519	90
2016	21909143	0	0	0	21909143	0	21909143	15%	0	19718229	19718229	90
2017	19953228	0	0	0	19953228	0	19953228	15%	2992984	14964921	17957905	90
2018	0	0	0	0	0	0	0	15%	0	0	0	#DIV/0!
2019	-89586	0	0	555120	465534	0	465534	15%	69830	209490	279320	60
2020	0	0	0	0	0	0	0	15%	0	0	0	#DIV/0!
2021	0	0	0	0	0	0	0	15%	0	0	0	#DIV/0!
2022	0	0	0	0	0	0	0	15%	0	0	0	#DIV/0!
TOTAL :	458120050	0	0	555120	458675170	0	458675170		3062814	409605179	412667993	

DEPRECIATION FOR THE YEAR 2023-24 MERC ORDER : LIFE 17 YEARS LIFE : 10 YEARS

BATTERIES

FROM 2011-12 22-23 RATE OF DEP : 9 %

RATE OF DEP : 5.28 % 18% FROM 1994-95 LIFE : 5 YEARS RATE OF DEP : 18%

YEAR	BOOK VALUE AS ON 01.04.2022	IDC	WRITE OFF DURING THE YEAR 2022-23	ASSET TRANSFER	BALANCE VALUE OF ASSETS	GOVT. GRANT	NET ASSETS VALUE AS ON 31.03.23	RATE OF DEP.	DEP. PROVISION FOR YEAR 2023-24	CUMM.DEP. PROVIDED UPTO 2022-23	CUMM. DEP. PROVIDED UPTO 2023-24	TOTAL % OF DEP PROVIDED UP TO 2022-23
1	7	8	9	10	11	12	14	15	16	17	18	
					(7-8-9-/+10)		(11-12-13)		(14*15)		(16+17)	
1989	2055	0	0	0	2055	0	2055	9%	0	1850	1850	90
1990	428864	0	0	0	428864	0	428864	9%	0	385978	385978	90
1991	0	0	0	0	0	0	0	9%	0	0	0	#DIV/0!
1992	395	0	0	0	395	0	395	9%	0	356	356	90
1993	106722	0	0	0	106722	0	106722	9%	0	96050	96050	90
1994	0	0	0	0	0	0	0	18%	0	0	0	#DIV/0!
1995	607422.25	0	0	0	607422	0	607422	18%	0	546680	546680	90
1996	44570	0	0	0	44570	0	44570	18%	0	40113	40113	90
1997	390674	0	0	0	390674	0	390674	18%	0	351607	351607	90
1998	371549	0	0	0	371549	0	371549	18%	0	334394	334394	90
1999	4921	0	0	0	4921	0	4921	18%	0	4429	4429	90
2000	1282890	0	0	0	1282890	0	1282890	18%	0	1154601	1154601	90
2001	6361665	0	0	0	6361665	0	6361665	18%	0	5725499	5725499	90
2002	360950	0	0	0	360950	0	360950	18%	0	324855	324855	90
2003	1847699.5	0	0	0	1847700	0	1847700	18%	0	1662930	1662930	90
2004	3159591	0	0	0	3159591	0	3159591	18%	0	2843632	2843632	90
2005	1881946.98	0	0	0	1881947	0	1881947	18%	0	1693752	1693752	90
2006	3859176	0	0	0	3859176	0	3859176	18%	0	3473258	3473258	90
2007	2728145	0	0	0	2728145	0	2728145	18%	0	2455331	2455331	90
2008	643820	0	0	0	643820	0	643820	18%	0	579438	579438	90
2009	401150	0	0	0	401150	0	401150	5.28%	0	361035	361035	90
2010	8941196	0	0	0	8941196	0	8941196	5.28%	0	8047076	8047076	90
2011	7142155	0	0	0	7142155	0	7142155	5.28%	377106	4148164	4525269	63
2012	8937826	0	0	0	8937826	0	8937826	5.28%	471917	4719172	5191089	58
2013	5932726	0	0	0	5932726	0	5932726	5.28%	313248	2819231	3132479	53
2014	15654021	0	0	0	15654021	0	15654021	5.28%	826532	6612258	7438791	48
2015	11613220	0	0	0	11613220	0	11613220	5.28%	613178	4292246	4905424	42
2016	3822093	0	0	0	3822093	0	3822093	5.28%	201807	1210839	1412646	37
2017	6303908	0	0	0	6303908	0	6303908	5.28%	332846	1664232	1997078	32
2018	1442032	0	0	0	1442032	0	1442032	5.28%	76139	304557	380697	26
2019	14400851	0	0	0	14400851	150851	14250000	5.28%	752400	2257200	3009600	21
2020	9009137	0	0	0	9009137	0	9009137	5.28%	475682	951365	1427047	16
2021	13299583	0	0	0	13299583	0	13299583	18.00%	2393925	2393925	4787850	36
2022	5984176	25226	0	0	6009402	0	6009402	18.00%	1081692	0	1081692	18
TOTAL :	136967130	25226	0	0	136992356	150851	136841504.9		7916473	#######	#######	

DEPRECIATION FOR THE YEAR 2023-24

MERC ORDER : LIFE 17 YEARS

LIFE : 10 YEARS

CAPACITORS

FROM 2011-12

RATE OF DEP :9 %

RATE OF DEP : 5.28 %

YEAR	BOOK VALUE AS ON 01.04.2022	IDC	WRITE OFF DURING THE YEAR 2022-23	ASSET TRANSFER	BALANCE VALUE OF ASSETS	GOVT. GRANT	NET ASSETS VALUE AS ON 31.03.23	RATE OF DEP.	DEP. PROVISION FOR YEAR 2023-24	CUMM.DEP. PROVIDED UPTO 2022-23	CUMM. DEP. PROVIDED UPTO 2023-24	TOTAL % OF DEP PROVIDED UP TO 2023-24
1	7	8	9	10	11	12	14	15	16	17	18	
					(7-8-9-/+10)		(11-12-13)		(14*15)		(16+17)	
2001	0	0	0	0	0	0	0	9%	0	0	0	0
2002	3245920	0	3880	0	3242040	0	3242040	9%	0	2917836	2917836	90
2003	4721610.8	0	22700	0	4698911	0	4698911	9%	0	4229020	4229020	90
2004	14502387	0	0	0	14502387	0	14502387	9%	0	#######	#######	90
2005	647939	0	0	0	647939	0	647939	5.28%	0	583145	583145	90
2006	11319	0	0	0	11319	0	11319	5.28%	0	10187	10187	90
2007	19009834	0	0	0	19009834	0	19009834	5.28%	0	#######	#######	90
2008	3976507	0	0	0	3976507	0	3976507	5.28%	0	3578856	3578856	90
2009	3156963	0	0	0	3156963	0	3156963	5.28%	155323	2685944	2841267	90
2010	16089136	0	0	0	16089136	0	16089136	5.28%	849506	#######	#######	81
2011	16316545	0	0	0	16316545	0	16316545	5.28%	861514	9476649	#######	63
2012	6136188	0	0	0	6136188	0	6136188	5.28%	323991	3239907	3563898	58
2013	6053230	0	0	0	6053230	0	6053230	5.28%	319611	2876495	3196105	53
2014	10728845	0	0	0	10728845	0	10728845	5.28%	566483	4531864	5098347	48
2015	10432479	0	0	0	10432479	0	10432479	5.28%	550835	3855844	4406679	42
2016	17820039	0	0	0	17820039	0	17820039	5.28%	940898	5645388	6586286	37
2017	8604750	0	0	0	8604750	0	8604750	5.28%	454331	2271654	2725985	32
2018	3741572	0	0	0	3741572	0	3741572	5.28%	197555	790220	987775	26
2019	10875101	0	0	0	10875101	3615733	7259368	5.28%	383295	1149884	1533179	21
2020	3326469	0	0	0	3326469	0	3326469	5.28%	175638	351275	526913	16
2021	7603124	0	0	0	7603124	0	7603124	5.28%	401445	401445	802890	11
2022	159168	0	0	0	159168	0	159168	5.28%	8404	0	8404	5
TOTAL :	167159126	0	26580	0	167132546	3615733	163516813		6188827	#######	#######	

DEPRECIATION FOR THE YEAR 2023-24 MERC ORDER : LIFE 17 YEARS LIFE : 7 YEARS

D.E.A. ON HIRE

FROM 2011-12 RATE OF DEP : 12.86 %

RATE OF DEP : 5.28 %

YEAR	BOOK VALUE AS ON 01.04.2022	IDC	WRITE OFF DURING THE YEAR 2022-23	ASSET TRANSFER	BALANCE VALUE OF ASSETS	NET ASSETS VALUE AS ON 31.03.23	RATE OF DEP.	DEP. PROVISION FOR YEAR 2023-24	CUMM. DEP. PROVIDED UPTO 2022-23	CUMM. DEP. PROVIDED UPTO 2023-24	TOTAL % OF DEP PROVIDED UP TO 2023-24
1	7	8	9	10	11	14	15	16	17	18	
					(7-8-9-/+10)	(11-12-13)		(14*15)		(16+17)	
1986	77814	0	0	0	77814	77814	12.86%	0	70033	70033	90
1987	0	0	0	0	0	0	12.86%	0	0	0	#DIV/0!
1988	0	0	0	0	0	0	12.86%	0	0	0	#DIV/0!
1989	176571	0	0	0	176571	176571	12.86%	0	158914	158914	90
1990	66151	0	0	0	66151	66151	12.86%	0	59536	59536	90
1991	1628	0	0	0	1628	1628	12.86%	0	1465	1465	90
1992	-814	0	0	0	-814	-814	12.86%	0	-733	-733	90
1993	1154	0	0	0	1154	1154	12.86%	0	1039	1039	90
1994	0	0	0	0	0	0	12.86%	0	0	0	#DIV/0!
1995	0	0	0	0	0	0	12.86%	0	0	0	#DIV/0!
1996	0	0	0	0	0	0	12.86%	0	0	0	#DIV/0!
1997	0	0	0	0	0	0	12.86%	0	0	0	#DIV/0!
1998	0	0	0	0	0	0	12.86%	0	0	0	#DIV/0!
1999	0	0	0	0	0	0	12.86%	0	0	0	#DIV/0!
2000	0	0	0	0	0	0	12.86%	0	0	0	#DIV/0!
2001	0	0	0	0	0	0	12.86%	0	0	0	#DIV/0!
2002	0	0	0	0	0	0	12.86%	0	0	0	#DIV/0!
2003	0	0	0	0	0	0	12.86%	0	0	0	#DIV/0!
2004	0	0	0	0	0	0	12.86%	0	0	0	#DIV/0!
2005	0	0	0	0	0	0	12.86%	0	0	0	#DIV/0!
2006	97425	0	0	0	97425	97425	12.86%	0	87683	87683	90
2007	0	0	0	0	0	0	12.86%	0	0	0	#DIV/0!
2008	0	0	0	0	0	0	12.86%	0	0	0	#DIV/0!
2009	0	0	0	0	0	0	12.86%	0	0	0	#DIV/0!
2010	0	0	0	0	0	0	12.86%	0	0	0	#DIV/0!
2011	0	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2012	0	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2013	0	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2014	0	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2015	0	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2016	0	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2017	0	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2018	0	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2019	0	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2020	0	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2021	0	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2022	0	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
TOTAL :	419929	0	0	0	419929	419929		0	377936	377936	

DEPRECIATION FOR THE YEAR 2023-24 MERC ORDER : LIFE 17 YEARS LIFE : 1 YEARS

LOOSE TOOLS

FROM : 2011-12 RATE OF DEP : 90 %

RATE OF DEP.: 5.28%

YEAR	BOOK VALUE AS ON 01.04.2022	IDC	WRITE OFF DURING THE YEAR 2022-23	ASSET TRANSFER	BALANCE VALUE OF ASSETS	NET ASSETS VALUE AS ON 31.03.23	RATE OF DEP.	DEP. PROVISION FOR YEAR 2023-24	CUMM.DEP. PROVIDED UPTO 2022-23	CUMM. DEP. PROVIDED UPTO 2023-24	TOTAL % OF DEP PROVIDED UP TO 2023-24
1	7	8	9	10	11	14	15	16	17	18	
					(7-8-9-/+10)	(11-12-13)		(14*15)		(16+17)	
1980	207131	0	0	0	207131	207131	90%	0	186418	186418	90
1981	0	0	0	0	0	0	90%	0	0	0	#DIV/0!
1982	5080	0	0	0	5080	5080	90%	0	4572	4572	90
1983	1069016	0	0	0	1069016	1069016	90%	0	962114	962114	90
1984	-1077774	0	0	0	-1077774	-1E+06	90%	0	-969997	-969997	90
1985	57103	0	0	0	57103	57103	90%	0	51393	51393	90
1986	16290	0	0	0	16290	16290	90%	0	14661	14661	90
1987	54640	0	0	0	54640	54640	90%	0	49176	49176	90
1988	95093	0	0	0	95093	95093	90%	0	85584	85584	90
1989	40883	0	0	0	40883	40883	90%	0	36795	36795	90
1990	94539	0	17820	0	76719	76719	90%	0	69047	69047	90
1991	4343601	0	0	0	4343601	4343601	90%	0	3909241	3909241	90
1992	30747	0	0	0	30747	30747	90%	0	27672	27672	90
1993	-5101356	0	0	0	-5101356	-5E+06	90%	0	-4591220	#######	90
1994	35034	0	0	0	35034	35034	90%	0	31531	31531	90
1995	-68947	0	0	0	-68947	-68947	90%	0	-62052	-62052	90
1996	120515	0	0	0	120515	120515	90%	0	108464	108464	90
1997	82983	0	0	0	82983	82983	90%	0	74685	74685	90
1998	-72471	0	0	0	-72471	-72471	90%	0	-65224	-65224	90
1999	303622	0	0	0	303622	303622	90%	0	273260	273260	90
2000	206852	0	0	0	206852	206852	90%	0	186167	186167	90
2001	51500	0	0	0	51500	51500	90%	0	46350	46350	90
2002	393168	0	0	0	393168	393168	90%	0	353851	353851	90
2003	84857	0	0	0	84857	84857	90%	0	76371	76371	90
2004	7218	0	0	0	7218	7218	90%	0	6496	6496	90
2005	0	0	0	0	0	0	90%	0	0	0	#DIV/0!
2006	0	0	0	0	0	0	90%	0	0	0	#DIV/0!
2007	0	0	0	0	0	0	90%	0	0	0	#DIV/0!
2008	0	0	0	0	0	0	90%	0	0	0	#DIV/0!
2009	0	0	0	0	0	0	90%	0	0	0	#DIV/0!
2010	0	0	0	0	0	0	90%	0	0	0	#DIV/0!
2011	0	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2012	0	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2013	0	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2014	0	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2015	0	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2016	0	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2017	0	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2018	0	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2019	0	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2020	0	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2021	0	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
2022	0	0	0	0	0	0	5.28%	0	0	0	#DIV/0!
TOTAL :	979324	0	17820	0	961504	961504		0	865354	865354	

DEPRECIATION FOR THE YEAR 2023-24 MERC ORDER : LIFE 14 YEARS LIFE : 10 YEARS

OFFICE EQUIPMENTS

FROM 2011-12 RATE OF DEP : 9 %

RATE OF DEP : 6.33 % FROM 1994-95 LIFE : 18 YEARS RATE OF DEP : 5%

YEAR	BOOK VALUE AS ON 01.04.2022	IDC	WRITE OFF DURING THE YEAR 2023-24	ASSET TRANSFER	BALANCE VALUE OF ASSETS	NET ASSETS VALUE AS ON 31.03.23	RATE OF DEP.	DEP. PROVISION FOR YEAR 2023-24	CUMM. DEP. PROVIDED UPTO 2022-23	CUMM. DEP. PROVIDED UPTO 2023-24	TOTAL % OF DEP PROVIDED UP TO 2023-24
1	7	8	9	10	11	14	15	16	17	18	
					(7-8-9-/+10)	(11-12-13)		(14*15)		(16+17)	
1981	0	0	0	0	0	0	9%	0	0	0	#DIV/0!
1982	109008	0	0	0	109008	109008	9%	0	98107	98107	90
1983	39013	0	0	0	39013	39013	9%	0	35112	35112	90
1984	32576	0	0	0	32576	32576	9%	0	29318	29318	90
1985	204157	0	0	0	204157	204157	9%	0	183741	183741	90
1986	33187	0	0	0	33187	33187	9%	0	29868	29868	90
1987	191169	0	0	0	191169	191169	9%	0	172052	172052	90
1988	949	0	0	0	949	949	9%	0	854	854	90
1989	0	0	0	0	0	0	9%	0	0	0	#DIV/0!
1990	0	0	0	0	0	0	9%	0	0	0	#DIV/0!
1991	110075	0	0	0	110075	110075	9%	0	99068	99068	90
1992	347849	0	0	0	347849	347849	9%	0	313064	313064	90
1993	0	0	0	0	0	0	5%	0	0	0	#DIV/0!
1994	0	0	0	0	0	0	5%	0	0	0	#DIV/0!
1995	0	0	0	0	0	0	5%	0	0	0	#DIV/0!
1996	0	0	0	0	0	0	5%	0	0	0	#DIV/0!
1997	2352	0	0	0	2352	2352	5%	0	2117	2117	90
1998	122352	0	0	0	122352	122352	6.33%	0	110117	110117	90
1999	674564	0	0	0	674564	674564	6.33%	0	607107	607107	90
2000	23096	0	0	0	23096	23096	6.33%	0	20787	20787	90
2001	0	0	0	0	0	0	6.33%	0	0	0	#DIV/0!
2002	2717	0	0	0	2717	2717	6.33%	0	2445	2445	90
2003	3397819	0	0	0	3397819	3397819	6.33%	0	3058037	3058037	90
2004	2544858	0	0	0	2544858	2544858	6.33%	0	2290373	2290373	90
2005	2920371	0	0	0	2920371	2920371	6.33%	0	2628334	2628334	90
2006	410000	0	0	0	410000	410000	6.33%	0	369000	369000	90
2007	27800	0	0	0	27800	27800	6.33%	0	25020	25020	90
2008	0	0	0	0	0	0	6.33%	0	0	0	#DIV/0!
2009	1335726	0	20450	0	1315276	1315276	6.33%	70631	1113118	1183749	90
2010	3156042	0	0	0	3156042	3156042	6.33%	199777	2513156	2712934	86
2011	489066	0	25758	0	463308	463308	6.33%	29327	322602	351929	76
2012	548165	0	0	0	548165	548165	6.33%	34699	346988	381687	70
2013	6550985	0	0	0	6550985	6550985	6.33%	414677	3732096	4146774	63
2014	268993	0	0	0	268993	268993	6.33%	17027	136218	153245	57
2015	181304	0	0	0	181304	181304	6.33%	11477	80336	91812	51
2016	3034985	0	0	0	3034985	3034985	6.33%	192115	1152687	1344802	44
2017	0	0	0	0	0	0	6.33%	0	0	0	#DIV/0!
2018	109540	0	0	0	109540	109540	6.33%	6934	27736	34669	32
2019	0	0	0	0	0	0	6.33%	0	0	0	#DIV/0!
2020	0	0	0	0	0	0	6.33%	0	0	0	#DIV/0!
2021	34482	0	0	0	34482	34482	6.33%	2183	2183	4365	13
2022	247466	0	0	0	247466	247466	6.33%	15665	0	15665	6
TOTAL :	27150666	0	46208	0	27104458	27104458		994512	#######	#######	

SUMMARY OF PROVISION OF DEPRECIATION ON ASSETS OF SUPPLY DIVISION
FOR THE YEAR 2023-24

ASSETS DESCREPTION	BOOK VALUE AS ON 01.04.2022	IDC	WRITE OFF DURING THE YEAR 2022-23	ASSET TRANSFER	BALANCE VALUE OF ASSETS	GOVT. GRANT	CABEL CAPITAL CONN. FEES	NET ASSETS VALUE AS ON 31.03.23	DEP. PROVISION FOR YEAR 2023-24
1	7		8	9	10	11	12	13	15
					(7-8-/+9)			(10-11-12)	(13*14)
LAND	22953418	0	0	0	22953418	0	0	22953418	0
BUILDING	883842833	0	0	-6237000	877605833	0	0	877605833	28107199
BLDG CASH COLLN PORT CWK	149466	0	0	0	149466	0	0	149466	4229
MOTOR VEHICLE	138266695	0	15989559	0	122277136	0	0	122277136	2337929
MACHINE TOOLS	402530882	0	458290	1490942	403563535	0	0	403563535	18138231
FURNITURE	27906103	0	0	0	27906103	0	0	27906103	417763
ROOM A.C.	27063917	0	455830	0	26608088	0	0	26608088	1190473
PERSONAL COMPUTER	198843842	0	4968283	0	193875559	0	0	193875559	7584247
ELECTRONIC EQUIP	5380858	0	0	0	5380858	0	0	5380858	163162
ELECTRONIC EQUIP SEPRATED M.T.	27419074	0	0	858082	28277156	0	0	28277156	1685524
CYCLOSTYLE MACH	1428550	0	0	0	1428550	0	0	1428550	0
CABLE & MAINS	12758450000	1650577	9262163	-446475	12750391938	384979655	1577310527	10788101756	456826552
DIST PILLARS	436214362	0	0	0	436214362	8101520	0	428112842	15319073
ST LTG LAMPS	1681633737	0	0	0	1681633737	259545591	0	1422088146	54657815
METERS (CONVENTIONAL)	355159356	0	20811105	0	334348251	50225000	0	284123251	1175461
METERS (ELECTRONICS)	1320303840	0	74802679	0	1245501161	148887387	0	1096613774	75863276
BUSINESS PROC AUTOMATION	500624525	0	0	0	500624525	0	0	500624525	1766544
SWITCHGEARS	6759862492	1378910	9202321	-858082	6751180999	311602232	0	6439578767	222909646
TRANSFORMER	5100568368	1345287	3635664	0	5098277991	354800351	0	4743477640	181477818
SCADA	458120050	0	0	555120	458675170	0	0	458675170	3062814
BATTERIES	136967130	25226	0	0	136992356	150851	0	136841505	7916473
CAPACITORS	167159126	0	26580	0	167132546	3615733	0	163516813	6188827
DEA ON HIRE	419929	0	0	0	419929	0	0	419929	0
LOOSE TOOLS	979324	0	17820	0	961504	0	0	961504	0
OFFICE EQUIPMENTS	27150666	0	46208	0	27104458	0	0	27104458	994512
TOTAL :	31439398543	4400000	139676503	-4637413	31299484628	1521908320	1577310527	28200265780	1087787569

DETAILS OF E-6 WISE ASSETS GROUPING - SUPPLY DIVISION

DEPRECITION PROVISION FOR THE YEAR 2023-24

ASSETS DESCREPTION	BOOK VALUE AS ON 01.04.2022	IDC	WRITE OFF DURING THE YEAR 2022-23	BALANCE VALUE OF ASSETS	GOVT. GRANT	CABEL CAPITAL CONN. FEES	NET ASSETS VALUE AS ON 31.03.23	DEP. PROVISION FOR YEAR 2023-24
LAND	**22953418**	**0**	**0**	**22953418**	**0**	**0**	**22953418**	**0**
BUILDING	883842833	0	0	877605833	0	0	877605833	28107199
BLDG CASH COLL CHOK	149466	0	0	149466	0	0	149466	4229
BUILDINGS	**883992299**	**0**	**0**	**877755299**	**0**	**0**	**877755299**	**28111428**
BUSINESS PROCESSH AUTOMATION	500624525	0	0	500624525	0	0	500624525	1766544
SWITCHGEARS	6759862492	1378910	9202321	6751180999	311602232	0	6439578767	222909646
TRANSFORMER	5100568368	1345287	3635664	5098277991	354800351	0	4743477640	181477818
SCADA	458120050	0	0	458675170	0	0	458675170	3062814
BATTERIES	136967130	25226	0	136992356	150851	0	136841505	7916473
CAPACITORS	167159126	0	26580	167132546	3615733	0	163516813	6188827
PLANT & MACHINERY	**13123301691**	**2749423**	**12864566**	**13112883587**	**670169167**	**0**	**12442714420**	**423322123**
CABLE & MAINS	12758450000	1650577	9262163	12750391938	384979655	1577310527	10788101756	456826552
DIST PILLARS	436214362	0	0	436214362	8101520	0	428112842	15319073
CABLE & MAINS	**13194664361**	**1650577**	**9262163**	**13186606300**	**393081175**	**1577310527**	**11216214598**	**472145624**
METERS (CONVENTIONAL)	355159356	0	20811105	334348251	50225000	0	284123251	1175461
METERS (ELECTRONICS)	1320303840	0	74802679	1245501161	148887387	0	1096613774	75863276
METERS AND INSTALLATIONS	**1675463196**	**0**	**95613784**	**1579849412**	**199112387**	**0**	**1380737025**	**77038737**
STREET LIGHTING LAMPS	**1681633737**	**0**	**0**	**1681633737**	**259545591**	**0**	**1422088146**	**54657815**
D.E.A. ON HIRE	**419929**	**0**	**0**	**419929**	**0**	**0**	**419929**	**0**
MOTOR VEHICLES	**138266695**	**0**	**15989559**	**122277136**	**0**	**0**	**122277136**	**2337929**
MACHINE TOOLS	402530882	0	458290	403563535	0	0	403563535	18138231
ELECTRONIC EQUIP SEPRATED M.T.	27419074	0	0	28277156	0	0	28277156	1685524
LOOSE TOOLS	979324	0	17820	961504	0	0	961504	0
TOOLS AND EQUIPMENTS	**430929280**	**0**	**476110**	**432802195**	**0**	**0**	**432802195**	**19823755**
FURNITURE	27906103	0	0	27906103	0	0	27906103	417763
ROOM A.C.	27063917	0	455830	26608088	0	0	26608088	1190473
PERSONAL COMPUTER	198843842	0	4968283	193875559	0	0	193875559	7584247
ELECTRONIC EQUIP	5380858	0	0	5380858	0	0	5380858	163162
CYCLOSTYLE MACH	1428550	0	0	1428550	0	0	1428550	0
OFFICE EQUIPMENTS	27150666	0	46208	27104458	0	0	27104458	994512
FURNITURE AND OFFICE EQUIPMENTS	**287773936**	**0**	**5470321**	**282303616**	**0**	**0**	**282303616**	**10350157**
TOTAL :	**31439398543**	**4400000**	**139676503**	**31299484628**	**1521908320**	**1577310527**	**28200265780**	**1087787569**

SUMMARY OF DEPRECIATION CHARGED ON ASSETS OF SUPPLY DIVISION
DURING FINANCIAL YEAR 2023-24

ASSETS DESCREPTION	BOOK VALUE AS ON 01.04.2022	BALANCE VALUE OF ASSETS (after w/off & other adjustments)	NET ASSETS VALUE AS ON 31.03.23 (after GOVT. grant & Capital conn fees	DEP. CHARGED FOR YEAR 2023-24
1	7	10	13	15
		(7-8-/+9)	(10-11-12)	(13*14)
LAND	22953418	22953418	22953418	0
BUILDING	883842833	877605833	877605833	28107199
BLDG CASH COLLN PORT CWK	149466	149466	149466	4229
MOTOR VEHICLE	138266695	122277136	122277136	2337929
MACHINE TOOLS	402530882	403563535	403563535	18138231
FURNITURE	27906103	27906103	27906103	417763
ROOM A.C.	27063917	26608088	26608088	1190473
PERSONAL COMPUTER	198843842	193875559	193875559	7584247
ELECTRONIC EQUIP	5380858	5380858	5380858	163162
ELECTRONIC EQUIP SEPRATED M.T.	27419074	28277156	28277156	1685524
CYCLOSTYLE MACH	1428550	1428550	1428550	0
CABLE & MAINS	12758450000	12750391938	10788101756	456826552
DIST PILLARS	436214362	436214362	428112842	15319073
ST LTG LAMPS	1681633737	1681633737	1422088146	54657815
METERS (CONVENTIONAL)	355159356	334348251	284123251	1175461
METERS (ELECTRONICS)	1320303840	1245501161	1096613774	75863276
BUSINESS PROC AUTOMATION	500624525	500624525	500624525	1766544
SWITCHGEARS	6759862492	6751180999	6439578767	222909646
TRANSFORMER	5100568368	5098277991	4743477640	181477818
SCADA	458120050	458675170	458675170	3062814
BATTERIES	136967130	136992356	136841505	7916473
CAPACITORS	167159126	167132546	163516813	6188827
DEA ON HIRE	419929	419929	419929	0
LOOSE TOOLS	979324	961504	961504	0
OFFICE EQUIPMENTS	27150666	27104458	27104458	994512
TOTAL : OF SUPPLY DIVISION	31439398543	31299484628	28200265780	1087787569
ADD : SHARE OF GEN. ADM.@50% (85291643.00)				42645821.5
TOTAL :				1130433390

Received Government Grant distributed proportionatly in the year 2020-2021

IPDS Grant Received Rs.568813229/- Less 189900000/- consider in 2019-20
balance Grant Rs.378913229/- Distributed Proportionatly to Concern Assets.

				378913229.00
ASSETS		IPDS EXP		PROPORTIONATE
METERS ELECTONIC		62540000.00	62540000.00	32826592.05
CABLE	2910	99280978.73		
	2911	35632921.60		
	2913	207885.42		
	2935	45350423.75		
	2924	37597726.00	218069935.50	114462628.9
TRANSFORMER	2903	252798326.45		
	2930	43129381.34	295927707.79	155329359.4
SWITCHGEAR	2901	32449908.60		
	2902	17250068.76		
	2904	57611303.99		
	2905	9223426.77		
	2908	2775112.00		
	2914	293321.79		
	2915	12007614.00		
	2921	0.00		
	2931	2306971.00	133917726.91	70292014.54
CAPACITOR	2906	6864418.00	6864418.00	3603061.23
BATTERIES	2907	2816388.00	2816388.00	1478292.61
PILARS	2932	1647575.81		
	2937	107612.95	1755188.76	921280.227
			721891364.96	378913229.00

ANNEXURE-13

REC Limited
(Formerly Rural Electrification Corporation Limited)
REC LNS Consolidated Interest Demand Notice

Run_Date : - 30-May-2022 10:47:35

From Date :- 20-JUN-22

To Date :- 20-JUN-22

S.No	Borrower Name	Tranch No	First Disb Date	Due Date	From Date	To Date	Days	Int Rate	O/S Bal	Int Amt Due	Rebate	Net Int Amt
1	The B.E.S. & T. Undertaking	1	06-Aug-15	20-Jun-22	20-Mar-22	19-Jun-22	92	10.08	42110600.00	1069909.21	0.00	1069909.21
2	The B.E.S. & T. Undertaking	1	06-Aug-15	20-Jun-22	20-Mar-22	19-Jun-22	92	10.08	8037470.00	204208.99	0.00	204208.99
3	The B.E.S. & T. Undertaking	1	04-Aug-15	20-Jun-22	20-Mar-22	19-Jun-22	92	10.08	102545730.00	2605392.00	0.00	2605392.00
4	The B.E.S. & T. Undertaking	1	06-Aug-15	20-Jun-22	20-Mar-22	19-Jun-22	92	10.08	9283050.00	235855.60	0.00	235855.60
5	The B.E.S. & T. Undertaking	1	06-Aug-15	20-Jun-22	20-Mar-22	19-Jun-22	92	10.08	25720590.00	653486.20	0.00	653486.20
6	The B.E.S. & T. Undertaking	1	06-Aug-15	20-Jun-22	20-Mar-22	19-Jun-22	92	10.08	11553220.00	293534.08	0.00	293534.08
7	The B.E.S. & T. Undertaking	1	06-Aug-15	20-Jun-22	20-Mar-22	19-Jun-22	92	10.08	42712810.00	1085209.63	0.00	1085209.63
8	The B.E.S. & T. Undertaking	1	04-Aug-15	20-Jun-22	20-Mar-22	19-Jun-22	92	10.08	195992650.00	4979609.42	0.00	4979609.42
9	The B.E.S. & T. Undertaking	1	04-Aug-15	20-Jun-22	20-Mar-22	19-Jun-22	92	10.08	363670650.00	9239825.04	0.00	9239825.04
10	The B.E.S. & T. Undertaking	1	04-Aug-15	20-Jun-22	20-Mar-22	19-Jun-22	92	10.08	26717740.00	678820.91	0.00	678820.91
11	The B.E.S. & T. Undertaking	1	04-Aug-15	20-Jun-22	20-Mar-22	19-Jun-22	92	10.08	110303998.00	2802507.28	0.00	2802507.28
												23848358.36
12	The B.E.S. & T. Undertaking	2	31-Mar-17	20-Jun-22	20-Mar-22	19-Jun-22	92	10.75	99772960.00	2703437.19	0.00	2703437.19
13	The B.E.S. & T. Undertaking	2	31-Mar-17	20-Jun-22	20-Mar-22	19-Jun-22	92	10.75	33151930.00	898281.06	0.00	898281.06
14	The B.E.S. & T. Undertaking	2	31-Mar-17	20-Jun-22	20-Mar-22	19-Jun-22	92	10.75	11393970.00	308729.76	0.00	308729.76
15	The B.E.S. & T. Undertaking	2	31-Mar-17	20-Jun-22	20-Mar-22	19-Jun-22	92	10.75	1031450.00	27948.06	0.00	27948.06
16	The B.E.S. & T. Undertaking	2	31-Mar-17	20-Jun-22	20-Mar-22	19-Jun-22	92	10.75	89850110.00	2434568.73	0.00	2434568.73
17	The B.E.S. & T. Undertaking	2	31-Mar-17	20-Jun-22	20-Mar-22	19-Jun-22	92	10.75	80787980.00	2189022.25	0.00	2189022.25
18	The B.E.S. & T. Undertaking	2	31-Mar-17	20-Jun-22	20-Mar-22	19-Jun-22	92	10.75	71352190.00	1933351.12	0.00	1933351.12
19	The B.E.S. & T. Undertaking	2	31-Mar-17	20-Jun-22	20-Mar-22	19-Jun-22	92	10.75	89183500.00	2416506.34	0.00	2416506.34
20	The B.E.S. & T. Undertaking	2	31-Mar-17	20-Jun-22	20-Mar-22	19-Jun-22	92	10.75	220339700.00	5970300.36	0.00	5970300.36
21	The B.E.S. & T. Undertaking	2	31-Mar-17	20-Jun-22	20-Mar-22	19-Jun-22	92	10.75	4065600.00	110161.05	0.00	110161.05
22	The B.E.S. & T. Undertaking	2	31-Mar-17	20-Jun-22	20-Mar-22	19-Jun-22	92	10.75	40936000.00	1109197.37	0.00	1109197.37
												20101503.29

S.No	Borrower Name	Tranch No	First Disb Date	Due Date	From Date	To Date	Days	Int Rate	O/S Bal	Int Amt Due	Rebate	Net Int Amt
23	The B.E.S. & T. Undertaking	3	29-Mar-18	20-Jun-22	20-Mar-22	19-Jun-22	92	10.75	7744800.00	209852.25	0.00	209852.25
24	The B.E.S. & T. Undertaking	3	29-Mar-18	20-Jun-22	20-Mar-22	19-Jun-22	92	10.75	58501800.00	1585158.36	0.00	1585158.36
25	The B.E.S. & T. Undertaking	3	29-Mar-18	20-Jun-22	20-Mar-22	19-Jun-22	92	10.75	48988100.00	1327376.19	0.00	1327376.19
26	The B.E.S. & T. Undertaking	3	29-Mar-18	20-Jun-22	20-Mar-22	19-Jun-22	92	10.75	35165200.00	952832.41	0.00	952832.41
27	The B.E.S. & T. Undertaking	3	29-Mar-18	20-Jun-22	20-Mar-22	19-Jun-22	92	10.75	186998000.00	5066877.32	0.00	5066877.32
28	The B.E.S. & T. Undertaking	3	29-Mar-18	20-Jun-22	20-Mar-22	19-Jun-22	92	10.75	162045800.00	4390775.24	0.00	4390775.24
29	The B.E.S. & T. Undertaking	3	29-Mar-18	20-Jun-22	20-Mar-22	19-Jun-22	92	10.75	20237700.00	548358.50	0.00	548358.50
30	The B.E.S. & T. Undertaking	3	29-Mar-18	20-Jun-22	20-Mar-22	19-Jun-22	92	10.75	46487700.00	1259625.62	0.00	1259625.62
												15340855.89
31	The B.E.S. & T. Undertaking	4	30-Oct-18	20-Jun-22	20-Mar-22	19-Jun-22	92	10.08	38639440.00	981717.02	0.00	981717.02
32	The B.E.S. & T. Undertaking	4	30-Oct-18	20-Jun-22	20-Mar-22	19-Jun-22	92	10.08	5420380.00	137716.26	0.00	137716.26
33	The B.E.S. & T. Undertaking	4	30-Oct-18	20-Jun-22	20-Mar-22	19-Jun-22	92	10.08	24452400.00	621265.14	0.00	621265.14
34	The B.E.S. & T. Undertaking	4	30-Oct-18	20-Jun-22	20-Mar-22	19-Jun-22	92	10.08	59493140.00	1511549.54	0.00	1511549.54
35	The B.E.S. & T. Undertaking	4	30-Oct-18	20-Jun-22	20-Mar-22	19-Jun-22	92	10.08	219048760.00	5565398.85	0.00	5565398.85
36	The B.E.S. & T. Undertaking	4	30-Oct-18	20-Jun-22	20-Mar-22	19-Jun-22	92	10.08	5537700.00	140697.03	0.00	140697.03
37	The B.E.S. & T. Undertaking	4	30-Oct-18	20-Jun-22	20-Mar-22	19-Jun-22	92	10.08	55797000.00	1417641.26	0.00	1417641.26
38	The B.E.S. & T. Undertaking	4	30-Oct-18	20-Jun-22	20-Mar-22	19-Jun-22	92	10.08	112152221.30	2849465.31	0.00	2849465.31
												13225450.41
									2767224039	**72516167.95**	**0**	**72516167.95**
												72516167.95

REC Limited

(Formerly Rural Electrification Corporation Limited)

REC LNS Consolidated Interest Demand Notice

Run_Date : - 31-Aug-2022 03:06:14

From Date :- 20-SEP-22

To Date :- 20-SEP-22

S.No	Borrower Name	Tranch No	First Disb Date	Due Date	From Date	To Date	Credit Amount	Days	Int Rate	O/S Bal	Int Amt Due	Rebate	Net Int Amt
1	The B.E.S. & T. Undertaking	1	06-Aug-15	20-Sep-22	20-Jun-22	14-Aug-22	0.00	56	10.08	42110600.00	651249.08	0.00	651249.08
2	The B.E.S. & T. Undertaking	1	06-Aug-15	20-Sep-22	15-Aug-22	19-Sep-22	6015800.00	36	10.08	36094800.00	358851.53	0.00	358851.53
3	The B.E.S. & T. Undertaking	1	06-Aug-15	20-Sep-22	20-Jun-22	14-Aug-22	0.00	56	10.08	8037470.00	124301.13	0.00	124301.13
4	The B.E.S. & T. Undertaking	1	06-Aug-15	20-Sep-22	15-Aug-22	19-Sep-22	1148210.00	36	10.08	6889260.00	68492.46	0.00	68492.46
5	The B.E.S. & T. Undertaking	1	04-Aug-15	20-Sep-22	20-Jun-22	14-Aug-22	0.00	56	10.08	102545730.00	1585890.79	0.00	1585890.79
6	The B.E.S. & T. Undertaking	1	04-Aug-15	20-Sep-22	15-Aug-22	19-Sep-22	14649390.00	36	10.08	87896340.00	873858.19	0.00	873858.19
7	The B.E.S. & T. Undertaking	1	06-Aug-15	20-Sep-22	20-Jun-22	14-Aug-22	0.00	56	10.08	9283050.00	143564.28	0.00	143564.28
8	The B.E.S. & T. Undertaking	1	06-Aug-15	20-Sep-22	15-Aug-22	19-Sep-22	1326150.00	36	10.08	7956900.00	79106.85	0.00	79106.85
9	The B.E.S. & T. Undertaking	1	06-Aug-15	20-Sep-22	20-Jun-22	14-Aug-22	0.00	56	10.08	25720590.00	397774.21	0.00	397774.21
10	The B.E.S. & T. Undertaking	1	06-Aug-15	20-Sep-22	15-Aug-22	19-Sep-22	3674370.00	36	10.08	22046220.00	219181.71	0.00	219181.71
11	The B.E.S. & T. Undertaking	1	06-Aug-15	20-Sep-22	20-Jun-22	14-Aug-22	0.00	56	10.08	11553220.00	178672.92	0.00	178672.92
12	The B.E.S. & T. Undertaking	1	06-Aug-15	20-Sep-22	15-Aug-22	19-Sep-22	1650460.00	36	10.08	9902760.00	98452.43	0.00	98452.43
13	The B.E.S. & T. Undertaking	1	06-Aug-15	20-Sep-22	20-Jun-22	14-Aug-22	0.00	56	10.08	42712810.00	660562.38	0.00	660562.38
14	The B.E.S. & T. Undertaking	1	06-Aug-15	20-Sep-22	15-Aug-22	19-Sep-22	6101830.00	36	10.08	36610980.00	363983.35	0.00	363983.35
15	The B.E.S. & T. Undertaking	1	04-Aug-15	20-Sep-22	20-Jun-22	14-Aug-22	0.00	56	10.08	195992650.00	3031066.60	0.00	3031066.60
16	The B.E.S. & T. Undertaking	1	04-Aug-15	20-Sep-22	15-Aug-22	19-Sep-22	27998950.00	36	10.08	167993700.00	1670179.56	0.00	1670179.56
17	The B.E.S. & T. Undertaking	1	04-Aug-15	20-Sep-22	20-Jun-22	14-Aug-22	0.00	56	10.08	363670650.00	5624241.33	0.00	5624241.33
18	The B.E.S. & T. Undertaking	1	04-Aug-15	20-Sep-22	15-Aug-22	19-Sep-22	51952950.00	36	10.08	311717700.00	3099071.75	0.00	3099071.75
19	The B.E.S. & T. Undertaking	1	04-Aug-15	20-Sep-22	20-Jun-22	14-Aug-22	0.00	56	10.08	26717740.00	413195.34	0.00	413195.34
20	The B.E.S. & T. Undertaking	1	04-Aug-15	20-Sep-22	15-Aug-22	19-Sep-22	3816820.00	36	10.08	22900920.00	227679.06	0.00	227679.06
21	The B.E.S. & T. Undertaking	1	04-Aug-15	20-Sep-22	20-Jun-22	14-Aug-22	0.00	56	10.08	110303998.00	1705873.99	0.00	1705873.99
22	The B.E.S. & T. Undertaking	1	04-Aug-15	20-Sep-22	15-Aug-22	19-Sep-22	15757714.00	36	10.08	94546284.00	939971.38	0.00	939971.38
							134092644.00						22515220.32

S.No	Borrower Name	Tranch No	First Disb Date	Due Date	From Date	To Date	Credit Amount	Days	Int Rate	O/S Bal	Int Amt Due	Rebate	Net Int Amt
23	The B.E.S. & T. Undertaking	2	31-Mar-17	20-Sep-22	20-Jun-22	14-Aug-22	0.00	56	10.75	99772960.00	1645570.46	0.00	1645570.46
24	The B.E.S. & T. Undertaking	2	31-Mar-17	20-Sep-22	15-Aug-22	19-Sep-22	14253280.00	36	10.75	85519680.00	906742.91	0.00	906742.91
25	The B.E.S. & T. Undertaking	2	31-Mar-17	20-Sep-22	20-Jun-22	14-Aug-22	0.00	56	10.75	33151930.00	546779.78	0.00	546779.78
26	The B.E.S. & T. Undertaking	2	31-Mar-17	20-Sep-22	15-Aug-22	19-Sep-22	4735990.00	36	10.75	28415940.00	301286.82	0.00	301286.82
27	The B.E.S. & T. Undertaking	2	31-Mar-17	20-Sep-22	20-Jun-22	14-Aug-22	0.00	56	10.75	11393970.00	187922.46	0.00	187922.46
28	The B.E.S. & T. Undertaking	2	31-Mar-17	20-Sep-22	15-Aug-22	19-Sep-22	1627710.00	36	10.75	9766260.00	103549.11	0.00	103549.11
29	The B.E.S. & T. Undertaking	2	31-Mar-17	20-Sep-22	20-Jun-22	14-Aug-22	0.00	56	10.75	1031450.00	17011.86	0.00	17011.86
30	The B.E.S. & T. Undertaking	2	31-Mar-17	20-Sep-22	15-Aug-22	19-Sep-22	147350.00	36	10.75	884100.00	9373.88	0.00	9373.88
31	The B.E.S. & T. Undertaking	2	31-Mar-17	20-Sep-22	20-Jun-22	14-Aug-22	0.00	56	10.75	89850110.00	1481911.40	0.00	1481911.40
32	The B.E.S. & T. Undertaking	2	31-Mar-17	20-Sep-22	15-Aug-22	19-Sep-22	12835730.00	36	10.75	77014380.00	816563.43	0.00	816563.43
33	The B.E.S. & T. Undertaking	2	31-Mar-17	20-Sep-22	20-Jun-22	14-Aug-22	0.00	56	10.75	80787980.00	1332448.33	0.00	1332448.33
34	The B.E.S. & T. Undertaking	2	31-Mar-17	20-Sep-22	15-Aug-22	19-Sep-22	11541140.00	36	10.75	69246840.00	734206.22	0.00	734206.22
35	The B.E.S. & T. Undertaking	2	31-Mar-17	20-Sep-22	20-Jun-22	14-Aug-22	0.00	56	10.75	71352190.00	1176822.42	0.00	1176822.42
36	The B.E.S. & T. Undertaking	2	31-Mar-17	20-Sep-22	15-Aug-22	19-Sep-22	10193170.00	36	10.75	61159020.00	648453.17	0.00	648453.17
37	The B.E.S. & T. Undertaking	2	31-Mar-17	20-Sep-22	20-Jun-22	14-Aug-22	0.00	56	10.75	89183500.00	1470916.90	0.00	1470916.90
38	The B.E.S. & T. Undertaking	2	31-Mar-17	20-Sep-22	15-Aug-22	19-Sep-22	12740500.00	36	10.75	76443000.00	810505.23	0.00	810505.23
39	The B.E.S. & T. Undertaking	2	31-Mar-17	20-Sep-22	20-Jun-22	14-Aug-22	0.00	56	10.75	220339700.00	3634095.87	0.00	3634095.87
40	The B.E.S. & T. Undertaking	2	31-Mar-17	20-Sep-22	15-Aug-22	19-Sep-22	31477100.00	36	10.75	188862600.00	2002460.99	0.00	2002460.99
41	The B.E.S. & T. Undertaking	2	31-Mar-17	20-Sep-22	20-Jun-22	14-Aug-22	0.00	56	10.75	4065600.00	67054.55	0.00	67054.55
42	The B.E.S. & T. Undertaking	2	31-Mar-17	20-Sep-22	15-Aug-22	19-Sep-22	580800.00	36	10.75	3484800.00	36948.43	0.00	36948.43
43	The B.E.S. & T. Undertaking	2	31-Mar-17	20-Sep-22	20-Jun-22	14-Aug-22	0.00	56	10.75	40936000.00	675163.62	0.00	675163.62
44	The B.E.S. & T. Undertaking	2	31-Mar-17	20-Sep-22	15-Aug-22	19-Sep-22	5848000.00	36	10.75	35088000.00	372028.93	0.00	372028.93
							105980770.00						18977816.77

S.No	Borrower Name	Tranch No	First Disb Date	Due Date	From Date	To Date	Credit Amount	Days	Int Rate	O/S Bal	Int Amt Due	Rebate	Net Int Amt
45	The B.E.S. & T. Undertaking	3	29-Mar-18	20-Sep-22	20-Jun-22	14-Aug-22	0.00	56	10.75	7744800.00	127736.15	0.00	127736.15
46	The B.E.S. & T. Undertaking	3	29-Mar-18	20-Sep-22	15-Aug-22	19-Sep-22	1106400.00	36	10.75	6638400.00	70385.23	0.00	70385.23
47	The B.E.S. & T. Undertaking	3	29-Mar-18	20-Sep-22	20-Jun-22	14-Aug-22	0.00	56	10.75	58501800.00	964879.00	0.00	964879.00
48	The B.E.S. & T. Undertaking	3	29-Mar-18	20-Sep-22	15-Aug-22	19-Sep-22	8357400.00	36	10.75	50144400.00	531668.02	0.00	531668.02
49	The B.E.S. & T. Undertaking	3	29-Mar-18	20-Sep-22	20-Jun-22	14-Aug-22	0.00	56	10.75	48988100.00	807968.12	0.00	807968.12
50	The B.E.S. & T. Undertaking	3	29-Mar-18	20-Sep-22	15-Aug-22	19-Sep-22	6998300.00	36	10.75	41989800.00	445206.92	0.00	445206.92
51	The B.E.S. & T. Undertaking	3	29-Mar-18	20-Sep-22	20-Jun-22	14-Aug-22	0.00	56	10.75	35165200.00	579984.94	0.00	579984.94
52	The B.E.S. & T. Undertaking	3	29-Mar-18	20-Sep-22	15-Aug-22	19-Sep-22	5023600.00	36	10.75	30141600.00	319583.54	0.00	319583.54
53	The B.E.S. & T. Undertaking	3	29-Mar-18	20-Sep-22	20-Jun-22	14-Aug-22	0.00	56	10.75	186998000.00	3084186.19	0.00	3084186.19
54	The B.E.S. & T. Undertaking	3	29-Mar-18	20-Sep-22	15-Aug-22	19-Sep-22	26714000.00	36	10.75	160284000.00	1699449.53	0.00	1699449.53
55	The B.E.S. & T. Undertaking	3	29-Mar-18	20-Sep-22	20-Jun-22	14-Aug-22	0.00	56	10.75	162045800.00	2672645.80	0.00	2672645.80
56	The B.E.S. & T. Undertaking	3	29-Mar-18	20-Sep-22	15-Aug-22	19-Sep-22	23149400.00	36	10.75	138896400.00	1472682.38	0.00	1472682.38
57	The B.E.S. & T. Undertaking	3	29-Mar-18	20-Sep-22	20-Jun-22	14-Aug-22	0.00	56	10.75	20237700.00	333783.44	0.00	333783.44
58	The B.E.S. & T. Undertaking	3	29-Mar-18	20-Sep-22	15-Aug-22	19-Sep-22	2891100.00	36	10.75	17346600.00	183921.48	0.00	183921.48
59	The B.E.S. & T. Undertaking	3	29-Mar-18	20-Sep-22	20-Jun-22	14-Aug-22	0.00	56	10.75	46487700.00	766728.64	0.00	766728.64
60	The B.E.S. & T. Undertaking	3	29-Mar-18	20-Sep-22	15-Aug-22	19-Sep-22	6641100.00	36	10.75	39846600.00	422483.13	0.00	422483.13
							80881300.00						14483292.51

S.No	Borrower Name	Tranch No	First Disb Date	Due Date	From Date	To Date	Credit Amount	Days	Int Rate	O/S Bal	Int Amt Due	Rebate	Net Int Amt
61	The B.E.S. & T. Undertaking	4	30-Oct-18	20-Sep-22	20-Jun-22	14-Aug-22	0.00	56	10.08	38639440.00	597566.88	0.00	597566.88
62	The B.E.S. & T. Undertaking	4	30-Oct-18	20-Sep-22	15-Aug-22	19-Sep-22	5519920.00	36	10.08	33119520.00	329271.55	0.00	329271.55
63	The B.E.S. & T. Undertaking	4	30-Oct-18	20-Sep-22	20-Jun-22	14-Aug-22	0.00	56	10.08	5420380.00	83827.29	0.00	83827.29
64	The B.E.S. & T. Undertaking	4	30-Oct-18	20-Sep-22	15-Aug-22	19-Sep-22	774340.00	36	10.08	4646040.00	46190.55	0.00	46190.55
65	The B.E.S. & T. Undertaking	4	30-Oct-18	20-Sep-22	20-Jun-22	14-Aug-22	0.00	56	10.08	24452400.00	378161.39	0.00	378161.39
66	The B.E.S. & T. Undertaking	4	30-Oct-18	20-Sep-22	15-Aug-22	19-Sep-22	3493200.00	36	10.08	20959200.00	208374.64	0.00	208374.64
67	The B.E.S. & T. Undertaking	4	30-Oct-18	20-Sep-22	20-Jun-22	14-Aug-22	0.00	56	10.08	59493140.00	920073.63	0.00	920073.63
68	The B.E.S. & T. Undertaking	4	30-Oct-18	20-Sep-22	15-Aug-22	19-Sep-22	8499020.00	36	10.08	50994120.00	506979.35	0.00	506979.35
69	The B.E.S. & T. Undertaking	4	30-Oct-18	20-Sep-22	20-Jun-22	14-Aug-22	0.00	56	10.08	219048760.00	3387634.08	0.00	3387634.08
70	The B.E.S. & T. Undertaking	4	30-Oct-18	20-Sep-22	15-Aug-22	19-Sep-22	31292680.00	36	10.08	187756080.00	1866655.52	0.00	1866655.52
71	The B.E.S. & T. Undertaking	4	30-Oct-18	20-Sep-22	20-Jun-22	14-Aug-22	0.00	56	10.08	5537700.00	85641.67	0.00	85641.67
72	The B.E.S. & T. Undertaking	4	30-Oct-18	20-Sep-22	15-Aug-22	19-Sep-22	791100.00	36	10.08	4746600.00	47190.31	0.00	47190.31
73	The B.E.S. & T. Undertaking	4	30-Oct-18	20-Sep-22	20-Jun-22	14-Aug-22	0.00	56	10.08	55797000.00	862912.07	0.00	862912.07
74	The B.E.S. & T. Undertaking	4	30-Oct-18	20-Sep-22	15-Aug-22	19-Sep-22	7971000.00	36	10.08	47826000.00	475482.16	0.00	475482.16
75	The B.E.S. & T. Undertaking	4	30-Oct-18	20-Sep-22	20-Jun-22	14-Aug-22	0.00	56	10.08	112152221.30	1734457.15	0.00	1734457.15
76	The B.E.S. & T. Undertaking	4	30-Oct-18	20-Sep-22	15-Aug-22	19-Sep-22	16021745.90	36	10.08	96130475.40	955721.29	0.00	955721.29
							74363005.90						12486139.53
							395317719.90			**2371906319**	**68462469.13**	**0**	**68462469.13**

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The B.E.S. & T. Undertaking

Run_Date : - 30-Nov-2022 11:26:58

From Date :- 21-SEP-22

To Date :- 20-DEC-22

S.No	Scheme Code	LoanNumber	Tranch No	First Disb Date	Due Date	From Date	To Date	Days	Int Rate	O/S Bal	Int Amt Due	Net Int Amt	Total
1	MH-TD-SPU-433-2013-8166	YQ-SPU-433-8166-1	1	06-Aug-15	20-Dec-22	20-Sep-22	19-Dec-22	91	10.08	36094800.00	907096.94	907096.94	
2	MH-TD-SPU-433-2013-8169	YQ-SPU-433-8169-1	1	06-Aug-15	20-Dec-22	20-Sep-22	19-Dec-22	91	10.08	6889260.00	173133.71	173133.71	
3	MH-TD-SPU-433-2013-8170	YQ-SPU-433-8170-1	1	04-Aug-15	20-Dec-22	20-Sep-22	19-Dec-22	91	10.08	87896340.00	2208919.31	2208919.31	
4	MH-TD-SPU-433-2013-8171	YQ-SPU-433-8171-1	1	06-Aug-15	20-Dec-22	20-Sep-22	19-Dec-22	91	10.08	7956900.00	199964.53	199964.53	
5	MH-TD-SPU-433-2013-8172	YQ-SPU-433-8172-1	1	06-Aug-15	20-Dec-22	20-Sep-22	19-Dec-22	91	10.08	22046220.00	554042.65	554042.65	
6	MH-TD-SPU-433-2013-8173	YQ-SPU-433-8173-1	1	06-Aug-15	20-Dec-22	20-Sep-22	19-Dec-22	91	10.08	9902760.00	248865.85	248865.85	
7	MH-TD-SPU-433-2013-8174	YQ-SPU-433-8174-1	1	06-Aug-15	20-Dec-22	20-Sep-22	19-Dec-22	91	10.08	36610980.00	920069.03	920069.03	
8	MH-TD-SPU-433-2013-8175	YQ-SPU-433-8175-1	1	04-Aug-15	20-Dec-22	20-Sep-22	19-Dec-22	91	10.08	167993700.00	4221842.77	4221842.77	
9	MH-TD-SPU-433-2013-8176	YQ-SPU-433-8176-1	1	04-Aug-15	20-Dec-22	20-Sep-22	19-Dec-22	91	10.08	311717700.00	7833764.71	7833764.71	
10	MH-TD-SPU-433-2013-8177	YQ-SPU-433-8177-1	1	04-Aug-15	20-Dec-22	20-Sep-22	19-Dec-22	91	10.08	22900920.00	575522.08	575522.08	
11	MH-TD-SPU-433-2013-8178	YQ-SPU-433-8178-1	1	04-Aug-15	20-Dec-22	20-Sep-22	19-Dec-22	91	10.08	94546284.00	2376038.78	2376038.78	20219260.36
12	MH-TD-SPU-433-2013-8166	YQ-SPU-433-8166-2	2	31-Mar-17	20-Dec-22	20-Sep-22	19-Dec-22	91	10.75	85519680.00	2292044.57	2292044.57	
13	MH-TD-SPU-433-2013-8169	YQ-SPU-433-8169-2	2	31-Mar-17	20-Dec-22	20-Sep-22	19-Dec-22	91	10.75	28415940.00	761586.12	761586.12	
14	MH-TD-SPU-433-2013-8170	YQ-SPU-433-8170-2	2	31-Mar-17	20-Dec-22	20-Sep-22	19-Dec-22	91	10.75	9766260.00	261749.15	261749.15	
15	MH-TD-SPU-433-2013-8171	YQ-SPU-433-8171-2	2	31-Mar-17	20-Dec-22	20-Sep-22	19-Dec-22	91	10.75	884100.00	23695.09	23695.09	
16	MH-TD-SPU-433-2013-8172	YQ-SPU-433-8172-2	2	31-Mar-17	20-Dec-22	20-Sep-22	19-Dec-22	91	10.75	77014380.00	2064090.88	2064090.88	
17	MH-TD-SPU-433-2013-8173	YQ-SPU-433-8173-2	2	31-Mar-17	20-Dec-22	20-Sep-22	19-Dec-22	91	10.75	69246840.00	1855910.17	1855910.17	
18	MH-TD-SPU-433-2013-8174	YQ-SPU-433-8174-2	2	31-Mar-17	20-Dec-22	20-Sep-22	19-Dec-22	91	10.75	61159020.00	1639145.52	1639145.52	
19	MH-TD-SPU-433-2013-8175	YQ-SPU-433-8175-2	2	31-Mar-17	20-Dec-22	20-Sep-22	19-Dec-22	91	10.75	76443000.00	2048777.12	2048777.12	
20	MH-TD-SPU-433-2013-8176	YQ-SPU-433-8176-2	2	31-Mar-17	20-Dec-22	20-Sep-22	19-Dec-22	91	10.75	188862600.00	5061776.40	5061776.40	
21	MH-TD-SPU-433-2013-8177	YQ-SPU-433-8177-2	2	31-Mar-17	20-Dec-22	20-Sep-22	19-Dec-22	91	10.75	3484800.00	93397.41	93397.41	
22	MH-TD-SPU-433-2013-8178	YQ-SPU-433-8178-2	2	31-Mar-17	20-Dec-22	20-Sep-22	19-Dec-22	91	10.75	35088000.00	940406.47	940406.47	17042578.90

S.No	Scheme Code	LoanNumber	Tranch No	First Disb Date	Due Date	From Date	To Date	Days	Int Rate	O/S Bal	Int Amt Due	Net Int Amt	Total
23	MH-TD-SPU-433-2013-8166	YQ-SPU-433-8166-3	3	29-Mar-18	20-Dec-22	20-Sep-22	19-Dec-22	91	10.75	6638400.00	177918.21	177918.21	
24	MH-TD-SPU-433-2013-8172	YQ-SPU-433-8172-3	3	29-Mar-18	20-Dec-22	20-Sep-22	19-Dec-22	91	10.75	50144400.00	1343938.61	1343938.61	
25	MH-TD-SPU-433-2013-8173	YQ-SPU-433-8173-3	3	29-Mar-18	20-Dec-22	20-Sep-22	19-Dec-22	91	10.75	41989800.00	1125384.16	1125384.16	
26	MH-TD-SPU-433-2013-8174	YQ-SPU-433-8174-3	3	29-Mar-18	20-Dec-22	20-Sep-22	19-Dec-22	91	10.75	30141600.00	807836.17	807836.17	
27	MH-TD-SPU-433-2013-8175	YQ-SPU-433-8175-3	3	29-Mar-18	20-Dec-22	20-Sep-22	19-Dec-22	91	10.75	160284000.00	4295830.77	4295830.77	
28	MH-TD-SPU-433-2013-8176	YQ-SPU-433-8176-3	3	29-Mar-18	20-Dec-22	20-Sep-22	19-Dec-22	91	10.75	138896400.00	3722613.79	3722613.79	
29	MH-TD-SPU-433-2013-8177	YQ-SPU-433-8177-3	3	29-Mar-18	20-Dec-22	20-Sep-22	19-Dec-22	91	10.75	17346600.00	464912.64	464912.64	
30	MH-TD-SPU-433-2013-8178	YQ-SPU-433-8178-3	3	29-Mar-18	20-Dec-22	20-Sep-22	19-Dec-22	91	10.75	39846600.00	1067943.46	1067943.46	13006377.81
31	MH-TD-SPU-433-2013-8166	YQ-SPU-433-8166-4	4	30-Oct-18	20-Dec-22	20-Sep-22	19-Dec-22	91	10.08	33119520.00	832325.30	832325.30	
32	MH-TD-SPU-433-2013-8172	YQ-SPU-433-8172-4	4	30-Oct-18	20-Dec-22	20-Sep-22	19-Dec-22	91	10.08	4646040.00	116759.44	116759.44	
33	MH-TD-SPU-433-2013-8173	YQ-SPU-433-8173-4	4	30-Oct-18	20-Dec-22	20-Sep-22	19-Dec-22	91	10.08	20959200.00	526724.79	526724.79	
34	MH-TD-SPU-433-2013-8174	YQ-SPU-433-8174-4	4	30-Oct-18	20-Dec-22	20-Sep-22	19-Dec-22	91	10.08	50994120.00	1281531.13	1281531.13	
35	MH-TD-SPU-433-2013-8175	YQ-SPU-433-8175-4	4	30-Oct-18	20-Dec-22	20-Sep-22	19-Dec-22	91	10.08	187756080.00	4718490.33	4718490.33	
36	MH-TD-SPU-433-2013-8176	YQ-SPU-433-8176-4	4	30-Oct-18	20-Dec-22	20-Sep-22	19-Dec-22	91	10.08	4746600.00	119286.61	119286.61	
37	MH-TD-SPU-433-2013-8177	YQ-SPU-433-8177-4	4	30-Oct-18	20-Dec-22	20-Sep-22	19-Dec-22	91	10.08	47826000.00	1201913.24	1201913.24	
38	MH-TD-SPU-433-2013-8178	YQ-SPU-433-8178-4	4	30-Oct-18	20-Dec-22	20-Sep-22	19-Dec-22	91	10.08	96130475.40	2415851.03	2415851.03	11212881.87
										2371906319.40	**61481098.94**	**61481098.94**	61481098.94

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REC Limited

Formerly Rural Electrification Corporation Limited)

Run_Date : - 04-Mar-2023 08:01:13

From Date :- 21-DEC-22

To Date :- 20-MAR-23

S.No	Borrower Name	Tranch No	Frequency	Reset Period	Current ROI Effective Date	First Disb Date	Due Date	From Date	To Date	Int Rate	Applicable Int Rate	O/S Bal	Int Amt Due	Net Int Amt
1	The B.E.S. & T.	1	QUARTERLY	36	06-Aug-21	06-Aug-15	20-Mar-23	20-Dec-22	19-Mar-23	10.08	10.08	36094800	897128.84	897128.84
2	The B.E.S. & T.	2	QUARTERLY	36	31-Mar-20	31-Mar-17	20-Mar-23	20-Dec-22	19-Mar-23	10.75	10.75	85519680	2266857.27	2266857.27
3	The B.E.S. & T.	3	QUARTERLY	36	29-Mar-21	29-Mar-18	20-Mar-23	20-Dec-22	19-Mar-23	10.75	10.75	6638400	175963.07	175963.07
4	The B.E.S. & T.	4	QUARTERLY	36	30-Oct-21	30-Oct-18	20-Mar-23	20-Dec-22	19-Mar-23	10.08	10.08	33119520	823178.86	823178.86
5	The B.E.S. & T.	1	QUARTERLY	36	06-Aug-21	06-Aug-15	20-Mar-23	20-Dec-22	19-Mar-23	10.08	10.08	6889260	171231.14	171231.14
6	The B.E.S. & T.	2	QUARTERLY	36	31-Mar-20	31-Mar-17	20-Mar-23	20-Dec-22	19-Mar-23	10.75	10.75	28415940	753217.04	753217.04
7	The B.E.S. & T.	1	QUARTERLY	36	04-Aug-21	04-Aug-15	20-Mar-23	20-Dec-22	19-Mar-23	10.08	10.08	87896340	2184645.47	2184645.47
8	The B.E.S. & T.	2	QUARTERLY	36	31-Mar-20	31-Mar-17	20-Mar-23	20-Dec-22	19-Mar-23	10.75	10.75	9766260	258872.78	258872.78
9	The B.E.S. & T.	1	QUARTERLY	36	06-Aug-21	06-Aug-15	20-Mar-23	20-Dec-22	19-Mar-23	10.08	10.08	7956900	197767.11	197767.11
10	The B.E.S. & T.	2	QUARTERLY	36	31-Mar-20	31-Mar-17	20-Mar-23	20-Dec-22	19-Mar-23	10.75	10.75	884100	23434.71	23434.71
11	The B.E.S. & T.	1	QUARTERLY	36	06-Aug-21	06-Aug-15	20-Mar-23	20-Dec-22	19-Mar-23	10.08	10.08	22046220	547954.27	547954.27
12	The B.E.S. & T.	2	QUARTERLY	36	31-Mar-20	31-Mar-17	20-Mar-23	20-Dec-22	19-Mar-23	10.75	10.75	77014380	2041408.57	2041408.57
13	The B.E.S. & T.	3	QUARTERLY	36	29-Mar-21	29-Mar-18	20-Mar-23	20-Dec-22	19-Mar-23	10.75	10.75	50144400	1329170.05	1329170.05
14	The B.E.S. & T.	4	QUARTERLY	36	30-Oct-21	30-Oct-18	20-Mar-23	20-Dec-22	19-Mar-23	10.08	10.08	4646040	115476.37	115476.37
15	The B.E.S. & T.	1	QUARTERLY	36	06-Aug-21	06-Aug-15	20-Mar-23	20-Dec-22	19-Mar-23	10.08	10.08	9902760	246131.06	246131.06
16	The B.E.S. & T.	2	QUARTERLY	36	31-Mar-20	31-Mar-17	20-Mar-23	20-Dec-22	19-Mar-23	10.75	10.75	69246840	1835515.55	1835515.55
17	The B.E.S. & T.	3	QUARTERLY	36	29-Mar-21	29-Mar-18	20-Mar-23	20-Dec-22	19-Mar-23	10.75	10.75	41989800	1113017.3	1113017.3
18	The B.E.S. & T.	4	QUARTERLY	36	30-Oct-21	30-Oct-18	20-Mar-23	20-Dec-22	19-Mar-23	10.08	10.08	20959200	520936.61	520936.61
19	The B.E.S. & T.	1	QUARTERLY	36	06-Aug-21	06-Aug-15	20-Mar-23	20-Dec-22	19-Mar-23	10.08	10.08	36610980	909958.39	909958.39
20	The B.E.S. & T.	2	QUARTERLY	36	31-Mar-20	31-Mar-17	20-Mar-23	20-Dec-22	19-Mar-23	10.75	10.75	61159020	1621132.93	1621132.93
21	The B.E.S. & T.	3	QUARTERLY	36	29-Mar-21	29-Mar-18	20-Mar-23	20-Dec-22	19-Mar-23	10.75	10.75	30141600	798958.85	798958.85
22	The B.E.S. & T.	4	QUARTERLY	36	30-Oct-21	30-Oct-18	20-Mar-23	20-Dec-22	19-Mar-23	10.08	10.08	50994120	1267448.37	1267448.37
23	The B.E.S. & T.	1	QUARTERLY	36	04-Aug-21	04-Aug-15	20-Mar-23	20-Dec-22	19-Mar-23	10.08	10.08	167993700	4175448.89	4175448.89
24	The B.E.S. & T.	2	QUARTERLY	36	31-Mar-20	31-Mar-17	20-Mar-23	20-Dec-22	19-Mar-23	10.75	10.75	76443000	2026263.08	2026263.08

25	The B.E.S. & T.	3	QUARTERLY	36	29-Mar-21	29-Mar-18	20-Mar-23	20-Dec-22	19-Mar-23	10.75	10.75	160284000	4248623.84	4248623.84
26	The B.E.S. & T.	4	QUARTERLY	36	30-Oct-21	30-Oct-18	20-Mar-23	20-Dec-22	19-Mar-23	10.08	10.08	187756080	4666638.79	4666638.79
27	The B.E.S. & T.	1	QUARTERLY	36	04-Aug-21	04-Aug-15	20-Mar-23	20-Dec-22	19-Mar-23	10.08	10.08	311717700	7747679.38	7747679.38
28	The B.E.S. & T.	2	QUARTERLY	36	31-Mar-20	31-Mar-17	20-Mar-23	20-Dec-22	19-Mar-23	10.75	10.75	188862600	5006152.48	5006152.48
29	The B.E.S. & T.	3	QUARTERLY	36	29-Mar-21	29-Mar-18	20-Mar-23	20-Dec-22	19-Mar-23	10.75	10.75	138896400	3681705.95	3681705.95
30	The B.E.S. & T.	4	QUARTERLY	36	30-Oct-21	30-Oct-18	20-Mar-23	20-Dec-22	19-Mar-23	10.08	10.08	4746600	117975.77	117975.77
31	The B.E.S. & T.	1	QUARTERLY	36	04-Aug-21	04-Aug-15	20-Mar-23	20-Dec-22	19-Mar-23	10.08	10.08	22900920	569197.66	569197.66
32	The B.E.S. & T.	2	QUARTERLY	36	31-Mar-20	31-Mar-17	20-Mar-23	20-Dec-22	19-Mar-23	10.75	10.75	3484800	92371.07	92371.07
33	The B.E.S. & T.	3	QUARTERLY	36	29-Mar-21	29-Mar-18	20-Mar-23	20-Dec-22	19-Mar-23	10.75	10.75	17346600	459803.71	459803.71
34	The B.E.S. & T.	4	QUARTERLY	36	30-Oct-21	30-Oct-18	20-Mar-23	20-Dec-22	19-Mar-23	10.08	10.08	47826000	1188705.4	1188705.4
35	The B.E.S. & T.	1	QUARTERLY	36	04-Aug-21	04-Aug-15	20-Mar-23	20-Dec-22	19-Mar-23	10.08	10.08	94546284	2349928.46	2349928.46
36	The B.E.S. & T.	2	QUARTERLY	36	31-Mar-20	31-Mar-17	20-Mar-23	20-Dec-22	19-Mar-23	10.75	10.75	35088000	930072.33	930072.33
37	The B.E.S. & T.	3	QUARTERLY	36	29-Mar-21	29-Mar-18	20-Mar-23	20-Dec-22	19-Mar-23	10.75	10.75	39846600	1056207.82	1056207.82
38	The B.E.S. & T.	4	QUARTERLY	36	30-Oct-21	30-Oct-18	20-Mar-23	20-Dec-22	19-Mar-23	10.08	10.08	96130475.4	2389303.21	2389303.21
												2371906319	**60805482.45**	**60805482.45**

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REC Limited (Formerly Rural Electrification Corporation Limited)

REC LNS Consolidated Interest Demand Notice

Run_Date : - 10-Jun-2023 01:05:44

From Date :- 21-MAR-23

S.No	LoanNumber	Tranch No	Current ROI Effective Date	First Disb Date	Due Date	From Date	To Date	Days	Int Rate	Net Int Amt
1	YQ-SPU-433-8166-1	1	06-Aug-21	06-Aug-15	20-Jun-23	20-Mar-23	19-Jun-23	92	10.08	917065.03
2	YQ-SPU-433-8169-1	1	06-Aug-21	06-Aug-15	20-Jun-23	20-Mar-23	19-Jun-23	92	10.08	175036.28
3	YQ-SPU-433-8170-1	1	04-Aug-21	04-Aug-15	20-Jun-23	20-Mar-23	19-Jun-23	92	10.08	2233193.15
4	YQ-SPU-433-8171-1	1	06-Aug-21	06-Aug-15	20-Jun-23	20-Mar-23	19-Jun-23	92	10.08	202161.94
5	YQ-SPU-433-8172-1	1	06-Aug-21	06-Aug-15	20-Jun-23	20-Mar-23	19-Jun-23	92	10.08	560131.03
6	YQ-SPU-433-8173-1	1	06-Aug-21	06-Aug-15	20-Jun-23	20-Mar-23	19-Jun-23	92	10.08	251600.64
7	YQ-SPU-433-8174-1	1	06-Aug-21	06-Aug-15	20-Jun-23	20-Mar-23	19-Jun-23	92	10.08	930179.68
8	YQ-SPU-433-8175-1	1	04-Aug-21	04-Aug-15	20-Jun-23	20-Mar-23	19-Jun-23	92	10.08	4268236.65
9	YQ-SPU-433-8176-1	1	04-Aug-21	04-Aug-15	20-Jun-23	20-Mar-23	19-Jun-23	92	10.08	7919850.03
10	YQ-SPU-433-8177-1	1	04-Aug-21	04-Aug-15	20-Jun-23	20-Mar-23	19-Jun-23	92	10.08	581846.50
11	YQ-SPU-433-8178-1	1	04-Aug-21	04-Aug-15	20-Jun-23	20-Mar-23	19-Jun-23	92	10.08	2402149.09
							Total			**20441450.02**
12	YQ-SPU-433-8166-2	2	31-Mar-20	31-Mar-17	20-Jun-23	20-Mar-23	30-Mar-23	11	10.75	277060.33
13	YQ-SPU-433-8166-2	2	31-Mar-23	31-Mar-17	20-Jun-23	31-Mar-23	19-Jun-23	81	11.10	2106595.73
14	YQ-SPU-433-8169-2	2	31-Mar-20	31-Mar-17	20-Jun-23	20-Mar-23	30-Mar-23	11	10.75	92059.86
15	YQ-SPU-433-8169-2	2	31-Mar-23	31-Mar-17	20-Jun-23	31-Mar-23	19-Jun-23	81	11.10	699966.35
16	YQ-SPU-433-8170-2	2	31-Mar-20	31-Mar-17	20-Jun-23	20-Mar-23	30-Mar-23	11	10.75	31640.01
17	YQ-SPU-433-8170-2	2	31-Mar-23	31-Mar-17	20-Jun-23	31-Mar-23	19-Jun-23	81	11.10	240571.08
18	YQ-SPU-433-8171-2	2	31-Mar-20	31-Mar-17	20-Jun-23	20-Mar-23	30-Mar-23	11	10.75	2864.24
19	YQ-SPU-433-8171-2	2	31-Mar-23	31-Mar-17	20-Jun-23	31-Mar-23	19-Jun-23	81	11.10	21777.93
20	YQ-SPU-433-8172-2	2	31-Mar-20	31-Mar-17	20-Jun-23	20-Mar-23	30-Mar-23	11	10.75	249505.49
21	YQ-SPU-433-8172-2	2	31-Mar-23	31-Mar-17	20-Jun-23	31-Mar-23	19-Jun-23	81	11.10	1897085.73
22	YQ-SPU-433-8173-2	2	31-Mar-20	31-Mar-17	20-Jun-23	20-Mar-23	30-Mar-23	11	10.75	224340.79
23	YQ-SPU-433-8173-2	2	31-Mar-23	31-Mar-17	20-Jun-23	31-Mar-23	19-Jun-23	81	11.10	1705748.87
24	YQ-SPU-433-8174-2	2	31-Mar-20	31-Mar-17	20-Jun-23	20-Mar-23	30-Mar-23	11	10.75	198138.47
25	YQ-SPU-433-8174-2	2	31-Mar-23	31-Mar-17	20-Jun-23	31-Mar-23	19-Jun-23	81	11.10	1506522.60
26	YQ-SPU-433-8175-2	2	31-Mar-20	31-Mar-17	20-Jun-23	20-Mar-23	30-Mar-23	11	10.75	247654.38
27	YQ-SPU-433-8175-2	2	31-Mar-23	31-Mar-17	20-Jun-23	31-Mar-23	19-Jun-23	81	11.10	1883010.99

REC Limited (Formerly Rural Electrification Corporation Limited)

REC LNS Consolidated Interest Demand Notice

Run_Date : - 10-Jun-2023 01:05:44

From Date :- 21-MAR-23

S.No	LoanNumber	Tranch No	Current ROI Effective Date	First Disb Date	Due Date	From Date	To Date	Days	Int Rate	Net Int Amt
28	YQ-SPU-433-8176-2	2	31-Mar-20	31-Mar-17	20-Jun-23	20-Mar-23	30-Mar-23	11	10.75	611863.08
29	YQ-SPU-433-8176-2	2	31-Mar-23	31-Mar-17	20-Jun-23	31-Mar-23	19-Jun-23	81	11.10	4652229.14
30	YQ-SPU-433-8177-2	2	31-Mar-20	31-Mar-17	20-Jun-23	20-Mar-23	30-Mar-23	11	10.75	11289.80
31	YQ-SPU-433-8177-2	2	31-Mar-23	31-Mar-17	20-Jun-23	31-Mar-23	19-Jun-23	81	11.10	85840.65
32	YQ-SPU-433-8178-2	2	31-Mar-20	31-Mar-17	20-Jun-23	20-Mar-23	30-Mar-23	11	10.75	113675.51
33	YQ-SPU-433-8178-2	2	31-Mar-23	31-Mar-17	20-Jun-23	31-Mar-23	19-Jun-23	81	11.10	864318.38
							Total			**17723759.41**
34	YQ-SPU-433-8166-3	3	29-Mar-21	29-Mar-18	20-Jun-23	20-Mar-23	19-Jun-23	92	10.75	179873.36
35	YQ-SPU-433-8172-3	3	29-Mar-21	29-Mar-18	20-Jun-23	20-Mar-23	19-Jun-23	92	10.75	1358707.17
36	YQ-SPU-433-8173-3	3	29-Mar-21	29-Mar-18	20-Jun-23	20-Mar-23	19-Jun-23	92	10.75	1137751.02
37	YQ-SPU-433-8174-3	3	29-Mar-21	29-Mar-18	20-Jun-23	20-Mar-23	19-Jun-23	92	10.75	816713.49
38	YQ-SPU-433-8175-3	3	29-Mar-21	29-Mar-18	20-Jun-23	20-Mar-23	19-Jun-23	92	10.75	4343037.70
39	YQ-SPU-433-8176-3	3	29-Mar-21	29-Mar-18	20-Jun-23	20-Mar-23	19-Jun-23	92	10.75	3763521.63
40	YQ-SPU-433-8177-3	3	29-Mar-21	29-Mar-18	20-Jun-23	20-Mar-23	19-Jun-23	92	10.75	470021.57
41	YQ-SPU-433-8178-3	3	29-Mar-21	29-Mar-18	20-Jun-23	20-Mar-23	19-Jun-23	92	10.75	1079679.11
							Total			**13149305.05**
42	YQ-SPU-433-8166-4	4	30-Oct-21	30-Oct-18	20-Jun-23	20-Mar-23	19-Jun-23	92	10.08	841471.73
43	YQ-SPU-433-8172-4	4	30-Oct-21	30-Oct-18	20-Jun-23	20-Mar-23	19-Jun-23	92	10.08	118042.51
44	YQ-SPU-433-8173-4	4	30-Oct-21	30-Oct-18	20-Jun-23	20-Mar-23	19-Jun-23	92	10.08	532512.98
45	YQ-SPU-433-8174-4	4	30-Oct-21	30-Oct-18	20-Jun-23	20-Mar-23	19-Jun-23	92	10.08	1295613.89
46	YQ-SPU-433-8175-4	4	30-Oct-21	30-Oct-18	20-Jun-23	20-Mar-23	19-Jun-23	92	10.08	4770341.87
47	YQ-SPU-433-8176-4	4	30-Oct-21	30-Oct-18	20-Jun-23	20-Mar-23	19-Jun-23	92	10.08	120597.45
48	YQ-SPU-433-8177-4	4	30-Oct-21	30-Oct-18	20-Jun-23	20-Mar-23	19-Jun-23	92	10.08	1215121.08
49	YQ-SPU-433-8178-4	4	30-Oct-21	30-Oct-18	20-Jun-23	20-Mar-23	19-Jun-23	92	10.08	2442398.84
							Total			**11336100.35**
							Grand Total			**62650614.83**

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REC Limited

(Formerly Rural Electrification Corporation Limited)

REC LNS Consolidated Interest Demand Notice

Run_Date : - 08-Sep-2023 05:04:51

From Date :- 21-JUN-23 To Date :- 20-SEP-23

S.No	Borrower Name	LoanNumber	Tranch No	Reset Period	Category	First Disb Date	Due Date	Int Rate	O/S Bal	Int Amt Due	Rebate	Net Int Amt	Total
1	The B.E.S. & T.	YQ-SPU-433-8166-1	1	36	P:SI (DISTRIBUTION)	06-Aug-15	20-Sep-23	10.08	36094800.00	558213.50	0	558213.50	
2	The B.E.S. & T.	YQ-SPU-433-8166-1	1	36	P:SI (DISTRIBUTION)	06-Aug-15	20-Sep-23	10.08	30079000.00	299042.95	0	299042.95	
3	The B.E.S. & T.	YQ-SPU-433-8169-1	1	36	P:SI (DISTRIBUTION)	06-Aug-15	20-Sep-23	10.08	6889260.00	106543.82	0	106543.82	
4	The B.E.S. & T.	YQ-SPU-433-8169-1	1	36	P:SI (DISTRIBUTION)	06-Aug-15	20-Sep-23	10.08	5741050.00	57077.05	0	57077.05	
5	The B.E.S. & T.	YQ-SPU-433-8170-1	1	36	P:SI (DISTRIBUTION)	04-Aug-15	20-Sep-23	10.08	87896340.00	1359334.96	0	1359334.96	
6	The B.E.S. & T.	YQ-SPU-433-8170-1	1	36	P:SI (DISTRIBUTION)	04-Aug-15	20-Sep-23	10.08	73246950.00	728215.16	0	728215.16	
7	The B.E.S. & T.	YQ-SPU-433-8171-1	1	36	P:SI (DISTRIBUTION)	06-Aug-15	20-Sep-23	10.08	7956900.00	123055.09	0	123055.09	
8	The B.E.S. & T.	YQ-SPU-433-8171-1	1	36	P:SI (DISTRIBUTION)	06-Aug-15	20-Sep-23	10.08	6630750.00	65922.37	0	65922.37	
9	The B.E.S. & T.	YQ-SPU-433-8172-1	1	36	P:SI (DISTRIBUTION)	06-Aug-15	20-Sep-23	10.08	22046220.00	340949.32	0	340949.32	
10	The B.E.S. & T.	YQ-SPU-433-8172-1	1	36	P:SI (DISTRIBUTION)	06-Aug-15	20-Sep-23	10.08	18371850.00	182651.42	0	182651.42	
11	The B.E.S. & T.	YQ-SPU-433-8173-1	1	36	P:SI (DISTRIBUTION)	06-Aug-15	20-Sep-23	10.08	9902760.00	153148.22	0	153148.22	
12	The B.E.S. & T.	YQ-SPU-433-8173-1	1	36	P:SI (DISTRIBUTION)	06-Aug-15	20-Sep-23	10.08	8252300.00	82043.69	0	82043.69	
13	The B.E.S. & T.	YQ-SPU-433-8174-1	1	36	P:SI (DISTRIBUTION)	06-Aug-15	20-Sep-23	10.08	36610980.00	566196.33	0	566196.33	
14	The B.E.S. & T.	YQ-SPU-433-8174-1	1	36	P:SI (DISTRIBUTION)	06-Aug-15	20-Sep-23	10.08	30509150.00	303319.46	0	303319.46	
15	The B.E.S. & T.	YQ-SPU-433-8175-1	1	36	P:SI (DISTRIBUTION)	04-Aug-15	20-Sep-23	10.08	167993700.00	2598057.09	0	2598057.09	
16	The B.E.S. & T.	YQ-SPU-433-8175-1	1	36	P:SI (DISTRIBUTION)	04-Aug-15	20-Sep-23	10.08	139994750.00	1391816.30	0	1391816.30	
17	The B.E.S. & T.	YQ-SPU-433-8176-1	1	36	P:SI (DISTRIBUTION)	04-Aug-15	20-Sep-23	10.08	311717700.00	4820778.28	0	4820778.28	
18	The B.E.S. & T.	YQ-SPU-433-8176-1	1	36	P:SI (DISTRIBUTION)	04-Aug-15	20-Sep-23	10.08	259764750.00	2582559.79	0	2582559.79	
19	The B.E.S. & T.	YQ-SPU-433-8177-1	1	36	P:SI (DISTRIBUTION)	04-Aug-15	20-Sep-23	10.08	22900920.00	354167.43	0	354167.43	
20	The B.E.S. & T.	YQ-SPU-433-8177-1	1	36	P:SI (DISTRIBUTION)	04-Aug-15	20-Sep-23	10.08	19084100.00	189732.55	0	189732.55	
21	The B.E.S. & T.	YQ-SPU-433-8178-1	1	36	P:SI (DISTRIBUTION)	04-Aug-15	20-Sep-23	10.08	94546284.00	1462177.71	0	1462177.71	
22	The B.E.S. & T.	YQ-SPU-433-8178-1	1	36	P:SI (DISTRIBUTION)	04-Aug-15	20-Sep-23	10.08	78788570.00	783309.49	0	783309.49	**19108311.98**
23	The B.E.S. & T.	YQ-SPU-433-8166-2	2	36	P:SI (DISTRIBUTION)	31-Mar-17	20-Sep-23	11.1	85519680.00	1456411.87	0	1456411.87	
24	The B.E.S. & T.	YQ-SPU-433-8166-2	2	36	P:SI (DISTRIBUTION)	31-Mar-17	20-Sep-23	11.1	71266400.00	780220.64	0	780220.64	

S.No	Borrower Name	LoanNumber	Tranch No	Reset Period	Category	First Disb Date	Due Date	Int Rate	O/S Bal	Int Amt Due	Rebate	Net Int Amt	Total
25	The B.E.S. & T.	YQ-SPU-433-8169-2	2	36	P:SI (DISTRIBUTION)	31-Mar-17	20-Sep-23	11.1	28415940.00	483927.35	0	483927.35	
26	The B.E.S. & T.	YQ-SPU-433-8169-2	2	36	P:SI (DISTRIBUTION)	31-Mar-17	20-Sep-23	11.1	23679950.00	259246.80	0	259246.80	
27	The B.E.S. & T.	YQ-SPU-433-8170-2	2	36	P:SI (DISTRIBUTION)	31-Mar-17	20-Sep-23	11.1	9766260.00	166320.75	0	166320.75	
28	The B.E.S. & T.	YQ-SPU-433-8170-2	2	36	P:SI (DISTRIBUTION)	31-Mar-17	20-Sep-23	11.1	8138550.00	89100.40	0	89100.40	
29	The B.E.S. & T.	YQ-SPU-433-8171-2	2	36	P:SI (DISTRIBUTION)	31-Mar-17	20-Sep-23	11.1	884100.00	15056.34	0	15056.34	
30	The B.E.S. & T.	YQ-SPU-433-8171-2	2	36	P:SI (DISTRIBUTION)	31-Mar-17	20-Sep-23	11.1	736750.00	8065.90	0	8065.90	
31	The B.E.S. & T.	YQ-SPU-433-8172-2	2	36	P:SI (DISTRIBUTION)	31-Mar-17	20-Sep-23	11.1	77014380.00	1311565.44	0	1311565.44	
32	The B.E.S. & T.	YQ-SPU-433-8172-2	2	36	P:SI (DISTRIBUTION)	31-Mar-17	20-Sep-23	11.1	64178650.00	702624.34	0	702624.34	
33	The B.E.S. & T.	YQ-SPU-433-8173-2	2	36	P:SI (DISTRIBUTION)	31-Mar-17	20-Sep-23	11.1	69246840.00	1179283.17	0	1179283.17	
34	The B.E.S. & T.	YQ-SPU-433-8173-2	2	36	P:SI (DISTRIBUTION)	31-Mar-17	20-Sep-23	11.1	57705700.00	631758.84	0	631758.84	
35	The B.E.S. & T.	YQ-SPU-433-8174-2	2	36	P:SI (DISTRIBUTION)	31-Mar-17	20-Sep-23	11.1	61159020.00	1041546.49	0	1041546.49	
36	The B.E.S. & T.	YQ-SPU-433-8174-2	2	36	P:SI (DISTRIBUTION)	31-Mar-17	20-Sep-23	11.1	50965850.00	557971.33	0	557971.33	
37	The B.E.S. & T.	YQ-SPU-433-8175-2	2	36	P:SI (DISTRIBUTION)	31-Mar-17	20-Sep-23	11.1	76443000.00	1301834.76	0	1301834.76	
38	The B.E.S. & T.	YQ-SPU-433-8175-2	2	36	P:SI (DISTRIBUTION)	31-Mar-17	20-Sep-23	11.1	63702500.00	697411.48	0	697411.48	
39	The B.E.S. & T.	YQ-SPU-433-8176-2	2	36	P:SI (DISTRIBUTION)	31-Mar-17	20-Sep-23	11.1	188862600.00	3216355.95	0	3216355.95	
40	The B.E.S. & T.	YQ-SPU-433-8176-2	2	36	P:SI (DISTRIBUTION)	31-Mar-17	20-Sep-23	11.1	157385500.00	1723047.83	0	1723047.83	
41	The B.E.S. & T.	YQ-SPU-433-8177-2	2	36	P:SI (DISTRIBUTION)	31-Mar-17	20-Sep-23	11.1	3484800.00	59346.62	0	59346.62	
42	The B.E.S. & T.	YQ-SPU-433-8177-2	2	36	P:SI (DISTRIBUTION)	31-Mar-17	20-Sep-23	11.1	2904000.00	31792.83	0	31792.83	
43	The B.E.S. & T.	YQ-SPU-433-8178-2	2	36	P:SI (DISTRIBUTION)	31-Mar-17	20-Sep-23	11.1	35088000.00	597553.45	0	597553.45	
44	The B.E.S. & T.	YQ-SPU-433-8178-2	2	36	P:SI (DISTRIBUTION)	31-Mar-17	20-Sep-23	11.1	29240000.00	320117.92	0	320117.92	**16630560.50**
45	The B.E.S. & T.	YQ-SPU-433-8166-3	3	36	P:SI (DISTRIBUTION)	29-Mar-18	20-Sep-23	10.75	6638400.00	109488.13	0	109488.13	
46	The B.E.S. & T.	YQ-SPU-433-8166-3	3	36	P:SI (DISTRIBUTION)	29-Mar-18	20-Sep-23	10.75	5532000.00	58654.36	0	58654.36	
47	The B.E.S. & T.	YQ-SPU-433-8172-3	3	36	P:SI (DISTRIBUTION)	29-Mar-18	20-Sep-23	10.75	50144400.00	827039.15	0	827039.15	
48	The B.E.S. & T.	YQ-SPU-433-8172-3	3	36	P:SI (DISTRIBUTION)	29-Mar-18	20-Sep-23	10.75	41787000.00	443056.68	0	443056.68	
49	The B.E.S. & T.	YQ-SPU-433-8173-3	3	36	P:SI (DISTRIBUTION)	29-Mar-18	20-Sep-23	10.75	41989800.00	692544.10	0	692544.10	
50	The B.E.S. & T.	YQ-SPU-433-8173-3	3	36	P:SI (DISTRIBUTION)	29-Mar-18	20-Sep-23	10.75	34991500.00	371005.77	0	371005.77	
51	The B.E.S. & T.	YQ-SPU-433-8174-3	3	36	P:SI (DISTRIBUTION)	29-Mar-18	20-Sep-23	10.75	30141600.00	497129.95	0	497129.95	
52	The B.E.S. & T.	YQ-SPU-433-8174-3	3	36	P:SI (DISTRIBUTION)	29-Mar-18	20-Sep-23	10.75	25118000.00	266319.62	0	266319.62	
53	The B.E.S. & T.	YQ-SPU-433-8175-3	3	36	P:SI (DISTRIBUTION)	29-Mar-18	20-Sep-23	10.75	160284000.00	2643588.16	0	2643588.16	
54	The B.E.S. & T.	YQ-SPU-433-8175-3	3	36	P:SI (DISTRIBUTION)	29-Mar-18	20-Sep-23	10.75	133570000.00	1416207.95	0	1416207.95	
55	The B.E.S. & T.	YQ-SPU-433-8176-3	3	36	P:SI (DISTRIBUTION)	29-Mar-18	20-Sep-23	10.75	138896400.00	2290839.25	0	2290839.25	
56	The B.E.S. & T.	YQ-SPU-433-8176-3	3	36	P:SI (DISTRIBUTION)	29-Mar-18	20-Sep-23	10.75	115747000.00	1227235.32	0	1227235.32	
57	The B.E.S. & T.	YQ-SPU-433-8177-3	3	36	P:SI (DISTRIBUTION)	29-Mar-18	20-Sep-23	10.75	17346600.00	286100.09	0	286100.09	

S.No	Borrower Name	LoanNumber	Tranch No	Reset Period	Category	First Disb Date	Due Date	Int Rate	O/S Bal	Int Amt Due	Rebate	Net Int Amt	Total
58	The B.E.S. & T.	YQ-SPU-433-8177-3	3	36	P:SI (DISTRIBUTION)	29-Mar-18	20-Sep-23	10.75	14455500.00	153267.90	0	153267.90	
59	The B.E.S. & T.	YQ-SPU-433-8178-3	3	36	P:SI (DISTRIBUTION)	29-Mar-18	20-Sep-23	10.75	39846600.00	657195.98	0	657195.98	
60	The B.E.S. & T.	YQ-SPU-433-8178-3	3	36	P:SI (DISTRIBUTION)	29-Mar-18	20-Sep-23	10.75	33205500.00	352069.27	0	352069.27	**12291741.68**
61	The B.E.S. & T.	YQ-SPU-433-8166-4	4	36	P:SI (DISTRIBUTION)	30-Oct-18	20-Sep-23	10.08	33119520.00	512200.18	0	512200.18	
62	The B.E.S. & T.	YQ-SPU-433-8166-4	4	36	P:SI (DISTRIBUTION)	30-Oct-18	20-Sep-23	10.08	27599600.00	274392.95	0	274392.95	
63	The B.E.S. & T.	YQ-SPU-433-8172-4	4	36	P:SI (DISTRIBUTION)	30-Oct-18	20-Sep-23	10.08	4646040.00	71851.96	0	71851.96	
64	The B.E.S. & T.	YQ-SPU-433-8172-4	4	36	P:SI (DISTRIBUTION)	30-Oct-18	20-Sep-23	10.08	3871700.00	38492.12	0	38492.12	
65	The B.E.S. & T.	YQ-SPU-433-8173-4	4	36	P:SI (DISTRIBUTION)	30-Oct-18	20-Sep-23	10.08	20959200.00	324138.33	0	324138.33	
66	The B.E.S. & T.	YQ-SPU-433-8173-4	4	36	P:SI (DISTRIBUTION)	30-Oct-18	20-Sep-23	10.08	17466000.00	173645.54	0	173645.54	
67	The B.E.S. & T.	YQ-SPU-433-8174-4	4	36	P:SI (DISTRIBUTION)	30-Oct-18	20-Sep-23	10.08	50994120.00	788634.54	0	788634.54	
68	The B.E.S. & T.	YQ-SPU-433-8174-4	4	36	P:SI (DISTRIBUTION)	30-Oct-18	20-Sep-23	10.08	42495100.00	422482.79	0	422482.79	
69	The B.E.S. & T.	YQ-SPU-433-8175-4	4	36	P:SI (DISTRIBUTION)	30-Oct-18	20-Sep-23	10.08	187756080.00	2903686.36	0	2903686.36	
70	The B.E.S. & T.	YQ-SPU-433-8175-4	4	36	P:SI (DISTRIBUTION)	30-Oct-18	20-Sep-23	10.08	156463400.00	1555546.26	0	1555546.26	
71	The B.E.S. & T.	YQ-SPU-433-8176-4	4	36	P:SI (DISTRIBUTION)	30-Oct-18	20-Sep-23	10.08	4746600.00	73407.14	0	73407.14	
72	The B.E.S. & T.	YQ-SPU-433-8176-4	4	36	P:SI (DISTRIBUTION)	30-Oct-18	20-Sep-23	10.08	3955500.00	39325.26	0	39325.26	
73	The B.E.S. & T.	YQ-SPU-433-8177-4	4	36	P:SI (DISTRIBUTION)	30-Oct-18	20-Sep-23	10.08	47826000.00	739638.92	0	739638.92	
74	The B.E.S. & T.	YQ-SPU-433-8177-4	4	36	P:SI (DISTRIBUTION)	30-Oct-18	20-Sep-23	10.08	39855000.00	396235.13	0	396235.13	
75	The B.E.S. & T.	YQ-SPU-433-8178-4	4	36	P:SI (DISTRIBUTION)	30-Oct-18	20-Sep-23	10.08	96130475.40	1486677.55	0	1486677.55	
76	The B.E.S. & T.	YQ-SPU-433-8178-4	4	36	P:SI (DISTRIBUTION)	30-Oct-18	20-Sep-23	10.08	80108729.50	796434.40	0	796434.40	**10596789.43**
									1976588599.50	**58627403.59**	**0**	**58627403.59**	**58627403.59**

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REC Limited

(Formerly Rural Electrification Corporation Limited)

REC LNS Consolidated Interest Demand Notice

Run_Date : - 05-Dec-2024 04:08:02

From Date :- 20-Sept.-24

To Date :- 20-DEC-24

S.No	Borrower Name	Tranch No	Reset Period	Current ROI Effective Date	First Disb Date	Due Date	From Date	To Date	Days	Int Rate	O/S Bal	Int Amt Due	Net Int Amt
1	The B.E.S. &	1	36	06-Aug-24	06-Aug-15	20-Dec-24	20-Sep-24	19-Dec-24	91	11.36	24063200.00	681522.57	681522.57
2	The B.E.S. &	1	36	06-Aug-24	06-Aug-15	20-Dec-24	20-Sep-24	19-Dec-24	91	11.36	4592840.00	130079.3	130079.30
3	The B.E.S. &	1	36	04-Aug-24	04-Aug-15	20-Dec-24	20-Sep-24	19-Dec-24	91	11.36	58597560.00	1659611.33	1659611.33
4	The B.E.S. &	1	36	06-Aug-24	06-Aug-15	20-Dec-24	20-Sep-24	19-Dec-24	91	11.36	5304600.00	150237.9	150237.90
5	The B.E.S. &	1	36	06-Aug-24	06-Aug-15	20-Dec-24	20-Sep-24	19-Dec-24	91	11.36	14697480.00	416264.85	416264.85
6	The B.E.S. &	1	36	06-Aug-24	06-Aug-15	20-Dec-24	20-Sep-24	19-Dec-24	91	11.36	6601840.00	186978.58	186978.58
7	The B.E.S. &	1	36	06-Aug-24	06-Aug-15	20-Dec-24	20-Sep-24	19-Dec-24	91	11.36	24407320.00	691268.8	691268.80
8	The B.E.S. &	1	36	04-Aug-24	04-Aug-15	20-Dec-24	20-Sep-24	19-Dec-24	91	11.36	111995800.00	3171966.53	3171966.53
9	The B.E.S. &	1	36	04-Aug-24	04-Aug-15	20-Dec-24	20-Sep-24	19-Dec-24	91	11.36	207811800.00	5885685.65	5885685.65
10	The B.E.S. &	1	36	04-Aug-24	04-Aug-15	20-Dec-24	20-Sep-24	19-Dec-24	91	11.36	15267280.00	432402.83	432402.83
11	The B.E.S. &	1	36	04-Aug-24	04-Aug-15	20-Dec-24	20-Sep-24	19-Dec-24	91	11.36	63030856.00	1785171.99	1785171.99
											536370576.00		15191190.32
12	The B.E.S. &	2	36	31-Mar-23	31-Mar-17	20-Dec-24	20-Sep-24	19-Dec-24	91	11.10	57013120.00	1577779.52	1577779.52
13	The B.E.S. &	2	36	31-Mar-23	31-Mar-17	20-Dec-24	20-Sep-24	19-Dec-24	91	11.10	18943960.00	524254.63	524254.63
14	The B.E.S. &	2	36	31-Mar-23	31-Mar-17	20-Dec-24	20-Sep-24	19-Dec-24	91	11.10	6510840.00	180180.81	180180.81
15	The B.E.S. &	2	36	31-Mar-23	31-Mar-17	20-Dec-24	20-Sep-24	19-Dec-24	91	11.10	589400.00	16311.04	16311.04
16	The B.E.S. &	2	36	31-Mar-23	31-Mar-17	20-Dec-24	20-Sep-24	19-Dec-24	91	11.10	51342920.00	1420862.56	1420862.56
17	The B.E.S. &	2	36	31-Mar-23	31-Mar-17	20-Dec-24	20-Sep-24	19-Dec-24	91	11.10	46164560.00	1277556.77	1277556.77
18	The B.E.S. &	2	36	31-Mar-23	31-Mar-17	20-Dec-24	20-Sep-24	19-Dec-24	91	11.10	40772680.00	1128342.03	1128342.03
19	The B.E.S. &	2	36	31-Mar-23	31-Mar-17	20-Dec-24	20-Sep-24	19-Dec-24	91	11.10	50962000.00	1410320.99	1410320.99
20	The B.E.S. &	2	36	31-Mar-23	31-Mar-17	20-Dec-24	20-Sep-24	19-Dec-24	91	11.10	125908400.00	3484385.61	3484385.61
21	The B.E.S. &	2	36	31-Mar-23	31-Mar-17	20-Dec-24	20-Sep-24	19-Dec-24	91	11.10	2323200.00	64292.17	64292.17
22	The B.E.S. &	2	36	31-Mar-23	31-Mar-17	20-Dec-24	20-Sep-24	19-Dec-24	91	11.10	23392000.00	647349.57	647349.57

											423923080.00		11731635.70
23	The B.E.S. &	3	36	29-Mar-24	29-Mar-18	20-Dec-24	20-Sep-24	19-Dec-24	91	11.36	4425600.00	125342.69	125342.69
24	The B.E.S. &	3	36	29-Mar-24	29-Mar-18	20-Dec-24	20-Sep-24	19-Dec-24	91	11.36	33429600.00	946799.54	946799.54
25	The B.E.S. &	3	36	29-Mar-24	29-Mar-18	20-Dec-24	20-Sep-24	19-Dec-24	91	11.36	27993200.00	792828.78	792828.78
26	The B.E.S. &	3	36	29-Mar-24	29-Mar-18	20-Dec-24	20-Sep-24	19-Dec-24	91	11.36	20094400.00	569117.45	569117.45
27	The B.E.S. &	3	36	29-Mar-24	29-Mar-18	20-Dec-24	20-Sep-24	19-Dec-24	91	11.36	106856000.00	3026396.12	3026396.12
28	The B.E.S. &	3	36	29-Mar-24	29-Mar-18	20-Dec-24	20-Sep-24	19-Dec-24	91	11.36	92597600.00	2622566.99	2622566.99
29	The B.E.S. &	3	36	29-Mar-24	29-Mar-18	20-Dec-24	20-Sep-24	19-Dec-24	91	11.36	11564400.00	327529.15	327529.15
30	The B.E.S. &	3	36	29-Mar-24	29-Mar-18	20-Dec-24	20-Sep-24	19-Dec-24	91	11.36	26564400.00	752362.03	752362.03
											323525200.00		9162942.76
	The B.E.S. &	4	36	30-Oct-21	30-Oct-18	20-Dec-24	20-Sep-24	29-Oct-24	40	10.08	22079680.00	243904.85	243904.85
31	The B.E.S. &	4	36	30-Oct-24	30-Oct-18	20-Dec-24	30-Oct-24	19-Dec-24	51	11.36	22079680.00	350468.04	350468.04
32	The B.E.S. &	4	36	30-Oct-21	30-Oct-18	20-Dec-24	20-Sep-24	29-Oct-24	40	10.08	3097360.00	34215.22	34215.22
33	The B.E.S. &	4	36	30-Oct-24	30-Oct-18	20-Dec-24	30-Oct-24	19-Dec-24	51	11.36	3097360.00	49164.01	49164.01
34	The B.E.S. &	4	36	30-Oct-21	30-Oct-18	20-Dec-24	20-Sep-24	29-Oct-24	40	10.08	13972800.00	154351.59	154351.59
35	The B.E.S. &	4	36	30-Oct-24	30-Oct-18	20-Dec-24	30-Oct-24	19-Dec-24	51	11.36	13972800.00	221788.53	221788.53
36	The B.E.S. &	4	36	30-Oct-21	30-Oct-18	20-Dec-24	20-Sep-24	29-Oct-24	40	10.08	33996080.00	375540.26	375540.26
37	The B.E.S. &	4	36	30-Oct-24	30-Oct-18	20-Dec-24	30-Oct-24	19-Dec-24	51	11.36	33996080.00	539615.59	539615.59
38	The B.E.S. &	4	36	30-Oct-21	30-Oct-18	20-Dec-24	20-Sep-24	29-Oct-24	40	10.08	125170720.00	1382707.79	1382707.79
39	The B.E.S. &	4	36	30-Oct-24	30-Oct-18	20-Dec-24	30-Oct-24	19-Dec-24	51	11.36	125170720.00	1986819.41	1986819.41
40	The B.E.S. &	4	36	30-Oct-21	30-Oct-18	20-Dec-24	20-Sep-24	29-Oct-24	40	10.08	3164400.00	34955.78	34955.78
41	The B.E.S. &	4	36	30-Oct-24	30-Oct-18	20-Dec-24	30-Oct-24	19-Dec-24	51	11.36	3164400.00	50228.13	50228.13
42	The B.E.S. &	4	36	30-Oct-21	30-Oct-18	20-Dec-24	20-Sep-24	29-Oct-24	40	10.08	31884000.00	352209.01	352209.01
43	The B.E.S. &	4	36	30-Oct-24	30-Oct-18	20-Dec-24	30-Oct-24	19-Dec-24	51	11.36	31884000.00	506090.8	506090.80
44	The B.E.S. &	4	36	30-Oct-21	30-Oct-18	20-Dec-24	20-Sep-24	29-Oct-24	40	10.08	64086983.60	707941.69	707941.69
45	The B.E.S. &	4	36	30-Oct-24	30-Oct-18	20-Dec-24	30-Oct-24	19-Dec-24	51	11.36	64086983.60	1017244.79	1017244.79
											594904047.20		
46											**1581270879.60**	**44093014.27**	**44093014.27**

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REC Limited

(Formerly Rural Electrification Corporation Limited)

Run_Date : - 07-Mar-2024 03:32:46

From Date :- 20-MAR-24

To Date :- 20-MAR-24

Sr. No	Borrower Name	LoanNumber	Tranch No	Current ROI Effective Date	First Disb Date	Due Date	From Date	To Date	Days	Int Rate	O/S Bal	Net Int Amt
1	The B.E.S. & T. Undertaking	YQ-SPU-433-8166-1	1	06-Aug-21	06-Aug-15	20-Mar-24	20-Dec-23	19-Mar-24	91	10.08	30079000	755914.11
2	The B.E.S. & T. Undertaking	YQ-SPU-433-8169-1	1	06-Aug-21	06-Aug-15	20-Mar-24	20-Dec-23	19-Mar-24	91	10.08	5741050	144278.09
3	The B.E.S. & T. Undertaking	YQ-SPU-433-8170-1	1	04-Aug-21	04-Aug-15	20-Mar-24	20-Dec-23	19-Mar-24	91	10.08	73246950	1840766.09
4	The B.E.S. & T. Undertaking	YQ-SPU-433-8171-1	1	06-Aug-21	06-Aug-15	20-Mar-24	20-Dec-23	19-Mar-24	91	10.08	6630750	166637.11
5	The B.E.S. & T. Undertaking	YQ-SPU-433-8172-1	1	06-Aug-21	06-Aug-15	20-Mar-24	20-Dec-23	19-Mar-24	91	10.08	18371850	461702.21
6	The B.E.S. & T. Undertaking	YQ-SPU-433-8173-1	1	06-Aug-21	06-Aug-15	20-Mar-24	20-Dec-23	19-Mar-24	91	10.08	8252300	207388.21
7	The B.E.S. & T. Undertaking	YQ-SPU-433-8174-1	1	06-Aug-21	06-Aug-15	20-Mar-24	20-Dec-23	19-Mar-24	91	10.08	30509150	766724.19
8	The B.E.S. & T. Undertaking	YQ-SPU-433-8175-1	1	04-Aug-21	04-Aug-15	20-Mar-24	20-Dec-23	19-Mar-24	91	10.08	139994750	3518202.31
9	The B.E.S. & T. Undertaking	YQ-SPU-433-8176-1	1	04-Aug-21	04-Aug-15	20-Mar-24	20-Dec-23	19-Mar-24	91	10.08	259764750	6528137.26
10	The B.E.S. & T. Undertaking	YQ-SPU-433-8177-1	1	04-Aug-21	04-Aug-15	20-Mar-24	20-Dec-23	19-Mar-24	91	10.08	19084100	479601.73
11	The B.E.S. & T. Undertaking	YQ-SPU-433-8178-1	1	04-Aug-21	04-Aug-15	20-Mar-24	20-Dec-23	19-Mar-24	91	10.08	78788570	1980032.31
12	The B.E.S. & T. Undertaking	YQ-SPU-433-8166-2	2	31-Mar-23	31-Mar-17	20-Mar-24	20-Dec-23	19-Mar-24	91	11.1	71266400	1972224.40
13	The B.E.S. & T. Undertaking	YQ-SPU-433-8169-2	2	31-Mar-23	31-Mar-17	20-Mar-24	20-Dec-23	19-Mar-24	91	11.1	23679950	655318.29
14	The B.E.S. & T. Undertaking	YQ-SPU-433-8170-2	2	31-Mar-23	31-Mar-17	20-Mar-24	20-Dec-23	19-Mar-24	91	11.1	8138550	225226.01
15	The B.E.S. & T. Undertaking	YQ-SPU-433-8171-2	2	31-Mar-23	31-Mar-17	20-Mar-24	20-Dec-23	19-Mar-24	91	11.1	736750	20388.80
16	The B.E.S. & T. Undertaking	YQ-SPU-433-8172-2	2	31-Mar-23	31-Mar-17	20-Mar-24	20-Dec-23	19-Mar-24	91	11.1	64178650	1776078.20
17	The B.E.S. & T. Undertaking	YQ-SPU-433-8173-2	2	31-Mar-23	31-Mar-17	20-Mar-24	20-Dec-23	19-Mar-24	91	11.1	57705700	1596945.96
18	The B.E.S. & T. Undertaking	YQ-SPU-433-8174-2	2	31-Mar-23	31-Mar-17	20-Mar-24	20-Dec-23	19-Mar-24	91	11.1	50965850	1410427.54
19	The B.E.S. & T. Undertaking	YQ-SPU-433-8175-2	2	31-Mar-23	31-Mar-17	20-Mar-24	20-Dec-23	19-Mar-24	91	11.1	63702500	1762901.24
20	The B.E.S. & T. Undertaking	YQ-SPU-433-8176-2	2	31-Mar-23	31-Mar-17	20-Mar-24	20-Dec-23	19-Mar-24	91	11.1	157385500	4355482.02
21	The B.E.S. & T. Undertaking	YQ-SPU-433-8177-2	2	31-Mar-23	31-Mar-17	20-Mar-24	20-Dec-23	19-Mar-24	91	11.1	2904000	80365.22
22	The B.E.S. & T. Undertaking	YQ-SPU-433-8178-2	2	31-Mar-23	31-Mar-17	20-Mar-24	20-Dec-23	19-Mar-24	91	11.1	29240000	809186.96

Sr. No	Borrower Name	LoanNumber	Tranch No	Current ROI Effective Date	First Disb Date	Due Date	From Date	To Date	Days	Int Rate	O/S Bal	Net Int Amt
23	The B.E.S. & T. Undertaking	YQ-SPU-433-8166-3	3	29-Mar-21	29-Mar-18	20-Mar-24	20-Dec-23	19-Mar-24	91	10.75	5532000	148265.18
24	The B.E.S. & T. Undertaking	YQ-SPU-433-8172-3	3	29-Mar-21	29-Mar-18	20-Mar-24	20-Dec-23	19-Mar-24	91	10.75	41787000	1119948.84
25	The B.E.S. & T. Undertaking	YQ-SPU-433-8173-3	3	29-Mar-21	29-Mar-18	20-Mar-24	20-Dec-23	19-Mar-24	91	10.75	34991500	937820.13
26	The B.E.S. & T. Undertaking	YQ-SPU-433-8174-3	3	29-Mar-21	29-Mar-18	20-Mar-24	20-Dec-23	19-Mar-24	91	10.75	25118000	673196.81
27	The B.E.S. & T. Undertaking	YQ-SPU-433-8175-3	3	29-Mar-21	29-Mar-18	20-Mar-24	20-Dec-23	19-Mar-24	91	10.75	133570000	3579858.97
28	The B.E.S. & T. Undertaking	YQ-SPU-433-8176-3	3	29-Mar-21	29-Mar-18	20-Mar-24	20-Dec-23	19-Mar-24	91	10.75	115747000	3102178.16
29	The B.E.S. & T. Undertaking	YQ-SPU-433-8177-3	3	29-Mar-21	29-Mar-18	20-Mar-24	20-Dec-23	19-Mar-24	91	10.75	14455500	387427.20
30	The B.E.S. & T. Undertaking	YQ-SPU-433-8178-3	3	29-Mar-21	29-Mar-18	20-Mar-24	20-Dec-23	19-Mar-24	91	10.75	33205500	889952.89
31	The B.E.S. & T. Undertaking	YQ-SPU-433-8166-4	4	30-Oct-21	30-Oct-18	20-Mar-24	20-Dec-23	19-Mar-24	91	10.08	27599600	693604.41
32	The B.E.S. & T. Undertaking	YQ-SPU-433-8172-4	4	30-Oct-21	30-Oct-18	20-Mar-24	20-Dec-23	19-Mar-24	91	10.08	3871700	97299.53
33	The B.E.S. & T. Undertaking	YQ-SPU-433-8173-4	4	30-Oct-21	30-Oct-18	20-Mar-24	20-Dec-23	19-Mar-24	91	10.08	17466000	438937.33
34	The B.E.S. & T. Undertaking	YQ-SPU-433-8174-4	4	30-Oct-21	30-Oct-18	20-Mar-24	20-Dec-23	19-Mar-24	91	10.08	42495100	1067942.61
35	The B.E.S. & T. Undertaking	YQ-SPU-433-8175-4	4	30-Oct-21	30-Oct-18	20-Mar-24	20-Dec-23	19-Mar-24	91	10.08	156463400	3932075.28
36	The B.E.S. & T. Undertaking	YQ-SPU-433-8176-4	4	30-Oct-21	30-Oct-18	20-Mar-24	20-Dec-23	19-Mar-24	91	10.08	3955500	99405.51
37	The B.E.S. & T. Undertaking	YQ-SPU-433-8177-4	4	30-Oct-21	30-Oct-18	20-Mar-24	20-Dec-23	19-Mar-24	91	10.08	39855000	1001594.37
38	The B.E.S. & T. Undertaking	YQ-SPU-433-8178-4	4	30-Oct-21	30-Oct-18	20-Mar-24	20-Dec-23	19-Mar-24	91	10.08	80108729.5	2013209.19
											1976588600	**51696644.67**

Disclaimer: This is ERP system generated report.

2250 lacs

Dt of disbursement 01.10.03

(c) 12½ p.a

A = 1125/20 p = 56.25 lacs

B = 1125/15 p + 75 Int

			A		B
	1.10.03		Int	Int@ 191.25/10 (19½,500)	
1	2003	56.25	135 lacs.		135 lacs / 10 = 135
2	1.10.04	56.25	128.25		135 lacs
3		56.25	121.50		135 lacs
4		56.25	114.75		135 lacs
5		56.25	108.00		135 lacs
6		56.25	101.25	2008	135 lacs (2)
7		56.25	94.50	Sure-mark	126 lacs
8		56.25	87.75		117 lacs
9		56.25	81.00		108 lacs
10		56.25	74.25		99 lacs
11		56.25	67.50		90 lacs
12		56.25	60.75		81
13		56.25	54.00		72
14		56.25	47.25		63
15		56.25	40.50		54
16		56.25	33.75		45
17		56.25	27.00		36
18		56.25	20.25		27
19		56.25	13.50		18
20		56.25	6.75		9

I-222/21/11/02

(15)

ESC/401 dated 22-11-02

KIND ATTN: Sh. Kshatriya, GM, BEST

CHIEF ENGINEER (SUPPLY) OFFICE 1073 26/11/02 BEST UNDERTAKING

No. 44(1)-PFI/2002000002
Government of India
Ministry of Finance
Department of Expenditure
Plan Finance - I Division

Most Immediate

GM | L | 4267
DL | 21/11/02

New Delhi, 04/04/2002

Sh Nankarpi Dept 27/11

C A C | IN | 1972 DT 26/11/02

To

The Pay & Accounts Officer
Department of Expenditure
Ministry of Finance
New Delhi

Subject: On account payment of Central Assistance under APDP - Accelerated Power DEV. Programme during financial year 2002-2003

Sir,

I am directed to convey the sanction of the President to the payment of :-
42594.00 Lakhs (Rupees four hundred twenty-five crore ninety-four lakh only)
as indicated below to the State Government(s) under Accelerated Power DEV. Programme for State Annual Plan 2002-2003 as under :-

(Amount in Lakhs)

S No.	State	Loan	Grant	Total
1	Andhra Pradesh	1953.50	1953.50	3907.00
2	Assam	109.50	985.50	1095.00
3	Bihar	805.50	805.50	1611.00
4	Chhattisgarh	500.00	500.00	1000.00
5	Goa	450.00	450.00	900.00
6	Gujarat	1067.50	1067.50	2135.00
7	Haryana	911.50	911.50	1823.00
8	Himachal Pradesh	133.30	1199.70	1333.00
9	Jharkhand	600.00	600.00	1200.00
10	Karnataka	1488.50	1488.50	2977.00
11	Kerala	853.50	853.50	1707.00
12	Manipur	26.70	240.30	267.00
13	Maharashtra	2250.00	2250.00	4500.00
14	Madhya Pradesh	1391.50	1391.50	2783.00
15	Mizoram	26.70	240.30	267.00
16	Nagaland	26.70	240.30	267.00
17	Orissa	736.00	736.00	1472.00
18	Rajasthan	1420.00	1420.00	2840.00
19	Sikkim	26.70	240.30	267.00
20	Tamilnadu	1606.00	1606.00	3212.00
21	Tripura	26.70	240.30	267.00
22	Uttar Pradesh	1500.00	1500.00	3000.00
23	Uttaranchal	185.00	1665.00	1850.00
24	West Bengal	951.00	951.00	1902.00
Grand Total		19051.80	23542.20	42594.00

2. The above amount may kindly be credited in the accounts of State Government(s) immediately.

-05-2002 16:34 JS(PF.1)D/O EXPNDR

No. 44(1)-PFI/2002000002
Government of India
Ministry of Finance
Department of Expenditure
Plan Finance - I Division

3. The payments are adjustable in the account of the Central Government in the books under sub-heads indicated as below:

Loan :-
Demand No.30
7601 - Loan & Advances To State Governments
02 - Loans For State Plan Scheme
101 Block Loans
18 - Accelerated Power DEV. Programme
18.00.55 - Loans & Advances

Grant :-
Demand No.30
3601 - Grant -In - Aid To State Governments
02 - Grants For State Plan Scheme
101 Block Grants
19 - Accelerated Power DEV. Programme
19.00.31 - Grants -In- Aid

4. The terms and conditions of the loans will be as follows:

(a) The loan will carry interest @ 12.00 % per annum.

(b) The loan represents a part of block loans for state plan Schemes and should be consolidated and deemed to have been paid on 1st October 2002. The maturity period of the loan will be 20 years and repayments being made in 20 annual equal instalments together with interest on the outstanding balance commencing the following year. However,fifty percent of these loans will enjoy five year initial grace period, after which repayment of these loans will be effected in 15 annual equal instalments. The amount payable annually (by way of principal and interest) would be recovered in ten equal instalments on the 15th of every month from April to March each year.

(c) In the event of default in the repayment of principal and/or interest, interest @ 1½.75 % would be chargeable on all such overdue instalments.

(d) The assistance is subject to adjustement on the basis of audited figures of expenditure for state Annual plan 2002-2003.

APR-25-2002 16:33 JS(PF.1)D/O EXPNDR

Ministry of Finance
Department of Expenditure
Plan Finance - I Division

5. The progressive totals of block loans & block grants released to the State Government(s) c... current financial year 2002-2003 so far including amount released in this sanction letter is as follo...

(Amoun...

Sl.No	State	Block Loan	Block Grant
1	AP - Andhra Pradesh	7897.73	4501.02
2	AS - Assam	1027.[illegible]	9251.62
3	BI - Bihar	8032.07	3902.60
4	CH - Chhattisgarh	2409.54	1318.38
5	GO - Goa	866.79	628.63
6	GU - Gujarat	3810.80	2243.20
7	HA - Haryana	2130.43	1433.90
8	HP - Himachal Pradesh	587.43	5286.82
9	JH - Jharkhand	2871.67	1573.58
10	KN - Karnataka	4580.05	2813.45
11	KR - Kerala	3817.71	2[illegible]
12	MA - Manipur	301.26	2[illegible].32
13	MH - Maharashtra	7009.24	4289.68
14	MP - Madhya Pradesh	5891.45	3320.05
15	MZ - Mizoram	315.81	2842.27
16	NA - Nagaland	304.59	2741.33
17	OR - Orissa	4255.89	2244.53
18	RJ - Rajasthan	5052.36	2976.72
19	SK - Sikkim	221.60	1995.07
20	TN - Tamilnadu	5772.87	3391.30
21	TR - Tripura	413.78	3724.05
22	UP - Uttar Pradesh	14345.17	7008.50
23	UR - Uttaranchal	633.33	5700.00
24	WB - West Bengal	7141.27	3603.98

6. The action taken on this letter may please be intimated and correctness of the prop... confirmed.

Notes :- PAO is requested to kindly recover an amount of **Rs13.08** crore from Utt... pay it to Uttaranchal. State Govts. are requested that further amount ... after SEB/Utilities have signed MOA with the M/O Power. (II) Prioritisat... would be done by the Advisor cum Consultant subject to the instructions ... issued by the M/O Power. From Uttar Pr. recovery may be ... of 50% Loan and 50% grant and paid to Uttaranchal ... 10% Loan and 90% grant.

Your Faithfully,

(S.R.DONGR...
Joint Direct...

APR-05-2002 16:34

JS(PF.I)D/U EXTN.

No. 4414/F

Government of India
Ministry of Finance
Department of Expenditure
Plan Finance - I Division

Copy To :

1. Finance/Planning/Power Secy. State concerned
2. Accountant General, State concerned
3. Planning Commission FR/SP Division
4. RBI, Central Office, Mumbai
5. RBI, C.A.S. Nagpur.
6. Budget Division, DEA, North Block
7. Ministry of Power, Shram Shakti Bhavan
8. CCA, Ministry of Finance, North Block

(S.R.DONGRE)
Joint Director
4/4/4

TOTAL LOAN – 4.500 lacs.

Loan - 2250 Lacs
Grant 2250 –
@ 12.00% per annum.

A — 20 yrs.

Loan Amt 1125 Lakh

	P	I	TOTAL	out.
2003/4	56.25	135 lacs	191.25	1125
2004/5	56.25	128.25	184.50	1068.75
5/6	56.25	121.50	177.75	1012.50
6/7	56.25	114.75	171.00	956.25
7/8	56.25	108.00	~~165.25~~	900.00
8/9	56.25	101.25	157.50 ~~lot 25~~	843.75
9/10	56.25			
10/11	56.25			
11/12	56.25			
12/13	56.25			
13/14	56.25			
14/15	56.25			
15/16	56.25			
16/17	56.25			
17/18	56.25			
18/19	56.25			
19/20	56.25			
20/21	56.25			
21/22	56.25			
22/23	56.25			

B — 15 years

Loan Amt 1125 Lakh

P	I	Total
–	135 lakh	135
–	135 Lac	135
–	135 Lac	135
–	135 Lac	135
–	135 Lac	135
June – mum 7.5 lacs	135 lacs	1125
7.5 lacs	126 lacs	1050
7.5 lacs		
7.5 lacs		
7.5 lacs		
7.5 lacs		
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7.5 lacs		
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7.5 lacs		

ANNEXURE-14

इंडियन बैंक
Indian Bank

Mumbai Fort Branch, Treasury Department,
Ground Floor, United Indian Building
Sir P.M. Road
Fort, MUMBAI 400 001

TEL: 022-22658977
FAX: 022-22658975

Date :30/09/2024

To
THE BRIHAN MUMBAI ELECTRIC SUPPLY & TRANSPORT UNDERTAKING
BEST BHAVAND BEST MARG

Dear Sir,

Sub: Government Securities held on your behalf in our Constituent Account.

This is to certify that, we are holding in our SGL Constituents A/c with RBI-PDO, Mumbai, the following securities as on 30/09/2024 on account of THE BRIHAN MUMBAI ELECTRIC SUPPLY & TRANSPORT UNDERTAKING

Name of the CSGL account holder : Indian Bank

CSGL Account No. SG20077

GOI SECURITIES

ISIN NO	SECURITY	AMOUNT	LAST IP DT	NEXT IP DT
IN0020120062	8.30% GOI 31-12-2042	1000000	30/06/2024	30/12/2024
	GOVT. SECURITIES TOTAL :	1000000		

STATE GOVT. SECURITIES

ISIN NO	SECURITY	AMOUNT	LAST IP DT	NEXT IP DT
IN1620150186	8.21% HARYANA SDL UDAY 31/03/2026	50000000	30/03/2024	30/09/2024
IN2920160123	8.19% RAJASTHAN SDL UDAY 23/06/2026	5000000	23/06/2024	23/12/2024
IN3420170109	7.73% WEST BENGAL SDL 08/11/2032	60000000	08/05/2024	08/11/2024
IN1220180245	8.45% ASSAM SDL 06/03/2029	46000000	06/09/2024	06/03/2025
IN2920180196	8.84% RAJASTHAN SDL 12/09/2028	10000000	12/09/2024	12/03/2025
IN1620160045	8.18% HARYANA SDL UDAY 15/06/2025	26000000	15/06/2024	15/12/2024
IN1620170127	8.20% HARYANA SDL 07/02/2028	36000000	07/08/2024	07/02/2025
IN2920130183	10.03% RAJASTHAN SDL SPECIAL 18/10/2028	45000000	18/04/2024	18/10/2024
IN2220210248	6.91% MAHARASHTRA SDL 2033	12000000	15/09/2024	15/03/2025
IN2020210174	7.14 KERALA SDL 2035	71200000	29/06/2024	29/12/2024
IN2920220042	7.83% RAJASTHAN SDL 2032	50000000	22/06/2024	22/12/2024
IN3120220170	7.79% TAMIL NADU SGS 04/10/2032	74000000	20/04/2024	20/10/2024
IN1720220131	7.87% HIMACHAL PRADESH SGS 2035	50000000	30/05/2024	30/11/2024
IN3420220900	7.89% WEST BENGAL SGS 29/03/2040	50000000	29/03/2024	29/09/2024
IN3420220918	7.85% WEST BENGAL SGS 29/03/2042	28000000	29/03/2024	29/09/2024
	STATE GOVT. SECURITIES TOTAL :	611200000		

Grand Total For The Constituent Held Securities : **612200000**

For INDIAN BANK

Branch Manager/CHIEF MANAGER

THE BRIHAN MUMBAI ELECTRIC SUPPLY & TRANSPORT UNDERTAKING

Tel No: 022-22841134 (D)
: 022-227799613

BEST BHAVAN
BEST MARG,
POST BOX NO.192,
COLABA,
MUMBAI 400 001

Res.: AM(CASH)/ECRF21/ 3076 /2022

Date : 27.06.2022

Indian Bank,
Treassury Dept.,
MUMBAI

PHONE NO. 022 2266 4924

Kind Attention: Ms. Pallavi Madam

Dear Sir,

We have undertaken a transaction which needs to be settled through the SGL account which we hold with You. The details of the same are as under:-

SR.	PARTICULAR	DETAILS
1	DEAL TYPE	Our Purchase
2	COUNTER PARTY	SBI DFHI LTD.
3	COUNTER PARTY SGL A/C WITH	Reserve Bank of India
4	ISIN NUMBER	IN2920220042
5	SECURITY NAME	07.83% RJ SDL 2032
6	INTEREST PAYMENT DATE	Semi Annually, 22/12, 22/06
7	REDEMPTION DATE	22/06/2032 – 100%
8	LAST INTEREST PAYMENT DATE	26/06/2022
9	QUANTUM (Rs.)	5,00,00,000.00 (Rs. Five Crore Only)
10	PRICE (Rs.)	100.24
11	YIELD	Annualise 7.9465%, Semi 7.7946%
12	DEAL DATE	27.06.2022 at DEAL TIME : 13.00 P.M.
13	VALUE DATE	28.06.2022
14	PRINCIPAL AMOUNT (Rs.)	5,01,20,000.00
15	NO. OF DAYS	6 days(Last IP Dt: 22/06/2022)
16	ACCRUED/EX-INTEREST (Rs.)	65,250.00
17	SETTLEMENT AMOUNT (Rs.)	5,01,85,250.00 (Rs. Five Crore One Lac Eighty Five Thousand Two Hundred Fifty Only)
18	OUR SGL A/C NO.	03
19	SGL BANK A/C NO.	415 241 492
20	SETTLEMENT MODE	NDS
21	PAN NO.	AAALM0042L
22	LEI No.	335800JHQJCQVE6DZN65

You are Authorized to settle the Transaction and Debit our Saving A/C No. 415 241 492 and also credit the above said Security to our SGL A/C No. 03.

Yours faithfully,

AUTHORISED SIGNATORY
B.E.S.& T. UNDERTAKING

THE BRIHAN MUMBAI ELECTRIC SUPPLY & TRANSPORT UNDERTAKING

Tel No: 022-22841134 (D)
: 022-227799613

BEST BHAVAN
BEST MARG,
POST BOX NO.192,
COLABA,
MUMBAI 400 001

Res.: AM(CASH)/ECRF25/ ----- /2023

Date : 05.07.2023

Indian Bank,
Treassury Dept.,
MUMBAI

PHONE NO. 022 2266 4924

Kind Attention:Ms. Pallavi Madam

Dear Sir,

We have undertaken a transaction which needs to be settled through the SGL account which we hold with You. The details of the same are as under:-

SR.	PARTICULAR	DETAILS
1	DEAL TYPE	Our Purchase
2	COUNTER PARTY	Taurrus Finsec Pvt. Ltd.
3	COUNTER PARTY SGL A/C WITH	The Federal Bank of India
4	ISIN NUMBER	IN3420220300
5	SECURITY NAME	07.89% West Bengal SDL 2040
6	INTEREST PAYMENT DATE	Semi Annually, 29/03, 29/09
7	REDEMPTION DATE	29/03/2040 – 100%
8	LAST INTEREST PAYMENT DATE	29/03/2023
9	QUANTUM (Rs.)	5,00,00,000.00 (Rs.Five Crore Only)
10	PRICE (Rs.)	103.6070
11	YIELD	Annualise 7.6500%,
12	DEAL DATE	05.07.2023 at DEAL TIME : 14.00 P.M.
13	VALUE DATE	06.07.2023
14	PRINCIPAL AMOUNT (Rs.)	5,18,03,500.00
15	NO. OF DAYS	97 days(Last IP Dt: 29/03/2023)
16	ACCRUED/EX-INTEREST (Rs.)	10,62,958.33
17	SETTLEMENT AMOUNT (Rs.)	5,28,66,458.33 (Rs. Five Crore Twenty Eight Lac Sixty Six Thousand Four Hundred Fifty Eight And Paise Thirty Three Only)
18	OUR SGL A/C NO.	03
19	SGL BANK A/C NO.	415 241 492
20	SETTLEMENT MODE	NDS
21	PAN NO.	AAALM0042L
22	LEI No.	335800JHQJCQVE6DZN65

You are Authorized to settle the Transaction and Debit our Saving A/C No. 415 241 492 and also credit the above said Security to our SGL A/C No. 03.

Yours faithfully,

AUTHORISED SIGNATORY
B.E.S.& T. UNDERTAKING

THE BRIHAN MUMBAI ELECTRIC SUPPLY & TRANSPORT UNDERTAKING

Tel No: 022-22841134 (D)
: 022-227799613

BEST BHAVAN
BEST MARG,
POST BOX NO.192,
COLABA,
MUMBAI 400 001

Res.: AM(CASH)/ECRF22/ /2022

Date : 19.10.2022

Indian Bank,
Treassury Dept.,
MUMBAI

PHONE NO. 022 2266 4924

Dear Sir, Kind Attention: Ms. Pallavi Madam

We have undertaken a transaction which needs to be settled through the SGL account which we hold with You. The details of the same are as under:-

SR.	PARTICULAR	DETAILS
1	DEAL TYPE	Our Purchase
2	COUNTER PARTY	SBI DFHI LTD.
3	COUNTER PARTY SGL A/C WITH	Reserve Bank of India
4	ISIN NUMBER	IN3120220170
5	SECURITY NAME	07.79% TN SGS 2032
6	INTEREST PAYMENT DATE	Semi Annually, 04/10, 04/04
7	REDEMPTION DATE	04/10/2032 – 100%
8	LAST INTEREST PAYMENT DATE	04/10/2022
9	QUANTUM (Rs.)	7,40,00,000.00 (Rs. Seven Crore Forty Lac Only)
10	PRICE (Rs)	100.5325
11	YIELD	Annualise 7.8602%, Semi 7.7115%
12	DEAL DATE	19.10.2022 at DEAL TIME : 12.00 P.M.
13	VALUE DATE	20.10.2022
14	PRINCIPAL AMOUNT (Rs.)	7,43,94,050.00
15	NO. OF DAYS	16 days(Last IP Dt: 04/10/2022)
16	ACCRUED/EX-INTEREST (Rs.)	2,56,204.44
17	SETTLEMENT AMOUNT (Rs.)	7,46,50,254.44 (Rs. Seven Crore Forty Six Lac Fifty Thousand Two Hundred Fifty Four and Paise Forty Four Only)
18	OUR SGL A/C NO.	03
19	SGL BANK A/C NO.	415 241 492
20	SETTLEMENT MODE	NDS
21	PAN NO.	AAALM0042L
22	LEI No.	335800JHQJCQVE6DZN65

You are Authorized to settle the Transaction and Debit our Saving A/C No. 415 241 492 and also credit the above said Security to our SGL A/C No. 03.

Yours faithfully,

AUTHORISED SIGNATORY
B.E.S.& T. UNDERTAKING

THE BRIHAN MUMBAI ELECTRIC SUPPLY & TRANSPORT UNDERTAKING

Tel No: 022-22841134 (D)
: 022-227799613

BEST BHAVAN
BEST MARG,
POST BOX NO.192,
COLABA,
MUMBAI 400 001

Res.: AM(CASH)/ECRF23/ --- /2022

Date : 29.11.2022

Indian Bank,
Treassury Dept.,
MUMBAI

PHONE NO. 022 2266 4924

Kind Attention: Ms. Pallavi Madam

Dear Sir,

We have undertaken a transaction which needs to be settled through the SGL account which we hold with You. The details of the same are as under:-

SR.	PARTICULAR	DETAILS
1	DEAL TYPE	Our Purchase
2	COUNTER PARTY	STCI Primary Dealer Ltd.
3	COUNTER PARTY SGL A/C WITH	Reserve Bank of India
4	ISIN NUMBER	IN1720220111
5	SECURITY NAME	07.87% HP SDL 2035
6	INTEREST PAYMENT DATE	Semi Annually, 09/11, 09/05
7	REDEMPTION DATE	09/11/2035 – 100%
8	LAST INTEREST PAYMENT DATE	09/11/2022
9	QUANTUM (Rs.)	5,00,00,000.00 (Rs. Five Crore Only)
10	PRICE (Rs.)	101.9000
11	YIELD	Annualise 7.7811%, Semi 7.6354%
12	DEAL DATE	29.11.2022 at DEAL TIME : 2.30 P.M.
13	VALUE DATE	30.11.2022
14	PRINCIPAL AMOUNT (Rs.)	5,09,50,000.00
15	NO. OF DAYS	21 days(Last IP Dt: 09/11/2022)
16	ACCRUED/EX-INTEREST (Rs.)	2,29,541.67
17	SETTLEMENT AMOUNT (Rs.)	5,11,79,541.67 (Rs. Five Crore Eleven Lac Seventy Nine Thousand Five Hundred Forty One and Sixty Seven Only)
18	OUR SGL A/C NO.	03
19	SGL BANK A/C NO.	415 241 492
20	SETTLEMENT MODE	NDS
21	PAN NO.	AAALM0042L
22	LEI No.	335800JHQJCQVE6DZN65

You are Authorized to settle the Transaction and Debit our Saving A/C No. 415 241 492 and also credit the above said Security to our SGL A/C No. 03.

Yours faithfully,

AUTHORISED SIGNATORY
B.E.S.& T. UNDERTAKING

THE BRIHAN MUMBAI ELECTRIC SUPPLY & TRANSPORT UNDERTAKING

Tel No: 022-22841134 (D)
: 022-227799613

BEST BHAVAN
BEST MARG,
POST BOX NO.192,
COLABA,
MUMBAI 400 001

Date : 05.07.2023

Res.: AM(CASH)/ECRF24/ ----- /2023

Indian Bank,
Treassury Dept.,
MUMBAI

PHONE NO. 022 2266 4924

Kind Attention:Ms. Pallavi Madam

Dear Sir,

We have undertaken a transaction which needs to be settled through the SGL account which we hold with You. The details of the same are as under:-

SR.	PARTICULAR	DETAILS
1	DEAL TYPE	Our Purchase
2	COUNTER PARTY	SBI DFHI LTD.
3	COUNTER PARTY SGL A/C WITH	Reserve Bank of India
4	ISIN NUMBER	IN3420220318
5	SECURITY NAME	07.85% West Bengal SDL 2042
6	INTEREST PAYMENT DATE	Semi Annually, 29/03, 29/09
7	REDEMPTION DATE	29/03/2042 – 100%
8	LAST INTEREST PAYMENT DATE	29/03/2023
9	QUANTUM (Rs.)	2,80,00,000.00 (Rs. Two Crore Eighty Lac Only)
10	PRICE (Rs.)	103.4300
11	YIELD	Annualise 7.6450%,
12	DEAL DATE	05.07.2023 at DEAL TIME : 12.00 P.M.
13	VALUE DATE	06.07.2023
14	PRINCIPAL AMOUNT (Rs.)	2,89,60,400.00
15	NO. OF DAYS	97 days(Last IP Dt: 29/03/2023)
16	ACCRUED/EX-INTEREST (Rs.)	5,92,238.89
17	SETTLEMENT AMOUNT (Rs.)	2,95,52,638.89 (Rs. Two Crore Ninety Five Lac Fifty Two Thousand Six Hundred Thirty Eight and Paise Eighty Nine Only)
18	OUR SGL A/C NO.	03
19	SGL BANK A/C NO.	415 241 492
20	SETTLEMENT MODE	NDS
21	PAN NO.	AAALM0042L
22	LEI No.	335800JHQJCQVE6DZN65

You are Authorized to settle the Transaction and Debit our Saving A/C No. 415 241 492 and also credit the above said Security to our SGL A/C No. 03.

Yours faithfully,

AUTHORISED SIGNATORY
B.E.S.& T. UNDERTAKING

ANNEXURE-15

		FY 2022 23		
NON TARIFF INCOME		**As per Petition**		**Revised**
CONTRACT CHARGES				
RENTS OF LAND AND BUILDINS		1.93		1.93
SALE OF SCRAP		5.14		5.14
INCOME FROM INVESTMENTS				
INTEREST ON ADVANCES TO SUPPLIERS/ CONTRACTORS		4.73		4.73
RENTAL FROM STAFF QUATERS				
RENTAL FROM CONTRACTORS				
INCOME FRON HIRE CHARGES FROM CONTRACTOR				
SUPERVISION CHARGES				
INCOME FROM CONSUMER		0.63		0.63
INCOME FROM RECOVERY AGAINST THEFT		7.8		10.82
INCOME FROM ADVERTISEMENTS		2.38		2.38
INCOME FROM SALE OF TENDER DOCUMENTS		0.25		0.25
INTEREST SUBSIDY FROM REC				
OTHERS		1.2		1.24
SHARE OF GA		33.46		33.46
	A	57.52		60.58

AS PER Appendix No. E2 AUDITED STATEMENT	FY 2022-23
Particulars	**(Rs. Crore)**
OTHER RECEIPTS	54.40
SHARE OF GA	33.46
TOTAL (A)	**87.86**
LESS	
DPC	14.04
IOA	24.01
TOTAL (B)	38.05
(A-B)	**49.81**
PLUS	
INCOME OF VIGILANCE (C)	10.82
Non- Tariff Income (A-B+C)	**60.63**

NON TARIFF INCOME		FY 2023-24		
		As per Petition		Revised
CONTRACT CHARGES				
RENTS OF LAND AND BUILDINS		1.85		1.85
SALE OF SCRAP		2.4		2.4
INCOME FROM INVESTMENTS				
INTEREST ON ADVANCES TO SUPPLIERS/ CONTRACTORS		5.51		5.51
RENTAL FROM STAFF QUATERS				
RENTAL FROM CONTRACTORS				
INCOME FRON HIRE CHARGES FROM CONTRACTOR				
SUPERVISION CHARGES				
INCOME FROM CONSUMER		0.36		0.36
INCOME FROM RECOVERY AGAINST THEFT		8.35		7.49
INCOME FROM ADVERTISEMENTS		7.29		7.29
INCOME FROM SALE OF TENDER DOCUMENTS		0.17		0.17
INTEREST SUBSIDY FROM REC				
OTHERS				
SHARE OF GA		21.37		21.37
TOTAL NON-TARIFF INCOME	A	47.3		46.44

AS PER Appendix No. E2 AUDITED STATEMENT	FY 2023-24
Particulars	**(Rs. Crore)**
OTHER RECEIPTS	55.38
SHARE OF GA	21.36
SUB TOTAL (A)	**76.74**
LESS	
DPC	16.07
IOA	21.72
SUB TOTAL (B)	**37.79**
(A) - (B)	**38.95**
PLUS	
INCOME OF VIGILANCE (C)	7.49
Non-Tariff Income (A-B+C)	**46.44**

ANNEXURE-16

AS PER AUDITED ACCOUNTS	FY 2022-23	FY 2023-24
DISTRIBUTION OF ENERGY BY METER (APPENDIX NO. E2)	3,529.54	4185.15
STREET LIGHT ENERGY (APPENDIX No. E2)	8.75	11.22
SUB TOTAL	**3,538.30**	**4196.37**
LESS		
VIGILANCE	10.82	7.49
NET REVENUE	**3,527.48**	**4188.88**

ANNEXURE-17

Brihan Mumbai Electric Supply & Transport Undertaking
Balance Sheet of Electric Supply as at 30th Sept. 2024

EQUITY AND LIABILITIES	Notes	As at 30th Sept. 2024 (in lakhs)	As at 31st March 2024 (in lakhs)
Shareholders' funds			
Reserves and surplus	**2**	5,06,123.56	4,83,379.33
		5,06,123.56	**4,83,379.33**
Non-current liabilities			
Long- Term Borrowings	**3**	2,11,792.99	**1,88,450.09**
Other non-current liabilities	**4**	63,139.96	56,631.54
		2,74,932.94	**2,45,081.63**
Current liabilities			
Trade payables	**5**	49,583.42	48,010.98
Other current liabilities	**6**	2,89,130.23	2,49,253.77
		3,38,713.65	**2,97,264.76**
TOTAL		**11,19,770.15**	**10,25,725.72**
ASSETS			
Non-current assets			
Fixed assets			
Tangible assets	**7**	1,57,861.24	1,62,306.93
Capital work-in-progress		7,213.04	4,603.68
Non-current investments	**8**	7,247.01	7,022.01
Long-term loans and advances	**9**	6,088.26	6,073.26
Other non-current assets	**10**	1,429.11	1,368.58
		1,79,838.66	**1,81,374.46**
Current assets			
Inventories	**11**	5,311.89	965.80
Trade receivables	**12**	61,646.84	52,803.15
Cash and Bank Balances	**13**	2,28,257.83	1,77,483.85
Short-term loans and advances	**14**	6,43,407.82	6,11,158.80
Other current assets	**15**	1,307.33	1,939.89
		9,39,931.72	**8,44,351.49**
TOTAL		**11,19,770.15**	**10,25,725.72**
Significant accounting policies	**1**		

Brihan Mumbai Electric Supply & Transport Undertaking
Statement of Profit and Loss for the period 01/04/2024 to 30/09/2024

	Notes	For the year ended 30th Sept. 2024 (in lakhs)	1st April 2023 - 31st Mar. 2024 (in lakhs)
Income			
Revenue from operation (gross)	**16**	2,45,869.40	4,27,821.77
Less: Excise duty			-
Revenue from operation (net)		**2,45,869.40**	**4,27,821.77**
Other income	**17**	3,084.89	6,460.03
Total Revenue		**2,48,954.29**	**4,34,281.80**
Expenses			
Purchase of electricity		1,69,139.21	3,16,641.06
Emloyee benefit expense	**18**	32,123.93	58,468.06
Finance cost	**19**	9,991.94	17,514.65
Depreciation	**7**	5,812.29	11,304.33
Other expenses	**20**	8,795.48	22,120.87
Total expenses		**2,25,862.84**	**4,26,048.98**
Profit before tax and Exceptional items		**23,091.44**	**8,232.82**
Exceptional items		-	0.00
Profit before tax		**23,091.44**	**8,232.82**

Notes forming part of financial statement

	As at 30th Sept. 2024 (in lakhs)	As at 31st March 2024(in lakhs)
2 **RESERVES AND SURPLUS**		
STATUTORY RESERVE (As per BMC Act, 1888)		
A. Sinking Fund for Public Loan	-	-
Addition during the year	-	-
	-	-
Less: Deduction During the Year		
	-	-
B. *Best Staff Benefit Fund	393.83	333.11
Addition during the year	15.73	60.72
	409.56	393.83
Less: Adj/Deduction During the Year	-	-
	409.56	**393.83**
C. Motor Vehicles(Third Party Ins Reserve)		
Addition/ Adj during the year		
Less: Adj/Deduction During the Year		
Total of A+B+C	**409.56**	**393.83**
NON-STATUTORY RESERVE		
D. Property Insurance Reserve	10,014.73	10,014.73
Addition during the year	-	-
	10,014.73	10,014.73
Less:Adj/ Deduction During the Year	-	0
	10,014.73	**10,014.73**
E. Third Party Insurance Reserve		
Addition during the year		
Less: Deduction During the Year		
F. Depreciation Fund		
Addition during the year	(0.01)	**0.00**
	(0.01)	0.00
Less: Deduction during the year		
	(0.01)	0.00
G. Fidelity Insurance Reserve	7.03	7.03
Addition/Adj during the year	-	-
	7.03	7.03
Less: Adj/Deduction During the Year	-	-
	7.03	**7.03**

Notes forming part of financial statement

	As at 30th Sept. 2024 (in lakhs)	As at 31st March 2024(in lakhs)
H. Grant/Consumer Cont.	44,917.13	40,585.12
Addition/ Adj during the year	457.77	4,332.01
	45,374.90	44,917.13
Less: Deduction / Adjustments During the Year		
	45,374.90	**44,917.13**
I. BEST Group Ins. Fund	0.00	(11.91)
Addition during the year	0.01	11.91
	0.01	0.00
Less: Deduction/Adj During the Year		
	0.01	**0.00**
J. Electric Supply Contingencies Reserve	8,456.79	7,658.64
Addition/Adj during the year	1.02	798.14
	8,457.80	8,456.79
Less: Deduction During the Year	-	-
	8,457.80	8,456.79
less: Invested amount as per regulation & investable amount	**-**	**-**
	8,457.80	**8,456.79**
K. * Generation Of Electricity Fund	19,687.30	19,687.30
Addition/Adj during the year	-	-
	19,687.30	19,687.30
Less: Deduction During the Year		
	19,687.30	**19,687.30**
Total of D+E+F+G+H+I+K	**83,541.76**	**83,082.98**
J. *Minimum Cash Balance as per Section 460KK1	0.50	0.50
Addition/Adj during the year		
	0.50	0.50
Less: Deduction During the Year		
	0.50	**0.50**
K. B. E. S. T. Staff Amenities Reserve	0.30	**0.30**
Provided during the year	-	-
	0.30	**0.30**
Less: Deduction During the Year	-	-
	0.30	**0.30**
L. Obsolescence of stores	14.53	14.53
Addition/Adj during the year		
	14.53	14.53
Less: Deduction / Adjustments During the Year	-	-
	14.53	**14.53**
M. Surplus		
Opening balances as per last financials	3,99,887.18	3,88,386.88
Add: Profit/(Loss) for the year	23,091.44	8,232.82
Less: Prior period items	821.72	4,065.62
	4,22,156.90	**4,00,685.32**
Deduct : Transfer to Contingency reserve fund	-	(798.14)
	4,22,156.90	**3,99,887.18**
Total of J+ K+L+M	**4,22,172.23**	**3,99,902.51**
Total	**5,06,123.56**	**4,83,379.33**

Notes forming part of financial statement

	As at 30 th Sept. 2024 (in lakhs)	As at 31st March 2024 (in lakhs)
3 Long-term borrowings		
Secured loan		
Secured against first charge on plant & machinery from Canara Bank^		
Long Term finance *	-	-
Unsecured loan		
APDRP Loan**	164.82	10.79
Short Term Finance *	51,000.00	30380.15
REC #	15,812.71	19,765.89
TATA BILL Discounting	1,44,815.46	1,38,293.26
DEPOSIT WITH BEST FUND (FROM SBF)		-
	2,11,792.99	**1,88,450.09**

^ Rate of Interest 12.95% and secured against first charge on plant & machinery
** The maturity period of the loan will be 20 years and repayments being made in 20 installments. The loan carries interest @ 10.50%.
* The repayment to be made in 6 monthly installments. The loan carries interest @ 10.00%
# Rate of Interest 11.75%

	As at 30 th Sept. 2024 (in lakhs)	As at 31st March 2024 (in lakhs)
4 Other Non-Current Liabilities		
Security Deposit		
- Deposit from Employees	33.77	34.51
- Deposit from Customer	63,106.19	56,597.03
	63,139.96	**56,631.54**

	As at 30 th Sept. 2024 (in lakhs)	As at 31st March 2024 (in lakhs)
5 Trade payables		
Trade payables *	49,583.42	48,010.98
	49,583.42	**48,010.98**

* The Company has not received information from Creditors regarding their status under the Micro, disclosure relating to amounts unpaid as on 31st March 2018 together with Interest paid / payable have not been ascertained.

	As at 30 th Sept. 2024 (in lakhs)	As at 31st March 2024 (in lakhs)
6 Other current liabilities		
Statutory Liabiliities (Contributions to PF,Pension, ESIC, withholding Taxes,VAT etc.)	2,31,200.37	1,84,414.29
Empolyee dues payable	9,374.90	2,893.66
Current maturities for long term borrowings	-	4,174.76
Other payables	48,554.95	57,771.06
	2,89,130.23	**2,49,253.77**

		As at 30 th Sept. 2024 (in lakhs)	As at 31st March 2024 (in lakhs)
8	**Non-current investments**		
	Unquoted Bond	425.00	
	General Securities :		
	8.20% Oil Bond 2023	-	0.00
	8.83%IRFC Bond 2034	350.00	350.00
	9.97%APPFCL Bond 2024	-	0.00
	9.97%APPFCL Bond 2024	-	0.00
		775.00	**350.00**
	BEST Group Insurance Scheme Fund		
	Central Bank of India Fort Branch		
	Indian Bank Fort Branch		
	Bank of India Electric House		
	Punjab National Bank Colaba		
	Central Bank of India Pedder Road Branch	-	-
	Canara Bank Colaba	-	-
	Syndicate Bank,Fort	-	-
	State Bank of Patiala	-	-
		-	-
	Generation of Electricity Fund Investment	-	200.00
	Unquoted Shares		
	Shares in Saraswat Co-op Bank	0.01	0.01
	Contingencies Reserve Fund Investment	6,472.00	6,472.00
		6,472.01	**6,472.01**
	Total	**7,247.01**	**7,022.01**

		As at 30 th Sept. 2024 (in lakhs)	As at 31st March 2024 (in lakhs)
9	**Long term Loans and advances**		
	(Unsecured, Considered good)		
	Deposits	6,088.26	6,073.26
		6,088.26	**6,073.26**

		As at 30 th Sept. 2024 (in lakhs)	As at 31st March 2024 (in lakhs)
10	**Other Non - Current Assets (Considered good)**		
	Deferred Revenue Expenditure		
	Staff Benefit Fund Investment (Fixed Deposit)	791.78	731.25
	Fixed Deposit with Chetna Co - operative Bank	166.32	166.32
	Term Deposit with Canara Bank for LC	471.01	471.01
		1,429.11	**1,368.58**

	As at 30 th Sept. 2024 (in lakhs)	As at 31st March 2024 (in lakhs)
11 Inventories		
Inventories	5,311.89	965.80
	5,311.89	**965.80**

	As at 30 th Sept. 2024 (in lakhs)	As at 31st March 2024 (in lakhs)
12 Trade receivables		
Unsecured, considered good stated otherwise		
Debts outstanding for a period exceeding six months from the date they are due for payment	**48,951.45**	**39,575.29**
	48,951.45	**39,575.29**
Other receivables	12,695.38	**13,227.87**
	12,695.38	**13,227.87**
Total	**61,646.84**	**52,803.15**

	As at 30 th Sept. 2024 (in lakhs)	As at 31st March 2024 (in lakhs)
13 Cash and bank balances		
Cash and cash equivalents		
Balance with banks in Current accounts	2,57,005.94	1,99,350.32
Cash on hand	(28,748.10)	(21,866.47)
	2,28,257.83	**1,77,483.85**
Balance in banks for margin money		
Staff Benefit Fund Investment (Fixed Deposit)	791.78	731.25
Fixed Deposit with Chetna Co - operative Bank	166.32	166.32
Term Deposit with Canara Bank for LC	471.01	471.01
CLTD A/C (FAME) WITH BANK OF INDIA		
	1,429.11	**1,368.58**
Less: Shown under other non current assets	(1,429.11)	(1,368.58)
	2,28,257.83	**1,77,483.85**

	As at 30 th Sept. 2024 (in lakhs)	As at 31st March 2024 (in lakhs)
14 Short term Loans and advances		
(Unsecured, Considered good)		
Deposits		
Other loans and advances		
Loans to employees	79.04	50.79
Prepaid expenses	292.22	325.06
Advances recoverable in cash or kind		
- Others	6,464.48	6,270.44
- From Transport Division	6,34,674.96	6,05,634.42
- From suppliers	1,897.13	(1,121.91)
	6,43,407.82	**6,11,158.80**

	As at 30 th Sept. 2024 (in lakhs)	As at 31st March 2024 (in lakhs)
15 Other current assets		
Interest Accrued but not received :		
Accrued Interest On contingencey reserve	0.40	157.06
Interest Accrued On Fixed And Call Deposit	116.67	116.67
Accrued Interest On Generation Of Electricty Fund	1,190.26	1,666.16
Accrued Interest On Staff benefit Fund	-	-
Accrued Interest On BEST Group Insu. Fund	-	-
	1,307.33	**1,939.89**

		Year ended 30th Sept. 2024 (in lakhs)	Year ended 31ST MARCH,2024 (in lakhs)
16	**Revenue from operations**		
	Sale of service	2,45,756.91	4,26,608.01
	Other operating income		
	Sale of Scrap	112.49	1213.75
	Revenue from operations (Gross)	**2,45,869.40**	**4,27,821.77**
	Sale of Service		
	Distribution of energy by meter	2,41,637.40	418514.48
	Distribution of energy	606.21	1121.68
	Repairs & Maintenance of Street lighting	3,513.31	6971.85
		2,45,756.91	**4,26,608.01**
17	**Interest income on**		
	Bank deposits	0.00	67.90
	Rent of Building & land	520.65	399.32
	E. D collection & D P charges	1,790.29	3832.93
	Profit on Sale of Assets	-	983.94
	Miscellaneous income	0.29	10.08
	Discount, sundry balances written back	391.96	437.27
	Advertisement receipts	381.69	728.59
		3,084.89	**6,460.03**

	Year ended 30th Sept. 2024 (in lakhs)	Year ended 31ST MARCH,2024 (in lakhs)
18 Employee benefit expense		
Salaries, wages and bonus	29,401.17	44,061.77
Contribution to provident and	2,638.09	14,216.18
Staff welfare expense	84.66	190.11
	32,123.93	**58,468.06**
19 Finance cost		
Interest expense	8,349.52	14,950.98
Other borrowing cost	1,642.42	2,563.68
	9,991.94	**17,514.65**
20 Other expenses		
Power, Fuel and Electricity	266.64	453.28
Rent	60.25	1,210.78
Repairs and Maintenance		
Building	138.27	669.32
Machinery	134.22	286.39
Others	1,228.27	3,177.41
Insurance	-	-
Incentive charges	798.46	1,600.24
Advertisement Expenses	12.36	171.31
Network charges	2,295.74	3,237.67
Payment to Auditors (Refer details Below)	-	300.00
Printing and Stationery	69.90	182.99
Communication cost	103.37	676.48
Travelling and Conveyance	385.74	1,448.61
Legal and Professional Fees	231.70	438.36
Rates and taxes	177.92	1.43
Bad debts	-	660.00
Bank Charges	53.16	368.36
Discount on Electricity charges	1,319.51	2,622.51
Permanent Reinstatement	506.77	2,644.52
Other Establishment Expenses	961.03	1,884.59
Best staff amenities reserve expense	52.20	82.57
Property insurance fund	-	-
Provision for Obsolescence of stores	-	4.05
Transfer to MCGM u/s 460 KK(2)e		
	8,795.48	**22,120.87**
Payment to auditors		
As auditor		
Audit fee	-	300.00
Tax audit fee		
Limited review		
	-	**300.00**

Monthly project progress reports of under-construction RE projects - reg. (BEST)

11/22/24 5:55 PM

ANNEXURE-18

From: <powertradingseci@gmail.com>

To: <agmes@bestundertaking.com>, <cerc@bestundertaking.com>, <dcemerc@bestundertaking.com>, <depower@bestundertaking.com>, <derc@bestundertaking.com>, <SEREG@mahatransco.in>, <CESTU@mahatransco.in>

Cc: "'Sanjeev Singh'" <sanjeev@seci.co.in>, "'Tarun Mukhija'" <tarun.mukhija@seci.co.in>, "'Peram Aditya'" <peram.aditya@seci.co.in>, "'Ravindra Parihar'" <ravindra.parihar@seci.co.in>, "'Zeba Malik'" <zeba.malik@seci.co.in>

Sir,
Please find attached link to access the monthly project progress reports
as mentioned in the letter dated 18.07.2023.

https://docs.google.com/spreadsheets/d/1Pnvsdpym1T1ptr04PJV-aYcHisqcMCTi/edit?usp=sharing
<https://docs.google.com/spreadsheets/d/1Pnvsdpym1T1ptr04PJV-aYcHisqcMCTi/edit?usp=sharing&ouid=104189269432542938825&rtpof=true&sd=true>
&ouid=104189269432542938825&rtpof=true&sd=true

With Regards
Akash Shivhare
(Engineer)
(Solar Energy Corporation of India Ltd.)

Attachments:

RE PROJECT PROGRESS STATUS FOR THE MONTH OF OCTOBER, 2024

S. No.	Scheme	Project Name	PSA Date	PSA Quantum (MW)	RE Type	Project Location	Project Capacity (MW)	PSA Tariff (Rs./kWh)	Discom Share (MW)	Financial Closure	Land Acquisition	LTA & Connectivity Details	Original SCD as per PPA	SCD/Revised SCD	Project Progress	Monthly progress w.r.t. last month	Expected date of Commissioning
1	ISTS Hybrid Tranche-III	ABC Renewable (RJ-03) Private Ltd	02-Jul-21	400	Hybrid	Chodiya Village, Jaisalmer, Rajasthan	380	2.48	137	Original FC: 27.07.2022 Revised FC: Till CTU's SPV transfer date. Actual FC: 22.08.2023	Total area required for the Project to be mentioned in acres. Solar-1800 Acres Wind-380 Acres. Solar: Preliminary land survey completed wind: 21 WTG Locations agreement to lease has been entered in that 10 WTG Location registrations were completed including pathways.	Delivery Point: 220 kV side of 400/220 kV Fategarh IV S/S Start date of connectivity-19.03.2025 Present-As per 30th JCC 26th June'2024-Connectivity is likely to be operationalized upon ommissioning of required Transmission system. i.e. 20.09.2025	27-Jan-23	Actual LTA Operationalization date	Application submitted to Supreme court appointed GIB committee on 15.03.2023 and Recieved the approval for laying the O/H Transmission line from supreme court appointed committee on 29.05.2023 Commercial discussions with OEMs are in progress. HPD vide Letter dated 16 Apr'24 requested for termination of PPA to SECI. HPD's termination notice was shared with buying entities for necessary inputs. SECI rejected HPD's notice. Subsequently, HPD approached Dispute Resolution Committee (DRC) which was intimated to buying entities.	HPD approached Dispute Resolution Committee (DRC) which was intimated to buying entities.	NA
2		Adani Hybrid Energy Jaisalmer Five Limited			Hybrid	Khavada, Gujarat (location changed as per SECI letter to HPD dated 03.08.2023)	600	2.48	216	Original: 27-07-2022 Revised: Till CTU's SPV transfer date. Actual FC: 02-08-2022	Land Required- Solar - ~2000 Acres Wind - ~150 Acres Land allocated to Park developer and lease deed signed. Sub lease dead signed on 22-Jul-2024..	Delivery Point: KPS-1, Khavada pooling substation 765/400kV (1000 MW) Start date of Connectivity: 31-03-2025 (interim) Present-44th JCC Meeting 27th June'2024-Likely Operationalization date: 21.03.2025	27-Jan-23	31.03.2025 or actual LTOA date,which ever is later	MoD clearance: To be applied Civil works: Civil foundation completed Solar pile - work in progress Wind foundation - Yet to start - GIS building, soil improvement works and civil works for GIS building is in progress. - Switchgear room staging and shuttering work for slab work in progress. - Power transformer civil works in progress. - Fire wall civil works construction in progress. 1/3 completed Supply Status of Major Project Equipment: MMS - Order issued (MMS supply is in progress - 47% Supplied) Modules - Orders issued (Module supply yet to start) Inverter - Orders issued (Inverter supply is in progress- 65% Supplied) IDT - Order issued (supply yet to start) Transmission line -Order issued (Supply Completed) Tower stubs - Order issued (Supply Completed) Structure - Order issued (Supply Completed) Power Transformer - Orders issued (supply is in progress) WTG - Supply yet to start T/L tower - 28/31 Erection completed 100% civil foundation completed	Solar pile - work in progress MMS - Order issued (MMS supply is in progress - 47% Supplied)	
3		Amp Energy Green Eighteen Pvt Ltd			Hybrid	Neemba village, fatehgarh, Jaisalmer Rajasthan	130	2.48	47	Original FC: 19.07.2022 Revised FC: Till CTU's SPV transfer date Actual FC: 21.03.2023	Total land required-805 Acres Tentatively Solar: 639.46 Acres Completed Wind: 112 acres Completed 752 acres in possesion of AEGEPL	Delivery Point: 220 kV side of 400/220 kV Fategarh IV S/S Start date of Connectivity - 19.01.2023 or system whichever is later. Present-30th JCC 26th June'2024-Connectivity likely to be operationalized upon **commissioning of** required Transmission system. i.e. 19.03.2025	19-Jan-23	Actual start date of connectivity + 60 days or date of commisioning whichever is earlier	MoD application;MoD approval received for 6 location.Balance 8 locations applications submitted for MoD approval Civil Works: Solar- pile works status-MCR raft WIP, Piling and area development started Wind-Foundation work status-Foundation casting works under progress. Excavation-12/14, PCC-10/14, Steel 9/14, Fdn 8/14, LT assembly- 3/14 (4th wip), Main crane reached and shifting to loc in progress Substation-foundation work status -Vendor finalized and mobilized Supply Status of Major Material Status: PO status of MMS-PO issued. Delivery under progress. PO status of Modules-PO issued. Delivery to start from Nov'24 onwards. PO status of Inverter-PO issued. Delivery to start from Dec'24 onwards PO status of WTGs-PO issued. Delivery started 8/14 No's WTGs received at site Transmission line from Plant to PSS 17.7 Km, 220 KV SC Transmission line Foundation work status-PO issued. Excavation work started and RoW resolution in progress GIB Status: Application submitted on 10.01.2023 and GIB approval received. Vendors finalized.Section 68 approval obtained	Solar- pile works status-MCR raft WIP, Piling and area development started Wind-Foundation work status-Foundation casting works under progress. Excavation-12/14, PCC-10/14, Steel 9/14, Fdn 8/14, LT assembly- 3/14 (4th wip), Main crane reached and shifting to loc in progress PO status of MMS-PO issued. Delivery under progress. PO status of Modules-PO issued. Delivery to start from Nov'24 onwards. PO status of Inverter-PO issued. Delivery to start from Dec'24 onwards PO status of WTGs-PO issued. Delivery started 8/14 No's **WTGs received at site**	
4	Manufacturing linked ISTS Connected Solar	Adani Green Energy Twenty Six A Limited	09-Dec-22	234	Solar	Khavda GJ	234	2.61	234	Discussions with lenders are ongoing. Schedule Financial Closure Date: 09-12-2023	Location allocated under Khavda RE Park and Sub lease executed.	LTA Applied:12-01-2023, Granted :30-04-2025 Effective: Jan 26	09-Dec-24	15-Feb-25	1. Procurement Status:-Order Placed for Module/WTG, Inverter, Power Transformer: Discussion with suppliers is in an advanced stage. 2. Installation Status: Detailed Engineering is in the advanced stage and ordering of critical items is in progress. Site infrastructure ready for projects at Khavda location.Execution work to be matched with SCD timelines. 3. GSS& Transmission Line Status:Foundations work and Tower erection is under progress 4. Expected Commissioning Date:Project execution shall be matched with PPA timelines.		Within PPA Timelines

Status of Project Detail

12/5/24 1:03 PM

From: Peram Aditya <peram.aditya@seci.co.in>

To: "agmes" <agmes@bestundertaking.com>, "cerc" <cerc@bestundertaking.com>, "derc" <derc@bestundertaking.com>

Cc: "Sanjeev Singh" <sanjeev@seci.co.in>, "Tarun Mukhija" <tarun.mukhija@seci.co.in>

Dear Sir,

This with reference to monthly review meeting corresponding to under implementation ISTS Solar Projects held on 06.11.2024 wherein SPDs, SECI (EMD department member and Solar department members) along with few buying entities had also participated, please find the status of 234 MW Project for which PPA was signed with SPV of M/s Adani Renewable Energy Holding Four Limited under Package – I of Manufacturing linked tender for your reference. The latest JCC minutes of meeting is also attached herewith wherein status of Connectivity has been marked in yellow colour for your reference. The brief status of Project (as submitted by SPD) is mentioned at below table -

S. No.	SPD Name	Project Capacity (MW)	Scheduled Financial Closure Date	Status of Financial Closure	Scheduled Commissioning Date	Status of Land	Supply Status
1	Adani Green Energy Twenty Six A Limited	234	15.02.2024	FC Achieved	15.02.2025	Location allocated under Khavda RE Park and Sub lease executed by SPD.	i. Discussion with suppliers is in advance stage..Project activities are alig with evacuation readiness.

Further, the detailed status of under Implementation Projects has already been shared with Energy Management Division.

Best Regards,
Aditya P

Attachments:

- 173199138625Letter and Minutes of 45th JCC meeting of WR.pdf

सोलर एनर्जी कॉर्पोरेशन ऑफ इंडिया लिमिटेड
(भारत सरकार का उपक्रम)
Solar Energy Corporation of India Ltd.
(A Govemment of India Enterprise)
स्वच्छ भारत - स्वच्छ ऊर्जा

No. SECI/PSD/Hybrid/2024/001/67847 Dated: 10.10.2024

To,

The CEO
Central Transmission Utility of India Ltd
First Floor, Saudamini, Plot No.2,
Sector-29, Near IFFCO Chowk,
Gurgaon-122001

Sub: Delay in readiness of evacuation system along with associated infrastructure and start date of connectivity -Reg.

Dear Sir,

This is with reference to Hybrid Projects under SECI's tenders mapped to different Buying Entities. In this regard, SECI is being continuously organizing Project review meetings with stakeholders (Developers and Buying Entities) to monitor the progress of Projects. During the meeting, Developers have highlighted the delay in readiness of evacuation infrastructure which leads to delay in commissioning of the Projects. Also it is to bring to your kind notice that SECI has extended the project timelines due to delay in start date of connectivity. Subsequently, Buying Entities have also raised the delay in off take of power which are affecting their RPOs.

In view of above, it is requested to kindly expedite the activities pertaining to evacuation infrastructure, so that Projects can be commissioned on time.

The detailed list of such Projects is attached herewith for your reference.

An early action in this regard shall be highly appreciated.

Thanking you,

Yours faithfully,

(P. Venkatesan)
DGM (Projects)

Hybrid ISTS Connectivity to be expedited details

Sr. No	Developer Name	Region	Stage-II Appl. No.	LTA Appl. No.	Project SCD	Start Date of Connectivity	JCC Present Status	Remarks
Hybird Tranche-III								
1	M/s AMP Energy Green Eight Private Limited	Fategarh, rajasthan-Northern Region	1200003022	1200003416	Actual start date of connectivity + 60 days or date of commisioning whichever is earlier	19.01.2023 or system whichever is later.	30th JCC 26th June'2024-Connectivity likely to be operationalized upon commissioning of required Transmission system. i.e. 19.03.2025	Project SCD extended, due to delay in connectivity
2	M/s Aadani Hybrid Energy Jaisalmer Five Limited	Khavada, Gujarat-Western Region	230700006	430700007	31.03.2025 or actual LTOA date,which ever is later	31.03.2025 (Interim)	44th JCC Meeting 27th June'2024-Likely Operationalization date: 21.03.2025	
3	M/s ABC Renewable Energy (RJ-03) Private limited	Jaisalmer, Rajasthan-Northern Region	1200003002	1200003531	Actual LTOA date/Start date of connectivity + 60 days	19.03.2025(Final).	As per 30th JCC 26th June'2024- Connectivity is likely to be operationalized upon ommissioning of required Transmission system. i.e. 20.09.2025	
Assured Peak Power								
1	M/s Greenko APD1 IREP Private limited	Kurnool, Andhara pradesh-Southern Region	1200002672	1200003664	Actual LTOA date/Start date of connectivity + 60 days	16.07.2024	As per 46th JCC 25th june2024-Likely Operationalization date: 490MW31.12.2024 410MW16.07.2024	Project SCD extended, due to delay in connectivity
RTC								
1	M/s Renew Surya Roshni Private Limited	Fategarh, rajasthan-Northern Region	1200002628	1200003269	Actual LTOA date/Start date of connectivity + 60 days	31-12-2022 or commissioning of ISTS, whichever is later.	As per 30th JCC 26th June'2024-Connectivity likely to be operationalized upon commissioning of required Transmission system. i.e. 01.01.2025	Project SCD extended, due to delay in connectivity
Tranche-IV								
1	M/s Kotuma Wind parks Private limited	Barmer, Rajasthan-Northern Region	1200003532	412100002	Actual LTOA date/Start date of connectivity + 60 days	20.09.2025	As per 30th JCC 26th June 2024-Connectivity likely to be operationalized upon commissioning of required Transmission system. i.e. 20.09.2025	Project SCD extended, due to delay in connectivity
		Gadag, Karnataka-Southern Region	1200003534	451100003		31.12.2024 (With the availability of common transmission system required for effectiveness of Connectivity/ GNA)	As per 46th JCC 25th June'2024-Likely Operationalization date: 31.12.2024	Project SCD extended, due to delay in connectivity
2	M/s Project Ten Renewable Power Private Limited	Pavagad, Karnataka-Sauthern Region	1200003540	451100004	Actual LTOA date/Start date of connectivity + 60 days	16.07.2024	As per 46th JCC 25th june 2024-Likely Operationalization date: 31.12.2024	Project SCD extended, due to delay in connectivity
		Koppal, Karnataka-Southern Region	1200003530	451100005		16.07.2024	As per 46th JCC 25th june 2024-Likely Operationalization date: 31.12.2024	Project SCD extended, due to delay in connectivity
Tranche-V								
1	M/s TP Saurya Limited	Gadag, Karnataka-Southern Region	251100006		24.02.2026 or actual start date of connectivity + 60 days, whichever is later	30.09.2025 (tentative) with the availability of common transmission system mrequired for effectiveness of Connectivity/ GNA.	As per 46th JCC 25th June'2024-Likely Operationalization date: 26.12.2025	Project SCD extended, due to delay in connectivity
		Koppal, Karnataka-Southern Region	251100005			11.01.2025 (tentative) with the availability of common transmission system required for effectiveness of connectivity/GNA	As per 46th JCC 25th June'2024-Likely Operationalizationdate:11.01.2025	Project SCD extended, due to delay in connectivity
		Bikaner, Rajasthan-Northern Region	1200003582			27.12.2025 (Final)	As per 30th JCC 26th June 2024-Connectivity likely to be operationalized upon commissioning of required Transmission system i.e. 01.01.2026	Project SCD extended, due to delay in connectivity

r. No	Developer Name	Region	Stage-II Appl. No.	LTA Appl. No.	Project SCD	Start Date of Connectivity	JCC Present Status	Remarks
2	M/s AMP Energy Green Private Limited	Barmer, Rajasthan-Northern Region	312100005	412100019	18.11.2025 Or actual start date of connectivity + 60 days	19.09.25 (Final)	As per 30th JCC 26th June 2024-Connectivity likely to beoperationalized on19.09.25.	Project SCD extended, due to delay in connectivity
3	M/s NTPC Renewable Energy Limited	Khavada, Gujarat-Western Region	330700007			31.01.2026 (Interim)	As per 44th JCC 27th June'2024-Operationalization date July'2026	Project SCD may be extended, due to delay in connectivity
		Kutch, Gujarat-Western Region	1200000084		16.05.2025			

ANNEXURE-19

The Brihan Mumbai Electric Supply & Transport Undertaking

(OF THE BRIHAN MUMBAI MAHANAGARPALIKA)

TELEPHONE : (022) 22856262
FAX : (022) 22851244
TELEX : 1185755 BEST IN
TELEGRAM : BEST, MUMBAI-400 001.

BEST BHAVAN,
BEST MARG,
POST BOX NO. 192.
MUMBAI - 400 001.

ADDRESS ALL COMMUNICATION BY TITLE NOT BY NAME

OUR REF. CER/DEPP- 122 / 147 /2022

DATE : 07 SEP 2022

To,

Atulya Kumar Naik,
General Manager (Power Trading)
Solar Energy Corporation of India Limited,
6th Floor, Plate-B, NBCC Office Block Tower-2,
East Kidwai Nagar, New Delhi-110023
Email: aknaik@seci.co.in

Sub: Request to achieve Scheduled Commissioning Date of the 400 MW Wind-Solar Hybrid power projects under ISTS Tranche – III scheme as per the provisions of Power Supply Agreement

Ref: 1. Your Letter dated 04.01.2021
2. Your Letter dated 01.06.2022 and 13.06.2022
3. Our emails dated 01.07.2021,07.07.2022,18.08.2022
4. Your Email dated 31.07.2022
5. Your Letter dated 25.08.2022 and 29.08.2022

Sir,

Vide your letter dated 04.01.2021, you have offered Wind Solar Hybrid power to BEST Undertaking at tariff of Rs. 2.41/unit discovered through competitive bidding plus its trading margin of 7 paise/unit for 25 years. You have informed that the Scheduled Commissioning Date of the scheme is 18 months from the effective date of PPA. The projects under the scheme are likely to be commissioned by third quarter of FY 2022-23.

Thereafter BEST has signed Power Supply Agreement with Solar Energy Corporation of India (SECI) on 25.06.2021 for procurement of 400 MW Wind-Solar Hybrid power at tariff of Rs. 2.48 per unit for 25 years. Subsequently SECI has signed Power Purchase Agreement (PPA) in July 2021 with three Hybrid Power Developers (HPD). As per the Article 1.1 (Definition), Scheduled Commissioning Date shall mean 18 months from the Effective Date of the SECI-HPD PPA.

Vide your letters dated 01.06.2022 and 13.06.2022, you have informed that Scheduled Commissioning Date of 380 MW Wind Solar Hybrid project of ABC Renewable Energy(RJ-03) Private Limited and 600 MW Wind Solar Hybrid project of Adani Hybrid Energy Jaisalmer Five Limited under Tranche III has been revised as 23.02.2023 on account of delay in adoption of tariff by CERC.

Vide our emails dated 01.07.2021,02.08.2021,07.12.2021,09.02.2022, 11.05.2022, 07.07.2022,29.07.2022,18.08.2022 and 25.08.2022 we had requested you to inform us the revised SCOD of all three generators tied up under 400 MW Solar-Wind Hybrid PSA and to submit the monthly Progress of all three projects regarding LTA granted by CTU, land identification/land acquisition, procurement of materials and commissioning of plant etc.

In reply, vide your email dated 31.07.2022, you have forwarded the MoM of JCC meeting wherein it was stated that the tentative timeline for Fatehgarh-IV PS is shifted to June 2024, considering SPV transfer as Dec'22 tentatively. As per clause 4.5.2 of PPA, due to delay in the SPV transfer by the CTU (Delay in start date ISTS Substation award), the SCD of the projects may be extended accordingly. However from the above MOM, we are unable to ascertain the revise SCOD of all three projects.

Further vide letters dated 25.08.2022 and 29.08.2022, SECI has informed that the scheduled commissioning date of the project is extended till the actual date of LTA operationalization due to delay in readiness of power evacuation infrastructure.

It is to bring to the kind notice that to meet BEST's load requirement and Solar/Non solar RPO of BEST from FY 2023-24 onwards, BEST has envisages the RE power from these projects. The delay in the commissioning of these projects may result in RPO shortfall of BEST in FY 2023-24 and Hon'ble Commission may levy penalty as per the MERC (RPO-REC) Regulations 2019.

Hon'ble Commission in its order dated 26.04.2021 (Case No. 16 of 2021), while approving BEST's procurement of 400 MW Solar Wind Hybrid power from SECI has stated as follows:

"The Commission cautions BEST and stake holders on the importance of timely completion of this project. Timely completion is of essence for BEST for complying with their RPO (which they are lagging at this stage), ensuring power at a reasonable cost for its consumers."

As the timely completion of the above project is very important for BEST Undertaking, I hereby kindly requested to let us know the Scheduled Commissioning Date of all three tied up generators and to adhere to the time-line as specified in the Power Supply Agreement, so that BEST can fulfil its RPO requirement as well as meet the load requirement of its consumers at very economical rate.

The Brihan Mumbai Electric Supply & Transport Undertaking

(OF THE BRIHAN MUMBAI MAHANAGARPALIKA)

TELEPHONE : (022) 22856262
FAX : (022) 22851244
TELEX : 1185755 BEST IN
TELEGRAM : BEST, MUMBAI-400 001.

BEST BHAVAN,
BEST MARG,
POST BOX NO. 192.
MUMBAI - 400 001.

ADDRESS ALL COMMUNICATION BY TITLE
NOT BY NAME

OUR REF. : CERDEPP-122/147/2022

DATE : 07 SEP 2022

It is further suggested to conduct the monthly online review meeting on every second Wednesday at 2.30 pm. with the officials of SECI, BEST Undertaking and the generators to assess the progress of all three Solar Wind Hybrid projects.

Yours faithfully,

(N.N. Chougule)
Chief Engineer (Regulatory)

DEPP

The Brihan Mumbai Electric Supply & Transport Undertaking

(OF THE BRIHAN MUMBAI MAHANAGARPALIKA)

TELEPHONE : (022) 22856262
FAX : (022) 22851244
TELEX : 1185755 BEST IN
TELEGRAM : BEST, MUMBAI-400 001.

BEST BHAVAN,
BEST MARG,
POST BOX NO. 192.
MUMBAI - 400 001.

ADDRESS ALL COMMUNICATION BY TITLE NOT BY NAME

OUR REF. : ESO/AGMES/ 52 / /2023

DATE : 02-08-2023

16650

- 3 AUG 2023

Shri. R. P. Gupta
Chairman & Managing Director
Solar Energy Corporation of India Limited,
6th Floor, Plate B, NBCC office Block Tower -2,
East Kidwai Nagar, New Delhi - 110023.
E-mail: corporate@seci.co.in

Sub: Request to achieve Scheduled Commissioning date (SCoD) of 400 MW Wind-Solar Hybrid power project under ISTS Hybrid Tranche-III scheme and 234 MW Solar power projects under SECI's Manufacturing linked solar scheme.

Dear Sir,

BEST Undertaking supplies power to the Island City of Mumbai, which houses various financial and other important establishments of the nation. BEST has signed Power Supply Agreements (PSA) with Solar Energy Corporation of India (SECI) for procurement of 400 MW Hybrid power and 234 MW Solar power for 25 years on 25.06.2021 and 09.12.2022 respectively. SECI has further signed PPA's with various developers on 21.07.2021 and 03.05.2023 respectively. As per the Article 1.1 (Definition) of PPA, Scheduled Commissioning Date shall mean 18 months from the Effective Date of the SECI-HPD PPA.

As such, SECI has informed that the date for power flow to BEST would be Dec'2024. (Refer your mail dated 28.04.2023). However, during the Virtual meeting on 23.06.2023, developers have informed that project completion date is being extended to March 2025.

BEST's present tie-up with various generator ends by March 2024. BEST has considered power from SECI of 634 MW as part of its stack for meeting the power requirement and accordingly planned the requirement from different sources. Achieving SCoD at the designated date is therefore of utmost importance.

May, I therefore kindly request you to give necessary instructions to solar developers for adhering to the time-line of Dec'2024 and expedite the projects.

With Regards,

Yours faithfully,

2/8/23
(Bilal Shaikh)
Assistant General Manager
(Electric Supply)

OFFICE OF THE ASST. GENERAL MANAGER BEST UNDERTAKING ELECTRIC SUPPLY

Anil Diggikar I.A.S.
General Manager

BRIHAN - MUMBAI ELECTRIC SUPPLY & TRANSPORT UNDERTAKING
BEST Bhavan, BEST Marg, Colaba,
Mumbai - 400 001.
Tel. : 022-22873961, 022-22873962
E-mail : gm@bestundertaking.com
Website: www.bestundertaking.com

DO/GM/AGMES/ 8980 /2024

10 APR 2024

Sub: Scheduled Commissioning Operation Date of 400 MW Wind-Solar Hybrid power project under ISTS Hybrid Tranche III scheme and 234 MW Solar power project under SECI's Manufacturing linked solar scheme – Meeting the prescribed deadlines

Dear Shri. Gupta,

BEST Undertaking supplies power to the Island City of Mumbai which houses various financial and other important establishments of the nation. BEST has signed Power Supply Agreements (PSA) with Solar Energy Corporation of India (SECI) for procurement of 400 MW Wind-Solar Hybrid power and 234 MW Solar power for 25 years on 25.06.2021and 09.12.2022 respectively. SECI has further signed PPAs with various developers on 21.07.2021 and 03.05.2023 respectively. As per the Article 1.1 (Definition), Scheduled Commissioning Date shall mean 18 months from the Effective Date of the SECI-HPD PPA.

As such, SECI has informed that the date for power flow to BEST would be December 2024 for 234 MW Solar power project under Manufacturing linked solar scheme and March 2025 for 400 MW Wind-Solar Hybrid power project under ISTS Hybrid Tranche III scheme (as per the email received from SECI dated 22.12.2023).

BEST has considered power from SECI of 634 MW as part of its stack for meeting the power requirement and accordingly planned the requirement from different sources. Achieving Scheduled Commissioning Operation Date (SCOD) at the designated date is therefore of utmost importance.

May, I therefore kindly request you to give necessary instructions to solar developers for meeting the prescribed deadlines and expedite the projects.

With Regards,

Yours Sincerely,

(Anil Diggikar)

Shri. R. P. Gupta
Chairman &Managing Director
Solar Energy Corporation of India Limited,
6th Floor, Plate B, NBCC office Block Tower -2,
East Kidwai Nagar, New Delhi - 110023.
e-mail: corporate@seci.co.in

Anil Diggikar I.A.S.
General Manager

BRIHAN - MUMBAI ELECTRIC SUPPLY & TRANSPORT UNDERTAKING
BEST Bhavan, BEST Marg, Colaba,
Mumbai - 400 001.
Tel. : 022-22873961, 022-22873962
E-mail : gm@bestundertaking.com
Website: www.bestundertaking.com

DO/GM/AGMES/1277/2024

Date :- 18/06/2024

Sub: Applicability of waiver of transmission charges to the RE projects tied by BES&T Undertaking with SECI.

Dear Shri Suresh,

BES&T Undertaking has signed Power Supply Agreements (PSA) with Solar Energy Corporation of India (SECI) for procurement of 400 MW Wind-Solar Hybrid power (under ISTS Hybrid Tranche III scheme) at Rajasthan and 234 MW Solar power (under Manufacturing linked solar scheme) at Gujarat for 25 years on 25.06.2021 and 09.12.2022 respectively. These projects are expected to be commissioned by the third quarter of FY 2022-23 and December 2024 respectively. However the date of scheduled commissioning is extended from time to time to January 2023, June 2024, December 2024, March 2025 due to the various reasons including corona disease, Hon'ble Supreme Court order on ban on overhead power transmission lines in the habitat of the endangered Great Indian Bustard (GIB) in Rajasthan etc. Now, the Scheduled Commissioning of Date (SCOD) of these projects are linked with Long Term Access (LTA) Operationalization date. SECI has approved the extension of COD to these projects considering the issues raised by the developers.

As per the MOP Notification dated 23.22.2021, Solar and Wind projects commissioned up to June 2025 are eligible for waiver of Interstate (ISTS) transmission charges. However 25 % of the ISTS charges will be applicable for the Solar and Wind projects commissioned between 01.07.2025 to 30.06.2026.

Further As per the MOP Notification dated 09.06.2023,*"for any solar, wind and sources mentioned in para 3.1 (i), (ii) and (iii) of the Order dated 23.11.2021, which is eligible for waiver of inter-state transmission charges and is having its scheduled date of commissioning on or before 30th June 2025 is granted extension of time from the commissioning by Ministry of New and Renewable Energy after careful consideration, on account of Force Majeure or for delay on the part of the transmission provider in providing the transmission even after having taken the requisite steps in time; or on account of delays on the part of any Government Agency, and the power plant is commissioned before the extended date; it will get benefit of waiver of inter-state transmission charges on the transmission of electricity generated by such power plant as if the said plant had been commissioned on or before 30th June 2025."*

BES&T Undertaking has tied up with SECI for procurement of RE power and having SCOD before June 2025 of the above said project. However, due to further delay in projects, BEST Undertaking may lose benefit of waiver of transmission charges if the COD of these projects gets delayed beyond June 2025. Therefore, may I kindly request you to continue the benefit of waiver of transmission charges to these projects also if the COD of these projects gets delayed beyond June 2025.

.....2

Accordingly, you are also kindly requested to direct the Central Transmission Utility (CTU), Power Grid Corporation of India Ltd (PGCIL), Power Gujarat Corporation Ltd (PGCL) and Maharashtra State Electricity Transmission Company Ltd (MSETCL) to complete the network strengthening schemes in time so as to evacuate the power from these projects for BEST Undertaking.

With Regards,

Your's Sincerely,

(Anil Diggikar)

Shri. Suresh Annepu
Director (RCM)
Ministry of Power,
Government of lndia,
Shram Shakti Bhawan,
New Delhi.

Anil Diggikar I.A.S.
General Manager

BRIHAN - MUMBAI ELECTRIC SUPPLY & TRANSPORT UNDERTAKING
BEST Bhavan, BEST Marg, Colaba,
Mumbai - 400 001.
Tel. : 022-22873961, 022-22873962
E-mail : gm@bestundertaking.com
Website: www.bestundertaking.com

DO/GM/AGMES/ 13568 /2024

DATE : 09/07/2024

Sub: Expedite the strengthening projects of CTU-STU network at 400 kV Chandrapur, Parli, Kudus, Vikhroli, Pimpalgaon, and Warora as mentioned in conditional NOC.

Dear Dr. Sanjeev,

BEST Undertaking has signed Power Sale Agreement with Solar Energy Corporation of India (SECI) for procurement of 400 MW Wind-Solar Hybrid power and 234 MW Solar power for 25 years.

Chief Engineer STU has issued conditional NOC to BEST Undertaking on 10.05.2022 and 16.10.2023 for Inter-state LTOA for 400 MW Solar Wind Hybrid power and 234 MW Solar power supply to BEST Undertaking. Chief Engineer STU has informed that as soon as the strengthening projects of CTU-STU network as mentioned in conditional NOC are completed and ATC margin is available, NOC will be applicable to the BEST Undertaking.

However, M/s ABC Renewable Energy (RJ-03) Private Limited, who is one of the developer of 400 MW Wind-Solar Hybrid power project at Rajasthan served a notice to the SECI for termination of the project highlighting the reason that the LTA operationalization may not happen until completion of the strengthening activity at 400kV Kudus,Vikhroli, Pimpalgaon and Warora. It is also submitted that Pimpalgaon and Warora networks are yet to be tendered and the commissioning timelines for the same are not yet available.

BEST heavily dependent on the tied up power with SECI for the supply of 634 MW Solar Wind Hybrid power which is expected to be commissioned in May 2025 to meet BEST's load demand as well as Renewable Purchase Obligation (RPO) of BEST.

However, any delay in completion of the strengthening projects of CTU-STU network at 400 kV Chandrapur, Parli, Kudus, Vikhroli, Pimpalgaon, and Warora may affect the evacuation of power flow from the tied up sources to BEST Undertaking.

...p.t.o

May, I therefore kindly request you to expedite the strengthening projects of CTU-STU network and issue the NOC without condition for Inter-state LTOA for 400 MW Solar Wind Hybrid power and 234 MW Solar supply through SECI to BEST Undertaking.

With Regards,

Yours Sincerely,

(Anil Diggikar)

Dr. Sanjeev Kumar (IAS),
Chairman & Managing Director
Maharashtra State Electricity Transmission Company limited (MSETCL)
'PRAKASHGANGA', C-19, E- Block,
Bandra Kurla Complex,
Bandra (E) Mumbai – 400 051.

The Brihan Mumbai Electric Supply & Transport Undertaking

(OF THE BRIHAN MUMBAI MAHANGARPALIKA)

TELEPHONE : (022) 2285 6262
FAX : (022) 2285 1244
TELEX : 1185755 BEST IN
TELEGRAM : BEST, MUMBAI-400 001.

BEST BHAVAN,
BEST MARG,
POST BOX NO. 192,
MUMBAI - 400 001.

ADDRESS ALL COMMUNICATION BY TITLE
NOT BY NAME

OUR REF. : CER/DEPP/ 53 /2024

DATE : 11 SEP 2024

Shri G. Ravisankar
Chairman
Central Transmission Utility of India Ltd (CTUIL)
Floors No. 5-10, Tower 1, Plot No. 16,
IRCON International Tower,
Institutional Area, Sector 32,
Gurugram, Haryana – 122001.

Sub: Request to expedite the network strengthening schemes at Fategarh IV substation, Rajasthan and Khavda pooling substations (KPS- I and KPS - III) at Gujarat

Sir,

BES&T Undertaking has signed Power Supply Agreements (PSA) with Solar Energy Corporation of India (SECI) for procurement of 400 MW Wind-Solar Hybrid power at Rajasthan & Gujarat (under ISTS Hybrid Tranche III scheme) on 25.06.2021 for 25 years and expected to be commissioned by the third quarter of FY 2022-23. Further BES&T Undertaking has signed PSA with SECI for procurement of 234 MW Solar power at Gujarat (under Manufacturing linked solar scheme) on 09.12.2022 for 25 years and is expected to be commissioned by the December 2024.

However the Scheduled Commissioning of Dates (SCOD) are extended from time to time, due to the various reasons and now the SCOD of these projects are linked with Long Term Access (LTA) Operationalization date. As per the monthly progress report (August 2024) of SECI, the connectivity schedule is as follows:

The delivery point of AMP Energy Green Eight Private Limited (Jaisalmer, Rajasthan) and ABC Renewable Energy(RJ-03) Private Limited (Jaisalmer, Rajasthan) is **400/220 kV Fategarh IV substation** and as per the 29th JCC meeting held on 27th March'2024,Connectivity likely to be operationalized by 20.03.2025 upon commissioning of required Transmission system.

The delivery point of Adani Hybrid Energy Jaisalmer Five Limited (Gujarat) is **765/400kV (1000 MW) Khavada pooling substation (KPS- I)** and as per the 43rd JCC Meeting held on 28th March'2024, connectivity likely to be operationalized by 21.03.2025 upon commissioning of required Transmission system.

The delivery point of Adani Green Energy Twenty Six A Limited (Gujarat) is **765/400kV Khavada pooling substation (KPS- III)** and connectivity is likely to be operationalized upon commissioning of required Transmission system by January 2026.

SECI has informed that the commissioning of these projects is dependent on the timely commissioning of ISTS network and SECI has also requested CTUIL to expedite the ISTS network implementation.

We would like to bring to your kind notice that BEST is supplying electricity in the city limit of Mumbai (Financial Capital and Business hub of India). BEST is heavily dependent on the tie up with SECI for the supply of 400 MW Solar Wind Hybrid power and 234 MW Solar power to meet BEST's load demand as well as Renewable Purchase Obligation (RPO). Any delay in supply of electricity from SECI may affect the quality and reliability of power supply to the vital consumers of BEST

May, I therefore kindly request you to expedite the above grid strengthening schemes so as to evacuate the power from these projects to BEST Undertaking as per schedule.

With Regards,

Your's faithfully,

(Dr. R. D. Patsute)
Chief Engineer (Regulatory)

Copy to:

Shri P.S.Das,
Senior General Manager
Central Transmission Utility of India Ltd (CTUIL)
Floors No. 5-10, Tower 1, Plot No. 16,
IRCON International Tower,
Institutional Area, Sector 32,
Gurugram, Haryana – 122001.

सोलर एनर्जी कॉर्पोरेशन ऑफ इंडिया लिमिटेड
(भारत सरकार का उपक्रम)
Solar Energy Corporation of India Ltd.
(A Govemment of India Enterprise)
स्वच्छ भारत - स्वच्छ ऊर्जा

No. SECI/PSD/Hybrid/2024/001/67847 Dated: 10.10.2024

To,

The CEO
Central Transmission Utility of India Ltd
First Floor, Saudamini, Plot No.2,
Sector-29, Near IFFCO Chowk,
Gurgaon-122001

Sub: Delay in readiness of evacuation system along with associated infrastructure and start date of connectivity -Reg.

Dear Sir,

This is with reference to Hybrid Projects under SECI's tenders mapped to different Buying Entities. In this regard, SECI is being continuously organizing Project review meetings with stakeholders (Developers and Buying Entities) to monitor the progress of Projects. During the meeting, Developers have highlighted the delay in readiness of evacuation infrastructure which leads to delay in commissioning of the Projects. Also it is to bring to your kind notice that SECI has extended the project timelines due to delay in start date of connectivity. Subsequently, Buying Entities have also raised the delay in off take of power which are affecting their RPOs.

In view of above, it is requested to kindly expedite the activities pertaining to evacuation infrastructure, so that Projects can be commissioned on time.

The detailed list of such Projects is attached herewith for your reference.

An early action in this regard shall be highly appreciated.

Thanking you,

Yours faithfully,

(P. Venkatesan)
DGM (Projects)

Hybrid ISTS Connectivity to be expedited details

Sr. No	Developer Name	Region	Stage-II Appl. No.	LTA Appl. No.	Project SCD	Start Date of Connectivity	JCC Present Status	Remarks
Hybird Tranche-III								
1	M/s AMP Energy Green Eight Private Limited	Fategarh, rajasthan-Northern Region	1200003022	1200003416	Actual start date of connectivity + 60 days or date of commisioning whichever is earlier	19.01.2023 or system whichever is later.	30th JCC 26th June'2024-Connectivity likely to be operationalized upon commissioning of required Transmission system. i.e. 19.03.2025	Project SCD extended, due to delay in connectivity
2	M/s Aadani Hybrid Energy Jaisalmer Five Limited	Khavada, Gujarat-Western Region	230700006	430700007	31.03.2025 or actual LTOA date,which ever is later	31.03.2025 (Interim)	44th JCC Meeting 27th June'2024-Likely Operationalization date: 21.03.2025	
3	M/s ABC Renewable Energy (RJ-03) Private limited	Jaisalmer, Rajasthan-Northern Region	1200003002	1200003531	Actual LTOA date/Start date of connectivity + 60 days	19.03.2025(Final).	As per 30th JCC 26th June'2024- Connectivity is likely to be operationalized upon ommissioning of required Transmission system. i.e. 20.09.2025	
Assured Peak Power								
1	M/s Greenko AP01 IREP Private limited	Kurnool, Andhara pradesh-Southern Region	1200002672	1200003664	Actual LTOA date/Start date of connectivity + 60 days	16.07.2024	As per 46th JCC 25th june2024-Likely Operationalization date: 490MW31.12.2024 410MW16.07.2024	Project SCD extended, due to delay in connectivity
RTC								
1	M/s Renew Surya Roshni Private Limited	Fategarh, rajasthan-Northern Region	1200002628	1200003269	Actual LTOA date/Start date of connectivity + 60 days	31-12-2022 or commissioning of ISTS, whichever is later.	As per 30th JCC 26th June'2024-Connectivity likely to be operationalized upon commissioning of required Transmission system. i.e. 01.01.2025	Project SCD extended, due to delay in connectivity
Tranche-IV								
1	M/s Kotuma Wind parks Private limited	Barmer, Rajasthan-Northern Region	1200003532	412100002	Actual LTOA date/Start date of connectivity + 60 days	20.09.2025	As per 30th JCC 26th June 2024-Connectivity likely to be operationalized upon commissioning of required Transmission system. i.e. 20.09.2025	Project SCD extended, due to delay in connectivity
		Gadag, Karnataka-Southern Region	1200003534	451100003		31.12.2024 (With the availability of common transmission system required for effectiveness of Connectivity/ GNA)	As per 46th JCC 25th June'2024-Likely Operationalization date: 31.12.2024	Project SCD extended, due to delay in connectivity
2	M/s Project Ten Renewable Power Private Limited	Pavagad, Karnataka-Southern Region	1200003540	451100004	Actual LTOA date/Start date of connectivity + 60 days	16.07.2024	As per 46th JCC 25th june 2024-Likely Operationalization date: 31.12.2024	Project SCD extended, due to delay in connectivity
		Koppal, Karnataka-Southern Region	1200003530	451100005		16.07.2024	As per 46th JCC 25th june 2024-Likely Operationalization date: 31.12.2024	Project SCD extended, due to delay in connectivity
Tranche-V								
1	M/s TP Saurya Limited	Gadag, Karnataka-Southern Region	251100006		24.02.2026 or actual start date of connectivity + 60 days, whichever is later	30.09.2025 (tentative) with the availability of common transmission system mrequired for effectiveness of Connectivity/ GNA.	As per 46th JCC 25th June'2024-Likely Operationalization date: 26.12.2025	Project SCD extended, due to delay in connectivity
		Koppal, Karnataka-Southern Region	251100005			11.01.2025 (tentative) with the availability of common transmission system required for effectiveness of connectivity/GNA	As per 46th JCC 25th June'2024-Likely Operationalizationdate:11.01.2025	Project SCD extended, due to delay in connectivity
		Bikaner, Rajasthan-Northern Region	1200003582			27.12.2025 (Final)	As per 30th JCC 26th June 2024-Connectivity likely to be operationalized upon commissioning of required Transmission system i.e. 01.01.2026	Project SCD extended, due to delay in connectivity

r. No	Developer Name	Region	Stage-II Appl. No.	LTA Appl. No.	Project SCD	Start Date of Connectivity	JCC Present Status	Remarks
2	M/s AMP Energy Green Private Limited	Barmer, Rajasthan-Northern Region	312100005	412100019	18.11.2025 Or actual start date of connectivity + 60 days	19.09.25 (Final)	As per 30th JCC 26th June 2024-Connectivity likely to beoperationalized on19.09.25.	Project SCD extended, due to delay in connectivity
3	M/s NTPC Renewable Energy Limited	Khavada, Gujarat-Western Region	330700007			31.01.2026 (Interim)	As per 44th JCC 27th June'2024-Operationalization date July'2026	Project SCD may be extended, due to delay in connectivity
		Kutch, Gujarat-Western Region	1200000084		16.05.2025			

सोलर एनर्जी कॉर्पोरेशन ऑफ इंडिया लिमिटेड
(भारत सरकार का उपक्रम)
Solar Energy Corporation of India Ltd.
(A Govemment of India Enterprise)
स्वच्छ भारत - स्वच्छ ऊर्जा

No. SECI/PSD/Hybrid/2024/001/67847 Dated: 10.10.2024

To,

The CEO
Central Transmission Utility of India Ltd
First Floor, Saudamini, Plot No.2,
Sector-29, Near IFFCO Chowk,
Gurgaon-122001

Sub: Delay in readiness of evacuation system along with associated infrastructure and start date of connectivity -Reg.

Dear Sir,

This is with reference to Hybrid Projects under SECI's tenders mapped to different Buying Entities. In this regard, SECI is being continuously organizing Project review meetings with stakeholders (Developers and Buying Entities) to monitor the progress of Projects. During the meeting, Developers have highlighted the delay in readiness of evacuation infrastructure which leads to delay in commissioning of the Projects. Also it is to bring to your kind notice that SECI has extended the project timelines due to delay in start date of connectivity. Subsequently, Buying Entities have also raised the delay in off take of power which are affecting their RPOs.

In view of above, it is requested to kindly expedite the activities pertaining to evacuation infrastructure, so that Projects can be commissioned on time.

The detailed list of such Projects is attached herewith for your reference.

An early action in this regard shall be highly appreciated.

Thanking you,

Yours faithfully,

(P. Venkatesan)
DGM (Projects)

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Assured Peak Power								
1	M/s Greenko APD1 IREP Private limited	Kurnool, Andhara pradesh-Southern Region	1200002672	1200003664	Actual LTOA date/Start date of connectivity + 60 days	16.07.2024	As per 46th JCC 25th june2024-Likely Operationalization date: 490MW31.12.2024 410MW16.07.2024	Project SCD extended, due to delay in connectivity
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		Gadag, Karnataka-Southern Region	1200003534	451100003		31.12.2024 (With the availability of common transmission system required for effectiveness of Connectivity/ GNA)	As per 46th JCC 25th June'2024-Likely Operationalization date: 31.12.2024	Project SCD extended, due to delay in connectivity
2	M/s Project Ten Renewable Power Private Limited	Pavagad, Karnataka-Southern Region	1200003540	451100004	Actual LTOA date/Start date of connectivity + 60 days	16.07.2024	As per 46th JCC 25th june 2024-Likely Operationalization date: 31.12.2024	Project SCD extended, due to delay in connectivity
		Koppal, Karnataka-Southern Region	1200003530	451100005		16.07.2024	As per 46th JCC 25th june 2024-Likely Operationalization date: 31.12.2024	Project SCD extended, due to delay in connectivity
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		Koppal, Karnataka-Southern Region	251100005			11.01.2025 (tentative) with the availability of common transmission system required for effectiveness of connectivity/GNA	As per 46th JCC 25th June'2024-Likely Operationalizationdate:11.01.2025	Project SCD extended, due to delay in connectivity
		Bikaner, Rajasthan-Northern Region	1200003582			27.12.2025 (Final)	As per 30th JCC 26th June 2024-Connectivity likely to be operationalized upon commissioning of required Transmission system i.e. 01.01.2026	Project SCD extended, due to delay in connectivity

Sr. No	Developer Name	Region	Stage-II Appl. No.	LTA Appl. No.	Project SCD	Start Date of Connectivity	JCC Present Status	Remarks
2	M/s AMP Energy Green Private Limited	Barmer, Rajasthan-Northern Region	312100005	412100019	18.11.2025 Or actual start date of connectivity + 60 days	19.09.25 (Final)	As per 30th JCC 26th June 2024-Connectivity likely to beoperationalized on19.09.25.	Project SCD extended, due to delay in connectivity
3	M/s NTPC Renewable Energy Limited	Khavada, Gujarat-Western Region	330700007			31.01.2026 (Interim)	As per 44th JCC 27th June'2024-Operationalization date July'2026	Project SCD may be extended, due to delay in connectivity
		Kutch, Gujarat-Western Region	1200000084		16.05.2025			

Anil Diggikar I.A.S.
General Manager

BRIHAN - MUMBAI ELECTRIC SUPPLY & TRANSPORT UNDERTAKING
BEST Bhavan, BEST Marg, Colaba,
Mumbai - 400 001.
Tel. : 022-22873961, 022-22873962
E-mail : gm@bestundertaking.com
Website: www.bestundertaking.com

DO/GM/AGMES/ 8980 /2024

10 APR 2024

Sub: Scheduled Commissioning Operation Date of 400 MW Wind-Solar Hybrid power project under ISTS Hybrid Tranche III scheme and 234 MW Solar power project under SECI's Manufacturing linked solar scheme – Meeting the prescribed deadlines

Dear Shri. Gupta,

BEST Undertaking supplies power to the Island City of Mumbai which houses various financial and other important establishments of the nation. BEST has signed Power Supply Agreements (PSA) with Solar Energy Corporation of India (SECI) for procurement of 400 MW Wind-Solar Hybrid power and 234 MW Solar power for 25 years on 25.06.2021and 09.12.2022 respectively. SECI has further signed PPAs with various developers on 21.07.2021 and 03.05.2023 respectively. As per the Article 1.1 (Definition), Scheduled Commissioning Date shall mean 18 months from the Effective Date of the SECI-HPD PPA.

As such, SECI has informed that the date for power flow to BEST would be December 2024 for 234 MW Solar power project under Manufacturing linked solar scheme and March 2025 for 400 MW Wind-Solar Hybrid power project under ISTS Hybrid Tranche III scheme (as per the email received from SECI dated 22.12.2023).

BEST has considered power from SECI of 634 MW as part of its stack for meeting the power requirement and accordingly planned the requirement from different sources. Achieving Scheduled Commissioning Operation Date (SCOD) at the designated date is therefore of utmost importance.

May, I therefore kindly request you to give necessary instructions to solar developers for meeting the prescribed deadlines and expedite the projects.

With Regards,

Yours Sincerely,

(Anil Diggikar)

Shri. R. P. Gupta
Chairman &Managing Director
Solar Energy Corporation of India Limited,
6th Floor, Plate B, NBCC office Block Tower -2,
East Kidwai Nagar, New Delhi - 110023.
e-mail: corporate@seci.co.in

REC Power Development and Consultancy Limited
(Formerly Known as REC Power Distribution Company Limited
A wholly owned subsidiary of REC Limited, a 'Navratna CPSE'
under Ministry of Power. Govt. of India)

REC Power Development

Notice Inviting Tender (NIT)

(Invited through e-Tendering mode only)

For

Appointment of Advanced Metering Infrastructure (AMI) Service Provider for Implementing Prepaid Smart Metering Project in The Brihanmumbai Electric Supply & Transport Undertaking (BEST) on DBFOOT basis

No. RECPDCL/BD /e-Tender/2022-2023/73759 Dated: 06.05.2022

REC Power Development & Consultancy Limited (RECPDCL)
(A wholly owned subsidiary of REC Ltd., a 'Navaratna CPSE'Under Ministry of Power, Govt. of India) CIN No. of RECPDCL: U40101DL2007GOI165779

Corporate office
REC Power Development & Consultancy Limited Plot Number 1-4, REC World Headquarters, D-Block Sector-29, Gurugram – 122001, Haryana
Website: www.recpdcl.in

Important Dates	
Date of Release of NIT / Tender	06.05.2022
Last date for queries/ seeking clarification	25.05.2022 at 17:00 Hours
Pre Bid Meeting	27.05.2022 at 11:00 Hours
Last date of submission of Bid	06.06.2022 at 17:00 Hours
Date of Opening of Bids	08.06.2022 at 10:00 Hours

Note: Online registration has to be done at e-tendering website i.e. mahatenders.gov.in in general; activation of registration may take about maximum 24 hours subject to the submission of all requisite documents required in the process.

-Sd- (S.C.Garg)
Addl. C.E.O.

[This document is meant for the purpose of engaging of agencies against this tender and should not be transferred, reproduced or otherwise used for purposes other than specified/issued]

Tender Information

Tender Reference No.	RECPDCL/BD /e-Tender/2022-2023/73759 Dated: 06.05.2022
Work Item Title/ Description	Appointment of Advanced Metering Infrastructure (AMI) Service Provider for Implementing Prepaid Smart Metering Project in The Brihanmumbai Electric Supply & Transport Undertaking (BEST) on DBFOOT basis
Mode of Tendering	Open (e-Tendering)
Tender Release Date	06.05.2022
Date of Pre-Bid Meeting	27.05.2022 at 11:00 Hours (IST) To join the video meeting, click this link: Will be provided later.
Last Bid Submission date	06.06.2022 at 17:00 Hours
Date of Opening of Bid	08.06.2022 at 10:00 Hours
Location of Bid submission/ Opening	Plot Number I-4, REC World Headquarters, D-Block, Sector-29, Gurugram – 122001, Haryana
Tender Category	Services
EMD Fee	75.36 Lacs
Performance Security	The Performance Security amount is 3% of Contract Price
Duration of Assignment	10 Years (2.5 Years Implementation Period + 7.5 Years O&M Period)
Address of Correspondence/ for Bid Submission	Mr. S.C.Garg Additional CEO, REC Power Development and Consultancy Limited Plot Number 1-4, REC World Headquarters, D-Block, Sector-29, Gurugram – 122001, Haryana e-mail: bd.delhi@recpdcl.in
Contact Person from BEST	Shri Suresh P. Makwana CEPL, BEST Email: cepl@bestundertaking.com, Contact No: 9869205357
Contact Person from RECPDCL	Shri Swapn Piyoosh Dy. Manager (Tech.) Email: swapn.piyoosh@recpdcl.in Contact No: +91 8527730111
	Shri Pratik Adarsh Dy. Manager (Tech.) Email: pratik.adarsh@recpdcl.in Contact No: +91 9457072000

AMISP TENDER & BIDDER DETAILS

Sr. No	Tender ID	Tender Ref No	Tender Value	Work Description	NIT Date	Bid Submission End Date	Pre Bid Meeting Date	Bid Opending Date	Bidder Name	Technical Bid Opening Date	Awarded to
1	2022_BEST_816964_2	DMM(SB-I)/06/TCU/73759/22-23/A	708.55 Cr	Appointment of AMISP for Implementing Prepaid Smart Metering Project in The Brihanmumbai Electric Supply and Transport Undertaking (BEST) on DBFOOT basis	14-7-2022	19-7-2022		21-7-2022	1) Adani Transmission Limited 2) Ashoka Buildon Ltd 3) Genus Power infrastructure Ltd. 4) Fluint Grid Ltd. 5) Intellismart Infrastructure Pvt Ltd 6) Monte Corlo Ltd	21-7-2022	L1 - Adani Transmission Ltd. @ 1303.16 Cr Dt. 06/09/2022 LOA - 30/09/2022

THE BRIHAN MUMBAI ELECTRIC SUPPLY & TRANSPORT UNDERTAKING
(OF THE BRIHAN MUMBAI MAHANAGARPALIKA)

☎ : 2377 5544, 2374 3933
Mob.: 9867830770
E_MAIL: mypednekar@bestmmd.net

ADD: MATERIALS MANAGEMENT DEPT.
Bijlee Bhavan, 2nd Floor, Mazagaon,
Kussara Bunder Road, Mumbai–400 010.

Ref.: DMM/SB/06/T-TA73759/4494/2022-23

Date: 30.09.2022

ADANI TRANSMISSION LIMITED
Adani Corporate House, Shantigram,
Near Vaishnodevi Circle,
S. G. Highway,
AHMEDABAD – 382 421

Kind attn.: Shri. Vaibhav Tandon
(Asst. Vice President)

E-mail: tandon.vaibhav@adani.com

Dear Sirs,

Sub: Letter of Award for Appointment of Advanced Metering Infrastructure (AMI) Service Provider for Implementing Prepaid Smart Metering Project in the Brihan-Mumbai Electric Supply & Transport Undertaking (BEST) on Design, Built, Finance, Own, Operate & Transfer (DBFOOT) basis

Ref.: 1. Tender No. DMM(SB)I/06/TCU/73759/2022-23/Advt., opened under Reverse Auctioning mechanism with Techno-commercial bids opened on 21.07.2022 & Price bids opened & Reverse Auction carried out on 06.09.2022
2. A. R. No. 97 dtd. 29.09.2022

This is in reference to your proposal in relation to the Request for Proposal (RFP). Pursuant to the evaluation of the bid, your bid has been found to be most suited. Vide A. R. No. 97 dtd. 29.09.2022, the Administrator (BEST Committee) has approved the proposal to enter into contract with the firm viz. Adani Transmission Limited for Appointment of Advanced Metering Infrastructure (AMI) Service Provider for Implementing Prepaid Smart Metering Project in the Brihan-Mumbai Electric Supply & Transport (BEST) Undertaking on Design, Built, Finance, Own, Operate & Transfer (DBFOOT) basis.

We are, therefore, pleased to inform you that the BEST Undertaking has accepted your offer, the details of which are as shown below:

Description	Basic Rate Rs.P.	Gross Rate Rs.P.	Approx. Total Cost Rs.P.
Appointment of Advanced Metering Infrastructure (AMI) Service Provider for Implementing Prepaid Smart Metering Project in the Brihan-Mumbai Electric Supply & Transport Undertaking (BEST) on DBFOOT basis as per the Undertaking's Technical Specifications	11,04,37,55,237.00	13,03,16,31,179.89	**13,03,16,31,179.89**

You are, therefore, requested to please take steps for incorporation of the SPV in terms of the RFP for execution of the AMISP contract. The execution of the AMISP contract shall happen only after you have furnished the Performance Security in terms of the RFP.

TERMS & CONDITIONS:

a)	**PRICES**	:	Unconditionally 'Firm' throughout the contractual period. The detailed price breakup is as per attached Annexure-A.
b)	**TAXES & STATUTORY LEVIES**	:	SGST @ 9% & CGST @ 9%. However, those applicable at the time of supply will be charged.
c)	**TERMS OF PAYMENT (CONTRACT PRICE & PAYMENT)**	:	As per the attached Annexure-B.
d)	**SCOPE OF WORK**	:	As per the attached Annexure-C.
e)	**WARRANTY CLAUSE**	:	i) The AMISP warrants that all the Goods that would be used as part of Solution would be new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the contract. ii) The AMISP further warrants that the Goods shall be free from defects arising from any act or omission of the AMISP or arising from design, materials, and workmanship, under normal use in the conditions prevailing in the country of final destination iii) The warranty of the AMI system including field and remote Hardwares, software and meters shall remain valid till expiryof the contract Period. iv) The AMISP shall be responsible for comprehensive maintenance of all the equipment and systems supplied & installed under this contract during the Operational Period. There may be some variation during detailed engineering. AMISP will have to make their own assessment of the systems and deploy manpower accordingly. However, it is to be ensured that specified manpower of requisitequalification is deployed. v) The maintenance of the system supplied & installed by the AMISP shall be comprehensive. The AMISP shall be responsible for providing all the spares as may be required. The spares shall be maintained by the AMISP at no extra cost to the Utility/AMI-IA. vi) At the end of the contract or at the time of transfer in case of termination, the meters shall have a warranty of 5 years from their installation.

f)	**PERFORMANCE SECURITY**	:	i) The AMISP shall furnish Performance Security in the form of an irrevocable bank guarantee valid up to a period of 6 (six) months beyond the end of the contract Period or extended thereafter, for the amount indicated in Special Conditions of contract (SCC) on the prescribed format. However, in case of delay in Installation Milestone, the validity of the initial Performance Security shall be extended by the period of such delay. In the event delay is solely due to acts and/ or omission of the AMI-IA cost of extending the validity of Performance Security shall be reimbursed to the AMISP by the AMI-IA. ii) Upon achievement of Installation Milestone, the value of the Performance Security shall be reduced by AMISP, to the extent indicated in SCC as determined in accordance with numbers of meters considered for Installation Milestone. iii) Any payments shall be made to the AMISP only after receipt of the initial Performance Security by AMI-IA. iv) Upon Termination of the contract due to AMI-IA Event of default or expiry of the contract Period, the separate Performance Security shall be discharged by AMI-IA without any interest and returned to the AMISP not later than 14 (fourteen) working days following the date of Termination of the contract. Upon Termination of the contract due to AMISP Event of default, the Performance Security shall be forfeited by AMI-IA. v) In case of any delay by the AMISP in performing the activities of the scope of work with respect to the Project Implementation Schedule, then upon AMI-IA's request, the AMISP shall extend the validity of the separate Performance Security for the period for which the contract is extended. In the event delay is solely due to acts and/ or omission of the AMI-IA cost of extending the validity of separate Performance Security shall be reimbursed to the AMISP by the AMI-IA.
g)	**LIQUIDATED DAMAGES, PENALTY & INCENTIVES CLAUSE**	:	i) Except in case of Force Majeure or where the delay in delivery of the Solution is caused due to any delay or default of AMI-IA if the Installation Milestone is delayed by more

			than 30 (thirty) months from the date of execution of the contract the AMISP shall be liable to pay liquidated damages as per the specified rates. ii) Except in case of Force Majeure or where the delay in delivery of the Solution is caused due to any delay or default of AMI-IA if the delivery, site installation, integration and operationalization of 100% of Feeder Meters each with related hardware, software and equipment is delayed by more than 9 (nine) months from the date of execution of the contract the AMISP shall be liable to pay liquidated damages as per the specified rates. iii) AMI-IA shall without prejudice to all its other remedies under the contract, deduct from the amount due to be paid, as liquidated damages, 50% of AMISP Service Charge for each delayed meter for each completed month of delay for a maximum period of 12 (twelve) months. An illustrative example for arriving at the deductions is given in SCC. iv) If the AMISP achieves milestone of "Installation Milestone atleast one month in advance than the timelines specified in the contract, AMI-IA shall provide an incentive as specified in SCC. v) Upon achieving Installation Milestone, AMISP shall be entitled to raise a supplementary invoice for the amount indicated therein. The Supplementary invoice shall be paid along with the amount due to be paid for AMISP Service Charges for the immediately succeeding month.
h)	**QUANTITY VARIATION CLAUSE**	:	AMI-IA reserves the right to increase or decrease the number of items under the AMI-SP contract subject to the limit of -20% (twenty percent) upto +30% (thirty percent) of the existing no. of items, covered under the AMI-SP contract, without any change in the unit prices or other terms and conditions of the AMI-SP contract and the Bid.
i)	**CONTRACT VALIDITY PERIOD (EFFECTIVENESS & TERM)**	:	i) This contract shall come into force and effect on the date of execution of the contract by the Parties; ii) Unless terminated earlier by either Party or extended by the AMI-IA in accordance with the terms of this contract, this contract shall continue in full force and effect until the earlier of (a) 10 (ten) years from the date of execution of the

			contract or (b) As soon as the "Meter-Months" exceeds "Total Meter- months" ("Term of the contract"). iii) The AMI-IA, at its own discretion, may extend the operation and maintenance period of the AMI system at terms mutuallyagreed upon with the AMISP.
j)	**PROTOTYPE & LOT INSPECTION**	:	i) Prototype Inspection: The Prototype inspection is applicable for this particular tender and the Undertaking's officers shall visit the firm's factory premises to inspect quality of Prototype produced and the Undertaking shall bear the expenditure of to and fro travelling, lodging and boarding of the Undertaking's two inspecting officers. The Prototype meters will be carefully preserved by BEST Undertaking for the guarantee period of five years. If any deviation is observed in the meter supplied by the Tenderer in subsequent lot, the meter(s) with deviation will be liable to be rejected. ii) Lot Inspection: The Lot Inspection is applicable for one Lot preferably first for this particular tender and the Undertaking's officers shall visit the firm's factory premises to inspect the quality of Lot produced and the Undertaking will bear the expenditure of to and fro travelling, lodging and boarding of the Undertaking's two inspecting officers. For subsequent visits required, if any, the Undertaking will bear the expenditure.
k)	**OTHER CONDITIONS**	:	In case any upfront payment is made by the Undertaking, then the monthly payable amount shall be reduced based on the then calculated Net Present Value (NPV).

You will be required to furnish Performance Security for the amount equivalent to Rs.39,09,48,936.00 in the form of Bank Guarantee valid for the period of 126 months from the date of release of this Letter of Award. For scrutiny of Bank Guarantee, you will have to pay Administrative Charges of Rs. 2,000/- + GST @ 18% in our Cash Department at Colaba or Dadar.

Further, this Letter of Award is also subject to other terms and conditions which are incorporated in the tender document and there shall be no change whatsoever in the Terms & Conditions as set out in the Draft contract. After receipt of Performance Security and signing of AMISP Contract Agreement, the Purchase Order will be released. Till that time, for all purposes, this Letter of Award shall be treated as Purchase Order.

The terms & conditions as set out in this Letter of Award shall stand valid until execution of AMISP contract. Please acknowledge the receipt and return the duplicate copy of this Letter of Award after signing & stamping it in all the pages to the undersigned as a token of acceptance.

Encl.: 1. Annexure-A
2. Annexure-B
3. Annexure-C

Yours faithfully,

MANGESH YESHWANT PEDNEKAR

Digitally signed by MANGESH YESHWANT PEDNEKAR
DN: c=IN, o=BEST UNDERTAKING, ou=MATERIAL MANAGEMENT, postalCode=400001, st=MAHARASHTRA, serialNumber=69788d2054117e45eaac033fe85d0c13bbbf9fe7154932f4ee2fdf454bf3d9d3062, cn=MANGESH YESHWANT PEDNEKAR
Date: 2022.09.30 17:15:44 +05'30'

(M. Y. Pednekar)
DY. MATERIALS MANAGER (SB)I

ANNEXURE-B

CONTRACT PRICE & PAYMENT

1.	**Contract Price:**
1.1	The Contract Price is as indicated in Special Conditions of Contract (SCC).
1.2	In the event any approval required for imports and/ or use of imported equipment is denied in accordance with all applicable laws including those in relation to testing issued by Ministry of Power (Order No No.9/16/2016-Trans-Part (2) dated 18 November 2020, as amended and/ or modified from time to time), the same shall neither entitle revision of Contract Price nor shall result in revision of the Project Implementation Plan as specified in Article 2.2 of this Contract.
2.	**Payment Mechanism:**
2.1	The payment shall be made to the AMISP in Indian Rupees (INR) only.
2.2	The payment to the AMISP shall commence only one month after Operational Go-Live as defined in Section 6;
2.3	The payments due to the AMISP from the AMI-IA shall be paid on monthly basis as per the payment structure specified in SCC.
2.4	Except in case of Change Order in accordance with Article 14 of this Contract, the sum total of all payments made to the AMISP shall not exceed the Contract Price quoted in Article 1.1.
2.5	The actual payment shall be net of any applicable liquidated damages and/or penalty due to noncompliance of SLAs by the AMISP.
2.6	AMISP will raise and deliver the invoice and the Deliverables mentioned above to the AMI-IA for the monthly payments within first 5 (five) working days of every month. AMISP shall also raise a supplementary invoice for the agreed amount towards software change requests/new requirements completed in the previous month, in accordance with Article 14.2 of this Contract. AMI-IA will review the AMISP invoice raised by the AMISP and the Deliverables including the SLA performance report, in accordance with Article 8, within 5 (five) working days from the invoice and SLA performance report delivered by the AMISP. AMI-IA may dispute the amount payable and shall pay the undisputed amount of the payment due via direct debit facility (as specified in Article 5.2.7) from the 11th (Eleventh) working day of every month till the 10th (tenth) working day of succeeding month. The disputed amount, (related to actual number of meters installed, integrated and operationalized, penalty imposed due to non-compliance of SLAs, and liquidated damages), shall be dealt as per Article 13 of this Contract.
2.7	The AMI-IA shall, within 90 (ninety) days from the date of execution of Contract, establish a Direct Debit Facility for the entire online consumer payments to ensure recovery of the

	amount due to be paid to the AMISP including amount due to be paid towards supplementary invoice. In this regard, the AMI-IA shall create a separate facility compatible with all online payment options such as Net Banking, Credit/ Debit Card, Mobile Wallets, UPIs, etc. This facility shall be configurable for direct debit of 100% (hundred percent) of the monthly payment due to the AMISP from all recharges and bill payments by Consumers. For the avoidance of doubt, it is expressly acknowledged that the Direct Debit Facility shall not be restricted to the area where the AMISP is providing services but for the entire area of supply of the AMI-IA.
2.8	The Direct Debit Facility would include a bucket filling approach whereby all consumer recharges and bill payments from the 11th (eleventh) working day of every month up to 10th (tenth) working day of the immediately succeeding month will be routed directly to the AMISP's bank account till such time the undisputed amount of the payment due including amount due towards with supplementary invoice issued by AMISP is recovered in its entirety. Once the entire undisputed amount of the payment due including amount due towards with supplementary invoice is recovered, the Direct Debit Facility shall no longer transfer any money to the AMISP. In the event the overall monthly amount due to the AMISP (i.e. 100% of undisputed amount due to be paid including any amount due to be paid towards supplementary invoice issued by AMISP) as the sum of the consumer payments is not reached till 10th working day of the next month, the shortfall/ deficit amount shall be paid along with the undisputed amount due to be paid including any amount to be paid towards supplementary invoice issued by AMISP for the immediately succeeding month. An illustration of the aforementioned Direct Debit Facility is provided in with Article 5.2 of this Contract.
2.9	In the event the AMISP fails to meet a particular performance criterion as mentioned under the Service Level Agreement (SLA) specified in Clause 7.7 of Section 6 for cumulatively 3 (three) months in past 6 (six) months, resulting in the maximum penalty for the particular performance criterion, AMI-IA may issue a SLA Default Notice to the AMISP directing it to take steps within 90 days to comply with the performance criterion specified in the SLA (For example, in the event AMISP fails to meet the norm specified for "Availability of AMI System per month" for cumulatively 3 (three) months in past 6 (six) months leading to levy of maximum penalty thereof.
2.10	In the event a Smart Meter supplied and installed by the AMISP is damaged for reasons not attributable to the AMISP such as theft, vandalism, burning, etc. or as a result of Force Majeure Event, the AMISP shall not be liable for such damage. In such cases, upon receipt of Notice from the AMI-IA, the AMISP shall repair or replace the damaged Smart Meters. AMISP shall be required to replace the Smart Meter no later than 15 days of notification by the AMI-IA. Upon replacing the Smart Meter, AMISP shall be entitled to raise a

	supplementary invoice for the amount mutually agreed between AMISP and the AMI-IA. The Supplementary Bill shall be paid along with the amount due to be paid towards AMISP Service Charges, for the immediately succeeding month. For the avoidance of doubt: (i) a damaged meter(s) shall be excluded from the total numbers installed and operational smart meters while conducting the SLA audit of the AMI system in accordance with Article 8; and (ii) in the event, AMISP replaces the Meterwithin 15 days of request by the AMI-IA or AMI-IA directs to continue operations without replacing the damaged Meter, theAMISP Service Charge qua such meter(s) shall be paid as if such damaged meter complies with the SLA prescribed in thisAMISP Contract.
2.11	operations for direct payment to AMISP through consumer payments has been illustrated in SCC.
3.	**Taxes & Duties:**
3.1	For Goods whether supplied from or outside India, the AMISP shall be entirely responsible for all taxes, duties, stamp duties, license fees, and other such levies imposed outside India.
3.2	Any statutory increase or decrease in the taxes and duties including GST and Cess as applicable or in the event of introduction of new tax/cess or cessation of existing tax/cess subsequent to the AMISP's offer on the goods and services explicitly mentioned in financial bid shall be dealt with in accordance with provisions of Change in Law.
3.3	Notwithstanding anything above or elsewhere in the Contract, in the event that the input tax credit of the GST charged by theAMISP is denied by the tax authorities to the AMI-IA for reasonsattributable to the AMISP, the AMI-IA shall be entitled to recover such amount from the AMISP by way of adjustment from any of the subsequent invoices submitted by the AMISPto the AMI-IA.

MANGESH YESHWANT PEDNEKAR

Digitally signed by MANGESH YESHWANT PEDNEKAR
DN: c=IN, o=BEST UNDERTAKING, ou=MATERIAL MANAGEMENT, postalCode=400001, st=MAHARASHTRA, serialNumber=e697882058111b45eaac03b6f5d0113bbfd9e745893318ee2f8f454bf3d9d3b62, cn=MANGESH YESHWANT PEDNEKAR
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ANNEXURE-23

SHARE OF GA BREAKUP

EXPENSES SUMMERY APRIL 2024- SEPT. 2024

PARTICULARS	G.A SUPPLY	TYPES
ESTABLISHMENT COST		
SALARIES, WAGES AND ALLOWANCES	14,25,96,844.74	SALARIES WAGES AND BONUS
DEARNESS ALLOWANCES	3,32,82,521.43	SALARIES WAGES AND BONUS
PROVIDENT FUND CONTRIBUTION	2,02,02,037.26	CONTRIBUTION TO PROVIDENT FUND
GRATUITY	75,59,376.19	CONTRIBUTION TO PROVIDENT FUND
COST OF BUS TOKEN AND PASSES	-	TRAVELLING EXPENSES
EX-GRATIA PAYMENT IN LIEU OF B	45,87,950.92	SALARIES WAGES AND BONUS
LEAVE TRAVEL ASSISTANCE	77,390.00	CONTRIBUTION TO PROVIDENT FUND
INTERIM RELIEF \ WAGE SETTLEME	10,16,39,861.92	SALARIES WAGES AND BONUS
VRS COMPENSATION TO STAFF	-	SALARIES WAGES AND BONUS
SPECIAL BENEFIT TO EMPLOYEES	-	STAFF WELFARE EXPENSE
CONDUCTOR ON DAILY WAGES	-	SALARIES WAGES AND BONUS
DRIVERS ON DAILY WAGES	-	SALARIES WAGES AND BONUS
PF CONT. DAILY WAGES CONDUCTOR	-	SALARIES WAGES AND BONUS
NATIONAL PENSION SCHEME(NPS) D	52,632.00	
RECEIVING STN. R & M LABOUR	-	SALARIES WAGES AND BONUS
SUB STATION R & M LABOUR	-	SALARIES WAGES AND BONUS
NETWORK R & M LABOUR	-	SALARIES WAGES AND BONUS
METERING R & M LABOUR	-	SALARIES WAGES AND BONUS
FUSE CONTROL R & M LABOUR	-	SALARIES WAGES AND BONUS
WORKSHOP KUSSARA R & M LABOUR	-	SALARIES WAGES AND BONUS
STREET LIGHTING R & M LABOUR	-	SALARIES WAGES AND BONUS
TOTAL OF ESTABLISHMENT	30,99,98,614.46	
ADMINISTRATION AND GENERAL EXPENSES		
ADMINISTRATION EXPENSES		
STATIONERY PRINTING / DRAWING	7,32,392.02	PRINTING & STATIONERY
POSTAGE,TELEGRAMS AND REVENUE	11,706.28	COMMUNICATION COST
INSPECTION,REGISTRATION AND LI	2,999.75	RATES AND TAXES
ADVERTISEMENT	2,32,154.50	ADVERTISEMENT EXP
ELECTRIC ENERGY FOR LIGHTING A	48,39,010.50	POWER, FUEL AND ELECTRICITY
TELEPHONE,RENTALS,REP. INCLU L	28,99,402.55	COMMUNICATION COST
RENT, RATES AND TAXES	-4,14,431.00	RENT
INTERNAL TRANSPORT EXPENSES	-	TRAVELLING & CONVEYANCE
INSURANCE (MISCELLANEOUS)	-	INSURANCE
BANK CHARGES / BANK COMMISSION	-2,401.98	BANK CHARGES
PROPORTION COST OF TELECOMMUNI	-	COMMUNICATION COST
CARRIAGE & SHIFTING (TRANSPORT	5,36,714.00	TRAVELLING & CONVEYANCE
CONSULTATION CHARGES / MEMBERS	2,59,457.50	LEGAL & PROFESSIONAL FEES
LEGAL COST INCLU STAMP FEES CO	57,81,202.59	LEGAL & PROFESSIONAL FEES
TRAINING / RESEARCH DEVELOPMEN	-	OTHER ESTABLISHMENT EXP
GROUP INSU PREMIUM-EMPLOYERS C	-	CONTRIBUTION TO PROVIDENT FUND
EDLI CONTRIBUTION TO EMPLOYEE	3,17,353.00	CONTRIBUTION TO PROVIDENT FUND

DEPOSIT LINK INSURANCE SCHEME	-	CONTRIBUTION TO PROVIDENT FUND
PROPERTY INSURANCE FUND	-	DON'T TAKE IN MERC
OTHER AUDIT CHARGES (ACCOUNTS)	51,84,113.50	LEGAL & PROFESSIONAL FEES
TOTAL OF ADMINISTRATION EXPENSES	2,03,79,673.21	
OTHER EXPENSES		
CONTINGENCIES	-	OTHER ESTABLISHMENT EXP
FREE ISSUE OF PETROL TO OFFICE	5,05,233.60	STAFF WELFARE EXPENSE
HIRING OF REFRIGERATOR & OTHER	2,679.20	RENT
CLOTHING AND LAUNDRY CHARGES	2,06,005.05	STAFF WELFARE EXPENSE
ACCIDENT COMPENSATION TO STAFF	-	STAFF WELFARE EXPENSE
ELECTRICAL APPLIANCE ON HIRE	-	RENT
ELECTRICAL APPLIANCES OF OUTSI	-	RENT
MOTOR VEHICLE 3RD PARTY INSURA	-	INSURANCE
3RD PARTY INSURANCE FUND (NON-	-	INSURANCE
PROVISION FOR OBSOLESCENCE OF	-	PROVISION FOR OBSOLESCENCE OF STORES
Total OTHER EXPENSES	7,13,917.85	
MISCELLANEOUS EXPENSES		
MEDICAL REIMBURSEMENT TO STAFF	37,532.40	STAFF WELFARE EXPENSE
MEDICAL REIMBURSEMENT TO STAFF	-	STAFF WELFARE EXPENSE
OTHER EXPENDITURE	68,08,386.94	OTHER ESTABLISHMENT EXP
HIRING CHARGES TO COMPUTER	-	OTHERS
DEPUTATION ALLOWANGE (TA+DA)	-	TRAVELLING EXP
COURSE FEES (DEPUTATION)	24.70	OTHER ESTABLISHMENT EXP
BOOKS AND PERIODICAL	26,847.59	OTHER ESTABLISHMENT EXP
PHOTOGRAPHIC MATERIALS	-	OTHER ESTABLISHMENT EXP
PUBLICITY CAMPAIGN	-	ADVERTISEMENT EXP
PRINTER RIBBON	1,53,300.08	PRINTING & STATIONERY
CONCESSION UNDER SR 4-4-10	-	STAFF WELFARE EXPENSE
DISASTER MANAGEMENT	-	OTHER ESTABLISHMENT EXP
EXPERIMENTAL WORK, RESEARCH ET	-	OTHER ESTABLISHMENT EXP
EMPLOYERS CONTRIBUTION TO ESI	20,651.50	CONTRIBUTION TO PROVIDENT FUND
PAYMENT OF HONORARIUM TO DOCTO	3,49,146.76	LEGAL & PROFESSIONAL FEES
EXPERIMENTAL WORK ON ELECTRICA	-	OTHERS
CONTRIBUTION TO BEST STAFF AME	4,38,888.77	BEST STAFF AMINITIES RESERVE EXP
PROVISION FOR FIDELITY INSURAN	-	INSURANCE
TPCL TRADING SERVICE CHARGES	-	OTHER ESTABLISHMENT EXP
CHARGES FOR COLLECTION OF BILL	-	OTHER ESTABLISHMENT EXP
FEES TO FORUM MEMBERS	-	LEGAL & PROFESSIONAL FEES
WEATHER FORECAST PROVIDER	-	OTHER ESTABLISHMENT EXP
OMBUDSMAN EXPENDITURE	-	LEGAL & PROFESSIONAL FEES
MERC FEES & CHARGES FOR ARR AP	-	LEGAL & PROFESSIONAL FEES
EXPENSES FOR CONSUMER EDUCATIO	-	OTHER ESTABLISHMENT EXP
ENTERPRISES & INSTITUTION RESE	-	OTHER ESTABLISHMENT EXP
LEASE RENT FOR DISTRIBUTION SU	-	RENT

FEES TO BEST COMMITTEE MEMBERS	-	OTHER ESTABLISHMENT EXP
ARMS,LICENCE FEES,AMMUNITIONS	1,616.00	OTHER ESTABLISHMENT EXP
HIRE CHARGES FOR OFF LINE DATA	-	OTHERS
COMPUTER CENTRE RUNNING EXPENS	-	OTHERS
SERVICES MAINT CHARGES FOR AUT	-	OTHERS
MCA`S ESTABLISHMENT (ACCOUNTS)	-	PAYMENT TO AUDITORS
EXPENS TOWARDS NON-STATU ACTIV	-	OTHER ESTABLISHMENT EXP
CELEBRATION OF REPUBLIC DAY /	5,392.60	OTHER ESTABLISHMENT EXP
LEASE RENT TO BHADA	64,782.00	RENT
CLEANING AND DISINFECTING BY C	4,11,319.29	OTHERS
CLEANING & DISINFECTING DEPART	23,653.56	OTHERS
DRUGS MEDICINES DRESSING INSTR	13,34,674.66	STAFF WELFARE EXPENSE
HOSPITAL CHARGES (MEDICAL)	-	STAFF WELFARE EXPENSE
MAHAPARINIRVAN DAY	-	OTHER ESTABLISHMENT EXP
COST OF TICKET TRANSFERRED TO	-	TRAVELLING EXP
PRINTING & DISPLAYING TIME TAB	-	PRINTING & STATIONERY
PASSENGER TAX	-	RATES AND TAXES
CONDUCTORS LICENCE FEES AND PH	-	OTHERS
DRIVERS LICENCE FEES	-	OTHER ESTABLISHMENT EXP
REWARDS TO FINDERS OF LOST PRO	-	OTHER ESTABLISHMENT EXP
BHATTA AND TRAVELLING CHARGES	-	OTHER ESTABLISHMENT EXP
INST.RESTRUCTURIG & MIS STUDY	-	OTHER ESTABLISHMENT EXP
BUSES LEASE RENTALS	-	RENT
TOLL TAX TO STATE GOVERNMENT	-	RATES AND TAXES
PROVISION FOR PASSENGERS INSUR	-	INSURANCE
THIRD PARTY INSURANCE FUND	-	INSURANCE
FUEL (ITO)	33,898.96	POWER, FUEL AND ELECTRICITY
NET COST OF ITO	-	POWER, FUEL AND ELECTRICITY
REGISTRATON & LICENCE FEES	-	RATES AND TAXES
BONUS AMOUNT FOR CASHLESS RFID	-	OTHER ESTABLISHMENT EXP
CHARGES TOWARDS AUTOMATION OF	-	LEGAL & PROFESSIONAL FEES
Total MISCELLANEOUS EXPENSES	97,10,115.81	
REPAIRS AND MAINTAINANCE		
DEAD STOCK (FURNITURE,TOOLS &	26,267.55	OTHER ESTABLISHMENT EXP
MINOR WORKS	-	OTHERS
SERVICING OF OFFICE EQUIPMENT	10,03,836.54	OTHERS
MPLS CONNECTIVITY CHARGES	10,29,464.50	OTHERS
COMPUTER SPARE PARTS	16,305.22	OTHERS
COMPUTER MAINTAINANCE & SERVIC	7,52,305.70	OTHERS
UPGRADATION / PURCH OF SOFTWAR	2,55,529.50	OTHERS
MAINT OF RADIO TELE SYSTEM INC	-	OTHERS
TOOLS & PLANTS INCLUDING REPLA	-	OTHERS
TOOLS & PLANT INCLUDING REPLAC	-	OTHERS
WORK THROUGH OUTSIDE PARTIES	-	OTHER ESTABLISHMENT EXP
STOCK ADJUSTMENT	-	OTHER ESTABLISHMENT EXP
HIRE SERVICE R & M OF MACHINE	-	OTHERS

UPKEEP & MAINTENANCE OF UPS SY	-	OTHERS
MPLS CONNECTIVITY CHARGES	-	OTHERS
CLOUD CONNECTIVITY CHARGES	-	OTHERS
MATERIALS	-	OTHERS
R & M OF CENTRAL OFFICE/ADMN.B	1,25,16,565.32	BUILDING
R & M ADMN. BLDG. (EWD)	13,10,319.09	BUILDING
PERMANENT REINSTATEMENT	-	PERMANENT REINSTATEMENT
METERS RELAYS INSTRUMENTS ETC.	-	MACHINERY
ANNUAL TECHNICAL SUPPORT FOR T	-	LEGAL & PROFESSIONAL FEES
SCADA MAINTENANCE & SCADA COMM	-	COMMUNICATION COST
OPERATION MAINT. OF BUSINESS P	-	OTHERS
RECEIVING STN. R & M MATERIALS	-	OTHERS
SUB STATION R & M MATERIALS	-	OTHERS
NETWORK R & M MATERIALS	-	NETWORK CHARGES
METERING R & M MATERIALS	-	MACHINERY
FUSE CONTROL R & M MATERIALS	-	OTHERS
WORKSHOP KUSSARA R & M MATERIA	-	OTHERS
STREET LIGHTING R & M MATERIAL	-	OTHERS
AGREEMENT / REGISTRATION / LEG	-	LEGAL & PROFESSIONAL FEES
R & M. OF CASH REC. CENTRE S/S	-	OTHERS
R & M ELECTRICAL WORK AT R/STN	-	OTHERS
AMC OF AUTOMATED ST LIGHTING M	-	OTHERS
STREET LT HIGH MAST UNIT R&M (	-	OTHERS
CONTRACT FOR OUTSOURCING ACTIV	-	OTHERS
WAY LEAVE CHARGES TO THE RAILW	-	OTHER ESTABLISHMENT EXP
R&M SUPPLY & INST. OF METER BO	-	
CHASSIS BY CONTRACTS	-	OTHERS
BODIES BY CONTRACTS	-	OTHERS
R & M OF ELECTRIC BUSES	-	OTHERS
R & M OF HYBRID BUSES	-	OTHERS
REPAIRS & MAINTENANCE AT DEPOT	-	OTHERS
DEVELOPMENT AND ALTERATION WOR	-	OTHERS
R & M OF AC BUSES (MATERIALS)	-	OTHERS
R & M OF CNG BUSES (MATERIALS)	-	OTHERS
RENTALS FOR PUMPS & TANKS AT D	-	OTHERS
R & M SHIFTING OF PETROL,HSD O	-	OTHERS
MATERIALS PAPER (STPP)	-	OTHERS
R & M TICKET & CASH BOXES,PUNC	-	OTHERS
BUS STOP SIGN AND BUS ROUTES	-	OTHERS
REPAIRING FOR DAMAGES CAUSED B	-	OTHERS
CHARGES FOR RADIATORS TOPPING	-	OTHERS
ERECTION,REMOV,REPLAC,DEFACING	-	OTHERS
R&M AND UP-KEEP OF STARTS CHOW	-	OTHERS
R&M OF TRAFFIC BLDG.CHOWKIES,S	-	OTHERS
REP. & MAINT. /UPKEEP OF GARAG	-	OTHERS
R & M ELECT WORK AT GARAGE,W'H	-	OTHERS
R & M ELEC WORK AT TRAFFIC BLD	-	OTHERS
R&M CHARGES FOR INTELLEGENT TR	-	OTHERS
TOTAL REPAIRS & MAINTAINANCE EXP	1,69,10,593.42	
OTHER COST		
LOAN FACTOR ON D.S.S. ETC.	-	INTEREST EXPENSES
REBATE ON SUB STATION PLOT	-	OTHER ESTABLISHMENT EXP

PROMPT PAYMENT DISCOUNT ON ELE	-	DISCOUNT ON ELECTRICITY CHARGES
RKVAH POWER FACTOR DISCOUNT	-	DISCOUNT ON ELECTRICITY CHARGES
RKVAH POWER FACTOR INCENTIVE	-	INCENTIVE CHARGES
REBATE ON ADVANCE PAYMENT TO C	-	OTHER ESTABLISHMENT EXP
INTEREST PAID TO CONSUMERS ON	-	OTHER BORROWING COST
DISCOUNT ON DIGITAL PAYMENT TO	-	DISCOUNT ON ELECTRICITY CHARGES
DISCOUNT FOR E BILL OPTION EXE	-	DISCOUNT ON ELECTRICITY CHARGES
MONET. REWARD TO OUTSIDE INFOR	-	OTHER ESTABLISHMENT EXP
REIM. OF TRANSA. CHGS.AGST PAY	-	DISCOUNT ON ELECTRICITY CHARGES
LOAD FACTOR INCENTIVE	-	INCENTIVE CHARGES
Total OF OTHER COST	-	
DEPRECIATION		
DEPRECIATION	-	
TOTAL OF DEPRECIATION	-	
INTEREST		
INTEREST ON TERM LOAN	-	INTEREST EXPENSES
INTEREST ON OD / CASH CREDIT	-	INTEREST EXPENSES
INTEREST ON SHORT TERM FINANCI	-	INTEREST EXPENSES
INTEREST ON ACCOUNT OF TATA PO	-	INTEREST EXPENSES
TOTAL OF INTEREST	-	
COST OF BULK POWER PURCHASE		
COST OF ELECTRIC ENERGY PURCHA	-	PURCHASE OF ELECTRICITY
FUEL ADJUSTMENT CHARGES PAID T	-	PURCHASE OF ELECTRICITY
FIXED CHARGES	-	PURCHASE OF ELECTRICITY
THERMAL INCENTIVE CHARGES	-	PURCHASE OF ELECTRICITY
ENERGY PURCHASE INRTRA STATE (	-	PURCHASE OF ELECTRICITY
CONTRACTED POWER PURCHASE	-	PURCHASE OF ELECTRICITY
OPEN ACCESS CHARGES (CORRIDOR	-	PURCHASE OF ELECTRICITY
ENERGY BILL BY MSEDCL (POOL IM	-	PURCHASE OF ELECTRICITY
STANDBY CHARGES TO MSEDCL (MAH	-	PURCHASE OF ELECTRICITY
INTRA STATE TRANSMISSION	-	PURCHASE OF ELECTRICITY
ENERGY RPS-OPEN ACCESS- WEEKLY	-	PURCHASE OF ELECTRICITY
ENERGY RPS -DISTRIBUTION	-	PURCHASE OF ELECTRICITY
ENERGY RPS-TRANSMISSION	-	PURCHASE OF ELECTRICITY
ANNUAL OPERATION CHARGES TO SL	-	PURCHASE OF ELECTRICITY
MONTHLY TRADING CHARGES TO SLD	-	PURCHASE OF ELECTRICITY
DELAYED PAYMENT CHARGES ON ENE	-	PURCHASE OF ELECTRICITY
DSM CHARGES FOR DEVIATION BY M	-	
TOTAL OF COST OF BULK POWER PURCHASE	-	
INTEREST ON CONSUMER DEPOSIT	-	OTHER BORROWING COST

ELECT. SUPPLY CONTIN. RESERVE	-	CONTINGENCY RESERVE
RETURN ON EQUITY	-	
RETURN ON INTEREST ON INTERNAL	-	
BAD DEBTS	-	BAD DEBTS
Grand Total	35,77,12,914.75	
Grand Total (Rs. Crore)	35.77	
Less: SECURITY SHARES (Rs. Crore)	4.70	
SHARE OF GA	**31.07**	



महाराष्ट्र MAHARASHTRA ◑ 2024 ◑ CU 486138

प्रधान मुद्रांक कार्यालय, मुंबई
प.मु.वि.क्र. ८.०००३०
19 NOV 2024
सक्षम अधिकारी

श्रीमती मिनल महाजन,

AMENDMENT TO THE BPTA EXECUTED BETWEEN MSETCL AND BEST ON 12/01/2009

Pursuant to Hon'ble Maharashtra Electricity Regulatory Commission (MERC) tariff order dated 31.03.2023 in Case No.239 of 2022 in the matter of " **Determination of Multi-Year Tariff for Intra-State Transmission Tariff for the Balance period of 4th Control Period for FY 2023-24 & FY 2024-25**".

The Clause 4.1(iv) (on Page No.7) of the BPTA executed between **MSETCL** and **BEST** on 12th Jan, 2009 is amended as follows:

Clause 4.1(iv)

"To make available Transmission Capacity on Intra-State Transmission System (InSTS) as per Long Term & Medium Term contracted Generation Capacity which is 921.69 MW (Annexure – I) for FY 2024-25 for BEST between points of injection and points of Drawl.

p.t.o.

जोडपत्र - २ Annexure - 2

नोंद वही अनु क्रमांक/दिनांक (Serial No./Date)	79
(Document)	AGREEMENT
	President S. Pawse
	M 75
	BEST
(Stamp Purchaser)	28 NOV 2021
मुद्रांक विक्रेत्या	शिर्के

परवाना क्रमांक : ८०००३०
मुद्रांक विक्रीचे ठिकाण/पत्ता :
नगर दिवाणी व सत्र न्यायालय, जुनी सिव्हिल इमारत, काला घोडा, पहिला मजला, मुंबई विद्यापीठ आजवळ, मुंबई - ४०० ०३२.

ज्या कारणासाठी ज्यांनी मुद्रांक खरेदी केला त्यांनी त्याचे कारणासाठी मुद्रांक खरेदी केल्यापासून ६ महिन्यात वापरणे बंधनकारक आहे.

The Base Transmission Capacity Rights (Base TCR) on Intra-State Transmission System (InSTS) of Maharashtra for <u>BEST</u> will be as determined by the Hon'ble Maharashtra Electricity Regulatory Commission (MERC) in the matter of Determination of Transmission Tariff for Intra-State Transmission System (InSTS), from time to time."

The generation capacity contracted to be considered under the Commission approved Base TCR of BEST is as per MERC tariff order in Case No.239 of 2022.

(Peeyush S. Sharma)
Chief Engineer (STU)
MSETCL

Sign & Stamp

(Suresh P. Makwana)
Chief Engineer Planning,
B.E.S.&T Undertaking

Sign & Stamp

BEST Undertaking, Mumbai

Total Genration Capacity Contracted for FY 2024-25								
Sr. No.	Name of Power Project/Agency (Operationalized)	Location of project	Installed Capacity of Power Project/ Agency (in MW)	Capacity Contracted (Operational PPA) (in MW)	Date of PPA	Contract Period (Long term /Medium term)	Duration of PPA	Remark
1	TPC-G (Hydro)	Bhira	300	153.51	06.03.2024	Medium Term	5 Years	Hydro Power
2	TPC-G (Hydro)	khopoli	72	36.84	06.03.2024	Medium Term	5 Years	Hydro Power
3	TPC-G (Hydro)	Bhivapuri	75	38.38	06.03.2024	Medium Term	5 Years	Hydro Power
4	TPC-G Unit No. 5	Trombay	500	255.85	06.03.2024	Medium Term	5 Years	Thermal Power
5	TPC-G Unit No. 7	Trombay	180	92.11	06.03.2024	Medium Term	5 Years	Thermal Power
6	TPC-G Unit No. 8	Trombay	250	100	06.03.2024	Medium Term	5 Years	Thermal Power
7	* M/s Manikaran Power Ltd.	Varora Dist-Chandrapur	540	100	24.05.2019	Medium Term	5 Years	Thermal Power
8	Walwhan Solar MH Ltd.	Mangalwedha Dist- Solapur	20	20	27.05.2013	Long Term	25 years	Solar RE for fulfilment of BEST RPO for Long Term
9	# M/s Sai Wardha power Generation pvt. Ltd.	Varora Dist-Chandrapur	540	125	15.10.2024	Medium Term	7 Years	Thermal Power
				921.69				

Total Genration Capacity Contracted for FY 2024-25 is **921.69 MW**

* Agreement for procurement of Power (APP) is signed between BEST & M/s Manikaran Power Ltd. (100 MW) through M/s Sai Wardha Power Generation Ltd. for 5 years from 01.04.2019 to 31.03.2024, however actual power flow started from 01.03.2020.

Agreement for procurement of Power (APP) is signed between BEST & M/s Sai Wardha Power Generation pvt. Ltd. for 125 MW RTC Power for 7 years on 15.10.2024. Condition's precedent completed. However, consent of CESTU/CESLDC is awaited.

DEPP 22/11/2024

Power Purchase Dept.

Fwd: Letter w.r.t ABC PPA termination

ANNEXURE-25

5/21/24 3:44 PM

From: Peram Aditya <peram.aditya@seci.co.in>

To: agmes@bestundertaking.com, cerc@bestundertaking.com, dcemerc@bestundertaking.com, derc@bestundertaking.com

Cc: "Atulya Kumar Naik" <aknaik@seci.co.in>, "Sanjeev Singh" <sanjeev@seci.co.in>, "Tarun Mukhija" <tarun.mukhija@seci.co.in>, "Peryiasamy Venkatesan" <venkatesan@seci.co.in>, "Aalok Singh" <alok.singh@seci.co.in>

Sir,

Please find attached termination letter of M/s ABC Renewable Energy Private Limited against their 380 MW Project under ISTS Hybrid Tranche III.

It is requested to provide BEST undertaking inputs on the same so that SECI may respond to HPD accordingly.

सादर धन्यवाद / Best Regards,
आदित्य पेरम / Aditya P
वरिष्ठ अभियंता / Sr. Engineer
सोलर एनर्जी कॉर्पोरेशन ऑफ इंडिया लिमिटेड / Solar Energy Corporation of India Ltd

Tel: +91 11 24666 284

Attachments:

- SECI Logo.jfif
- ABC TERMINATION OF PPA LETTER.pdf

705/16
16/4/24

ABC RENEWABLE ENERGY (RJ-03) PRIVATE LIMITED

ABC/HPD/SECI/380 MW/101/2023-24 Date: 16 April 2024

To,

Sh. Atulya Kumar Naik,
General Manager,
Solar Energy Corporation of India
Plate B, 6th Floor, Tower 2,
NBCC office complex
East Kidwai Nagar, New Delhi 110023.

Sub: Notice of termination of PPA due to inordinate delays in the development of 380 MW Solar-Wind Hybrid Project – Reg.

Ref:

1. Ref No. SECI/C&I/HPD/T3/1200 MW/RfS/012020 dated 14-01-2020 and its subsequent amendments (collectively referred to as "**RfS**");
2. Letter of Award ("**LOA**") from SECI to ABC Renewable Energy Private Limited vide Ref No. SECI/C&P/HPD/T3/LOA/ABCREPL/P1/40591, dated 31-12-2020;
3. Power Purchase Agreement into between SECI and ABC Renewable Energy (RJ-03) Private Limited (HPD) dated 27-07-2021(**PPA**);
4. Notification No. 8/2021-Central Tax (Rate) dated 30-Sep-2021 issued by the Ministry of Finance Government of India ("**GST Notification**");
5. Circular No. 163/19/2021-GST dated 06-10-2021 issued by Ministry of Finance, Government of India;
6. Office Memorandum dated 09-03-2021 regarding the imposition of Basic Customs Duty (**BCD**) on solar PV cells and Modules/panels issued by Ministry of New and Renewable Energy ("**MNRE**"), Government of India;
7. Order of the Hon'ble Supreme Court in WP 838/2019 regarding undergrounding of a transmission line in the potential great Indian Bustard in Rajasthan ("**GIB Order**");
8. Our letter with reference no. ABC/HPD/SECI/380 MW/14/2021-22, dated 10-12-2021;
9. Report of the working group in respect of date submission Procedure and verification of compliance to CEA Regulations on Technical Standards for connectivity to the GRID by RE Generators, July 2022;
10. Communication to SECI on NOC by MSETCL on LTA to the supply of power to BEST; and
11. Minutes of Joint Coordination Committee meeting with Generation & ISTS Transmission Developers for upcoming Generation & Transmission projects in Western Region (WR) held on 27-09-2023 through video conferencing.

Dear Sir,

We write to you with respect to the present status of development of the 380 MW wind solar hybrid project ("**Project**") by ABC Renewable Energy Private Limited ("**Company**") under the PPA executed with SECI. The Project was awarded to the Company through the LOA after emerging successful in the reverse auction process conducted by SECI. The PPA for the Project was subsequently executed on 27-07-2021.

It has been around three years since the LOA was issued by SECI and so far, the following uncertainties are hampering the Project execution activities.

1. no clear visibility of power evacuation infrastructure;
2. uncertainty in relief for Change in Law events;
3. delay in tariff adoption for the Project; and

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Communication Address: Unit 702, 7th Floor, Tower 3, Equinox Business Park, Off Bandra Kurla Complex, LBS Marg, Kurla (W), Mumbai – 400070
Tel.: 022 – 68812800 Email: compliance.abc@brookfieldrenewable.in

4. delays and uncertainties due to the order of the Hon'ble Supreme Court for conservation of the Great Indian Bustard (**GIB**).

No clear visibility of power evacuation infrastructure:

In order to commission the Project within the scheduled timelines (i.e., by 27 January 2023, as set out in the PPA), we submitted the application for connectivity on 31-12-2020 i.e. immediately on receipt of LOA, seeking connectivity at the Fatehgarh III substation. We also simultaneously started procuring land in the vicinity of Fatehgarh III substation. However, instead of the Fatehgarh III substation, CTUIL has granted connectivity at the Fatehgarh IV substation since the available capacity for connectivity at the Fatehgarh III substation was allocated to manufacturing linked solar projects awarded by SECI. Therefore, we were left with no alternative but to accept connectivity at the Fatehgarh IV substation and identify alternate land parcels surrounding the Fatehgarh IV substation.

Thereafter, there have been significant delays by CTUIL in providing clarity on location of Fatehgarh IV grid substation and the lack of readiness of evacuation infrastructure has halted our project development activities. Even though the stage 2 connectivity was approved on 17-03-2021, the transfer of the SPV by CTUIL for construction of Fatehgarh IV substation happened only in August 2023 and the expected date of commissioning of the Fatehgarh IV substation is February 2025. This uncertainty on the substation location and the delayed commissioning schedule has severely impacted our plans for procurement of land for both the solar and wind components of the project. In view of these uncertainties, no capital deployment can be done in projects of this nature involving huge investments.

The aforesaid issues have delayed the start of initial project development activities by over **28 months** (considering the period between the date of issuance of stage 2 connectivity and the award of construction works for the Fatehgarh IV substation), which exceeds even the timelines provided for construction of projects as per the PPA i.e. 18 months.

Lack of readiness of intra-state portion of the LTA system

Upon grant of Stage 1 and Stage 2 connectivity on 17-03-2021, the Transmission Agreement was signed on 12-04-2021 with CTUIL. Subsequently, the Long-Term Access (LTA) Grant was issued on 22-01-2022 and the LTA Agreement was signed on 18-02-2022. Financial closure was successfully achieved on 22-08-2023 and the same has been confirmed by SECI vide its letter dated 04-10-23. It is evident that we have concluded all the required milestones with a serious intention to construct and commission the Project.

However, the intra-state portion of LTA system particularly for the power to be scheduled to BEST Undertaking (details are attached) for **137 MW** is not ready for supply of power till date.

To supply power to BEST Undertaking, MSETCL had provided a conditional NOC on 10-05-2022 (copy attached) for LTA setting out conditions linked to the development of identified CTU-STU network. The NoC issued by MSETCL has clearly states that network strengthening has to be done as there is no transmission capability available at the CTU/STU network. Further, the NoC has also clearly identified that networks such as 400 kV Kudus, Vikhroli, Pimpalgaon and Warora need to be strengthened, which is needed for LTA operationalization. We understand from the JCC meeting of CTUIL (copy attached), that the Pimpalgaon and Warora networks are yet to be tendered and the completion timelines are yet to be declared which is a significant uncertainty for us to take-up our project activities.

This uncertainty in readiness of LTA is a serious concern which will potentially impact the project revenues as the supply of power to BEST is not possible until the proposed transmission infrastructure by MSTECL is in place.

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Delay in SERC tariff adoption

Further we would like to bring to your kind notice that SECI has entered into Power Sale Agreements (**PSAs**) with five distribution utilities (**Discoms**) and the power will be supplied on pro rata basis to all the Discoms by SECI:

1. Brihanmumbai Electric Supply & Transport Undertaking (**BEST Undertaking**) - PSA signed on June 25, 2021.
2. BSES Rajdhani Power Ltd (BRPL) - PSA signed on July 20, 2021.
3. BSES Yamuna Power Ltd (BYPL)- PSA signed on July 20, 2021.
4. West Bengal State Electricity Distribution Company Ltd - PSA signed on June 30, 2021.
5. Chhattisgarh State Power Distribution Company Ltd - PSA signed on July 02, 2021.

After completion of PSA and PPA formalities, CERC's tariff adoption order was received on December 21, 2021. Tariff adoption by the SERCs is also seen as compliance and as a critical milestone by the lenders, due to issues faced by various developers across the country. The tariff adoption process was concluded by the CSERC (Chhattisgarh State Regulatory Commission) on December 30, 2021, MERC (Maharashtra Electricity Regulatory Commission) on April 26, 2021, WBERC (West Bengal Electricity Regulatory Commission) on July 28, 2022 and DERC on 26th March 2024.

We wish to draw your attention to the fact that, the tariff adoption by DERC (Delhi Electricity Regulatory Commission) for procurement of **37 MW** of power from the proposed project by BRPL **(37MW)** has taken around 2 years 8 months' time and tariff adoption for BYPL **(35MW)** has not concluded so far.

Delay due to GIB issue

The Hon'ble Supreme Court of India has vide order dated 19-4-2021 in I.A No. 85618 of 2020 in Writ Petition (Civil) No. 838 of 2019 directed underground of overhead high voltage transmission lines for all projects falling within the demarcated 'GIB priority areas' and for projects lying within 'GIB potential areas', overhead transmission lines can only be only after obtaining prior approval of the committee constituted by the Hon'ble Supreme Court to evaluate such proposals. The Supreme Court also directed that any installed overhead transmission lines are required to mandatorily install bird diverters. The Supreme Court appointed committee was also given the responsibility to study and assess the feasibility of laying underground cables on a project to project basis. The proposed location falls within the GIB potential area and in light of this, we submitted our proposal to the committee for approval to install overhead transmission lines. However, in the absence of any guidelines issued for the committee for evaluating such proposals, the approvals were delayed. The committee has approved the laying of overhead electric lines with bird diverters vide letter dated 29-05-2023, which was much beyond the scheduled project commissioning timelines as per the PPA.

The committee approval received only allows installation of 220kV overhead lines with bird diverters for the Project. However, there is a lack of clarity on permissibility of installation of 33kV overhead lines in the order issued by the Hon'ble Supreme Court of India, including if bird diverters are required to be installed for these lines. While undergrounding of 33kV transmission is theoretically feasible, laying underground lines for all wind turbine generators poses significant challenges in comparison to laying overhead line as: (i) there are a large number of feeders to be laid down through open lands, posing a wider risk to human life; (ii) there will be significant difficulty in securing right of way for the entire length underground 33kV cables.

Change in Law

Under Article 12.3 of the PPA, the hybrid project developer is required to notify SECI and the Buying utilities of Change in Law events. Various change in law events have occurred after the LOA for the Project has been issued, including: (i) increase in GST on components related to renewable energy projects; (ii) introduction of basic

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customs duty on solar modules and cells; (iii) order of the Hon'ble Supreme court in connection with conservation of GIB; and (iv) the additional reactive power support requirements. The impact of these change in law events on the Project was also discussed during the CERC tariff adoption process by all the respondents, copy enclosed. After conclusion of the final hearing, we have notified SECI/ buying entities about the impact of the change in law events vide our letters dated 10-12-2021 and 04-08-2023 for which no responses have been received.

Further, SECI has forwarded a letter received by them from WBSEDCL, wherein it was communicated to SECI through letter Ref. no. PTP/SECI/165, dated 10-08-2023, raising concerns on tariff increase due to change in law, stating that such an increase would impose a burden on the Discom as well as the end consumer and suggested that the matter be taken up with the Ministry of New and Renewable Energy for a favorable resolution. WBSEDCL was one of the respondents in the petition for tariff adoption for the Project before CERC but had not raised any concern regarding this change in law event during the hearings, even though this was specifically discussed. This objection at a later stage by WBSEDCL is a matter of serious concern to us. In this regard, SECI has not informed us of any further action on the letter from WBSEDCL.

This uncertainty in acceptance of bearing the Change in Law burden for a considerable capacity allocated from our project (34 MW) to WBSEDCL, will lead to a considerable impact on project viability and therefore the investments in project will be at risk, if the WBSEDCL does not agree to the increase in tariff due to change in law as per the provisions of the PPA.

We would further like to bring to your notice that in the proceedings for tariff adoption by DERC for BRPL, SECI has confirmed that there shall be no modifications to the tariff on account of change in law, subject to acceptance of the same by the developers. This clearly indicates that BRPL will not agree to any revision in tariff and this has serious consequences on project viability. Further, this is in contradiction with the approval accorded by CERC which expressly provides for tariff revision on account of change in law.

Lenders concerns and cost overrun:

We have completed the financial closure for the project by affirming to the lenders that the tariff adoption and other compliances will be concluded soon, and drawl requests would be made only post compliances. The lenders are now stressing on resolution of the following uncertainties for a capacity of 245 MW which is 64% of the project capacity prior to disbursements.

a) Delay in tariff adoption by DERC for 35 MW
b) Clarity on LTA date for 137 MW proposed for BEST
c) Confirmation of Change in law compensation from WBSEDCL (34 MW) and BRPL (37 MW)

Despite considerable investments made by us for the preliminary project activities, we are unable to initiate the project construction works due to multiple uncertainties that continue to prevail even after 12 months from the originally scheduled timeline for commissioning the Project.

Time overrun and cost overrun are the major concerns for any infrastructure projects and this inordinate delay by governmental agencies involved in providing necessary permits and approvals has severely impacted our ability to take-up the project construction.

Apart from the uncertainties cited above, the input costs for setting up hybrid projects has also increased by over 50% in the recent years which is quite evident from the tariffs being discovered in the recently concluded hybrid project bids.

Provisions of PPA in case of prolonged delays and uncertainties:

As mentioned above, delays in implementation of the Project are attributable to prolonged delays in procuring approvals from various government agencies responsible for granting connectivity approval, LTA, tariff adoption approval as well as delay in providing clarity on relief for change in law events which are way beyond our control as a project developer and restrict our ability to perform our obligations under the PPA. These circumstances

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Tel.: 022 – 68812800 Email: compliance.abc@brookfieldrenewable.in

clearly qualify as a 'Non-Natural Force Majeure event' in accordance with Clause 11.2.2 (d) of the PPA which is extracted below for your reference.

"action of a Government Authority having Material Adverse Effect including but not limited to Change in Law, only if consequences thereof cannot be dealt with under and in accordance with the provisions of Article 12 of this Agreement; any unlawful or unauthorized or without jurisdiction revocation of, or delay in, or refusal, or failure to renew or grant without valid cause, any Permits of the HPD or any of the clearance, license, authorization to be obtained by the contractors to perform their respective obligations under the relevant PPA and/or the Project Documents; provided that such delay, modification, denial, refusal or revocation did not result from the HPD's or any contractor's inability or failure to comply with any condition relating to grant, maintenance or renewal of such Permits or clearance, license, authorization, as the case may be."

Further, under the Clause 11.10.2 of PPA, this is a case of prolonged Non-Natural Force Majeure condition as the delay in obtaining the approvals is way beyond 180 days. The relevant clause of the PPA is extracted below for your reference -

"Upon occurrence of non-natural Force Majeure event the HPD shall, at its discretion have the right to terminate the PPA forthwith after the completion of the period of 180 (one hundred and eighty) days from the date of Force Majeure notice"

For a Force Majeure condition which continues beyond 12 months, Clause 4.5.3 of the PPA prescribes that

"In case the extension due to reasons specified in article 4.5.1 (b) and (c), and if such Force Majeure continues even after a maximum period of 180 days from the date of Force Majeure notice, any parties may choose to terminate the agreement as per provisions of article 11.10. In case neither party terminated the agreements the agreement under this clause, the agreement stands terminated on the expiry of twelve (12) months of the continuation of Force Majeure event unless parties mutually agree to extend the agreement for the further period"

Treatment of the present case under above provisions:

The aforementioned approvals from various agencies, constitute preliminary duties of the various agencies involved. We had not anticipated these excessive delays and in good faith to continue the project activities, did not invoke the Force Majeure clause available to us as a remedy under various provisions of the PPA cited above. We strongly believed that all the issues impacting our ability to perform our obligations as per the PPA would be resolved by SECI. However, no solution has been arrived at even after a delay of more than 12 months beyond the scheduled commissioning date, thereby forcing us to issue this notice.

The time delay beyond the specified timelines amount to the defaults by the relevant agency which needs to be considered as a Force Majeure Event.

Accordingly, there has been:

1. more than 850 days of delay in providing clarity on substation location and its commissioning timelines;
2. more than 600 days of delay in providing clarity on commissioning of the LTA components as specified in the conditional NOC provided by MSETCL;
3. nearly 800 days of delays in providing tariff approval by DERC for BRPL; and
4. No clarity on adoption of tariff by DERC for BYPL.

SECI Event of default and Breach of Obligations:

As per Clause 13.2.1(iii) and (v) of PPA, it is clear that SECI has committed an event of Default as these delays are a clear material breach of obligations. SECI was responsible for ensuring tariff adoption from the respective state electricity regulatory commissions and coordinating with the CTU/STU for grant of LTA within the scheduled timelines. The LTA operationalization date is not yet firm even after one year after the original

CIN: U40300TG2021PTC147804
Regd. Office Address: H.No. 6-3-680/8/3, PNO-03, 1st Floor, PMR Plaza, Thakur Mansion Lane, Hyderabad, TG-500082, IN
Communication Address: Unit 702, 7th Floor, Tower 3, Equinox Business Park, Off Bandra Kurla Complex, LBS Marg, Kurla (W), Mumbai – 400070
Tel.: 022 – 68812800 Email: compliance.abc@brookfieldrenewable.in

scheduled commissioning date has passed and BRPL's tariff adoption by DERC for 37 MW has just concluded on 26-03-2024, which is around 2 years 8 months after signing the PPA. Further, there is no clarity on timeline for tariff adoption by DERC for BYPL (35 MW).

This event of default triggers under Clause 13.2.1(iii) and (v) of PPA leading to termination of PPA under prolonged uncertainty condition which is way beyond reasonable timelines allowed for project implementation.

We have invested significant time and money in the Project, the carrying cost of various Bank Guarantees submitted to SECI and CTU and the investments made on land acquisition etc., are burdensome, resulting in huge financial implications for us. Clause 17.13 of PPA, provides for us to claim liquidated damages caused due to the breach of obligations as injuries caused to us under the referred clause.

Termination Notice:

These inordinate delays have hampered our investment plans and are also affecting our future business prospects. The proposed commissioning of the Project has become completely unviable and impossible to complete in light of the facts and circumstances mentioned above. In view of uncertain conditions and timelines for the Project, we find no option other than to terminate the PPA and the consequently, the Project, under prolonged Force Majeure conditions, where there is no liability on either party.

Therefore, in terms of PPA we declare hereby that the PPA stands terminated and we request you to release the Payment on Order Instrument (POI) submitted dated 27-04-2021 and extended POI dated 26-10-2023, within 15 days from the date of this notice. This will not only relieve us from liabilities under the uncertain conditions of the project timelines but also will allow us to continue future business activities with SECI.

This letter is to be construed as intimation of termination of PPA, without prejudice to the other rights available to us on the facts and under applicable law.

Thanking you,

Yours faithfully,

For and on behalf of **ABC Renewable Energy (RJ-03) Private Limited**



Director

Copy to:

1. The Chairman & Managing Director of the Solar Energy Corporation of India Limited (SECI)
2. The Chairman & Managing Director of the Indian Renewable Energy Development Agency Limited (IREDA)
3. Joint Secretary of Ministry of New and Renewable Energy (MNRE)
4. Chief Operating Officer of Central Transmission Utility of India (CTUIL)
5. The Director- Solar, Solar Energy Corporation of India Ltd (SECI)
6. Deputy General Manager – Hybrid Projects, Solar Energy Corporation of India Ltd (SECI)

CIN: U40300TG2021PTC147804
Regd. Office Address: H.No. 6-3-680/8/3, PNO-03, 1st Floor, PMR Plaza, Thakur Mansion Lane, Hyderabad, TG-500082, IN
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Tel.: 022 – 68812800 Email: compliance.abc@brookfieldrenewable.in

The Brihan Mumbai Electric Supply & Transport Undertaking

(OF THE BRIHAN MUMBAI MAHANAGARPALIKA)

TELEPHONE : (022) 22856262
FAX : (022) 22851244
TELEX : 1185755 BEST IN
TELEGRAM : BEST, MUMBAI-400 001.

ADDRESS ALL COMMUNICATION BY TITLE NOT BY NAME

BEST BHAVAN,
BEST MARG,
POST BOX NO. 192.
MUMBAI - 400 001.

OUR REF. : CER/ DEPP/ 39 /2024

DATE : 04 JUL 2024

To,
Atulya Kumar Naik,
General Manager (EM),
Solar Energy Corporation of India,
6TH Floor, Plate B, NBCC office Block Tower 2,
East Kidwai Nagar, New Delhi - 110023

Sub: Request not to accept the notice served by M/s ABC Renewable Energy (RJ-03) Private Limited for the termination of 380 MW Wind-Solar Hybrid project

Ref : Your email dated 03.05.2024.

Sir,

BEST Undertaking has signed Power Sale Agreement with Solar Energy Corporation of India (SECI) on 25.06.2021 for procurement of 400 MW Wind-Solar Hybrid power from 1110 MW Wind-Solar Hybrid power project under ISTS Hybrid Tranche-III scheme for 25 years.

Vide D.O. letter ref. no. DO/GM/AGMES/8980/2024 dated 10.04.2024, BEST has requested SECI to give necessary instructions to solar developers for meeting the prescribed deadlines and expedite the projects.

In reply to BEST's D.O.letter, SECI vide its email dated 03.05.2024 has forwarded the latest status of the projects and expected commissioning timelines of the projects. Further SECI has informed that M/s ABC Renewable Energy (RJ-03) Private Limited have served a notice to SECI for termination of the project highlighting the reason that the LTA operationalization may not happen until completion of the strengthening activity at 400 kV Kudus, Vikhroli, Pimpalgaon and Warora.

Contd.....

Earlier vide email dated 22.04.2024, SECI has forwarded the monthly progress of 380 MW Wind-Solar Hybrid project of M/s ABC Renewable Energy (RJ-03) Private Limited as follows:

i) GIB approval completed
ii) FC activity completed.
iii) Commercial discussions with OEMs are in progress and the order placement will be done in the month of March 2024
iv) EPC contractor finalization is under progress.
v) SPV transfer of ISTS substation completed on 2nd August 2023, accordingly project commissioning may be Feb-March 2025.

From the above, it is observed that the progress of the project is in advanced stage. Further after a lapse of 3 year period of signing PPA, it is not appropriate to serve a notice to SECI by the developer for termination of the project just highlighting the difficulties in LTA operationalization.

If the PPA with ABC Renewable Energy (RJ-03) Private Limited (380 MW) gets terminated, then BEST will lose cheaper power of 137 MW and may have to tie up the alternate RE power at higher rate which will have a impact of tariff shock to the consumers of BEST. Further the process to tie up the alternate RE power will take at least six months and the actual power from the proposed tie up may take further 2 to 3 years. Also, BEST is heavily dependent on the tied up power with SECI for the supply of 400 MW Solar Wind Hybrid power which is expected to be commissioned in May 2025 to meet BEST's load demand as well as Renewable Purchase Obligation (RPO). In case this project gets delayed or terminated, BEST will have huge RPO shortfall and will have to face penalty for non fulfillment of RPO obligation.

In view of above, BEST strongly opposes termination of the 380 MW Solar – Wind Hybrid project of M/s ABC Renewable Energy (RJ-03) Private Limited. SECI is kindly requested not to accept the notice served by M/s ABC Renewable Energy (RJ-03) Private Limited and direct the developer to complete the project as per the schedule.

With Regards,

Your's faithfully,

(Dr. R. D. Patsute)
Chief Engineer (Regulatory)

ANNEXURE-26

Date : 01-11-2024

To:

Mr. Sanjay Sharma (Secretary)

Dispute Resolution Committee

Solar Energy Corporation of India (SECI),

Plate-B, 6th Floor, Tower 2,

NBCC Office Block, East Kidwai Nagar,

New Delhi-110023

Subject: Dispute Resolution Appeal regarding Termination of Power Purchase Agreement (PPA) Between ABC Renewable Energy (RJ-03) Private Limited and Solar Energy Corporation of India Limited (SECI) against the order dated. 11/10/2024 and consequently a return of Performance Bank Guarantee amounting to INR Thirty Eight Crores submitted by way of Payment Instrument Order under the MNRE's Order F. No. 283/56/2019-GRID SOLAR/Pt. dated 07.06.2023 and refund of success charges paid

Parties:

1. **ABC Renewable Energy (RJ-03) Private Limited** (Through its Authorised Representative),
   2nd Floor, Plot No.3, House No.6-3-680/8/3,
   PMR Plaza, Thakur Mansion lane,
   Somajiguda, Hyderabad - 500034

Appellant

AND

1. **Solar Energy Corporation of India**
   (through its Chairman and Managing Director)
   6th Floor, Plate-B, NBCC Office Block Tower-2,
   East Kidwai Nagar, New Delhi-110023

Respondent

Respected Members of the Dispute Resolution Committee:

I. Introduction and Overview

This appeal is being filed by **ABC Renewable Energy (RJ-03) Private Limited** (hereinafter referred to also as "Appellant") regarding dispute arising from the termination of the **Power Purchase Agreement** (PPA) dated **27.07.2021**, entered with the **Solar Energy Corporation of India Limited** (hereinafter referred to as "Respondent No.1 or SECI"). The Appellant has terminated the PPA due to persistent **force majeure events** beyond its control, which have significantly delayed the execution of the project and rendered its performance impossible and is consequently seeking return of Performance Bank Guarantee (PBG).

This appeal challenges SECI's refusalto recognise termination of the PPA in accordance with the express provisions thereof. It is humbly submitted that it is not open to SECI to reject the termination of the PPA once it has admitted the existence of the prolonged Force Majeure events for more than 6 months. Instead of accepting termination of the PPA, despite admitting the occurrence of prolonged Force Majeure events, SECI has resorted to indefinite and unlawful extensions of project timelines in its recent communication. Petitioner asserts that SECI's decision to provide an indefinite extension does not conform to the legal framework of the PPA or applicable law, specifically **Clause 4.5.3** and **Clause 11 (Force Majeure)** and further aggravates the hardship faced by the Appellant.

The Appellant seeks this Hon'ble Committee's intervention to declare that the PPA stands terminated on grounds of prolonged Force Majeure events, which are continuing

II. Background and Factual Context:

1. Respondent, Solar Energy Corporation of India (SECI), is a Government of India enterprise which works under administrative supervision of Ministry of New and Renewable Energy (MNRE). It is one of the Renewable Energy Implementing Agencies (REIAs) whose primary role is to implement schemes and develop renewable energy projects in India.

2. On 14.05.2018, SECI has been designated as the implementing agency for implementation of the scheme for setting-up of ISTS-connected Wind-Solar Hybrid Power Projects, under the National Wind- Solar Hybrid Policy issued by Ministry of New and Renewable Energy, Government of India (MNRE)

MNRE, Government of India has issued the "Guidelines for Tariff Based Competitive Bidding Process for procurement of power from Grid Connected Wind Solar Hybrid Projects" issued by the Ministry of New and Renewable Energy vide F.No. 238/78/2017-Wind dated 14.10.2020.

Based on the Guidelines afore referred to, SECI had initiated a Tariff Based Competitive Bid Process for procurement of 1200 MW of the power generated from the ISTS connected Wind-Solar Hybrid Power Projects on the terms and conditions contained in the Request for Selection (herein after referred to as `RFS') issued by SECI vide RFS No SECI/C&P/HPD/T3/1200MW/RfS/012020_ dated 14.01.2020.

3. On 07.12.2020, ABC Renewable Energy Pvt. Ltd. holding company of the Appellant herein, submitted the bid in the SECI for the 380MW project (herein after referred to as ' ABC') ABC has been selected in the Competitive Bidding Process for development, generation and supply of electricity from the 380 MW Hybrid Power Project to be established by HPD anywhere in India and for supply of such electricity by SECI as an Intermediary Agency to the Buying Utility(ies) under a Power Sale Agreement to be entered into between SECI and such Buying Utility(ies)

4. SECI has issued the Letter of Award No. SECI/C&P/HPD/T3/LOA/ABCREPL/P1/40591 dated 31.12.2020 in favour of the ABC Renewable Energy Private limited for development and establishment of the 380 MW Hybrid Power Project in the State of Rajasthan as per the terms and conditions contained in the RfS, draft of this Power Purchase Agreement circulated at the time of the bidding and other bidding documents as well as the conditions contained in the Letter of Award.

5. Important clauses of LOA are as under;

i)

Allotted Project ID	Project Capacity (MW)	Applicable Tariff (INR/kWh) in figures	Applicable Tariff (INR/kWh) in words
HPD-ISTS-T3-ABCREPL-P1-380MW	380 (Solar PV: 254 MW & Wind: 126 MW)	₹ 2.41/-	Rupees Two and forty- one paisa only

ii) The HPD shall meet financial closure requirements for the Project within 12 (twelve) months from the Effective Date of the PPA and shall furnish the documents pertaining to compliance of financial closure.

iii) The HPD/Project Company shall achieve commissioning of full capacity of the Project within 18 months from the Effective Date of the PPA.

The HPD shall pay to SECI, Success Charges of Rs. 1 lakh/MW/project + 18% GST within 30 days of issuance of this Letter of Award (LOA), in line with Clause 3.12 of the RfS, towards administrative overheads, coordination with State Authorities and others, DISCOM/ STU/ CTU, pre-commissioning and commissioning expense. Performance Bank Guarantee(s)/ Payment on Order Instrument (POI) for a value of @ Rs 10 Lakh/ MW per Project shall be submitted by the HPD at least 07 working days prior to signing of PPA (PPA signing date to be intimated by SECI), in line with Clause 3.11 of the RfS.

6. Pursuant to the above, ABC approached Indian Renewable Energy Development Agency Limited (IREDA) , a Govt of India company for the Issuance of Payment on Order Instrument (P0I) and upon compliance of the sanction terms of IREDA Performance Bank Guarantee by way of Payment on Order Instrument (POI) for INR 38 Crores (Rs. Thirty-Eight Crores) issued by IREDA by was submitted in favour of the Respondent and pursuant to the same, Power Purchase Agreement (PPA) was executed between the Appellant and SECI on 27/07/2021. Appellant has also paid an amount of Rs. 4,19,90,000 /- towards success fee.

7. Thereafter, Appellant had immediately applied for stage-I and stage-II connectivity on the same day i.e. 31st December 2020. In the application Appellant had requested connectivity be granted in Fatehgarh-III as a first priority and Fatehgarh-II as a second priority, as there was connectivity available in those ISTS substations. Also, Appellant had mentioned that the commissioning schedule of the generating station date as June 30,2022.

8. However, CTUIL granted stage-I and stage-II connectivity to the Appellant on 17th March 2021 Fatehgarh-IV, Substation which was yet to be established until then as the Fatehgarh-IV PS had not been approved by MoP, GOI . Thereafter, the Long-Term Access (LTA) Grant was issued on 22-01-2022, and the LTA Agreement was signed on 18-02-2022.

9. Subsequently, in the letter issued to SECI on 26th May 2022, Appellant had to request SECI to revise the timelines of financial closure and scheduled commissioning to 23-08-2022 and 23-02-2023 respectively due to the delay in tariff adoption by the appropriate commission. Also, in the letter Appellant had mentioned about the minutes dated 22nd April 2022 of 21st JCC meeting of generation projects for granting connectivity/LTA in Northern region held on 25th March 2022 by CTUIL, wherein it was conveyed that "220kV bay at Fatehgarh-IV PS shall be implemented as a part of Rajasthan SEZ Phase-III" which was under bidding then and was expected to get ready by Q4 of FY 2023-24. SECI, accepted the request of Appellant and issued a letter on 01st June 2022, providing the revised timelines. SCOD and Financial closure date were revised to 23.02.2023 and 23.08.2022 respectively.

10. In the subsequent 6th consultation meeting for evolving transmission schemes of Northern Region (CMETS-NR) held on 28th April 2022, CTUIL has informed the stakeholders that the bidding process for the Fatehgarh-IV PS and Bhadla-III PS is being delayed due to the GIB issue and the tentative timeline for the Fatehgarh-IV PS and Bhadla-III PS may be shifted to June-24, with anticipated SPV transfer in Dec'22

11. Because of the aforesaid delays in the LTA system the Appellant communicated its apprehensions about the lenders unwillingness to close on lending terms and interest rates so early in advance and also, similar situations were faced with the wind turbine OEM's and solar module suppliers on freezing the contracts well in advance. In view of the same, Appellant addressed a letter to SECI on 09th June 2022 and had requested to revise the Schedule commissioning to 31st August 2024 from 23rd February 2023 and financial closure date to 29th February 2024 from 23rd August 2022 in accordance with terms and clauses of the RfS and PPA for delay in readiness of transmission system and operationalization of LTA. Appellant has again issued follow up letters dated 16th June 2022 and 04th August 2022 in similar lines.

12. In the letter dated 04th August 2022, Appellant has informed SECI that, CTUIL indicated June 2024 as the date of readiness of the Fatehgarh-IV substation during the JCC meeting held on 28th June 2022.

13. In response, SECI, in their letter dated 24th August 2022, accepted and admitted the genuine Force Majeure events affecting the Appellant and provided the Appellant with a blanket extension to the financial closure timelines till actual date of SPV transfer by the CTU and the SCD of the project was extended till the actual date of LTA operationalization.

14. Despite such uncertainties surrounding the timelines of commissioning of the Fatehgarh-IV substation, Appellant, in good faith started to continue with the project activities like achieving the financial closure. In its letter dated 24th February 2023 to SECI, Appellant has submitted documents from Banks/ Financial institutions certifying arrangement of necessary funds by way of sanction of loans, copy of final Detailed Project Report (DPR), Module Supply Agreement, Coordination and Guarantee agreement pertaining to Wind component and other documentation necessary for achieving financial closure. In the subsequent communications Respondent has raised certain queries to which Appellant has provided satisfactory documentation. Finally, Respondent issued a letter on 04th October 2023 stating that, Appellant has complied with conditions subsequent/ Financial closure as on 22nd August 2023.

15. Based on the connectivity infrastructure readiness committed by CTUIL, Petitioner was planning the schedule commercial operation dates of its project and Petitioner was forced to extend the dates of commissioning to avail the connectivity . As stated above In 6th consultation meeting for evolving transmission schemes of Northern Region (CMETS-NR) held on 28th April 2022, CTUIL has informed the stakeholders that the bidding process for the Fatehgarh-IV PS and Bhadla-III PS is being delayed due to the GIB issue and the tentative timeline for the Fatehgarh-IV PS and Bhadla-III PS may be shifted to June-24, with anticipated SPV transfer in Dec'22

16. However, the tendering for the development of Connectivity Sub-Station (Fatehgarh-IV) was delayed and ultimately tendered and awarded during August 2023. Subsequently in the successive JCC meetings i.e. 27th, 28th, 29th and 30th the dates were further changed for expected date of connectivity under GNA as mentioned in the below table:

Sl.No.	**JCC Meeting No.**	**Meeting Date**	**Expected Readiness of the 220kV Bay at Fatehgarg-IV PS**	**Expected Start Date of Connectivity under GNA**
1	27th JCC	26-Sep-23	31-Jan-25	31-Jan-25

2	28th JCC	05-Jan-24	01-Feb-25	19-Sep-25
3	29th JCC	27-Mar-24	01-Feb-25	19-Sep-25
4	30th JCC	26-Jun-24	31-May-25	19-Sep-25

Appellant ABC has been working with the bona fide intent of establishing the project. However, the timelines of the connectivity have been changing with every JCC meeting and are still uncertain. Despite such commitments on Scheduled commercial dates for the Project by the Petitioner, it has become impossible to execute the project, with the uncertainty on the connectivity infrastructure and project bided has become highly unviable.

17. The uncertainty in the connectivity can be further reinforced from the latest update received from the 30th JCC meeting, where in it is informed that the 220kV terminal bay will be ready only by 31st May 2025 and connectivity likely to be operationalized upon commissioning of required transmission system by 19th September 2025. Additionally, there was also a discussion in the meeting where it was mentioned that there are major RoW issues around Beawar transmission line which is a key activity for the system to get commissioned within the timelines provided. This indicates that the commissioning dates of transmission infrastructure remain uncertain even as on date.

18. The commissioning timelines of the ISTS substation have been pushed to September 2025 as indicated above in the 28th JCC meeting. This has completely disturbed the Appellant's plans to initiate the development of its project construction. This delay has also rendered the project unviable. This is clearly evident from the tariff discovered in the last 1 year for similar kind of projects, where the construction period will be same to that of the Appellant. This event qualifies as a Non-Natural Force Majeure event as per the clause 11.2.2.c. It is submitted that the recent tariffs discovered, projects of which would come in the same time spans are as follows:

Tender	**Bid Capacity (MW)**	**RE Type**	**Month of e-RA**	**Tariff (Rs./kWh)**
NTPC 1500 MW Hybrid ISTS (Tranche IV)	1500	Hybrid	Dec-23	3.27 - 3.32
SECI 2000 MW Hybrid (Tranche VII)	2000	Hybrid	Jan-24	3.15 - 3.21

SJVN 1500 MW Hybrid	1500	Hybrid	Feb-24	3.43 - 3.47
NHPC 1500 MW Hybrid	1500	Hybrid	Feb-24	3.48 - 3.49

19. In this context we were forced to issue termination letter on 16th April 2024, citing the aforesaid reasons among other Force Majeure events. Further, after consultation meetings with SECI a letter was issued on 10th June 2024 reiterating the Appellant's stand on PPA termination.

Uncertainty in Power offtake:

20. For supplying power to BEST Undertaking (One of the End Procurers), MSETCL had provided conditional NOC (copy attached) for LTA which had conditions linked to the development of identified CTU-STU network link elements. The network elements identified in the NOC such as 400 kV Kudus, Vikhroli, Pimpalgaon and Warora shall also be needed for LTA operationalization. The Pimpalgaon and Warora networks are yet to be tendered and the completion timelines are yet to be declared.

21. This indicates that the readiness of intra-state portion of LTA system particularly for the power to be scheduled to BEST Undertaking (details are attached) is not clear till date. This uncertainty in readiness of LTA is also a serious concern which will potentially impact the project revenues as the supply of power to BEST is not possible until the proposed transmission infrastructure by MSTECL is in place.

22. Other Issues Faced –

Major issued faced by ABC:

(i) A Writ Petition (Civil) No. 838 of 2019, M.K. Ranjitsinh & Ors. Vs. Union of India & Ors., was filed by some third parties, inter alia objecting setting up projects in Great Indian Bustard area, in the said Writ Petition, the Hon'ble Supreme Court of India was pleased to pass an Interim Order dated 19.04.2021 to the following effect:

- **Supreme Court Order (19-04-2021):**
    - Directs undergrounding of overhead high voltage transmission lines in 'GIB priority areas'.
    - For 'GIB potential areas', overhead lines need prior approval from a Supreme Court committee.

- Requires bird diverters on installed overhead lines.
- Committee tasked with assessing feasibility of underground cables on a project basis.

- **Project Status:**
  - Proposal for overhead lines submitted to the committee; approval delayed due to lack of guidelines.
  - Approval received on 29-05-2023 for 220kV overhead lines with bird diverters, beyond project commissioning timelines.

(ii) Change in Law

- GST increase on renewable energy components.
- Basic customs duty on solar modules and cells.
- Additional reactive power support requirements.
- Installation of Bird Flight Diverters as per the Committee formed by the Hon'ble Supreme Court.
- Introduction of GST on Land Lease

(iii) DERC Proceedings:

a. SECI confirmed no tariff modification for BRPL unless developers accept.
b. Contradicts CERC's tariff revision approval.

23. **Force Majeure Events and Delays**

The Appellant, in the circumstances encountered multiple unforeseen events that delayed the project timeline, including **regulatory challenges**, **environmental conservation guidelines** related to the **Great Indian Bustard (GIB)**, and delays in the **commissioning of the Fatehgarh-IV substation and related transmission infrastructure**.

Fatehgarh IV Substation and related infrastructure as of now is not expected to be operational until 19.09.2025.

24. Accordingly, after taking up several times with Respondent, a final notice of termination was issued by the Appellant on 16.04.2024 and Respondent dismissed issues raised by the Appellant, citing that an indefinite extension had been granted until the commissioning of the LTA, vide its letter dated 11.10.2024. Despite the extension, the underlying issues, majorly the **unavailability of transmission infrastructure** and **regulatory hurdles**, remain unresolved. Therefore, the Appellant's ability to perform under the PPA stands frustrated.

25. Article 4.5.3 of the PPA stipulates that the agreement can be terminated by either party on the expiry of 180 days of a continued Force majeure event. Further, Article 4.5.3 provides that if a Force Majeure event continued for more than 12 months, then the PPA stands automatically terminated unless the parties agree otherwise. It is submitted that the continuous uncertainty over the readiness of the LTA system and consequent delay in LTA operationalisation, is a prolonged Force Majeure event that has lasted more than 180 days entitling the Appellant to terminate the PPA. Without prejudice, it is submitted that the delay in the LTA system has lasted for more than 12 months which necessitated the termination of the PPA in accordance with Article 4.5.3 since it is not possible for the Petitioner to proceed with the project. **Clause 4.5.3** of the PPA explicitly states:

    "In case such Force Majeure Event continues even after a maximum period of 180 days from the date of the Force Majeure Notice, any of the Parties may choose to terminate the Agreement as per the provisions of Article 11. In case neither party terminates the Agreement under this clause, the Agreement shall stand terminated on the expiry of 12 (twelve) months of the continuation of the Force Majeure Event unless the parties mutually agree to extend the Agreement for a further period."

26. It is submitted that SECI cannot be permitted to render Article 4.5.3 a nullity by granting indefinite extensions of time. An open-ended extension of time leaves the Appellant with no concrete timeline for project completion and is completely impractical for any prudent utility. The force majeure events outlined above have already exceeded **28 months**, far beyond the **180-day period** stipulated under the PPA.

27. Therefore, the indefinite extension of time offered by SECI is both unlawful and unreasonable, and violates the terms agreed upon in the PPA and applicable law . Petitioner has finally served a Notice dated 30/10/2024 informing the respondent its decision to approach this honourable committee for dispute resolution. Copy of the same is attached.

28. Application Fees

Appellant has paid a Fee of INR 38 Lakhs (Rs. Thirty-Eight Lakhs), equivalent to one percent of PBG amount being INR 38 Crores (Rs. Thirty-Eight Crores) on 31st October 2024 through UTR No. NEFT/038135220751 in accordance with Clause 3(iii)(d)(III) of the MNRE Order F. No. 283/56/2019-GRID SOLAR/Pt. dated 07.06.2023.

III. Prayer

In view of the persistent force majeure events and SECI's indefinite and unlawful extension of the project's commissioning timelines, the Appellant prays for the following reliefs from this Hon'ble **Dispute Resolution Committee**:

1. Declare that the Termination of the Power Purchase Agreement (PPA) executed between the Appellant and dated 27/07/2021 is valid.
2. Direct SECI to release/return the Performance Bank Guarantee (PBG) of INR 38 crore dated 27/04/2021 submitted by the Appellant under the PPA
3. Direct SECI to refund the success charges amounting to Rs. 4,19,90,000 paid by the Appellant along with applicable interest.
4. Award the Appellant costs and fees associated with this dispute resolution process, in accordance with the PPA and applicable laws.
5. Provide any other relief that the Hon'ble Committee deems just and appropriate under the circumstances.

List of Attached Documents

In support of this dispute resolution appeal, the following documents are attached:

1. Letter of Award (LoA) issued by SECI on 31.12.2020.
2. Stage-II Connectivity Approval received from CTUIL 17.03.2021.
3. Power Purchase Agreement (PPA) dated 27.07.2021.
4. Change in Law Notice issued by the Appellant on 10.12.2021.

5. Minutes of 6th consultation meeting for evolving transmission schemes of Northern Region (CMETS-NR) held on 28th April 2022.

6. Financial Closure Approval letter from SECI dated 04.10.2023.

7. Force Majeure Notice issued by the Appellant on 16.04.2024 and 10.06.2024.

8. SECI's Extension Letter dated 24.08.2022.

9. Relevant Supreme Court Orders regarding GIB conservation.

10. Correspondence with CTUIL regarding connectivity and transmission delays.

11. Letter dated 09.08.2023 of the Appellant addressed to the Respondent.

12. Letter dated 04.10.2023 of the Appellant addressed to the Respondent.

13. Letter dated 16.04.2024 of the Appellant addressed to the Respondent.

14. Letter dated 10.06.2024 of the Appellant addressed to the Respondent.

15. Letter dated 11.10.2024 of the Respondent addressed to the Appellant.

16. Letter dated 30.10.2024 of the Petitioner addressed to the Respondent.

Sincerely,

ABC Renewable Energy (RJ-03) Private Limited





Sri Murali Surapaneni

Director

INDIA NON JUDICIAL

Government of National Capital Territory of Delhi

e-Stamp

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Certificate No.	:	IN-DL012348437481O0T
Certificate Issued Date	:	23-Jul-2021 03:58 PM
Account Reference	:	IMPACC (IV)/ dl720603/ DELHI/ DL-DLH
Unique Doc. Reference	:	SUBIN-DLDL72060300466682393686T
Purchased by	:	SOLAR ENERGY CORPORATION OF INDIA LTD
Description of Document	:	Article 5 General Agreement
Property Description	:	Not Applicable
Consideration Price (Rs.)	:	0 (Zero)
First Party	:	SOLAR ENERGY CORPORATION OF INDIA LTD
Second Party	:	Not Applicable
Stamp Duty Paid By	:	SOLAR ENERGY CORPORATION OF INDIA LTD
Stamp Duty Amount(Rs.)	:	100 (One Hundred only)

Please write or type below this line

This Power Purchase Agreement is made on the 27th day of July of 2021 at New Delhi.

Between

Adani Hybrid Energy Jaisalmer Five Limited, a Company incorporated under the Companies Act 1956 or Companies Act 2013, having its registered office at Adani

Adani Hybrid Energy Jaisalmer Five Limited

Statutory Alert:
1. The authenticity of this Stamp certificate should be verified at 'www.shcilestamp.com' or using e-Stamp Mobile App of Stock Holding. Any discrepancy in the details on this Certificate and as available on the website / Mobile App renders it invalid.
2. The onus of checking the legitimacy is on the users of the certificate.
3. In case of any discrepancy please inform the Competent Authority.

Corporate House, Shantigram, Nr.Vaishno Devi Circle, S G Highway, Khodiyar Ahmedabad, Gujarat, India 382421. (hereinafter referred to as "**Hybrid Power Developer or HPD**", which expression shall, unless repugnant to the context or meaning thereof, be deemed to include its successors and permitted assigns) as a Party of the **First Part**;

And

Solar Energy Corporation of India Limited, a company incorporated under the Companies Act 1956, having its registered office at 1st Floor, A-Wing, D-3, District Centre, Saket, New Delhi-110017 and New address at Plate-B, 6th Floor, Tower-2, NBCC Office Block, East Kidwayi Nagar, New Delhi- 110023 (hereinafter referred to as "SECI", or "Procurer" or "Buyer" which expression shall, unless repugnant to the context or meaning thereof, be deemed to include its successors and assignees) as a Party of the **Second Part**;

The HPD and SECI are individually referred to as 'Party' and collectively referred to as 'Parties'.

WHEREAS:

A. SECI has been designated as the implementing agency for implementation of the scheme for setting-up of ISTS-connected Wind-Solar Hybrid Power Projects, under the National Wind-Solar Hybrid Policy issued by MNRE dated 14.05.2018.

B. The Ministry of New and Renewable Energy, Government of India has issued the "Guidelines for Tariff Based Competitive Bidding Process for procurement of power from Grid Connected Wind Solar Hybrid Projects" issued by the Ministry of New and Renewable Energy vide F.No. 238/78/2017-Wind dated 14.10.2020, including subsequent amendments and clarifications, if any.

C. SECI had initiated a Tariff Based Competitive Bid Process for procurement of 1200 MW of the power generated from the ISTS connected Wind-Solar Hybrid Power Projects on the terms and conditions contained in the Request for Selection (herein after referred to as **`RFS')** issued by SECI vide RFS No SECI/C&P/IIPD/T3/1200MW/RfS/012020_ dated 14.01.2020 .

D. The Hybrid Power Developer (hereinafter referred to as **'IIPD'**) has been selected in the Competitive Bidding Process for development, generation and supply of electricity from the 600 MW Hybrid Power Project to be established by IIPD anywhere in India and for supply of such electricity by SECI as an Intermediary Agency to the Buying Utility (ies)

Adani Hybrid Energy Jaisalmer Five Limited

[as defined] under a Power Sale Agreement to be entered into between SECI and such Buying Utility (ies);

E. SECI has issued the Letter of Award No SECI/C&P/HPD/T3/LoA/AREHEL/P1/40592 dated 31.12.2020 in favour of the **Adani Renewable Energy Holding Eight Limited** for development and establishment of the 600 MW Hybrid Power Project in the State of Rajasthan as per the terms and conditions contained in the RfS, draft of this Power Purchase Agreement circulated at the time of the bidding and other bidding documents as well as the conditions contained in the Letter of Award;

F. SECI has agreed to purchase such power from the HPD as an Intermediary Procurer and sell it to Buying Utility on back-to-back basis as per the provisions of the RfS. Accordingly, SECI has agreed to sign/has signed a Power Sale Agreement with the Buying Utility to sell such power as per the provisions of the above said scheme;

G. In terms of the RfS and the Bidding Documents, the HPD has furnished the Performance Bank Guarantee in the sum of Rs. 60,00,00,000 /-.(INR Sixty Crores Only) in favour of SECI as per the format provided as a part of the Bidding Documents and a copy of the Bank Guarantee/POI provided is in Schedule – 1/ Schedule-3 to this Agreement;

H. The HPD has fulfilled the terms of the bidding and the terms of the Letter of Award for signing this Power Purchase Agreement as a definitive agreement for establishing the Hybrid Power Project of 600 MW at District-Jaisalmer, State-Rajasthan for generation and sale of electricity by the HPD to SECI to enable SECI to make available such power to the Buying Utility(ies), as SECI may consider appropriate, under a Power Sale Agreement and on a back-to-back basis to the Power Purchase Agreement to be entered into with the HPD;

I. SECI has signed the Power Sale Agreement with the Buying Utility(ies) of States in India.

J. The parties have agreed to execute this Power Purchase Agreement in terms of the provisions of the RfS, the bidding documents and the Letter of Award in regard to the terms and conditions for establishment of the Hybrid Power Project at Rajasthan and for generation and supply of electricity by the HPD to SECI.

Adani Hybrid Energy Jaisalmer Five Limited

Now therefore, in consideration of the premises and mutual agreements, covenants and conditions set forth herein, it is hereby agreed by and between the Parties as follows:



ARTICLE 1: DEFINITIONS AND INTERPRETATION

1.1 *Definitions*

The terms used in this Agreement, unless as defined below or repugnant to the context, shall have the same meaning as assigned to them by the Electricity Act, 2003 and the rules or regulations framed there under, including those issued / framed by the Appropriate Commission (as defined hereunder), as amended or re-enacted from time to time.

"Act" or "Electricity Act, 2003"	shall mean the Electricity Act, 2003 and include any modifications, amendments and substitution from time to time;
"Adjusted Equity"	shall mean the Equity funded in Indian Rupees and adjusted on the first day of the current month (the "Reference Date"), in the manner set forth below, to reflect the change in its value on account of depreciation and variations in Wholesale Price Index (WPI), and for any Reference Date occurring between the first day of the month of Appointed Date (the date of achievement of Financial Closure) and the Reference Date; i. On or before Commercial Operation Date (COD), the Adjusted Equity shall be a sum equal to the Equity funded in Indian Rupees and expended on the Project, revised to the extent of one half of the variation in WPI occurring between the first day of the month of Appointed Date and Reference Date; ii. An amount equal to the Adjusted Equity as on COD shall be deemed to be the base (the "Base Adjusted Equity"); iii. After COD, the Adjusted Equity hereunder shall be a sum equal to the Base Adjusted Equity, reduced by 0.333% (zero point three three three percent) thereof at the commencement of each month following the COD [reduction of 1% (one percent) per quarter of an year] and the amount so arrived at shall be revised to the extent of variation in WPI occurring between the COD and the Reference Date; For the avoidance of doubt, the Adjusted Equity shall, in the event of termination, be computed as on the Reference Date immediately preceding the Transfer Date; provided that no reduction in the Adjusted Equity shall be made for a period equal to the duration, if any, for which the PPA period is extended, but the revision on account of WPI shall continue to be made.
"Agreement" or "Power Purchase Agreement" or "PPA"	shall mean this Power Purchase Agreement including its recitals and Schedules, amended or modified from time to time in accordance with the terms hereof;
"Appropriate Commission"	Unless otherwise stated, Appropriate Commission shall mean Central Electricity Regulatory Commission;
"Bill Dispute Notice"	shall mean the notice issued by a Party raising a Dispute regarding a Monthly Bill or a Supplementary Bill issued by the other Party;

"Business Day"	shall mean with respect to HPD and SECI, a day other than Sunday or a statutory holiday, on which the banks remain open for business in Delhi;
"Buying Entity"	Shall mean Distribution companies and shall include wherever admissible the Distribution licensees or buying entity in any State or any bulk consumer who agreed to purchase the wind-solar hybrid power from SECI and execute the Power Sale Agreement from time to time with SECI, and requires hybrid power to fulfil its solar and non-solar RPO under respective RPO regulations;
"Capacity Utilization Factor" or "CUF"	shall have the same meaning as provided in CERC (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2009 as amended from time to time; However for avoidance of any doubt, it is clarified that the CUF shall be calculated on the Contracted Capacity; In any Contract Year, if 'X' MWh of energy has been metered out at the Delivery Point for 'Y' MW Project capacity, CUF= (X MWh/(Y MW*8766)) X100%;
"CERC"	shall mean the Central Electricity Regulatory Commission of India, constituted under sub – section (1) of Section 76 of the Electricity Act, 2003, or its successors;
"CTU" or "Central Transmission Utility"	shall mean the Government Company notified by the Central Government under Sub-Section (1) of Section 38 of the Electricity Act, 2003.
"Change in Law"	shall have the meaning ascribed thereto in Article 12 of this Agreement;
"Commissioning"	The Project will be considered as commissioned if all equipment as per rated Project Capacity has been installed and energy has flown into grid, in line with the Commissioning procedures defined in the PPA.
"Commercial Operation Date (COD)"	The Commercial Operation Date (COD) shall be considered as the actual date of commissioning of the project as declared by the Commissioning Committee constituted by procurer. In case of part commissioning COD will be declared only for that part of project capacity;
"Competent Court of Law"	shall mean any court or tribunal or any similar judicial or quasi- judicial body in India that has jurisdiction to adjudicate upon issues relating to this Agreement;
"Consents, Clearances and Permits"	shall mean all authorizations, licenses, approvals, registrations, permits, waivers, privileges, acknowledgements, agreements, or concessions required to be obtained from or provided by any concerned authority for the purpose of setting up of the generation facilities and/ or supply of power;

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"Consultation Period"	shall mean the period of ninety (90) days or such other longer period as the Parties may agree, commencing from the date of issuance of a HPD Preliminary Default Notice or SECI Preliminary Default Notice as provided in Article 13 of this Agreement, for consultation between the Parties to mitigate the consequence of the relevant event having regard to all the circumstances;
"Contract Year"	shall mean the period beginning from the Effective Date and ending on the immediately succeeding March 31 and thereafter each period of 12 months beginning on April 1 and ending on March 31 provided that: (i) in the financial year in which the Scheduled Commissioning Date would occur, the Contract Year shall end on the date immediately before the Scheduled Commissioning Date and a new Contract Year shall commence once again from the Scheduled Commissioning Date and end on the immediately succeeding March 31, and thereafter each period of twelve (12) months commencing on April 1 and ending on March 31, and (ii) provided further that the last Contract Year of this Agreement shall end on the last day of the Term of this Agreement
"Contracted Capacity"	shall mean 600 MW contracted with SECI for supply by the HPD to SECI at the Delivery Point from the Hybrid Power Project. It shall be equal to the Project Capacity as defined;
"Day"	shall mean a day, if not a Business Day, the immediately succeeding Business Day.
"Debt Due"	shall mean the aggregate of the following sums expressed in Indian Rupees outstanding on the Transfer Date: i. The principal amount of the debt provided by the Senior Lenders under the Financing Agreements for financing the Total Project Cost (the 'Principal') but excluding any part of the principal that had fallen due for repayment prior to the Transfer Date; ii. All accrued interest, financing fees and charges payable under the Financing Agreements on, or in respect of, the debt referred to in sub-clause (i) above until the Transfer Date but excluding: (i) any interest, fees or charges that had fallen due one year prior to the Transfer Date, (ii) any penal interest or charges payable under the Financing Agreements to any Senior Lender, (iii) any pre-payment charges in relation to accelerated repayment of debt except where such charges have arisen due to Utility Default, and (iv) any Subordinated Debt which is included in the Financial Package and disbursed by lenders for financing the Total Project Cost. Provided that if all or any part of the Debt Due is convertible into Equity at the option of Senior Lenders and/or the Concessionaire, it shall for the purposes of this Agreement be deemed not to be Debt Due even if no such conversion has taken place and the principal thereof shall be dealt with as if such conversion had been undertaken.

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	Provided further that the Debt Due, on or after COD, shall in no case exceed 80% (eighty percent) of the Total Project Cost.
"Delivery Point"	"Delivery Point" shall mean a single point or multiple points at the voltage level of 220 kV or above of the CTU Sub-station(s) including the dedicated transmission lines connecting the Project/ individual component with the substation system as specified in the RfS document. Interconnection at 132kV will be allowed exclusively in case the project is granted connectivity at an available bay of an existing ISTS substation, if any. Metering shall be done at this interconnection point where the power is injected into. For interconnection with grid and metering, the HPD shall abide by the relevant and applicable regulations, Grid Code notified by the CERC or and Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006 as amended and revised from time to time, or orders passed thereunder by the appropriate commission or CEA. Pursuant to Article 4.2.6, all charges and losses related to Transmission of power from project up to Delivery Point (including but not limited to open access, transmission, wheeling, Unscheduled Interchange, Scheduling, Reactive power, RLDC/SLDC charges etc.) as notified by the competent authority / regulator shall be borne by the HPD and beyond the Delivery Point all charges and losses as notified by the competent authority / regulator from time to time shall be borne by the Buying Utilities. In case it is paid by SECI on behalf of Buying Utilities / HPD, the same shall be recovered from the Buying Utilities / HPD (as applicable);
"Discoms"	shall mean the Buying Entity or the distribution utilities who have signed/will sign the PSA (s) with SECI for purchase of Power;
"Dispute"	shall mean any dispute or difference of any kind between SECI and the HPD, in connection with or arising out of this Agreement including but not limited to any issue on the interpretation and scope of the terms of this Agreement as provided in Article 16 of this Agreement;
"Due Date"	Due Date shall mean the forty-fifth (45th) day after a Monthly Bill (including all the relevant documents) or a Supplementary Bill is received in hard copy and duly acknowledged by the SECI or, if such day is not a Business Day, the immediately succeeding Business Day, by which date such Monthly Bill or a Supplementary Bill is payable by the SECI.
"Effective Date"	shall have the meaning ascribed thereto in Article 2.1 of this Agreement;
"Electricity Laws"	shall mean the Electricity Act, 2003 and the rules and regulations made there under from time to time along with amendments thereto and replacements thereof and any other Law pertaining to electricity including regulations framed by the Appropriate Commission;

"Energy Accounts"	shall mean the regional energy accounts/state energy accounts as specified in the Grid Code issued by the appropriate agency for each Month (as per their prescribed methodology), including the revisions and amendments thereof or where such regional energy accounts/ state energy accounts are not issued, Joint Meter Reading (JMR) will be considered; SECI reserves the right to choose from any of the above, i.e. JMR/SEA/REA, based on the acceptance of the same by the Buying Utility;
"Event of Default"	shall mean the events as defined in Article 13 of this Agreement;
"Expiry Date"	Shall mean the date occurring twenty five (25) years from the Scheduled Commissioning Date subject to that the supply of power shall be limited for a period of 25 years from the Scheduled Commissioning Date unless extended by the Parties as per this Agreement;
"Financial Closure"	shall mean compliance with the requirements under Article 3.1 of this Agreement;
"Financing Agreements"	shall mean the agreements pursuant to which the HPD has sought financing for the Power Project including the loan agreements, security documents, notes, indentures, security agreements, letters of credit and other documents, as may be amended, modified, or replaced from time to time, but without in anyway increasing the liabilities of SECI;
"Force Majeure" or "Force Majeure Event"	shall have the meaning ascribed thereto in Article 11 of this Agreement;
"Guidelines: or "Scheme"	shall mean the "Guidelines for Tariff Based Competitive Bidding Process for procurement of power from Grid Connected Wind Solar Hybrid Projects" issued by the Ministry of New and Renewable Energy vide F.No. 238/78/2017-Wind dated 14.10.2020, including subsequent amendments and clarifications, if any
"Grid Code" / "IEGC" or "State Grid Code"	shall mean the Grid Code specified by the CERC under Clause (h) of Sub-section (1) of Section 79 of the Electricity Act, as amended from time to time, and/or the State Grid Code as specified by the concerned State Commission, referred under Clause (h) of Sub- section (1) of Section 86 of the Electricity Act 2003, as applicable;
"Indian Governmental Instrumentality"	shall mean the Government of India, Governments of state(s) Rajasthan, Gujarat and New Delhi and any ministry, department, board, authority, agency, corporation, commission under the direct or indirect control of Government of India or the above state Government(s) or both, any political sub-division of any of them; including any court or Appropriate Commission(s) or tribunal or judicial or quasi-judicial body in India;
"Insurances"	shall mean the insurance cover to be obtained and maintained by the HPD in accordance with Article 8 of this Agreement;

"Interconnection Facilities"	shall mean the facilities on HPD's side of the Delivery Point for scheduling, transmitting and metering the electrical output in accordance with this Agreement and which shall include, without limitation, all other transmission lines and associated equipment, transformers, relay and switching equipment and protective devices, safety equipment and RTU, Data Transfer and Acquisition facilities for transmitting data subject to Article 7, the Metering System required for supply of power as per the terms of this Agreement;
Intermediary agency or Intermediary nodal agency or Intermediary Procurer"	shall mean Solar Energy Corporation of India Limited;
"Invoice" or "Bill"	shall mean either a Monthly Bill / Supplementary Bill or a Monthly Invoice/ Supplementary Invoice raised by any of the Parties;
"Joint Control"	shall mean a situation where none of the promoter shareholders has at least 51 % shareholding in the paid up share capital and voting rights in the HPD, and the control is exercised jointly;
"Late Payment Surcharge"	shall have the meaning ascribed thereto in Article 10.3.3 of this Agreement;
"Law"	shall mean in relation to this Agreement, all laws including Electricity Laws in force in India and any statute, ordinance, regulation, notification or code, rule, or any interpretation of any of them by an Indian Governmental Instrumentality and having force of law and shall further include without limitation all applicable rules, regulations, orders, notifications by an Indian Governmental Instrumentality pursuant to or under any of them and shall include without limitation all rules, regulations, decisions and orders of the Appropriate Commissions;
"Letter of Credit" or "L/C"	shall have the meaning ascribed thereto in Article 10.4 of this Agreement;
"MNRE"	shall mean the Ministry of New and Renewable Energy, Government of India;
"Month"	shall mean a period of thirty (30) days from (and excluding) the date of the event, where applicable, else a calendar month;
"Party" and "Parties"	shall have the meaning ascribed thereto in the recital to this Agreement;
"Payment Security Mechanism"	shall have the meaning ascribed thereto in Article 10.4 of this Agreement;
"Payment on Order Instrument"	shall mean the irrevocable unconditional letter of undertaking issued by either of the three institutions, viz., (i) Indian Renewable Development agency Limited (IREDA) or (ii) Power Finance Corporation Limited or (iii) REC Limited., as an alternative to submission of Performance Bank Guarantee by the HPD, issued in the form attached hereto as Schedule 3;

"Performance Bank Guarantee"	shall mean the irrevocable unconditional bank guarantee, submitted by the HPD to SECI in the form attached hereto as Schedule 1;
"Pooling Substation/ Pooling Point"	means a point where more than one project may connect to a common transmission system. Multiple projects can be connected to a pooling substation from where common transmission system shall be constructed and maintained by the HPD(s) to get connected to the ISTS substation. The voltage level for such common line shall be 220 kV and above. Further, the metering of the pooled power shall be done at the injection point, i.e. the ISTS substation. However, the voltage level of transmission system of individual projects up to the pooling substation may be at 33 kV and above. Sub-meters shall be installed at the pooling substation for metering and forecasting and scheduling of individual projects. The losses in the common transmission system up to the injection point shall be apportioned to the individual Projects for the purpose of billing. In such case, it shall be responsibility of the HPD to obtain and furnish the meter reading jointly by the HPD and any competent authority (State Government or Central Government) (if applicable).
"Power Project" or "Project"	shall mean the Wind-Solar hybrid power generation facility of Contracted Capacity of 600 MW, located at Village- District- Jaisalmer, State- Rajasthan having a separate control system, metering and a single point or separate points of injection into the grid at Delivery/Interconnection/Metering point(s) at ISTS substation or in case of sharing of transmission lines, by separate injection at pooling point. The rated capacities of the various components are as follows: Solar PV component: 570 MW Wind Power component: 200 MW This includes all units and auxiliaries such as water supply, treatment or storage facilities; bay/s for transmission system in the switchyard, dedicated transmission line up to the Delivery Point and all the other assets, buildings/structures, equipment, plant and machinery, facilities and related assets required for the efficient and economic operation of the power generation facility; whether completed or at any stage of development and construction or intended to be developed and constructed for the purpose of supply of power as per this Agreement;
"Power Sale Agreement" or "PSA"	shall mean the power sale agreement entered between the Buying Entity and SECI (Buyer- Buying Entity(ies) PSA) for selling the power as per the provisions of Guidelines;
"Preliminary Default Notice"	shall have the meaning ascribed thereto in Article 13 of this Agreement;
"Project Capacity"	shall mean the maximum AC capacity of the Project at the point of injection on which the Power Purchase Agreement has been signed.

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"Prudent Utility Practices"	shall mean the practices, methods and standards that are generally accepted internationally from time to time by electric utilities for the purpose of ensuring the safe, efficient and economic design, construction, commissioning, operation and maintenance of power generation equipment and which practices, methods and standards shall be adjusted as necessary, to take account of: a) operation and maintenance guidelines recommended by the manufacturers of the plant and equipment to be incorporated in the Power Project; b) the requirements of Indian Law; and the physical conditions at the site of the Power Project
"RBI"	shall mean the Reserve Bank of India;
"Rebate"	shall have the same meaning as ascribed thereto in Article 10.3.4 of this Agreement;
"RLDC"	shall mean the relevant Regional Load Dispatch Centre established under Sub-section (1) of Section 27 of the Electricity Act, 2003;
"RPC"	shall mean the relevant Regional Power Committee established by the Government of India for a specific region in accordance with the Electricity Act, 2003 for facilitating integrated operation of the power system in that region;
"Rupees", "Rs.", "₹"	shall mean Indian rupees, the lawful currency of India;
"Scheduled Commissioning Date" or "SCD" of the Project	shall mean 27-01-2023
"SERC"	shall mean the Electricity Regulatory Commission of any State in India constituted under Section-82 of the Electricity Act, 2003 or its successors, and includes a Joint Commission constituted under Subsection (1) of Section 83 of the Electricity Act 2003;
"SLDC"	shall mean the centre established under Sub-section (1) of Section 31 of the Electricity Act 2003, relevant for the State(s) where the Delivery Point is located;
"SLDC Charges"	shall mean the charges levied by the SLDC of the state wherein the Hybrid Power Project is located;
"Solar Photovoltaic Project" or "Solar PV Project"	shall mean the solar photovoltaic power project that uses sunlight for conversion into electricity and that is being set up by the HPD to provide Solar Power to SECI as per the terms and conditions of this Agreement;
"Solar Power"	shall mean power generated from the Solar Photovoltaic Power Project;
"SECI"	shall mean Solar Energy Corporation of India Limited;

"State Transmission Utility" or "STU"	shall mean the Board or the Government company notified by the respective State Government under Sub-section (1) of Section 39 of the Act;
"Sub-pooling Substation"	shall mean the intermediate pooling point where power from the Solar and Wind Project components of the Hybrid Power Project is injected into and from where the hybrid power is evacuated through a single transmission line and injected into Delivery Point;
"Tariff"	Shall have the same meaning as provided for in Article 9 of this Agreement;
"Tariff Payment"	shall mean the payments to be made under Monthly Bills as referred to in Article 10 and the relevant Supplementary Bills;
"Termination Notice"	shall mean the notice given by either Parties for termination of this Agreement in accordance with Article 13 of this Agreement;
"Term of Agreement"	shall have the meaning ascribed thereto in Article 2 of this Agreement;
"Unit/ Part Commissioning"	Subject to the compliance of conditions / procedure as detailed under Schedule-2 of this Agreement, Unit / Part Commissioning shall mean the Hybrid Power Capacity (AC MW) to be commissioned as per provisions of this Agreement and RfS document. The minimum capacity for acceptance of first part commissioning at one project site shall be at least 50 MW, without prejudice to the imposition of penalty, in terms of this PPA on the part which is not commissioned. The projects can further be commissioned in parts of at least 25 MW batch size, with last part could be the balance capacity;
"Unit Commercial Operation Date (UCOD)"	shall mean the date of issuance of commissioning certificate for the respective part(s) of the Power Project subsequent to the demonstration of the compliance of commissioning as per this Agreement and witnessed by the Committee duly constituted and also start of injection and scheduling power from the Power Project to the Delivery Point and availability / installation of all necessary arrangements / equipment including RTU for scheduling of power generated from the Project and transmission of data to the concerned authority as per applicable regulation;
"Week"	shall mean a calendar week commencing from 00:00 hours of Monday, and ending at 24:00 hours of the following Sunday;
"Wind Power"	Shall mean power generated from the Wind Power Projects;
"Wind Power Project"	shall mean the project that uses wind for conversion into electricity and that is being set up by the HPD to provide Wind Power to Buyer as per the terms and conditions of this Agreement;
"Wind Solar Hybrid Power Project"	means the wind-solar hybrid power project where the rated power capacity of one resource is atleast 33% of the Contracted Capacity.


Adani Hybrid Energy Jaisalmer Five Limited


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1.2 Interpretation

Save where the contrary is indicated, any reference in this Agreement to:

1.2.1 "Agreement" shall be construed as including a reference to its Schedules and/or Appendices and/or Annexures;

1.2.2 An "Article", a "Recital", a "Schedule" and a "paragraph / clause" shall be construed as a reference to an Article, a Recital, a Schedule and a paragraph/clause respectively of this Agreement;

1.2.3 A "crore" means a reference to ten million (10,000,000) and a "lakh" means a reference to one tenth of a million (1,00,000);

1.2.4 An "encumbrance" shall be construed as a reference to a mortgage, charge, pledge, lien or other encumbrance securing any obligation of any person or any other type of preferential arrangement (including, without limitation, title transfer and retention arrangements) having a similar effect;

1.2.5 "Indebtedness" shall be construed so as to include any obligation (whether incurred as principal or surety) for the payment or repayment of money, whether present or future, actual or contingent;

1.2.6 A "person" shall be construed as a reference to any person, firm, company, corporation, society, trust, government, state or agency of a state or any association or partnership (whether or not having separate legal personality) of two or more of the above and a person shall be construed as including a reference to its successors, permitted transferees and permitted assigns in accordance with their respective interests;

1.2.7 "Rupee", "Rupees", "Rs" or new rupee symbol "₹ " shall denote Indian Rupees, the lawful currency of India;

1.2.8 The "Winding-up", "dissolution", "insolvency", or "reorganization" of a company or corporation shall be construed so as to include any equivalent or analogous proceedings under the Law of the jurisdiction in which such company or corporation is incorporated or any jurisdiction in which such company or corporation carries on business including the seeking of liquidation, Winding-up, reorganization, dissolution, arrangement, protection or relief of debtors;

1.2.9 Words importing the singular shall include the plural and vice versa;

1.2.10 This Agreement itself or any other agreement or document shall be construed as a reference to this or to such other agreement or document as it may have been, or may from time to time be, amended, varied, novated, replaced or supplemented;

1.2.11 A Law shall be construed as a reference to such Law including its amendments or re- enactments from time to time;

1.2.12 A time of day shall, save as otherwise provided in any agreement or document be construed as a reference to Indian Standard Time;

1.2.13 Different parts of this Agreement are to be taken as mutually explanatory and supplementary to each other and if there is any inconsistency between or among the parts of this Agreement, they shall be interpreted in a harmonious manner so as to give effect to each part;

1.2.14 The tables of contents and any headings or sub-headings in this Agreement have been inserted for ease of reference only and shall not affect the interpretation of this Agreement;

1.2.15 All interest, if applicable and payable under this Agreement, shall accrue from day to day and be calculated on the basis of a year of three hundred and sixty five (365) days;

1.2.16 The words "hereof" or "herein", if and when used in this Agreement shall mean a reference to this Agreement;

1.2.17 The terms "including" or "including without limitation" shall mean that any list of examples following such term shall in no way restrict or limit the generality of the word or provision in respect of which such examples are provided;

1.2.18 This Agreement and other documents such as Request for Selection Documents, Guidelines including subsequent clarifications, amendments and further clarifications in regard to the tender shall be read in conjunction with each other and interpreted in harmonious manner. However, in case of any mismatch/contradiction between provisions of different documents, following shall be the order of precedence:

1. Power Purchase Agreement
2. RfS Documents

Adani Hybrid Energy Jaisalmer Five Limited

ARTICLE 2: TERM OF AGREEMENT

2.1 ***Effective Date***

2.1.1 This Agreement shall come into effect from 27.07.2021 and such date shall be referred to as the Effective Date.

2.1.2 The Parties agree that decisions pertaining to adoption of the Tariff and approval of the same, for procurement of contracted capacity, shall be binding on all Parties concerned, as contained in the Electricity Act, 2003 and any amendments thereof.

2.1.3 Notwithstanding the Effective Date, the condition precedent for the enforcement of the obligations of either party against the other under this Agreement shall be that, within 120 days after the Effective Date of this Agreement, SECI and/or the Buying Entity (ies) shall obtain adoption of tariff from its State Electricity Regulatory Commission and/ or CERC (as applicable), on the terms and conditions contained in this Agreement read with the terms and conditions contained in the Power Sale Agreement entered into between SECI and the Buying Entity(ies). The Parties agree that in the event, the order of adoption of tariff as mentioned above is not issued by the SERC and/ or CERC (as applicable) within the time specified above, the provisions of Article 2.1.4 shall apply.

2.1.4 Pursuant to Article 4.2.6, if parties have mutually extended the time period as stipulated under Article 2.1.1 and the order from the SERC and/ or CERC (as applicable) is issued within the timeline as per Article 2.1.3, no extension for Financial Closure or Scheduled Commissioning Date shall be given. However, if the requisite SERC and/ or CERC (as applicable) order is issued after the timeline as per Article 2.1.3, this shall entail a corresponding extension in Scheduled Financial Closure and the Scheduled Commissioning Date for equal number of days for which the SERC and / or CERC order has been delayed beyond such period as specified in Article 2.1.3.

2.2 ***Term of Agreement***

2.2.1 Subject to Article 2.3 and 2.4 of this Agreement, this Agreement shall be valid for a term from the Effective Date until the Expiry Date. This Agreement may be extended for a further period at least one hundred eighty (180) days prior to the Expiry Date, on mutually agreed terms and conditions.

2.2.2 The HPD is free to operate their plants beyond the Expiry Date if other conditions like land lease / Right to Use of Land (as applicable), permits, approvals and

clearances etc. allow. In such case unless otherwise agreed by the SECI, SECI shall not be obligated to procure power beyond the Expiry Date.

2.3 ***Early Termination***

2.3.1 This Agreement shall terminate before the Expiry Date if either SECI or HPD terminates the Agreement, pursuant to Article 13 of this Agreement.

2.4 ***Survival***

2.4.1 The expiry or termination of this Agreement shall not affect any accrued rights, obligations and liabilities of the Parties under this Agreement, including the right to receive penalty as per the terms of this Agreement, nor shall it affect the survival of any continuing obligations for which this Agreement provides, either expressly or by necessary implication, which are to survive after the Expiry Date or termination including those under Article 11 (Force Majeure), Article 13 (Events of Default and Termination), Article 14 (Liability and Indemnification), Article 16 (Governing Law and Dispute Resolution), Article 17 (Miscellaneous Provisions), and other Articles and Schedules of this Agreement which expressly or by their nature survive the Term or termination of this Agreement shall continue and survive any expiry or termination of this Agreement.

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ARTICLE 3: CONDITIONS SUBSEQUENT

3.1 Satisfaction of conditions subsequent by the HPD

The HPD agrees and undertakes to duly perform and complete all of the following activities including Financial Closure at the HPD's own cost and risk within 12 Months from the Effective Date, unless such completion is affected by any Force Majeure event, or for the activities specifically waived in writing by SECI:

a) The HPD shall make Project financing arrangements its Projects(s) and shall provide necessary certificates to SECI in this regard;

The IIPD shall submit to SECI the relevant documents as stated above, complying with the Conditions Subsequent, within twelve (12) months from the Effective Date i.e 27.07.2022.

3.2 Consequences of non-fulfilment of conditions subsequent and financial closure

3.2.1 In case of a failure to submit the documents as above, SECI shall encash the Performance Bank Guarantee/ POI submitted by the HPD, terminate this Agreement and remove the Project from the list of the selected Projects by giving a notice to the HPD in writing of at least seven (7) days, unless the delay (subject to the conditions that IIPD has made / is making all possible efforts) is on account of delay in allotment of Land by the Government not owing to any action or inaction on the part of the IIPD or caused due to a Force Majeure. Unless extended as per provisions of Article 3.2.1 (i) of this Agreement in writing, the termination of the Agreement shall take effect upon the expiry of the 7th day of the above notice.

3.2.1 (i) An extension, without any impact on the Scheduled Commissioning Date, can however be considered, on the sole request of HPD, on payment of Rs. 1000/- per day per MW to SECI Such extension charges are required to be paid to SECI in advance, for the period of extension required. In case of any delay in depositing this extension charge, HPD shall pay an interest on this extension charge for the days lapsed beyond due date of Financial Closure @ SBI-MCLR (1Year). In case such delay in making payment of the extension charges to SECI is more than 7 days, the termination of the Agreement shall take effect upon the expiry of such 7th day. This amount will go into the Payment Security Mechanism. In case of the HPD meeting the requirements of conditions subsequent and financial closure before the last date of such proposed delay period, the remaining amount deposited by the IIPD shall be returned by SECI without interest. This extension will not have any impact on the

Scheduled Commissioning Date. Any extension charges paid so by the IIPD, shall be returned to the HPD without any interest on achievement of successful commissioning within the Scheduled Commissioning Date, on pro-rata basis, based on the project capacity commissioned as on Scheduled Commissioned Date. However, in case the HPD fails to commission the Contract Capacity by Scheduled Commissioning Date, the extension charges deposited by the HPD shall not be refunded by SECI.

3.2.2 For the avoidance of doubt, it is clarified that this Article shall survive the termination of this Agreement.

3.2.4 In case of inability of the IIPD to fulfil the conditions specified in Article 3.1 due to any Force Majeure event, the time period for fulfilment of the Conditions Subsequent and Financial Closure as mentioned in Article 3.1, shall be extended for the period of such Force Majeure event.

Further, any delay in adoption of tariff by the Appropriate Commission, beyond 120 (one hundred twenty days) days after the Effective Date of this Agreement, shall entail a corresponding extension in the deadline as stipulated in Article 3.1.

3.2.5 Provided that due to the provisions of this Article 3.2.4, any increase in the time period for completion of conditions subsequent and financial closure mentioned under Article 3.1, shall also lead to an equal extension in the Scheduled Commissioning Date.

3.3 Performance Bank Guarantee/ Payment on Order Instrument (POI)

3.3.1 The Performance Bank Guarantee (PBG)/ Payment on Order Instrument having validity from the date of submission of PBG/POI until thirty (30) months from the Effective Date and of Rs. 10 Lakh/MW has been furnished under this Agreement shall be for guaranteeing the commencement of the supply of power up to the Contracted Capacity within the time specified in this Agreement as per format provided in Schedule 1/Schedule 3.

3.3.2 The failure on the part of the HPD to furnish and maintain the Performance Bank Guarantee/POI shall be a material breach of the term of this Agreement on the part of the HPD.

3.3.3 If the HPD fails to commence supply of power from the Scheduled Commissioning Date specified in this Agreement or any further extension thereof granted by SECI, subject to conditions mentioned in Article 4.5, SECI shall encash the Performance

Bank Guarantee/POI equivalent to the amount calculated as per liquidated damages applicable under Article 4.6 as on the date of encashment without prejudice to the other rights of SECI under this Agreement. It is to be noted that the damages/dues recovered by SECI by encashing the PBG/POI, upon the default of the HPD under the PPA, shall be credited to the payment security fund maintained by SECI under the PPA.

3.4 Return of Performance Bank Guarantee/ Payment on Order Instrument

3.4.1 Subject to Article 3.3, SECI shall return / release the Performance Bank Guarantee/ POI immediately after the successful Commissioning of the Project after taking into account any liquidated damages / penalties due to delays in commissioning as per provisions stipulated in this Agreement.

3.4.2 The return / release of the Performance Bank Guarantee/ POI shall be without prejudice to other rights of SECI under this Agreement.

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ARTICLE 4: CONSTRUCTION & DEVELOPMENT OF THE PROJECT

4.1 ***HPD's Obligations***

4.1.1 The HPD undertakes to be responsible, at HPD's own cost and risk, for:

a) The HPD shall be solely responsible and make arrangements for Land & associated infrastructure for development of the Project and for Connectivity with the CTU System for confirming the evacuation of power by the Scheduled Commissioning date and all clearances related thereto;

On or before Scheduled Commissioning Date, the HPD shall demonstrate possession of 100% (Hundred Percent) of the land identified for the Project in its name for a period not less than the complete Term of this Agreement. In this regard, the HPD shall submit documents/ Lease Agreement to establish possession/ right to use 100% of the required land in the same of the HPD or its Affiliate. In case the land is in the name of the Affiliate, the land should be transferred in the name of the HPD prior to the SCD. Wherever leasing of private land is involved, the lease should allow transfer of land to the lenders or SECI, in case of default of the HPD. The HPD shall submit a sworn affidavit from the authorized signatory of the HPD listing the details of the land and certifying that total land required for the Project is under clear possession of the HPD;

b) Obtaining all Consents, Clearances and Permits as required and maintaining all Consents, Clearances and Permits in full force and effect during the Term of this Agreement. SECI shall have no obligation to recommend to any department/agency or the Govt. for the grant/permission for the Hybrid Power project. The Hybrid Power Developer shall, on his own, obtain permissions/ sanctions from Government authorities, if any required for establishing the project. Any steps that may be taken by SECI in regard to grant of such consents and permits or any other approval to be taken by the HPD shall only be a voluntary endeavour with no intention of being bound by any legal or binding obligation.

c) designing, constructing, erecting, commissioning, completing and testing the Power Project in accordance with the applicable Law, the Grid Code, the terms and conditions of this Agreement and Prudent Utility Practices.

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d) the commencement of supply of power up to the Contracted Capacity to SECI no later than the Scheduled Commissioning Date and continuance of the supply of power throughout the term of the Agreement;

e) connecting the Power Project switchyard with the Interconnection Facilities at the Delivery Point; The HPD shall make adequate arrangements to connect the Power Project switchyard with the Interconnection Facilities at Interconnection / Metering / Delivery Point.

f) owning the Power Project throughout the Term of Agreement free and clear of encumbrances, except those expressly permitted under Article 15;

g) maintaining its controlling shareholding (controlling shareholding shall mean more than 50% of the voting rights and paid-up share capital) prevalent at the time of signing of PPA up to a period of one (1) year after Commercial Operation Date of the Project in line with Clause 3.20 of the RfS; However transfer of controlling shareholding within the same Group Companies will be allowed with the permission of SECI after COD subject to the condition that the management control remains within the same Group Companies; and

f) fulfilling all obligations undertaken by the HPD under this Agreement.

g) Obtaining Long Term Access (LTA) and executing transmission service agreement with CTU/STU as the case may be, for evacuation of the Contracted Capacity and maintaining it throughout the term of the Agreement.

h) The HPD shall be responsible to for directly coordinating and dealing with the corresponding Buying Utility(ies), Load Dispatch Centres, Regional Power Committees, and other authorities in all respects in regard to declaration of availability, scheduling and dispatch of hybrid Power and due compliance with deviation and settlement mechanism and the applicable Grid code/State/Central Regulations, acknowledging that the HPD and the corresponding Buying Utility(ies) are the Grid connected entities and SECI as an Intermediary Procurer/ trading licensee is not a Grid connected entity in respect of the Hybrid Power contracted under this Agreement.

i) The HPD shall fulfil the technical requirements according to criteria mentioned under Annexure II–Technical requirement for Grid Connected Solar PV Power Stations under Guidelines for Tariff Based Competitive Bidding Process for Procurement of Power from Grid Connected Solar Power Projects, issued by Ministry of Power, vide resolution no.23/27/2017-R&R dated 03.08.2017, including subsequent amendments and clarifications. Further, the type-certified

wind turbine models listed in Revised List of Models and Manufacturers (RLMM) issued by MNRE as updated as on the date of commissioning of the Projects will be allowed for deployment under this Agreement. The wind power projects will be developed as per Guidelines issued by MNRE on Development of Onshore Wind Power Projects

j) Further, the Project being implemented under this Agreement shall fulfil the criteria as per Central Electricity Authority (Technical Standards for Connectivity to the Grid) Regulations, 2007, and subsequent amendments and clarifications thereof,

k) As part of scheduling of power from the Project, the HPD will be required to punch-in their respective schedules and subsequent revisions, by themselves, at the interfaces of all the RLDCs concerned for the corridor of power flow, including the RLDC of the Buying Entity/Discom, as per the Regulations in force, under intimation to SECI. SECI may facilitate in identification of any discrepancy and assist the HPD for its early rectification without any liability on SECI. The HPD shall be solely responsible for discrepancy identification and its rectification to avoid any rejection/less payment of invoices.

l) making a payment security deposit of Rs.30,00,00,000(Indian Rupees Thirty Crores only) to the designated account as intimated by the SECI towards Payment Security Fund as per clause 3.12 of Section 3 of RfS.

4.2 ***Information regarding Interconnection Facilities***

4.2.1 The HPD shall be required to obtain all information from the STU/CTU/concerned authority with regard to the Interconnection Facilities as is reasonably necessary to enable it to design, install and operate all interconnection plant and apparatus on the HPD's side of the Delivery Point to enable delivery of electricity at the Delivery Point. The transmission of power up to the point of interconnection where the metering is done for energy accounting shall be the responsibility of the HPD at his own cost.

4.2.2 Penalties, fines and charges imposed by the CTU/ STU under any statute or regulation in relation to delay in commissioning of Project shall be payable by the HPD to the extent the delay is attributable to the HPD.

4.2.3 The responsibility of getting connectivity with the transmission system up to the Interconnection Point, will lie with the HPD. The transmission of power up to the point of interconnection where the metering is done for energy accounting shall be the responsibility of the HPD at his own cost. The maintenance of Transmission

system up to the designated point as per the applicable terms and conditions shall be the responsibility of the HPD. All costs and charges including but not limited to the wheeling charges and losses up to and including at the Interconnection Point associated with this arrangement will also be borne by the HPD.

4.2.4 In case of Pooling substation, losses in the transmission line shall be apportioned among the HPDs who share such a Pooling arrangement and duly signed by all HPDs, based on their monthly generation.

4.2.5 The arrangement of connectivity shall be made by the HPD through a dedicated transmission line. The entire cost of transmission including cost of construction of line, any other charges, losses etc. from the Project up to the Interconnection Point will be borne by the HPD. In case of non-availability of Grid and Transmission System during Term of this Agreement, for reasons not attributable to the HPD, provisions of Article 4.10 shall be applicable.

4.2.6 Government of India from time to time issues order for waiver of inter-state transmission system (ISTS) charges and losses on transmission of wind/solar power till a certain date. In case the commissioning of the Project gets delayed beyond the applicable date of ISTS waiver, arising out of any reasons whatsoever, SECI shall bear no liability with respect to transmission charges and losses levied, if any. Further, in case SCD of the Project is prior to the above deadline of waiver of ISTS charges and losses, and commissioning of the Project is delayed beyond the above date for the reasons attributable to the HPD, the applicable transmission charges and losses shall be borne by the HPD.

4.3 Purchase and sale of Contracted Capacity

4.3.1 Subject to the terms and conditions of this Agreement, the HPD undertakes to sell to SECI and SECI undertakes to pay Tariff for all the energy supplied at the Delivery Point corresponding to the Contracted Capacity.

4.3.2 Energy procured from the Project under this Agreement shall be allocated on a pro-rata basis, to all the Buying Entities which have signed their respective Power Sale Agreements with SECI under the referred RfS.

4.4 *Right to Contracted Capacity & Energy*

4.4.1 The HPD will declare the CUF of the Project and will be allowed to revise the same once within three years after COD of the full project capacity. Subsequent to commissioning/part-commissioning of the Project, SECI, in any Contract Year

except for the first year of operation, shall not be obliged to purchase any additional energy from the HPD beyond **2313.8032** Million kWh (MU) .

If for any Contract Year except for first year of operation, it is found that the HPD has not been able to generate minimum energy of **1735.3524**.Million kWh (MU) of the energy generated from the Project on account of reasons solely attributable to the HPD, the non-compliance by HPD shall make the HPD liable to pay the compensation provided in the respective PSA as payable to Buying Entity(ies) by Buyer to enable Buyer to remit the amount to Buying Entity(ies). In case of full commissioning of the Project, energy supplied between COD and the commencement of first financial year after COD will not be taken into consideration for the purpose of calculation of CUF. In case of part commissioning of the Project, the above limits shall be considered on pro-rata basis till the commissioning of full Contracted Capacity of the Project.

The lower limit will, however be relaxable by Buyer to the extent of grid non-availability for evacuation which is beyond the control of the HPD (as certified by the SLDC/RLDC). This compensation shall be applied to the amount of shortfall in generation during the Contract Year. The amount of such compensation shall be will be calculated @ 50% (fifty percent) of the PPA tariff for the shortfall in energy terms, in accordance with the terms of the PPA. This compensation shall not be applicable in events of Force Majeure identified under PPA with SECI affecting supply of power by HPD.

4.4.2 Any excess generation over and above as per Article 4.4.1, may be purchased by SECI at the tariff in term of as per Article 9, provided the Buying Entity consents to purchase such power. While the HPD would be free to install the DC solar field as per its design of required output, including its requirement of auxiliary consumption and to repower the Project from time to time during the term of the PPA in line with applicable MNRE guidelines, it will not be allowed to sell any excess power to any other entity other than SECI (unless refused by SECI). Further, any addition to the installed capacity (including but not limited to solar panels and/or wind turbines) subsequent to commissioning of the full capacity/part capacity of the Project (as applicable), shall not be eligible for any future claims made by the HPD, seeking compensation on account of any changes in the applicable provisions covered under Change in Law as defined in this Agreement.

The HPD will be free to re-power their plants during the PPA duration. However, after repowering, the minimum ratio of both the resources shall be maintained.

The HPD shall be required to intimate SECI about the proposed excess quantum of energy likely to be generated from the Project within any Contract Year, at least 60 days prior to the proposed date of commencement of excess generation. SECI shall be required to intimate its approval/refusal to the HPD, for buying such excess generation not later than 30 days of receiving the above offer from the HPD. In the event the offer of the HPD is not accepted by SECI within the said period of 30 days, such right shall cease to exist and the HPD shall, at its sole discretion, may sell such excess power to any third party.

However, in case at any point of time, the peak of capacity reached is higher than the contracted capacity and causes disturbance in the system at the point where power is injected, the HPD will have to forego the excess generation and reduce the output to the rated capacity and shall also have to pay the penalty/charges (if applicable) as per applicable regulations / requirements / guidelines of CERC / SERC /SLDC or any other competent agency.

Any energy produced and flowing into the grid before Scheduled Commissioning Date shall not be at the cost of SECI. SECI may agree to buy such power at a tariff as agreed to between SECI and the Buying Entity (including SECI's trading margin), provided the Buying Utility consents for purchase of such power.

4.5 ***Extensions of Time***

4.5.1 In the event that the HPD is prevented from performing its obligations under Article 4.1 by the Scheduled Commissioning Date due to:

a) any SECI Event of Default; or

b) Force Majeure Events affecting SECI/ Buying Entity(ies) , or

c) Force Majeure Events affecting the HPD,

the Scheduled Commissioning Date and the Expiry Date shall be deferred, subject to Article 4.5.6, for a reasonable period but not less than 'day for day' basis, to permit the HPD or SECI/ Buying Entity(ies) through the use of due diligence, to overcome the effects of the Force Majeure Events affecting the HPD or SECI/Buying Entity(ies), or till such time such Event of Default is rectified by SECI.

4.5.2 Subsequent to grant of connectivity, in case there is a delay in grant/operationalization of LTA by the CTU and/or there is a delay in readiness

of the ISTS substation at the Delivery Point, including readiness of the power evacuation and transmission infrastructure of the ISTS network until SCD of the Project, and it is established that:

(i) The HPD has complied with the complete application formalities as per RfS,

(ii) The HPD has adhered to the applicable Procedure in this regard as notified by the CERC/CTU, and

(iii) The delay in grant of connectivity/LTA by the CTU and/or delay in readiness of the ISTS substation at the Delivery Point, including readiness of the power evacuation and transmission infrastructure of the ISTS network, is a factor attributable to the CTU/transmission licensee and is beyond the control of the HPD;

The above shall be treated as delays beyond the control of the HPD and SCD for such Projects shall be revised as the date as on 60 days subsequent to the readiness of the Delivery Point and power evacuation infrastructure and/or operationalization of LTA. Decision on requisite extension on account of the above factor shall be taken by SECI.

Further, any delay in adoption of tariff by the Appropriate Commission, beyond 120 days after Effective Date of this Agreement, shall entail a corresponding extension in Scheduled Commissioning Date.

4.5.3 In case of extension due to reasons specified in Article 4.5.1(b) and (c), and if such Force Majeure Event continues even after a maximum period of 180 days from the date of the Force Majeure Notice, any of the Parties may choose to terminate the Agreement as per the provisions of Article 11.10. In case neither party terminates the Agreement under this clause, the Agreement shall stand terminated on the expiry of twelve (12) months of the continuation of the Force Majeure event unless the parties mutually agree to extend the Agreement for the further period.

4.5.4 If the Parties have not agreed, within thirty (30) days after the affected Party's performance has ceased to be affected by the relevant circumstance, on the time period by which the Scheduled Commissioning Date or the Expiry Date should be deferred, any Party may raise the Dispute to be resolved in accordance with Article 16.

4.5.5 As a result of such extension on account of Article 4.5.1 or Article 4.5.2, the newly determined Scheduled Commissioning Date and newly determined Expiry Date

shall be deemed to be the Scheduled Commissioning Date and the Expiry Date for the purposes of this Agreement.

4.5.6 Not Used.

4.5.7 Delay in commissioning of the project beyond the scheduled commissioning date for reasons other than those specified in Article 4.5.1 & Article 4.5.2 shall be an event of default on part of the HPD and shall be subject to the consequences specified in the Article 4.6.

4.6 Liquidated Damages not amounting to penalty for delay in Commissioning

4.6.1 The Project shall be fully commissioned within the Scheduled Commissioning Date as defined in this Agreement. If the HPD is unable to commission the Project by the Scheduled Commissioning Date for the reasons other than those specified in Article 4.5.1 and 4.5.2, the HPD shall pay to SECI, damages for the delay in such commissioning and making the Contracted Capacity available for dispatch by the Scheduled Commissioning Date as per the following:

(a) Delay beyond the Scheduled Commissioning Date upto (& including) the date as on 6 months after the Scheduled Commissioning Date: The total PBG/POI amount shall be encashed on per day basis and proportionate to the balance capacity not commissioned. For example, in case of a Project of 240 MW capacity, if commissioning of 100 MW capacity is delayed by 18 days beyond the SCD, then the liquidated damages shall be: PBG/POI amount X (100/240) X (18/180). For the purpose of calculations of liquidated damages, 'month' shall be considered consisting of 30 days.

4.6.2 The maximum time period allowed for commissioning of the full Project Capacity with encashment of Performance Bank Guarantee/POI shall be limited to the date as on 6 months from the SCD of the Project. In case, the Commissioning of the Project is delayed beyond 6 months from the SCD, it shall be considered as an HPD Event of Default and provisions of Article 13 shall apply and the Contracted Capacity shall stand reduced / amended to the Project Capacity Commissioned within 6 months from the SCD and the PPA for the balance Capacity will stand terminated and shall be reduced from the project capacity.

4.6.3 The HPD further acknowledges that the amount of the liquidated damages fixed is genuine and reasonable pre-estimate of the damages that may be suffered by SECI/ Buying entity(s) as specified under this Agreement or in the PSA.

4.7 Acceptance/Performance Test

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4.7.1 Prior to synchronization of the Power Project, the IIPD shall be required to get the Project certified for the requisite acceptance/performance test as may be laid down by Central Electricity Authority or an agency identified by the central government to carry out testing and certification for the Hybrid power project.

4.8 Third Party Verification

4.8.1 The IIPD shall be further required to provide entry to the site of the Power Project free of all encumbrances at all times during the Term of the Agreement to SECI and a third Party nominated by any Indian Governmental Instrumentality for inspection and verification of the works being carried out by the HPD at the site of the Power Project.

4.8.2 The third party may verify the construction works/operation of the Power Project being carried out by the HPD and if it is found that the construction works/operation of the Power Project is not as per the Prudent Utility Practices, it may seek clarifications from HPD or require the works to be stopped or to comply with the instructions of such third party.

4.9 Breach of Obligations

4.9.1 The Parties herein agree that during the subsistence of this Agreement, subject to SECI being in compliance of its obligations & undertakings under this Agreement, the HPD would have no right to negotiate or enter into any dialogue with any third party for the sale of Contracted Capacity of power which is the subject matter of this Agreement. It is the specific understanding between the Parties that such bar will apply throughout the entire term of this Agreement.

4.10 Generation compensation for Off-take constraints

4.10.1 Not Used.

4.10.2 Offtake constraints due to Backdown: The Hybrid Power Developer and Buying Entity shall follow the forecasting and scheduling process as per the regulations in this regard by the Appropriate Commission. The Government of India, as per Clause 5.2(u) of the Indian Electricity Grid Code (IEGC), encourages a status of "must-run" to wind and solar power projects. Therefore wind solar hybrid power plant, duly commissioned, should never be directed to back down by a Discom/ Load Dispatch Centre (LDC) except grid security or safety of any equipment or personnel where it should be duly recorded, the justification of which can be verified by any third party agency, and be notified in writing. No back-down

curtailment to be ordered without giving formal/ written instruction for the same. The details of back-down / curtailment, including justifications for such curtailment, specifying data to back such curtailment, to be made public by the concerned Load Dispatch Centre. In the event of any backing down, the HPD shall be eligible for a Generation Compensation, in the manner detailed below and there shall be no other claim, directly or indirectly against SECI:

Duration of Backdown	Provision for Generation Compensation
Hours of Backdown during a monthly billing cycle.	***Minimum Generation Compensation = 100% of [(Average Generation per hour during the month) (number of backdown hours during the month) X PPA tariff]*** Where, Average Generation per hour during the month (kWh) = Total generation in the month (kWh) ÷ Total hours of generation in the month

The Generation Compensation shall be paid as part of the energy bill for the successive month after receipt of Regional Energy Accounts (REA)/SEA/JMR. No Trading Margin shall be applicable on the Generation Compensation as provided in Article 4.10.2 only.

It is hereby clarified that for the purpose of Article 4.10, "generation" shall mean scheduled energy based on Energy Accounts. Notwithstanding anything mentioned above, the provisions of Article 4.10 shall be applicable subject to the acceptance of the same by the respective Buying Utility

No compensation shall be payable, however, if the backdown/ curtailment is on account of considerations of grid security/ safety. Such a backdown will be recorded and reported to RLDC/ NLDC. RLDC/ NLDC will examine the issue of grid safety/ security and give a finding that the issue of grid safety existed.

ARTICLE 5: SYNCHRONISATION, COMMISSIONING AND COMMERCIAL OPERATION

5.1 Synchronization, Commissioning and Commercial Operation

5.1.1 The HPD shall give the concerned RLDC/SLDC and SECI and also Buying Entity at least sixty (60) days' advanced preliminary written notice and at least thirty (30) days' advanced final written notice, of the date on which it intends to synchronize the Power Project to the Grid System.

5.1.2 Subject to Article 5.1.1, the Power Project may be synchronized by the HPD to the Grid System when it meets all the connection conditions prescribed in applicable Grid Code then in effect and otherwise meets all other Indian legal requirements for synchronization to the Grid System.

5.1.3 The synchronization equipment and all necessary arrangements / equipment including RTU for scheduling of power generated from the Project and transmission of data to the concerned authority as per applicable regulation shall be installed by the HPD at its generation facility of the Power Project at its own cost. The HPD shall synchronize its system with the Grid System only after the approval of synchronization scheme is granted by the head of the concerned substation/Grid System and checking/verification is made by the concerned authorities of the Grid System.

5.1.4 The HPD shall immediately after each synchronization/tripping of generator, inform the sub-station of the Grid System to which the Power Project is electrically connected in accordance with applicable Grid Code under intimation to SECI. In addition, the HPD will inject in-firm power to grid time to time to carry out operational/ functional test prior to commercial operation. For avoidance of doubt, it is clarified that Synchronization / Connectivity of the Project with the grid shall not to be considered as Commissioning of the Project.

5.1.5 The HPD shall commission the Project as detailed in "Schedule 2: Commissioning Procedure" within the SCD as per this Agreement. Declaration of COD / UCOD shall only be done subject to the demonstration of the compliances as per Schedule-2 and subsequent upon the successful visit by the Commissioning Committee.

5.1.6 There can be part Commissioning of the Project. Part commissioning of the project shall mean that all equipment corresponding to the part capacity have been installed and commissioned and corresponding energy has flown into the grid.

Part commissioning cannot be construed by just installing one source of generation, the IIPD shall install both solar and wind capacities in proposed ratio on pro-rata basis.

5.1.7 The Parties agree that for the purpose of commencement of the supply of electricity by HPD to SECI, liquidated damages for delay etc., the Scheduled Commissioning

Date or extended Scheduled Commissioning Date as defined in this Agreement shall be the relevant date.

5.1.8 **Early Commissioning**

The HPD shall be permitted for full commissioning as well as part commissioning of the Project even prior to the Scheduled Commissioning Date, subject to availability of transmission connectivity and Long-Term Access (LTA).

Early commissioning of the Project will be allowed solely at the risk and cost of the HPD, and SECI shall purchase the energy from such early commissioned Project at the PPA tariff, only in the case Discom agrees to purchase power from the Project at an earlier date, and at the PPA tariff plus trading margin. Such intimation for early commissioning shall be provided to SECI at least 60 days prior to the proposed early commissioning date. In case there is no response provided by SECI within 30 days from the receipt of such intimation, such early commissioned capacity shall be deemed to have been refused by SECI.

In case SECI does not agree to purchase such energy, early part/full commissioning of the Project shall still be allowed and the HPD will be free to sell such energy to a third party; subject to operationalization of LTA, until SCD or the date of commencement of procurement of power from the Project as notified by SECI, whichever is earlier. COD of the Project under the PPA will be declared from the date of commencement of procurement of energy from the Project by SECI.

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ARTICLE 6: DISPATCH AND SCHEDULING

6.1 *Dispatch and Scheduling*

6.1.1 The HPD shall be required to schedule its power as per the applicable regulations / requirements / guidelines of CERC / SERC /SLDC / RLDC or any other competent agency and same being recognized by the SLDC or any other competent authority / agency as per applicable regulation/ law / direction and maintain compliance to the applicable Codes/ Grid Code requirements and directions, if any, as specified by concerned SLDC/RLDC from time to time. Any deviation from the Schedule will attract the provisions of applicable regulation / guidelines / directions and any financial implication on account of this shall be on the account of the HPD.

6.1.2 The HPD shall be responsible for directly coordinating and dealing with the Buying Entity, State Load Dispatch Centre's, Regional Power Committees, and other authorities in all respects in regard to declaration of availability, scheduling and dispatch of hybrid Power and due compliance with deviation and settlement mechanism and the applicable Grid code Regulations, acknowledging that the HPD and Buying Entity are the Grid connected entities and SECI as an intermediary procurer/ trading licensee is not a Grid connected entity in respect of the power contracted under this Agreement.

6.1.3 The HPD shall be responsible for any deviation from scheduling and for any resultant liabilities on account of charges for deviation as per applicable regulations. UI charges on this account shall be directly paid by the HPD.

6.1.4 Auxiliary power consumption will be treated as per the concerned Central/ State regulations.

6.1.5 Energy procured from the Project under the PPA shall be allocated on a pro-rata basis, to all the Buying Entities which have signed their respective Power Sale Agreements with SECI under the referred RfS.

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ARTICLE 7: METERING

7.1 ***Meters***

7.1.1 For installation of Meters, Meter testing, Meter calibration and Meter reading and all matters incidental thereto, the HPD and SECI shall follow and be bound by the Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006, the Grid Code, as amended and revised from time to time.

7.1.2 The HPD shall bear all costs pertaining to installation, testing, calibration, maintenance, renewal and repair of meters at HPD's side of Delivery Point.

7.1.3 In addition to ensuring compliance of the applicable codes, the HPD shall install Main & Check meters at the Delivery Point, along with Stand-by meter(s) as per the applicable Central/State regulations.

7.1.4 In case of pooling of multiple Projects, power from multiple Projects can be pooled at a Pooling Substation prior to the Delivery point and the combined power can be fed at Delivery point through a common transmission line from the Pooling Substation. In such cases, ABT compliant sub-meters as per relevant regulation/approval are also to be set up at pooling substation for individual projects in addition to the meters at Delivery Point as described in clause 7.1.3.

7.2 Reporting of Metered Data and Parameters

7.2.1 The grid connected hybrid power plants will install necessary equipment for continuous monitoring of ambient air temperature, wind resource data (including wind speed), solar resource data and other weather parameters and simultaneously for monitoring of the electric power generated from the plant.

7.2.2 Online arrangement would have to be made by the HPD for submission of above data regularly for the entire period of this Power Purchase Agreement to the SLDC, SECI, National Institute of Wind Energy (NIWE) and the concerned Ministry or concerned agency as per applicable regulation / directions.

7.2.3 Reports on above parameters on monthly basis (or as required by regulation / guidelines) shall be submitted by the HPD to Ministry of New and Renewable Energy/ SECI/National Institute of Solar Energy/ National Institute of Wind Energy through SECI for entire period of PPA.

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7.2.4 In addition to the abovementioned data, the HPD shall also be required to submit information, as required by SECI, for regular monitoring of status of the Project.

ARTICLE 8: INSURANCES

8.1 ***Insurance***

8.1.1 The HPD shall effect and maintain or cause to be effected and maintained, at its own cost and expense, throughout the Term of PPA, Insurances against such risks to keep the Project in good condition and shall take Industrial All Risk insurance policy covering risks against any loss or damage, with such deductibles and with such endorsements and co-insured(s), which the Prudent Utility Practices would ordinarily merit maintenance of and as required under the Financing Agreements, Implementation and Support Agreement and under the applicable laws.

8.2 ***Application of Insurance Proceeds***

8.2.1 In case of the Project not being implemented through Financing Agreement(s), save as expressly provided in this Agreement or the Insurances, the proceeds of any insurance claim made due to loss or damage to the Power Project or any part of the Power Project shall be first applied to reinstatement, replacement or renewal of such loss or damage.

In case of the Project being financed through Financing Agreement(s), save as expressly provided in this Agreement or the Insurances, the proceeds of any insurance claim made due to loss or damage to the Power Project or any part of the Power Project shall be applied as per such Financing Agreements.

8.2.2 If a Force Majeure Event renders the Power Project no longer economically and technically viable and the insurers under the Insurances make payment on a "total loss" or equivalent basis, SECI shall have claim on such proceeds of such Insurance limited to outstanding dues of SECI against the Buying Utility(ies) as per PSA entered into and any other dues of the Buying Utility(ies) against HPD.

8.3 ***Effect on liability of SECI***

8.3.1 Notwithstanding any liability or obligation that may arise under this Agreement, any loss, damage, liability, payment, obligation or expense which is insured or not or for which the HPD can claim compensation, under any Insurance shall not be charged to or payable by Buyer. It is for the HPD to ensure that appropriate

insurance coverage is taken for payment by the insurer for the entire loss and there is no under insurance or short adjustment etc.

ARTICLE 9: APPLICABLE TARIFF

9.1 The HPD shall be entitled to receive the Tariff of Rs.2.41./ kWh , fixed for the entire term of this Agreement, with effect from the SCD, for the power sold by the Buyer to the Buying Entity for the scheduled energy as reflected in the Energy Accounts. In case of early commissioning, subject to the consent for such purchase by the Buying Utility, SECI may purchase the generation at the PPA tariff.

9.2 Any excess generation over and above energy specified in Article 4.4.1, will be purchased by SECI at 75% (seventy-five per cent) of the tariff as per Article 9.1, provided the Buying Entity consents for purchase of such excess generation. Any energy produced and flowing into the grid before SCD shall not be at the cost of SECI. SECI may agree to buy such power provided Buying Entity consents to purchase such energy. However, the HPD will not be allowed to sell energy generated prior to SCD or excess energy during any Contract Year to any other entity other than SECI (unless refused by SECI).

9.3 Early Commissioning:

Early commissioning of the Project will be allowed solely at the risk and cost of the HPD, and SECI shall purchase the energy from such early commissioned Project at the PPA tariff, only in the case Discom agrees to purchase power from the Project at an earlier date, and at the PPA tariff plus trading margin.

Such intimation for early commissioning shall be provided to SECI at least 60 days before the proposed early commissioning date. In case there is no response provided by SECI within 30 days from the receipt of such intimation, such early commissioned capacity shall be deemed to have been rejected by SECI.

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ARTICLE 10: BILLING AND PAYMENT

10.1 *General*

10.1.1 Pursuant to Article 4.1.1 (l), SECI shall set up a payment security fund for Hybrid Power Projects in order to ensure timely payment. This fund will have a corpus to cover 3 months' payment.

10.1.2 From the commencement of supply of power, SECI shall pay to the HPD the monthly Tariff Payments subject to the adjustments as per provisions of this Agreement including Article 6, in accordance with Article 9. All Tariff Payments by SECI shall be in Indian Rupees.

10.1.3 For the purpose of payment of the bills raised by the HPD(s), in case Energy Account is published on cumulative basis, payment to the HPD(s) for the energy delivered shall be apportioned based on JMR taken for the HPD's Project at the Pooling substation/metering point.

10.1.4 The HPD shall be required to make arrangements and payments for import of energy (if any) as per applicable regulations.

10.2 *Delivery and Content of Monthly Bills/Supplementary Bills*

10.2.1 The HPD shall issue to SECI hard copy of a signed Monthly Bill/Supplementary Bill for the immediately preceding Month/relevant period based on the issuance of Energy Accounts along with all relevant documents (payments made by HPD for drawal of power, payment of reactive energy charges, Metering charges or any other charges as per guidelines of SERC/CERC, if applicable.

Each Monthly Bill shall include all charges as per this Agreement for the energy supplied for the relevant Month based on Energy Accounts issued by RPC or any other competent authority which shall be binding on both the Parties The Monthly Bill amount shall be the product of the energy as per Energy Accounts and the Applicable Tariff. Energy drawn from the grid will be regulated as per the applicable Central/State regulations.

10.2.2 As per applicable regulation(s) of the Appropriate Commission(s)/respective SERC(s), all charges pertaining to obtaining open access and scheduling of power, if any, shall be borne by the HPD.

10.3 ***Payment of Monthly Bills***

10.3.1 SECI shall pay the amount payable under the Monthly Bill/Supplementary Bill by the Due Date to such account of the HPD, as shall have been previously notified by the HPD as below.

10.3.2 All payments required to be made under this Agreement shall also include any deduction or set off for:

i) deductions required by the Law; and

ii) amount claimed by SECI, if any, from the HPD, will be adjusted from the monthly energy payment. In case of any excess payment adjustment, 1.25% surcharge will be applicable on day to day basis.

The HPD shall open a bank account (the "HPD's Designated Account") for all Tariff Payments (including Supplementary Bills) to be made by SECI to the HPD, and notify SECI of the details of such account at least ninety (90) Days before the dispatch of the first Monthly Bill. SECI shall also designate a bank account at New Delhi ("SECI Designated Account") for payments to be made by the HPD to SECI, if any, and notify the HPD of the details of such account ninety (90) Days before the Scheduled Commissioning Date. SECI and the HPD shall instruct their respective bankers to make all payments under this Agreement to the HPD's Designated Account or SECI's Designated Account, as the case may be, and shall notify either Party of such instructions on the same day.

10.3.3 Late Payment Surcharge

Late Payment Surcharge In the event of payment of a Monthly Bill by SECI beyond thirty days, a Late Payment Surcharge (LPS) shall be payable to the HPD on the payment outstanding after the Due Date, at the base rate of Late Payment Surcharge applicable for the period for the first month of default. "Base rate of Late Payment Surcharge" means the marginal cost of funds-based lending rate for one year of the State Bank of India, as applicable on the 1st April of the financial year in which the period lies, plus five percent. The Late Payment Surcharge shall be claimed by HPD through the Supplementary Bill. Late Payment Surcharge shall be payable on the payment outstanding after the Due Date at the base rate of Late Payment Surcharge applicable for the period for the first month of default subject

to such late payment surcharge being duly received by SECI under the PSA from the Buying Entity(ies). The rate of Late Payment Surcharge for the successive months of default shall increase by 0.5 percent for every month of delay provided that the Late Payment Surcharge shall not be more than 3 percent higher than the base rate at any time: (a) Provided that the rate at which Late Payment Surcharge shall be payable shall not be higher than 1.25% per month at any time for purchase of power.

10.3.4 Subject to the Article 9 of this Agreement, in the event of early Commissioning of the Project and subject to acceptance by SECI, the payment for the power fed to the grid may be accounted from the date of UCOD, and HPD would be allowed to raise Bills against such power as per Article 10.2.1, subject to the conditions as stipulated in Article 9. However, payment against the 1st such bill raised by the HPD, will be made subject to acceptance of the bill by the Discom.

10.3.5 **Rebate**

For payment of any Bill on or before Due Date, the following Rebate shall be paid by the HPD to SECI in the following manner.

a) A Rebate of 1.5% shall be payable to the SECI for the payments made within a period of 10 (ten) days of the presentation of hard copy of Bill.
b) Any payments made after ten (10) days of the date of presentation of Bill through hard copy up to the Due Date shall be allowed a rebate of 1 %.
c) For the above purpose, the date of presentation of Bill shall be the next Business Day of delivery of the physical copy of the Bill at SECI. .
d) No Rebate shall be payable on the Bills raised on account of Change in Law (except in case of annuity tariff model being implemented, where rebate will be applicable) relating to taxes, duties, cess etc. and on Supplementary Bill.

For the above purpose date of presentation of bill shall be the same day of delivery in hard copy. However, for consideration of rebate, next business day shall be considered.

10.4 **Payment Security Mechanism**

Letter of Credit (LC):

10.4.1 SECI shall provide to the HPD, in respect of payment of its Monthly Bills and/or Supplementary Bills, a monthly unconditional, revolving and irrevocable letter of credit ("Letter of Credit"), opened and maintained which may be drawn upon by the HPD in accordance with this Article.

10.4.2 Before the start of supply, SECI through a scheduled bank open a Letter of Credit in favour of the HPD, to be made operative from a date prior to the Due Date of its first Monthly Bill under this Agreement. The Letter of Credit shall have a term of twelve (12) Months and shall be renewed annually, for an amount equal to:

i) for the first Contract Year, equal to the estimated average monthly billing;
ii) for each subsequent Contract Year, equal to the average of the monthly billing of the previous Contract Year.

10.4.3 Provided that the HPD shall not draw upon such Letter of Credit prior to 30 days beyond the Due Date of the relevant Monthly Bill and/or Supplementary Bill, and shall not make more than one drawal in a Month.

10.4.4 Provided further that if at any time, such Letter of Credit amount falls short of the amount specified in Article 10.4.2 due to any reason whatsoever, SECI shall restore such shortfall before next drawl.

10.4.5 SECI shall cause the scheduled bank issuing the Letter of Credit to intimate the HPD, in writing regarding establishing of such irrevocable Letter of Credit.

10.4.6 SECI shall ensure that the Letter of Credit shall be renewed not later than its expiry.

10.4.7 All costs relating to opening, maintenance of the Letter of Credit shall be borne by SECI.

10.4.8 If SECI fails to pay undisputed Monthly Bill or Supplementary Bill or a part thereof within and including the date as on 30 days beyond the Due Date, then, subject to Article 10.4.6 & 10.5.2, the HPD may draw upon the Letter of Credit, and accordingly the bank shall pay without any reference or instructions from SECI, an amount equal to such Monthly Bill or Supplementary Bill or part thereof,

in accordance with Article 10.4.3 above, by presenting to the scheduled bank issuing the Letter of Credit, the following documents:

i) a copy of the Monthly Bill or Supplementary Bill which has remained unpaid to HPD and;

ii) a certificate from the HPD to the effect that the bill at item (i) above, or specified part thereof, is in accordance with the Agreement and has remained unpaid beyond the Due Date;

10.5 Disputed Bill

10.5.1 If the SECI does not dispute a Monthly Bill or a Supplementary Bill raised by the HPD within thirty (30) days of receiving such Bill shall be taken as conclusive.

10.5.2 If the SECI disputes the amount payable under a Monthly Bill or a Supplementary Bill, as the case may be, it shall pay 50% of the invoice amount and it shall within thirty (30) days of receiving such Bill, issue a notice
(the "Bill Dispute Notice") to the invoicing Party setting out:

i) the details of the disputed amount;

ii) its estimate of what the correct amount should be; and

iii) all written material in support of its claim.

10.5.3 If the HPD agrees to the claim raised in the Bill Dispute Notice issued pursuant to Article 10.5.2, the HPD shall revise such Bill and present along with the next Monthly Bill. In such a case excess amount shall be refunded along with interest at the same rate as Late Payment Surcharge, which shall be applied from the date on which such excess payment was made by the disputing Party to the invoicing Party and up to and including the date on which such payment has been received as refund.

10.5.4 If the HPD does not agree to the claim raised in the Bill Dispute Notice issued pursuant to Article 10.5.2, it shall, within fifteen (15) days of receiving the Bill Dispute Notice, furnish a notice (Bill Disagreement Notice) to the SECI providing:

i) reasons for its disagreement;

ii) its estimate of what the correct amount should be; and

iii) all written material in support of its counter-claim.

10.5.5 Upon receipt of the Bill Disagreement Notice by the SECI under Article 10.5.4, authorized representative(s) or a director of the board of directors/ member of board of the SECI and HPD shall meet and make best endeavours to amicably resolve such dispute within fifteen (15) days of receipt of the Bill Disagreement Notice.

10.5.6 If the Parties do not amicably resolve the Dispute within fifteen (15) days of receipt of Bill Disagreement Notice pursuant to Article 10.5.4, the matter shall be referred to Dispute resolution in accordance with Article 16.

10.5.7 For the avoidance of doubt, it is clarified the despite a Dispute regarding an invoice, SECI shall, without prejudice to its right to Dispute, be under an obligation to make payment of 50% of the invoice amount in the Monthly Bill.

10.6 Quarterly and Annual Reconciliation

10.6.1 The Parties acknowledge that all payments made against Monthly Bills and Supplementary Bills shall be subject to quarterly reconciliation within 30 days of the end of the quarter at the beginning of the following quarter of each Contract Year and annual reconciliation at the end of each Contract Year within 30 days to take into account the Energy Accounts, Tariff adjustment payments, Tariff Rebate, Late Payment Surcharge, or any other reasonable circumstance provided under this Agreement.

10.6.2 The Parties, therefore, agree that as soon as all such data in respect of any quarter of a Contract Year or a full Contract Year as the case may be has been finally verified and adjusted, the HPD and SECI shall jointly sign such reconciliation statement. Within fifteen (15) days of signing of a reconciliation statement, the HPD shall make appropriate adjustments in the next Monthly Bill. Late Payment Surcharge/ interest shall be payable in such a case from the date on which such payment had been made to the invoicing Party or the date on which any payment was originally due, as may be applicable. Any Dispute with regard to the

above reconciliation shall be dealt with in accordance with the provisions of Article 16.

10.7 *Payment of Supplementary Bill*

10.7.1 HPD may raise a ("Supplementary Bill") for payment on account of:

i) Adjustments required by the Energy Accounts (if applicable); or
ii) Change in Law as provided in Article 12, or
iii) Payment under Article 4.10,

And such Supplementary Bill shall be paid by the other Party.

10.7.2 SECI shall remit all amounts due under a Supplementary Bill raised by the HPD to the HPD's Designated Account by the Due Date, except open access charges, RLDC or scheduling charges and transmission charges (if applicable). For Supplementary Bill on account of adjustment required by energy account and payments under Article 4.10, Rebate as applicable to Monthly Bills pursuant to Article 10.3.5 shall equally apply. Payment will be made after realization of the same from the Buying Utility. No surcharge will be applicable other than that on the monthly energy payment and associated debit and credit note.

10.7.3 Not Used.

ARTICLE 11: FORCE MAJEURE

11.1 *Definition of Force Majeure*

A 'Force Majeure' (FM) would mean one or more of the following acts, events or circumstances or a combination of acts, events or circumstances or the consequence(s) thereof, that wholly or partly prevents or unavoidably delays the performance by the Party (the Affected Party) of its obligations under the relevant Power Purchase Agreement, but only if and to the extent that such events or circumstances are not within the reasonable control, directly or indirectly, of the Affected Party and could not have been avoided if the Affected Party had taken reasonable care or complied with Prudent Utility Practices.

An Affected Party means SECI or the HPD whose performance has been affected by an event of Force Majeure.

11.2 *Categorization of Force Majeure Events:*

11.2.1 **Natural Force Majeure Event**

a) Act of God, including, but not limited to lightning, drought, fire and explosion (to the extent originating from a source external to the site), earthquake, volcanic eruption, landslide, flood, cyclone, typhoon or tornado if it is declared / notified by the competent state / central authority / agency (as applicable), or verified to the satisfaction of Procurer;

b) radioactive contamination or ionising radiation originating from a source in India or resulting from another Force Majeure Event mentioned above excluding circumstances where the source or cause of contamination or radiation is brought or has been brought into or near the Project by the Affected Party or those employed or engaged by the Affected Party;

c) the discovery of geological conditions, toxic contamination or archaeological remains on the Project land that could not reasonably have been expected to be discovered through an inspection of the Project land; or

d) any event or circumstances of a nature analogous to any of the events as specified under Article 11.2.1 (a), 11.2.1 (b) and 11.2.1 (c).

11.2.2 Non-Natural Force Majeure Event

a) any act of war (whether declared or undeclared), invasion, armed conflict or act of foreign enemy, blockade, embargo, revolution, riot, insurrection, terrorist or military action;

b) nation/state-wide strike, lockout, boycotts or other industrial disputes which are not directly and solely attributable to the actions of the Affected Party, but does not include strike or labour unrest limited to the Affected Party or its contractors;

c) nationalisation or any compulsory acquisition by any Indian Governmental Instrumentality/ State Government in national interest or expropriation of any material Project assets or rights of the HPD, as a result of which the HPD or its shareholders are deprived (wholly or partly) of their rights or entitlements under the Power Purchase Agreement. Provided that such action does not constitute remedies or sanctions lawfully exercised by the Procurer or any other Government Authority as a result of any breach of any of the Applicable Laws or the Applicable Permits by the HPD or the HPD related parties;

d) action of a Government Authority having Material Adverse Effect including but not limited to Change in Law, only if consequences thereof cannot be dealt with under and in accordance with the provisions of Article 12 of this Agreement; any unlawful or unauthorised or without jurisdiction revocation of, or delay in, or refusal, or failure to renew or grant without valid cause, any Permits of the HPD or any of the clearance, licence, authorization to be obtained by the contractors to perform their respective obligations under the relevant PPA and/or the Project Documents; provided that such delay, modification, denial, refusal or revocation did not result from the HPD's or any contractor's inability or failure to comply with any condition relating to grant, maintenance or renewal of such Permits or clearance, licence, authorization, as the case may be.

11.3 Force Majeure Exclusions

11.3.1 Force Majeure shall not include (i) any event or circumstance which is within the reasonable control of the Parties and (ii) the following conditions, except to the extent that they are consequences of an event of Force Majeure:

a. Unavailability, late delivery, or changes in cost of the plant, machinery, equipment, materials, spare parts or consumables for the Power Project;

b. Delay in the performance of any contractor, sub-contractor or their agents;

c. Non-performance resulting from normal wear and tear typically experienced in power generation materials and equipment;

d. Strikes at the facilities of the Affected Party;

e. Insufficiency of finances or funds or the agreement becoming onerous to perform; and

f. Non-performance caused by, or connected with, the Affected Party's:

i. Negligent or intentional acts, errors or omissions;

ii. Failure to comply with an Indian Law; or

iii. Breach of, or default under this Agreement.

11.4 ***Notification of Force Majeure Event***

11.4.1 The Affected Party shall give notice to the other Party of any event of Force Majeure as soon as reasonably practicable, but not later than fifteen (15) days after the date on which such Party knew or should reasonably have known of the commencement of the event of Force Majeure and SECI shall take a decision on the Affected Party's claim within 15 days of the receipt of the intimation. If an event of Force Majeure results in a breakdown of communications rendering it unreasonable to give notice within the applicable time limit specified herein, then the Party claiming Force Majeure shall give such notice as soon as reasonably practicable after reinstatement of communications, but not later than one (1) day after such reinstatement.

11.4.2 Provided that such notice shall be a pre-condition to the Affected Party's entitlement to claim relief under the PPA. Such notice shall include full particulars of the event of Force Majeure, its effects on the Party claiming relief and the remedial measures proposed. The Affected Party shall give the other Party regular (and not less than weekly) reports on the progress of those remedial measures and such other information as the other Party may reasonably request about the Force Majeure Event.

11.4.3 The Affected Party shall give notice to the other Party of (i) the cessation of the relevant event of Force Majeure; and (ii) the cessation of the effects of such event

of Force Majeure on the performance of its rights or obligations under the PPA, as soon as practicable after becoming aware of each of these cessations.

11.5 Performance Excused

11.5.1 The Affected Party, to the extent rendered unable to perform its obligations or part of the obligation thereof under the PPA as a consequence of the Force Majeure Event, shall be excused from performance of the obligations, provided that the period shall not exceed 180 (one hundred and eighty) Days from the date of issuance of the FM Notice. The Parties may mutually agree to extend the period for which performance is excused due to a Force Majeure Event.

11.5.2 For the time period, as mutually agreed by the Parties, during which the performance shall be excused, the generator shall be entitled for a day to day extension of the period provided for Financial Closure or Scheduled Commissioning Period or the PPA period, as the case may be.

11.5.3 Provided always that a Party shall be excused from performance only to the extent reasonably warranted by the Force Majeure Event.

11.5.4 Provided further that, nothing shall absolve the Affected Party from any payment obligations accrued prior to the occurrence of the underlying Force Majeure Event.

11.6 No Liability for Other Losses

Save as otherwise provided in this Agreement, no Party shall be liable in any manner, whatsoever, to the other Parties in respect of any loss relating to or arising out of the occurrence or existence of any Force Majeure Event.

11.7 Resumption of Performance

During the period that a Force Majeure Event is subsisting, the Affected Party shall, in consultation with the other Parties, make all reasonable efforts to limit or mitigate the effects of such Force Majeure Event on the performance of its obligations under the PPA. The Affected Party shall also make efforts to resume performance of its obligations under this Agreement as soon as possible and

upon resumption, shall notify other Parties of the same in writing. The other Parties shall afford all reasonable assistance to the Affected Party in this regard.

11.8 Duty to Perform and Duty to Mitigate

To the extent not prevented by a Force Majeure Event pursuant to Article 11.2, the Affected Party shall continue to perform its obligations pursuant to this Agreement, in line with provisions of Article 11.5. The Affected Party shall use its reasonable efforts to mitigate the effect of any Force Majeure Event as soon as practicable.

11.9 Available Relief for a Force Majeure Event

Subject to this Article 11:

a) no Party shall be in breach of its obligations pursuant to this Agreement except to the extent that the performance of its obligations was prevented, hindered or delayed due to a Force Majeure Event;

b) every Party shall be entitled to claim relief in relation to a Force Majeure Event in regard to its obligations, including but not limited to those specified under Article 4.5;

c) For avoidance of doubt, neither Party's obligation to make payments of money due and payable prior to occurrence of Force Majeure events under this Agreement shall be suspended or excused due to the occurrence of a Force Majeure Event in respect of such Party.

d) Provided that no payments shall be made by either Party affected by a Force Majeure Event for the period of such event on account of its inability to perform its obligations due to such Force Majeure Event.

11.10 Termination Due to Force Majeure Event

11.10.1 Termination due to Natural Force Majeure Event

a) If, prior to the completion of the 180 (one hundred and eighty) Day period (or any extended period) for a Natural Force Majeure Event commencing from the date of issuance of the Force Majeure Notice, the Parties are of the

reasonable view that a Natural Force Majeure Event is likely to continue beyond such 180 (one hundred and eighty) Day period or any extended period agreed in pursuance of Article 11.5 (Performance Excused); or that it is uneconomic or impractical to restore the affected Unit, then the Parties may mutually decide to terminate the PPA, and the termination shall take effect from the date on which such decision is taken.

b) Without prejudice to the provisions of Article 11.10.1.(a) above, the Affected Party shall, after the expiry of the period of 180 (one hundred and eighty) Days or any other mutually extended period, be entitled to forthwith terminate the PPA in its sole discretion by issuing a notice to that effect.

c) On termination of the PPA pursuant to Article 11.10.1(b):

i. no Termination Compensation shall be payable to the HPD.

ii. the HPD shall be eligible for undisputed payments under outstanding Monthly Bill(s), before the occurrence of Force Majeure Event.

11.10.2 Termination due to Non-Natural Force Majeure Event

a) Upon occurrence of a Non-Natural Force Majeure Event, the HPD shall, at its discretion, have the right to terminate the PPA forthwith after the completion of the period of 180 (one hundred and eighty) Days from the date of the Force Majeure Notice.

b) On termination of the PPA pursuant to Article 11.10.2(a):

i. SECI shall pay to the HPD, 'Force Majeure Termination Compensation' equivalent to the amount of the Debt Due and the 110% (one hundred and ten per cent) of the Adjusted Equity, as defined in the PPA, and takeover the Project assets.

ii. the HPD shall be eligible for undisputed payments under outstanding Monthly Bill(s), before the occurrence of Force Majeure Event.

ARTICLE 12: CHANGE IN LAW

12.1 *Definitions*

In this Article 12, the following terms shall have the following meanings:

12.1.1 In this Article 12, the term Change in Law shall refer to the occurrence of any of the following events pertaining to this project only after 7.12.2020 including (i) the enactment of any new law; or (ii) an amendment, modification or repeal of an existing law; or (iii) the requirement to obtain a new consent, permit or license; or (iv) any modification to the prevailing conditions prescribed for obtaining an consent, permit or license, not owing to any default of the Hybrid Power Developer; or (v) any change in the rates of any Taxes including any duties and cess or introduction of any new tax/cess/duty made applicable for setting up the hybrid power project and supply of power from the Project by the IIPD which have a direct effect on the Project. It is further clarified that, in case the applicability of Safeguard Duty on "Solar Cells whether or not assembled in modules or panels", which is currently applicable until 29.07.2021, gets extended and has a direct effect on the Project, resulting in change in Project Cost, such extension will also qualify under "Change in Law" as per timeline and procedure indicated under this Article.

However, Change in Law shall not include (i) any change in taxes on corporate income or (ii) any change in any withholding tax on income or dividends distributed to the shareholders of the IIPD.

12.1.2 In the event of occurrence of any of events as provided under Article 12.1.1 which results in any increase/ decrease in the Project Cost **(i.e. cost incurred by the HPD towards supply and services only for the Project concerned, upto Actual Commissioning Date of the last part capacity, or Scheduled Commissioning Date/extended Scheduled Commissioning Date, whichever is earlier),** the HPD/ SECI / Buying Utility(ies) shall be entitled for

compensation by the other party, as the case may be, subject to the condition that the such 'Change in Law' is recognized by the Appropriate Commission. Compensation payment on account of such 'Change in Law' shall be determined and shall be effective from such date as may be decided by the Appropriate Commission. For eg., in case the Actual Commissioning Date of the last part capacity is 15.04.2022, Scheduled Commissioning Date is 15.03.2022 and extended Scheduled Commissioning Date is 01.04.2022, the Project Cost shall be determined as the cost incurred by the HPD upto 01.04.2022.

12.1.3 However, in case of change in rates of safeguard duty, GST and basic customs duty after 07.12.2020 and resulting in change in Project Cost, then such change will be treated as 'Change in Law' and the quantum of compensation payment on account of change in rates of such duties and shall be provided to the affected party by the other party as per Article 12.2.3, subject to the provision that Appropriate Commission recognizes such provisions at the time of adoption of tariff by the Appropriate Commission and any decision in this regard shall be governing on HPD and Buying Entity.

12.2 *Relief for Change in Law*

12.2.1 Save and except as provided under Article 12.1.3, the aggrieved Party shall be required to approach the Hon'ble CERC for seeking approval of Change in Law.

12.2.2 The decision of the Hon'ble CERC to acknowledge a Change in Law and the date from which it will become effective, provide relief for the same, shall be final and governing on HPD and Buying Entity.

12.2.3 In case of Change in Law as approved by the Appropriate Commission pursuant to Article 12.2.1 or as provided under Article 12.1.3, the HPD/ SECI/ Buying Entities (as the case may be) shall be entitled for relief as follows:

Every net increase/decrease of Rs.1 lakh per MW in the Project Cost, for reasons other than those wherein such extension is on account of payment of liquidated damages, penalty or any other charges, as the case may be), shall be liable for corresponding increase/decrease of an amount equal to Rs 0.0049 /kWh.

Any such change, shall be considered upto three digits after the decimal point, and remaining digits, if any, shall be ignored.

For e.g. in case the change in tariff payable is calculated as Rs. 0.14678/kWh, it shall be modified as Rs. 0.146/kWh

12.2.4 In case Change in Law results in delay in commissioning or supply of power, where cause and effect between these two can be clearly established, the SECI under intimation to the Buying Entities may provide suitable time-extension in Scheduled Commissioning Date or Scheduled Date of Commencement of Supply of Power, as the case may be.

12.2.5 It the event of any decrease in the project cost by the HPD or any income to the HPD on account of any of the events as indicated above, HPD shall pass on the benefit of such reduction at a rate as provided in Article 12.2.3 to SECI which shall be further passed on to the Buying Entity. In the event of the HPD failing to comply with the above requirement, SECI shall make such deductions in the monthly tariff payments on immediate basis. Further, at the time of raising of 1st Monthly Tariff Payment Bill, HPD shall be required to provide a statutory auditor certificate supported by Board Resolution in regard to implications (loss/ gain) arising out of Article 12.

12.3 Notification of Change in Law

12.3.1 If the HPD is affected by Change in Law in accordance with Article 12 and wishes to claim a Change in Law under this Article, it shall give notice to the SECI and Buying Utility (s) of such Change in Law as soon as reasonably practicable (but no later than 60 days from the date of occurrence of such Change in Law).

12.3.2 Any notice service pursuant to this Article 12.3.1 and 12.1.3, shall provide, amongst other things, precise details of the Change in Law and its effect on the Project Cost, supported by documentary evidences including Statutory Auditor Certificate to this effect so as to establish one to one correlation and its impact on the Project Cost.

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ARTICLE 13: EVENTS OF DEFAULT AND TERMINATION

13.1 *HPD Event of Default*

13.1.1 The occurrence and/or continuation of any of the following events, unless any such event occurs as a result of a Force Majeure Event or a breach by SECI or Buying Entity(ies) of its obligations under this Agreement, shall constitute an HPD Event of Default:

(i) the failure to commence supply of power to SECI up to the Contracted Capacity, by the end of the period specified in Article 4, or failure to continue supply of Contracted Capacity to SECI after Commercial Operation Date throughout the term of this Agreement, or

if

a) the HPD assigns, mortgages or charges or purports to assign, mortgage or charge any of its assets or rights related to the Power Project in contravention of the provisions of this Agreement; or

b) the HPD transfers or novates any of its rights and/ or obligations under this agreement, in a manner contrary to the provisions of this Agreement; except where such transfer

- is in pursuance of a Law; and does not affect the ability of the transferee to perform, and such transferee has the financial capability to perform, its obligations under this Agreement or

- is to a transferee who assumes such obligations under this Agreement and the Agreement remains effective with respect to the transferee;

(ii) if (a) the HPD becomes voluntarily or involuntarily the subject of any bankruptcy or insolvency or winding up proceedings and such proceedings remain uncontested for a period of thirty (30) days, or (b) any winding up or bankruptcy or insolvency order is passed against the HPD, or (c) the HPD goes into liquidation or dissolution or has a receiver or any similar officer appointed over all or substantially all of its assets or official liquidator is appointed to manage its affairs, pursuant to Law, provided that a dissolution or liquidation of the HPD will not be a HPD Event of Default if such dissolution or liquidation is for the purpose of a merger, consolidation or reorganization and where the resulting company retains

creditworthiness similar to the HPD and expressly assumes all obligations of the HPD under this Agreement and is in a position to perform them; or

(iii) the HPD repudiates this Agreement and does not rectify such breach within a period of thirty (30) days from a notice from SECI in this regard; or

(iv) except where due to any SECI's failure to comply with its material obligations, the HPD is in breach of any of its material obligations pursuant to this Agreement, and such material breach is not rectified by the HPD within thirty (30) days of receipt of first notice in this regard given by SECI.

(v) change in controlling shareholding before the specified time frame as mentioned in Article 4.1.1 of this Agreement; or

(vi) occurrence of any other event which is specified in this Agreement to be a material breach/ default of the HPD.

(vii) except where due to any SECI's failure to comply with its material obligations, the HPD is in breach of any of its material obligations pursuant to this Agreement, and such material breach is not rectified by the HPD within thirty (30) days of receipt of first notice in this regard given by SECI.

13.2 *SECI Event of Default*

13.2.1 The occurrence and the continuation of any of the following events, unless any such event occurs as a result of a Force Majeure Event or a breach by the HPD of its obligations under this Agreement, shall constitute the Event of Default on the part of defaulting SECI:

(i) SECI fails to pay (with respect to a Monthly Bill or a Supplementary Bill), subject to Article 10.5, for a period of ninety (90) days after the Due Date and the HPD is unable to recover the amount outstanding to the HPD through the Letter of Credit,

(ii) SECI repudiates this Agreement and does not rectify such breach even within a period of sixty (60) days from a notice from the HPD in this regard; or

(iii) except where due to any HPD's failure to comply with its obligations, SECI is in material breach of any of its obligations pursuant to this

Agreement, and such material breach is not rectified by SECI within sixty (60) days of receipt of notice in this regard from the HPD to SECI; or if

- SECI becomes voluntarily or involuntarily the subject of any bankruptcy or insolvency or winding up proceedings and such proceedings remain uncontested for a period of sixty (60) days, or

- any winding up or bankruptcy or insolvency order is passed against SECI, or

- SECI goes into liquidation or dissolution or a receiver or any similar officer is appointed over all or substantially all of its assets or official liquidator is appointed to manage its affairs, pursuant to Law, provided that it shall not constitute a SECI Event of Default, where such dissolution or liquidation of Buyer or SECI is for the purpose of a merger, consolidation or reorganization and where the resulting entity has the financial standing to perform its obligations under this Agreement and has creditworthiness similar to SECI and expressly assumes all obligations of SECI and is in a position to perform them; or;

(iv) If Buying Entities are subject to any of the above defaults and SECI does not designate another or other Buying Entities for purchase of power.

(v) Occurrence of any other event which is specified in this Agreement to be a material breach or default of SECI.

13.3 *Procedure for cases of HPD Event of Default*

13.3.1 Upon the occurrence and continuation of any HPD Event of Default under Article 13.1, SECI shall have the right to deliver to the HPD, with a copy to the representative of the lenders to the HPD with whom the HPD has executed the Financing Agreements, a notice stating its intention to terminate this Agreement (SECI Preliminary Default Notice), which shall specify in reasonable detail, the circumstances giving rise to the issue of such notice.

13.3.2 Following the issue of a SECI Preliminary Default Notice, the Consultation Period of ninety (90) days or such longer period as the Parties may agree, shall apply and it shall be the responsibility of the Parties to discuss as to what steps

shall be taken with a view to mitigate the consequences of the relevant Event of Default having regard to all the circumstances.

13.3.3 During the Consultation Period, the Parties shall continue to perform their respective obligations under this Agreement.

13.3.4 Within a period of seven (7) days following the expiry of the Consultation Period unless the Parties shall have otherwise agreed to the contrary or the HPD Event of Default giving rise to the Consultation Period shall have ceased to exist or shall have been remedied, SECI may terminate this Agreement by giving a written Termination Notice of sixty (60) days to the HPD.

13.3.5 Subject to the terms of this Agreement, upon occurrence of a HPD Event of Default under this Agreement, the HPD shall be liable to pay to SECI, liquidated damages, as provided in Article 4.6 of the PPA for failure to commission within stipulated time and Article 4.4.1 for failure to supply power in terms of the PPA. For other cases, the HPD shall be liable pay to SECI, damages, equivalent to 6 (six) months, or balance PPA period whichever is less, of charges for its contracted capacity. SECI shall have the right to recover the said damages by way of forfeiture of bank guarantee, if any, without prejudice to resorting to any other legal course or remedy. In addition to the levy of damages as aforesaid, the lenders in concurrence with the Buying Entity and SECI, may exercise their rights, if any, under Financing Agreements, to seek substitution of the HPD by a selectee for the residual period of the Agreement, for the purpose of securing the payments of the total debt amount from the HPD and performing the obligations of the HPD. However, in the event the lenders are unable to substitute the defaulting HPD within the stipulated period, SECI may terminate the PPA and the Buying Entity may acquire the Project assets for an amount equivalent to 90% of the Debt Due or less as mutually agreed, failing which, the lenders may exercise their mortgage rights and liquidate the Project assets. Provided that any substitution under this Agreement can only be made with the prior consent of SECI including the condition that the selectee meets the eligibility requirements of Request for Selection (RfS) issued by SECI and accepts the terms and conditions of this Agreement.

13.3.6 The lenders in concurrence with the Buying Utility and SECI, may seek to exercise right of substitution under Article 13.3.5 by an amendment or novation of the PPA in favour of the selectee. The HPD shall cooperate with SECI to carry out such substitution and shall have the duty and obligation to continue to operate the Power Project in accordance with this PPA till such time as the substitution is finalized. In the event of Change in Shareholding/Substitution of Promoters triggered by the Financial Institutions leading to signing of fresh PPA with a new entity, an amount of Rs. 10 Lakh per Project+ 18% GST per transaction as facilitation fee (non-refundable) shall be deposited by the HPD to SECI.

13.3.7 In the event the lenders are unable to substitute the defaulting HPD within the stipulated period, SECI may terminate the PPA and the Buying Utility may acquire the Project assets for an amount equivalent to 90% of the debt due, failing which, the lenders may exercise their mortgage rights and liquidate the Project assets.

13.4 ***Procedure for cases of SECI Event of Default***

13.4.1 Upon the occurrence and continuation of any SECI Event of Default specified in Article 13.2, the HPD shall have the right to deliver to SECI, a HPD Preliminary Default Notice, which notice shall specify in reasonable detail the circumstances giving rise to its issue.

13.4.2 Following the issue of a HPD Preliminary Default Notice, the Consultation Period of ninety (90) days or such longer period as the Parties may agree, shall apply and it shall be the responsibility of the Parties to discuss as to what steps shall be taken with a view to mitigate the consequences of the relevant Event of Default having regard to all the circumstances.

13.4.3 During the Consultation Period, the Parties shall continue to perform their respective obligations under this Agreement.

13.4.4 After a period of two hundred ten (210) days following the expiry of the Consultation Period and unless the Parties shall have otherwise agreed to the contrary or SECI Event of Default giving rise to the Consultation Period shall have ceased to exist or shall have been remedied, SECI under intimation to the Buying

Entity and the HPD shall, subject to the prior consent of the HPD, novate its part of the PPA to any third party, including its Affiliates within the stipulated period. In the event the aforesaid novation is not acceptable to the HPD, or if no offer of novation is made by SECI within the stipulated period, then the HPD may terminate the PPA and at its discretion require Buying Entity to either (i) takeover the Project assets by making a payment of the termination compensation equivalent to the amount of the Debt Due and 110% (one hundred and ten per cent) of the Adjusted Equity, less Insurance Cover, if any, or, (ii) pay to the HPD, damages, equivalent to 6 (six) months, or balance PPA period whichever is less, of charges for its contracted capacity, with the Project assets being retained by the HPD.

Provided further that at the end of three (3) months period from the period mentioned in this Article 13.4.4, this Agreement may be terminated by the HPD.

In the event of termination of PPA, any damages or charges payable to the STU/ CTU, for the connectivity of the plant, shall be borne by the Buying Entity.

13.5 Not Used.

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ARTICLE 14: LIABILITY AND INDEMNIFICATION

14.1 *Indemnity*

14.1.1 The HPD shall indemnify, defend and hold SECI harmless against:

a) any and all third party claims against SECI for any loss of or damage to property of such third party, or death or injury to such third party, arising out of a breach by the HPD of any of its obligations under this Agreement; and

b) any and all losses, damages, costs and expenses including legal costs, fines, penalties and interest actually suffered or incurred by SECI from third party claims arising by reason of a breach by the HPD of any of its obligations under this Agreement, (provided that this Article 14 shall not apply to such breaches by the HPD, for which specific remedies have been provided for under this Agreement).

14.1.2 SECI shall cause the Buying Entity(ies) to indemnify, defend and hold the HPD harmless against:

a) any and all third party claims against the HPD, for any loss of or damage to property of such third party, or death or injury to such third party, arising out of a breach by Buying Entity(ies) of any of their obligations under this Agreement; and

b) any and all losses, damages, costs and expenses including legal costs, fines, penalties and interest ('Indemnifiable Losses') actually suffered or incurred by the HPD from third party claims arising by reason of a breach by Buying Entity(ies) of any of its obligations. SECI shall incorporate appropriate covenants in the PSA for the above obligations of Buying Entity(ies). In so far as indemnity to HPD is concerned, Buying Entity(ies) shall be the indemnifying party and not SECI.

14.2 Procedure for claiming Indemnity

14.2.1 ***Third party claims***

a. Where the Indemnified Party is entitled to indemnification from the Indemnifying Party pursuant to Article 14.1.1(a) or 14.1.2(a), the Indemnified Party shall promptly notify the Indemnifying Party of such claim referred to in Article 14.1.1(a) or 14.1.2(a) in respect of which it is entitled to be indemnified.

Such notice shall be given as soon as reasonably practicable after the Indemnified Party becomes aware of such claim. The Indemnifying Party shall be liable to settle the indemnification claim within thirty (30) days of receipt of the above notice. Provided however that, if:

i) the Parties choose to refer the dispute in accordance with Article 16.3.2; and

ii) the claim amount is not required to be paid/ deposited to such third party pending the resolution of the Dispute,

the Indemnifying Party shall become liable to pay the claim amount to the Indemnified Party or to the third party, as the case may be, promptly following the resolution of the Dispute, if such Dispute is not settled in favour of the Indemnified Party.

b. The Indemnified Party may contest the claim by referring to the Appropriate Commission for which it is entitled to be Indemnified under Article 14.1.1(a) or 14.1.2(a) and the Indemnifying Party shall reimburse to the Indemnified Party all reasonable costs and expenses incurred by the Indemnified party. However, such Indemnified Party shall not settle or compromise such claim without first getting the consent of the Indemnifying Party, which consent shall not be unreasonably withheld or delayed.

An Indemnifying Party may, at its own expense, assume control of the defence of any proceedings brought against the Indemnified Party if it acknowledges its obligation to indemnify such Indemnified Party, gives such Indemnified Party prompt notice of its intention to assume control of the defence, and employs an independent legal counsel at its own cost that is reasonably satisfactory to the Indemnified Party.

14.3 *Indemnifiable Losses*

14.3.1 Where an Indemnified Party is entitled to Indemnifiable Losses from the Indemnifying Party pursuant to Article 14.1.1(b) or 14.1.2(b), the Indemnified Party shall promptly notify the Indemnifying Party of the Indemnifiable Losses actually incurred by the Indemnified Party. The Indemnifiable Losses shall be reimbursed by the Indemnifying Party within thirty (30) days of receipt of the

notice seeking Indemnifiable Losses by the Indemnified Party. In case of nonpayment of such losses after a valid notice under this Article 14.3, such event shall constitute a payment default under Article 13.

14.4 *Limitation on Liability*

14.4.1 Except as expressly provided in this Agreement, neither the HPD nor SECI nor Buying Entity(ies) nor its/ their respective officers, directors, agents, employees or affiliates (or their officers, directors, agents or employees), shall be liable or responsible to the other Party or its affiliates, officers, directors, agents, employees, successors or permitted assigns or their respective insurers for incidental, indirect or consequential damages, connected with or resulting from performance or non-performance of this Agreement, or anything done in connection herewith, including claims in the nature of lost revenues, income or profits (other than payments expressly required and properly due under this Agreement), any increased expense of, reduction in or loss of power generation or equipment used therefore, irrespective of whether such claims are based upon breach of warranty, tort (including negligence, whether of Buying Entity(ies) , the HPD or others), strict liability, contract, breach of statutory duty, operation of law or otherwise.

14.4.2 SECI shall have no recourse against any officer, director or shareholder of the HPD or any Affiliate of the HPD or any of its officers, directors or shareholders for such claims excluded under this Article. The HPD shall have no recourse against any officer, director or shareholder of Buyer or Buying Entity(ies) , or any affiliate of Buyer or any of its officers, directors or shareholders for such claims excluded under this Article.

14.5 SECI's Liability

14.5.1 Notwithstanding anything to the contrary contained in this Agreement, the Parties acknowledge and accept that the SECI is an Intermediary Company to purchase and resell the electricity to the Buying Utility(ies) to enable them to fulfill the Renewable Purchase Obligations (RPO) and, therefore, the performance of the obligations of the SECI under this Agreement shall be subject to the ability of the SECI to enforce the corresponding obligations assumed by the Buying Utility(ies) on re-sale under the Power Sale Agreement to be entered into by the Buying

Utility(ies) with SECI. It is however, specifically agreed that the payment of money becoming due from the SECI to the HPD under this Agreement for supply of Power to the extent of the Contracted Capacity shall not be on a back to back basis and will be as per:

(i) the recourse under the Payment Security Mechanism provided in the PPA and PSA, as follows:

a) Letter of Credit;

(b) State Government Guarantee/ Tri-Partite Agreement (TPA) signed between Reserve Bank of India, Central Government and State Government of the Buying Entity, covering security for payment of energy charges, as applicable

(c) Payment Security Fund provided by the Buying Entity, and

(ii) Payment security fund as referred in Article 10.1.1 of the PPA. SECI shall discharge the tariff payment obligation in terms of the provisions of this Agreement.

14.5.2 The parties agree that in respect of the obligations other than the tariff payment obligation specifically mentioned herein above, in the event the HPD has any claim against the SECI in regard to the performance of any obligation of the SECI under this Agreement or enforcement of any right of the HPD against the SECI under this Agreement, the same shall be subject to the ability of the SECI to enforce the corresponding obligations assumed by the Buying Utility(ies) under the Power Sale Agreement to be entered into between the SECI and the Buying Utility(ies) on resale on mutatis mutandis basis and not otherwise.

14.6 Duty to Mitigate

14.6.1 The Parties shall endevour to take all reasonable steps so as mitigate any loss or damage which has occurred under this Article 14.

ARTICLE 15: ASSIGNMENTS AND CHARGES

15.1 *Assignments*

This Agreement shall be binding upon, and inure to the benefit of the Parties and their respective successors and permitted assigns. This Agreement shall not be assigned by any Party, except to the Project Lenders or Lender's Representative as security for their debt under the Financing Agreements, other than by mutual consent between the Parties to be evidenced in writing. Such assignment shall be agreed to by SECI subject to the compliance of provisions contained in this Agreement and more specifically to the provisions of Article 4.1.1 of this Agreement. In no case, such assignment shall be permissible prior to the declaration of COD.

Provided that, SECI shall permit assignment of any of HPD's rights and obligations under this Agreement in favour of the lenders to the HPD, if required under the Financing Agreements.

Provided that, such consent shall not be withheld if SECI seeks to transfer to any transferee all of its rights and obligations under this Agreement.

The enforcement of the rights and obligation between the HPD and the Buying Utility (ies) provided in this Agreement and in the PSA shall not be treated as an assignment but an enforcement of the terms agreed under this Agreement.

Provided further that any successor(s) or permitted assign(s) identified after mutual agreement between the Parties may be required to execute a new agreement on the same terms and conditions as are included in this Agreement. An amount of Rs. 5 Lakh per Transaction as Facilitation Fee (non-refundable) shall be deposited by the HPD to SECI. Provided further that, such consent shall not be withheld by the HPD if SECI seeks to transfer to any affiliate all of its rights and obligations under this Agreement.

In the event of Change in Shareholding/Substitution of Promoters triggered by the Financial Institutions leading to signing of fresh PPA with a New Entity, an amount of Rs. 10 Lakh per Transaction as Facilitation Fee (non-refundable) shall be deposited by the HPD to SECI.

15.2 *Permitted Charges*

15.2.1 HPD shall not create or permit to subsist any encumbrance over all or any of its rights and benefits under this Agreement, other than as set forth in Article 15.1 and the Guidelines.

ARTICLE 16: GOVERNING LAW AND DISPUTE RESOLUTION

16.1 *Governing Law*

16.1.1 This Agreement shall be governed by and construed in accordance with the Laws of India. Any legal proceedings in respect of any matters, claims or disputes under this Agreement shall be under the jurisdiction of appropriate courts in Delhi.

16.2 *Amicable Settlement and Dispute Resolution*

16.2.1 ***Amicable Settlement***

i. Either Party is entitled to raise any claim, dispute or difference of whatever nature arising under, out of or in connection with this Agreement ("Dispute") by giving a written notice (Dispute Notice) to the other Party, which shall contain:

(a) a description of the Dispute;

(b) the grounds for such Dispute; and

(c) all written material in support of its claim.

ii. The other Party shall, within thirty (30) days of issue of Dispute Notice issued under Article 16.2.1(i), furnish:

(a) counter-claim and defences, if any, regarding the Dispute; and

(b) all written material in support of its defences and counter-claim.

iii. Within thirty (30) days of issue of Dispute Notice by any Party pursuant to Article 16

(i) if the other Party does not furnish any counter claim or defence under Article 16

(ii) or thirty (30) days from the date of furnishing counter claims or defence by the other Party, both the Parties to the Dispute shall meet to settle such Dispute amicably. If the Parties fail to resolve the Dispute amicably within thirty (30) days from the later of the dates mentioned in this Article 16.2.1.

(iii) the Dispute shall be referred for dispute resolution in accordance with Article 16.3.

16.3 ***Dispute Resolution***

16.3.1 **Dispute Resolution by the Appropriate Commission**

i) Where any Dispute or differences arises in relation to this agreement of any nature whatsoever including the construction, interpretation or implementation of the provisions of this agreement as well as claim made by any Party for any change in or determination of the Tariff or any matter related to Tariff or claims made by any Party which partly or wholly relate to any change in the Tariff or determination of any of such claims could result in change in the Tariff, and relates to any matter agreed to be referred to the Appropriate Commission, shall be submitted to adjudication by the Appropriate Commission. Appeal against the decisions of the Appropriate Commission shall be made only as per the provisions of the Electricity Act, 2003, as amended from time to time.

ii) SECI shall be entitled to co-opt the Buying Entity(ies) and/or the lenders (if any) as a supporting party in such proceedings before the Appropriate Commission.

16.3.2 **Not used.**

16.4 ***Parties to Perform Obligations***

16.4.1 Notwithstanding the existence of any Dispute and difference referred to the Appropriate Commission and save as the Appropriate Commission may otherwise direct by a final or interim order, the Parties hereto shall continue to perform their respective obligations (which are not in dispute) under this Agreement.

ARTICLE 17: MISCELLANEOUS PROVISIONS

17.1 *Amendment*

17.1.1 This Agreement may only be amended or supplemented by a written agreement between the Parties.

17.2 *Third Party Beneficiaries*

17.2.1 Subject to provisions contained in this agreement relating to back to back implications of the PPA as well as PSA, this Agreement is solely for the benefit of the Parties and their respective successors and permitted assigns and shall not be construed as creating any duty, standard of care or any liability to, any person not a party to this Agreement.

17.3 *Waiver*

17.3.1 No waiver by either Party of any default or breach by the other Party in the performance of any of the provisions of this Agreement shall be effective unless in writing duly executed by an authorised representative of such Party.

17.3.2 Neither the failure by either Party to insist on any occasion upon the performance of the terms, conditions and provisions of this Agreement nor time or other indulgence granted by one Party to the other Parties shall act as a waiver of such breach or acceptance of any variation or the relinquishment of any such right or any other right under this Agreement, which shall remain in full force and effect.

17.4 *Confidentiality*

17.4.1 The Parties undertake to hold in confidence this Agreement and not to disclose the terms and conditions of the transaction contemplated hereby to third parties, except:

a) to their professional advisors;

b) to their officers, contractors, employees, agents or representatives, financiers, who need to have access to such information for the proper performance of their activities; or

c) disclosures required under Law, without the prior written consent of the other Party.

17.5 *Severability*

17.5.1 The invalidity or unenforceability, for any reason, of any part of this Agreement shall not prejudice or affect the validity or enforceability of the remainder of this Agreement, unless the part held invalid or unenforceable is fundamental to this Agreement.

17.6 *Notices*

17.6.1 All notices or other communications which are required to be given under this Agreement shall be in writing and in the English language.

17.6.2 If to the HPD, all notices or other communications which are required must be delivered personally or by registered post or facsimile or any other method duly acknowledged to the addresses below:

Address	: Adani Corporate House, 4th Floor, South Wing, Shantigram, Nr.Vaishno Devi Circle, S G Highway, Khodiyar Ahmedabad, Gujarat India 382421
Attention	: Durgesh Gupta
Email	: solar.bd@adani.com
Fax. No.	: +91 79 2555 7294
Telephone No.	: +91 79 2555 8005

17.6.3 If to SECI, all notices or communications must be delivered personally or by registered post or facsimile or any other mode duly acknowledged to the address(es) below:

Address	: 6th Floor, Plate-B,NBCC Office Block Tower-2, East Kidwai Nagar, New Delhi-110023.
Attention	: Y.B.K Reddy
Email	: ybkreddy@seci.co.in
Telephone No.	: 011-24666-218

17.6.4 All notices or communications given by facsimile shall be confirmed by sending a copy of the same via post office in an envelope properly addressed to the appropriate Party for delivery by registered mail. All notices shall be deemed

validly delivered upon receipt evidenced by an acknowledgement of the recipient, unless the Party delivering the notice can prove in case of delivery through the registered post that the recipient refused to acknowledge the receipt of the notice despite efforts of the postal authorities.

17.6.5 Any Party may by notice of at least fifteen (15) days to the other Party change the address and/or addresses to which such notices and communications to it are to be delivered or mailed.

17.7 *Language*

17.7.1 All agreements, correspondence and communications between the Parties relating to this Agreement and all other documentation to be prepared and supplied under the Agreement shall be written in English, and the Agreement shall be construed and interpreted in accordance with English language.

17.7.2 If any of the agreements, correspondence, communications or documents are prepared in any language other than English, the English translation of such agreements, correspondence, communications or documents shall prevail in matters of interpretation.

17.8 *Restriction of Shareholders / Owners' Liability*

17.8.1 Parties expressly agree and acknowledge that none of the shareholders of the Parties hereto shall be liable to the other Parties for any of the contractual obligations of the concerned Party under this Agreement. Further, the financial liabilities of the shareholder/s of each Party to this Agreement, shall be restricted to the extent provided in the Indian Companies Act, 2013.

17.9 *Taxes and Duties*

17.9.1 The HPD shall bear and promptly pay all statutory taxes, duties, levies and cess, assessed/ levied on the HPD, contractors or their employees that are required to be paid by the HPD as per the Law in relation to the execution of the Agreement and for supplying power as per the terms of this Agreement.

17.9.2 SECI shall be indemnified and held harmless by the HPD against any claims that may be made against SECI in relation to the matters set out in Article 17.9.1.

17.9.3 SECI shall not be liable for any payment of, taxes, duties, levies, cess whatsoever for discharging any obligation of the HPD by SECI on behalf of HPD.

17.10 ***Independent Entity***

17.10.1 The IIPD shall be an independent entity performing its obligations pursuant to the Agreement.

17.10.2 Subject to the provisions of the Agreement, the HPD shall be solely responsible for the manner in which its obligations under this Agreement are to be performed. All employees and representatives of the IIPD or contractors engaged by the HPD in connection with the performance of the Agreement shall be under the complete control of the IIPD and shall not be deemed to be employees, representatives, contractors of SECI and nothing contained in the Agreement or in any agreement or contract awarded by the IIPD shall be construed to create any contractual relationship between any such employees, representatives or contractors and SECI.

17.11 *Compliance with Law*

Despite anything contained in this Agreement but without prejudice to this Article, if any provision of this Agreement shall be in deviation or inconsistent with or repugnant to the provisions contained in the Electricity Act, 2003, or any rules and regulations made there under, such provision of this Agreement shall be deemed to be amended to the extent required to bring it into compliance with the aforesaid relevant provisions as amended from time to time.

17.12. The duly executed Power Sale Agreement between SECI and Buying entity(s) as attached to this Agreement shall be read along with this Agreement as a composite back to back agreement for Generation and supply of electricity to the Buying entity(s), particularly, to fulfill the Renewable Purchase Obligations under the provisions of the Electricity Act, 2003 and the Regulations notified thereunder.

17.13 *Breach of Obligations*

The Parties acknowledge that a breach of any of the obligations contained herein would result in injuries. The Parties further acknowledge that the amount of the liquidated damages or the method of calculating the liquidated damages specified in this Agreement is a genuine and reasonable pre-estimate of the damages that may be suffered by the non-defaulting party in each case specified under this Agreement.

17.14 *Order of priority in application*

In case of inconsistencies between the agreement(s) executed between the Parties, applicable Law including rules and regulations framed thereunder, the order of priority as between them shall be the order in which they are placed below:

i. applicable Law, rules and regulations framed thereunder;
ii. the Grid Code; and
iii. the terms and conditions of this Agreement;

IN WITNESS WHEREOF the Parties have caused the Agreement to be executed through their duly authorized representatives as of the date and place set forth above.

For and on behalf of For and on behalf of

[SECI] **[AHEJFL]**

Y.B.K Reddy, AGM
Solar Energy Corporation of India Limited
6th Floor, Plate-B, NBCC Office Block Tower-2
East Kidwai Nagar, New Delhi-110023

Durgesh Gupta
Adani Hybrid Energy Jaisalmer Five Limited (AHEJFL),
Adani Corporate House, 4th Floor, South Wing, Shantigram, Nr.Vaishno Devi Circle,
S. G. Highway, Khodiyar Ahmedabad, Gujarat, India 382421

Witness:
1. [P. VENKATESAN]
2. Ankit Agrawal.

Witness:
1. (Prakhar Bhardwaj)
2. (Kamini Nagal)

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Government of National Capital Territory of Delhi

e-Stamp

Certificate No.	:	IN-DL01233400596693T
Certificate Issued Date	:	23-Jul-2021 03:57 PM
Account Reference	:	IMPACC (IV)/ dl720603/ DELHI/ DL-DLH
Unique Doc. Reference	:	SUBIN-DLDL72060300465174539082T
Purchased by	:	SOLAR ENERGY CORPORATION OF INDIA LTD
Description of Document	:	Article 5 General Agreement
Property Description	:	Not Applicable
Consideration Price (Rs.)	:	0 (Zero)
First Party	:	SOLAR ENERGY CORPORATION OF INDIA LTD
Second Party	:	Not Applicable
Stamp Duty Paid By	:	SOLAR ENERGY CORPORATION OF INDIA LTD
Stamp Duty Amount(Rs.)	:	100 (One Hundred only)

Please write or type below this line

This Power Purchase Agreement is made on the 27th day of July of 2021 at New Delhi.

Between

ABC Renewable Energy (RJ-03) Private limited , a Company incorporated under the Companies Act 1956 or Companies Act 2013, having its registered office at H. No. 6-3-

RENEWABLE ENERGY (RJ-03) PVT. LTD. HYDERABAD

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Statutory Alert:
1. The authenticity of this Stamp certificate should be verified at 'www.shcilestamp.com' or using e-Stamp Mobile App of Stock Holding. Any discrepancy in the details on this Certificate and as available on the website / Mobile App renders it invalid.
2. The onus of checking the legitimacy is on the users of the certificate.
3. In case of any discrepancy please inform the Competent Authority.

680/8/3, PNO-03, 1st Floor, PMR Plaza, Thakur Mansion Lane, Hyderabad, Telangana, India-500082. (hereinafter referred to as "**Hybrid Power Developer or HPD**", which expression shall, unless repugnant to the context or meaning thereof, be deemed to include its successors and permitted assigns) as a Party of the **First Part**;

And

Solar Energy Corporation of India Limited, a company incorporated under the Companies Act 1956, having its registered office at 1st Floor, A-Wing, D-3, District Centre, Saket, New Delhi-110017 and New address at Plate-B, 6th Floor, Tower-2, NBCC Office Block, East Kidwayi Nagar, New Delhi- 110023 (hereinafter referred to as "SECI", or "Procurer" or "Buyer" which expression shall, unless repugnant to the context or meaning thereof, be deemed to include its successors and assignees) as a Party of the **Second Part**;

The HPD and SECI are individually referred to as 'Party' and collectively referred to as 'Parties'.

WHEREAS:

A. SECI has been designated as the implementing agency for implementation of the scheme for setting-up of ISTS-connected Wind-Solar Hybrid Power Projects, under the National Wind-Solar Hybrid Policy issued by MNRE dated 14.05.2018.

B. The Ministry of New and Renewable Energy, Government of India has issued the "Guidelines for Tariff Based Competitive Bidding Process for procurement of power from Grid Connected Wind Solar Hybrid Projects" issued by the Ministry of New and Renewable Energy vide F.No. 238/78/2017-Wind dated 14.10.2020, including subsequent amendments and clarifications, if any.

C. SECI had initiated a Tariff Based Competitive Bid Process for procurement of 1200 MW of the power generated from the ISTS connected Wind-Solar Hybrid Power Projects on the terms and conditions contained in the Request for Selection (herein after referred to as '**RFS**') issued by SECI vide RFS No SECI/C&P/HPD/T3/1200MW/RfS/012020_ dated 14.01.2020

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D. The Hybrid Power Developer (hereinafter referred to as '**HPD**') has been selected in the Competitive Bidding Process for development, generation and supply of electricity from the 380 MW Hybrid Power Project to be established by HPD anywhere in India and for supply of such electricity by SECI as an Intermediary Agency to the Buying Utility(ies) [as defined]

under a Power Sale Agreement to be entered into between SECI and such Buying Utility (ies);

E. SECI has issued the Letter of Award No SECI/C&P/HPD/T3/LoA/ABCREPL/P1/40591 dated 31.12.2020 in favour of the **ABC Renewable Energy Private limited** for development and establishment of the 380 MW Hybrid Power Project in the State of Rajasthan as per the terms and conditions contained in the RfS, draft of this Power Purchase Agreement circulated at the time of the bidding and other bidding documents as well as the conditions contained in the Letter of Award;

F. SECI has agreed to purchase such power from the HPD as an Intermediary Procurer and sell it to Buying Utility on back-to-back basis as per the provisions of the RfS. Accordingly, SECI has agreed to sign/has signed a Power Sale Agreement with the Buying Utility to sell such power as per the provisions of the above said scheme;

G. In terms of the RfS and the Bidding Documents, the HPD has furnished the Payment on Order Instrument in the sum of Rs. 38,00,00,000 /-.(INR Thirty Eight Crores Only) in favour of SECI as per the format provided as a part of the Bidding Documents and a copy of the Bank Guarantee/POI provided is in Schedule – 1/ Schedule-3 to this Agreement;

H. The HPD has fulfilled the terms of the bidding and the terms of the Letter of Award for signing this Power Purchase Agreement as a definitive agreement for establishing the Hybrid Power Project of 380 MW at -Rajasthan for generation and sale of electricity by the HPD to SECI to enable SECI to make available such power to the Buying Utility(ies), as SECI may consider appropriate, under a Power Sale Agreement and on a back-to-back basis to the Power Purchase Agreement to be entered into with the HPD;

I. SECI has signed the Power Sale Agreement with the Buying Utility(ies) of States in India.

J. The parties have agreed to execute this Power Purchase Agreement in terms of the provisions of the RfS, the bidding documents and the Letter of Award in regard to the terms and conditions for establishment of the Hybrid Power Project at Rajasthan and for generation and supply of electricity by the HPD to SECI.

Now therefore, in consideration of the premises and mutual agreements, covenants and conditions set forth herein, it is hereby agreed by and between the Parties as follows:

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ARTICLE 1: DEFINITIONS AND INTERPRETATION

1.1 *Definitions*

The terms used in this Agreement, unless as defined below or repugnant to the context, shall have the same meaning as assigned to them by the Electricity Act, 2003 and the rules or regulations framed there under, including those issued / framed by the Appropriate Commission (as defined hereunder), as amended or re-enacted from time to time.

"Act" or "Electricity Act, 2003"	shall mean the Electricity Act, 2003 and include any modifications, amendments and substitution from time to time;
"Adjusted Equity"	shall mean the Equity funded in Indian Rupees and adjusted on the first day of the current month (the "Reference Date"), in the manner set forth below, to reflect the change in its value on account of depreciation and variations in Wholesale Price Index (WPI), and for any Reference Date occurring between the first day of the month of Appointed Date (the date of achievement of Financial Closure) and the Reference Date; i. On or before Commercial Operation Date (COD), the Adjusted Equity shall be a sum equal to the Equity funded in Indian Rupees and expended on the Project, revised to the extent of one half of the variation in WPI occurring between the first day of the month of Appointed Date and Reference Date; ii. An amount equal to the Adjusted Equity as on COD shall be deemed to be the base (the "Base Adjusted Equity"); iii. After COD, the Adjusted Equity hereunder shall be a sum equal to the Base Adjusted Equity, reduced by 0.333% (zero point three three three percent) thereof at the commencement of each month following the COD [reduction of 1% (one percent) per quarter of an year] and the amount so arrived at shall be revised to the extent of variation in WPI occurring between the COD and the Reference Date; For the avoidance of doubt, the Adjusted Equity shall, in the event of termination, be computed as on the Reference Date immediately preceding the Transfer Date; provided that no reduction in the Adjusted Equity shall be made for a period equal to the duration, if any, for which the PPA period is extended, but the revision on account of WPI shall continue to be made.
"Agreement" or "Power Purchase Agreement" or "PPA"	shall mean this Power Purchase Agreement including its recitals and Schedules, amended or modified from time to time in accordance with the terms hereof;

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"Appropriate Commission"	Unless otherwise stated, Appropriate Commission shall mean Central Electricity Regulatory Commission;
"Bill Dispute Notice"	shall mean the notice issued by a Party raising a Dispute regarding a Monthly Bill or a Supplementary Bill issued by the other Party;
"Business Day"	shall mean with respect to HPD and SECI, a day other than Sunday or a statutory holiday, on which the banks remain open for business in Delhi;
"Buying Entity"	Shall mean Distribution companies and shall include wherever admissible the Distribution licensees or buying entity in any State or any bulk consumer who agreed to purchase the wind-solar hybrid power from SECI and execute the Power Sale Agreement from time to time with SECI, and requires hybrid power to fulfil its solar and non-solar RPO under respective RPO regulations;
"Capacity Utilization Factor" or "CUF"	shall have the same meaning as provided in CERC (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2009 as amended from time to time; However for avoidance of any doubt, it is clarified that the CUF shall be calculated on the Contracted Capacity; In any Contract Year, if 'X' MWh of energy has been metered out at the Delivery Point for 'Y' MW Project capacity, CUF= (X MWh/(Y MW*8766)) X100%;
"CERC"	shall mean the Central Electricity Regulatory Commission of India, constituted under sub – section (1) of Section 76 of the Electricity Act, 2003, or its successors;
"CTU" or "Central Transmission Utility"	shall mean the Government Company notified by the Central Government under Sub-Section (1) of Section 38 of the Electricity Act, 2003.
"Change in Law"	shall have the meaning ascribed thereto in Article 12 of this Agreement;
"Commissioning"	The Project will be considered as commissioned if all equipment as per rated Project Capacity has been installed and energy has flown into grid, in line with the Commissioning procedures defined in the PPA.
"Commercial Operation Date (COD)"	The Commercial Operation Date (COD) shall be considered as the actual date of commissioning of the project as declared by the Commissioning Committee constituted by procurer. In case of part commissioning COD will be declared only for that part of project capacity;
"Competent Court of Law"	shall mean any court or tribunal or any similar judicial or quasi-judicial body in India that has jurisdiction to adjudicate upon issues relating to this Agreement;

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"Consents, Clearances and Permits"	shall mean all authorizations, licenses, approvals, registrations, permits, waivers, privileges, acknowledgements, agreements, or concessions required to be obtained from or provided by any concerned authority for the purpose of setting up of the generation facilities and/ or supply of power;
"Consultation Period"	shall mean the period of ninety (90) days or such other longer period as the Parties may agree, commencing from the date of issuance of a HPD Preliminary Default Notice or SECI Preliminary Default Notice as provided in Article 13 of this Agreement, for consultation between the Parties to mitigate the consequence of the relevant event having regard to all the circumstances;
"Contract Year"	shall mean the period beginning from the Effective Date and ending on the immediately succeeding March 31 and thereafter each period of 12 months beginning on April 1 and ending on March 31 provided that: (i) in the financial year in which the Scheduled Commissioning Date would occur, the Contract Year shall end on the date immediately before the Scheduled Commissioning Date and a new Contract Year shall commence once again from the Scheduled Commissioning Date and end on the immediately succeeding March 31, and thereafter each period of twelve (12) months commencing on April 1 and ending on March 31, and (ii) provided further that the last Contract Year of this Agreement shall end on the last day of the Term of this Agreement
"Contracted Capacity"	shall mean 380 MW contracted with SECI for supply by the HPD to SECI at the Delivery Point from the Hybrid Power Project. It shall be equal to the Project Capacity as defined;
"Day"	shall mean a day, if not a Business Day, the immediately succeeding Business Day.
"Debt Due"	shall mean the aggregate of the following sums expressed in Indian Rupees outstanding on the Transfer Date: i. The principal amount of the debt provided by the Senior Lenders under the Financing Agreements for financing the Total Project Cost (the 'Principal') but excluding any part of the principal that had fallen due for repayment prior to the Transfer Date; ii. All accrued interest, financing fees and charges payable under the Financing Agreements on, or in respect of, the debt referred to in sub-clause (i) above until the Transfer Date but excluding: (i) any interest, fees or charges that had fallen due one year prior to the Transfer Date, (ii) any penal interest or charges payable under the Financing Agreements to any Senior Lender, (iii) any pre-payment charges in relation to accelerated repayment of debt except where such charges have arisen due to Utility Default, and (iv) any Subordinated Debt which is included in the Financial Package and disbursed by lenders

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	for financing the Total Project Cost. Provided that if all or any part of the Debt Due is convertible into Equity at the option of Senior Lenders and/or the Concessionaire, it shall for the purposes of this Agreement be deemed not to be Debt Due even if no such conversion has taken place and the principal thereof shall be dealt with as if such conversion had been undertaken. Provided further that the Debt Due, on or after COD, shall in no case exceed 80% (eighty percent) of the Total Project Cost.
"Delivery Point"	"Delivery Point" shall mean a single point or multiple points at the voltage level of 220 kV or above of the CTU Sub-station(s) including the dedicated transmission lines connecting the Project/ individual component with the substation system as specified in the RfS document. Interconnection at 132kV will be allowed exclusively in case the project is granted connectivity at an available bay of an existing ISTS substation, if any. Metering shall be done at this interconnection point where the power is injected into. For interconnection with grid and metering, the HPD shall abide by the relevant and applicable regulations, Grid Code notified by the CERC or and Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006 as amended and revised from time to time, or orders passed thereunder by the appropriate commission or CEA. Pursuant to Article 4.2.6, all charges and losses related to Transmission of power from project up to Delivery Point (including but not limited to open access, transmission, wheeling, Unscheduled Interchange, Scheduling, Reactive power, RLDC/SLDC charges etc.) as notified by the competent authority / regulator shall be borne by the HPD and beyond the Delivery Point all charges and losses as notified by the competent authority / regulator from time to time shall be borne by the Buying Utilities. In case it is paid by SECI on behalf of Buying Utilities / HPD, the same shall be recovered from the Buying Utilities / HPD (as applicable);
"Discoms"	shall mean the Buying Entity or the distribution utilities who have signed/will sign the PSA (s) with SECI for purchase of Power;
"Dispute"	shall mean any dispute or difference of any kind between SECI and the HPD, in connection with or arising out of this Agreement including but not limited to any issue on the interpretation and scope of the terms of this Agreement as provided in Article 16 of this Agreement;

"Due Date"	Due Date shall mean the forty-fifth (45th) day after a Monthly Bill (including all the relevant documents) or a Supplementary Bill is received in hard copy and duly acknowledged by the SECI or, if such day is not a Business Day, the immediately succeeding Business Day, by which date such Monthly Bill or a Supplementary Bill is payable by the SECI.
"Effective Date"	shall have the meaning ascribed thereto in Article 2.1 of this Agreement;
"Electricity Laws"	shall mean the Electricity Act, 2003 and the rules and regulations made there under from time to time along with amendments thereto and replacements thereof and any other Law pertaining to electricity including regulations framed by the Appropriate Commission;
"Energy Accounts"	shall mean the regional energy accounts/state energy accounts as specified in the Grid Code issued by the appropriate agency for each Month (as per their prescribed methodology), including the revisions and amendments thereof or where such regional energy accounts/ state energy accounts are not issued, Joint Meter Reading (JMR) will be considered; SECI reserves the right to choose from any of the above, i.e. JMR/SEA/REA, based on the acceptance of the same by the Buying Utility;
"Event of Default"	shall mean the events as defined in Article 13 of this Agreement;
"Expiry Date"	Shall mean the date occurring twenty five (25) years from the Scheduled Commissioning Date subject to that the supply of power shall be limited for a period of 25 years from the Scheduled Commissioning Date unless extended by the Parties as per this Agreement;
"Financial Closure"	shall mean compliance with the requirements under Article 3.1 of this Agreement;
"Financing Agreements"	shall mean the agreements pursuant to which the HPD has sought financing for the Power Project including the loan agreements, security documents, notes, indentures, security agreements, letters of credit and other documents, as may be amended, modified, or replaced from time to time, but without in anyway increasing the liabilities of SECI;
"Force Majeure" or "Force Majeure Event"	shall have the meaning ascribed thereto in Article 11 of this Agreement;
"Guidelines: or "Scheme"	shall mean the "Guidelines for Tariff Based Competitive Bidding Process for procurement of power from Grid Connected Wind Solar Hybrid Projects" issued by the Ministry of New and Renewable Energy vide F.No. 238/78/2017-Wind dated 14.10.2020, including subsequent amendments and clarifications, if any

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"Grid Code" / "IEGC" or "State Grid Code"	shall mean the Grid Code specified by the CERC under Clause (h) of Sub-section (1) of Section 79 of the Electricity Act, as amended from time to time, and/or the State Grid Code as specified by the concerned State Commission, referred under Clause (h) of Sub- section (1) of Section 86 of the Electricity Act 2003, as applicable;
"Indian Governmental Instrumentality"	shall mean the Government of India, Governments of state(s) Rajasthan and New Delhi and any ministry, department, board, authority, agency, corporation, commission under the direct or indirect control of Government of India or the above state Government(s) or both, any political sub-division of any of them; including any court or Appropriate Commission(s) or tribunal or judicial or quasi-judicial body in India;
"Insurances"	shall mean the insurance cover to be obtained and maintained by the HPD in accordance with Article 8 of this Agreement;
"Interconnection Facilities"	shall mean the facilities on HPD's side of the Delivery Point for scheduling, transmitting and metering the electrical output in accordance with this Agreement and which shall include, without limitation, all other transmission lines and associated equipment, transformers, relay and switching equipment and protective devices, safety equipment and RTU, Data Transfer and Acquisition facilities for transmitting data subject to Article 7, the Metering System required for supply of power as per the terms of this Agreement;
Intermediary agency or Intermediary nodal agency or Intermediary Procurer"	shall mean Solar Energy Corporation of India Limited;
"Invoice" or "Bill"	shall mean either a Monthly Bill / Supplementary Bill or a Monthly Invoice/ Supplementary Invoice raised by any of the Parties;
"Joint Control"	shall mean a situation where none of the promoter shareholders has at least 51 % shareholding in the paid up share capital and voting rights in the HPD, and the control is exercised jointly;
"Late Payment Surcharge"	shall have the meaning ascribed thereto in Article 10.3.3 of this Agreement;

"Law"	shall mean in relation to this Agreement, all laws including Electricity Laws in force in India and any statute, ordinance, regulation, notification or code, rule, or any interpretation of any of them by an Indian Governmental Instrumentality and having force of law and shall further include without limitation all applicable rules, regulations, orders, notifications by an Indian Governmental Instrumentality pursuant to or under any of them and shall include without limitation all rules, regulations, decisions and orders of the Appropriate Commissions;
"Letter of Credit" or "L/C"	shall have the meaning ascribed thereto in Article 10.4 of this Agreement;
"MNRE"	shall mean the Ministry of New and Renewable Energy, Government of India;
"Month"	shall mean a period of thirty (30) days from (and excluding) the date of the event, where applicable, else a calendar month;
"Party" and "Parties"	shall have the meaning ascribed thereto in the recital to this Agreement;
"Payment Security Mechanism"	shall have the meaning ascribed thereto in Article 10.4 of this Agreement;
"Payment on Order Instrument"	shall mean the irrevocable unconditional letter of undertaking issued by either of the three institutions, viz., (i) Indian Renewable Development agency Limited (IREDA) or (ii) Power Finance Corporation Limited or (iii) REC Limited., as an alternative to submission of Performance Bank Guarantee by the HPD, issued in the form attached hereto as Schedule 3;
"Performance Bank Guarantee"	shall mean the irrevocable unconditional bank guarantee, submitted by the HPD to SECI in the form attached hereto as Schedule 1;
"Pooling Substation/ Pooling Point"	means a point where more than one project may connect to a common transmission system. Multiple projects can be connected to a pooling substation from where common transmission system shall be constructed and maintained by the HPD(s) to get connected to the ISTS substation. The voltage level for such common line shall be 220 kV and above. Further, the metering of the pooled power shall be done at the injection point, i.e. the ISTS substation. However, the voltage level of transmission system of individual projects up to the pooling substation may be at 33 kV and above. Sub-meters shall be installed at the pooling substation for metering and forecasting and scheduling of individual projects. The losses in the common transmission system up to the injection point shall be apportioned to the individual Projects for the purpose of billing. In such case, it shall be responsibility of the HPD to obtain and furnish the meter reading jointly by the HPD and any competent authority (State Government or Central Government) (if applicable).

"Power Project" or "Project"	shall mean the Wind-Solar hybrid power generation facility of Contracted Capacity of 380 MW, located at Village- Chodiya Village District- Jaisalmer, State- Rajasthan having a separate control system, metering and a single point or separate points of injection into the grid at Delivery/Interconnection/Metering point(s) at ISTS substation or in case of sharing of transmission lines, by separate injection at pooling point. The rated capacities of the various components are as follows: Solar PV component: 380 MW Wind Power component: 126 MW This includes all units and auxiliaries such as water supply, treatment or storage facilities; bay/s for transmission system in the switchyard, dedicated transmission line up to the Delivery Point and all the other assets, buildings/structures, equipment, plant and machinery, facilities and related assets required for the efficient and economic operation of the power generation facility; whether completed or at any stage of development and construction or intended to be developed and constructed for the purpose of supply of power as per this Agreement;
"Power Sale Agreement" or "PSA"	shall mean the power sale agreement entered between the Buying Entity and SECI (Buyer- Buying Entity(ies) PSA) for selling the power as per the provisions of Guidelines;
"Preliminary Default Notice"	shall have the meaning ascribed thereto in Article 13 of this Agreement;
"Project Capacity"	shall mean the maximum AC capacity of the Project at the point of injection on which the Power Purchase Agreement has been signed.
"Prudent Utility Practices"	shall mean the practices, methods and standards that are generally accepted internationally from time to time by electric utilities for the purpose of ensuring the safe, efficient and economic design, construction, commissioning, operation and maintenance of power generation equipment and which practices, methods and standards shall be adjusted as necessary, to take account of: a) operation and maintenance guidelines recommended by the manufacturers of the plant and equipment to be incorporated in the Power Project; b) the requirements of Indian Law; and the physical conditions at the site of the Power Project
"RBI"	shall mean the Reserve Bank of India;
"Rebate"	shall have the same meaning as ascribed thereto in Article 10.3.4 of this Agreement;
"RLDC"	shall mean the relevant Regional Load Dispatch Centre established under Sub-section (1) of Section 27 of the Electricity Act, 2003;
"RPC"	shall mean the relevant Regional Power Committee established by the Government of India for a specific region in accordance with the Electricity Act, 2003 for facilitating integrated operation of the power system in that region;

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"Rupees", "Rs.", "₹"	shall mean Indian rupees, the lawful currency of India;
"Scheduled Commissioning Date" or "SCD" of the Project	shall mean 27-01-2023
"SERC"	shall mean the Electricity Regulatory Commission of any State in India constituted under Section-82 of the Electricity Act, 2003 or its successors, and includes a Joint Commission constituted under Subsection (1) of Section 83 of the Electricity Act 2003;
"SLDC"	shall mean the centre established under Sub-section (1) of Section 31 of the Electricity Act 2003, relevant for the State(s) where the Delivery Point is located;
"SLDC Charges"	shall mean the charges levied by the SLDC of the state wherein the Hybrid Power Project is located;
"Solar Photovoltaic Project" or "Solar PV Project"	shall mean the solar photovoltaic power project that uses sunlight for conversion into electricity and that is being set up by the HPD to provide Solar Power to SECI as per the terms and conditions of this Agreement;
"Solar Power"	shall mean power generated from the Solar Photovoltaic Power Project;
"SECI"	shall mean Solar Energy Corporation of India Limited;
"State Transmission Utility" or "STU"	shall mean the Board or the Government company notified by the respective State Government under Sub-section (1) of Section 39 of the Act;
"Sub-pooling Substation"	shall mean the intermediate pooling point where power from the Solar and Wind Project components of the Hybrid Power Project is injected into and from where the hybrid power is evacuated through a single transmission line and injected into Delivery Point;
"Tariff"	Shall have the same meaning as provided for in Article 9 of this Agreement;
"Tariff Payment"	shall mean the payments to be made under Monthly Bills as referred to in Article 10 and the relevant Supplementary Bills;
"Termination Notice"	shall mean the notice given by either Parties for termination of this Agreement in accordance with Article 13 of this Agreement;
"Term of Agreement"	shall have the meaning ascribed thereto in Article 2 of this Agreement;
"Unit/ Part Commissioning"	Subject to the compliance of conditions / procedure as detailed under Schedule-2 of this Agreement, Unit / Part Commissioning shall mean the Hybrid Power Capacity (AC MW) to be commissioned as per provisions of this Agreement and RfS document. The minimum capacity for acceptance of first part commissioning at one project site shall be at least 50 MW, without prejudice to the imposition of penalty, in terms of this PPA on the part which is not commissioned.

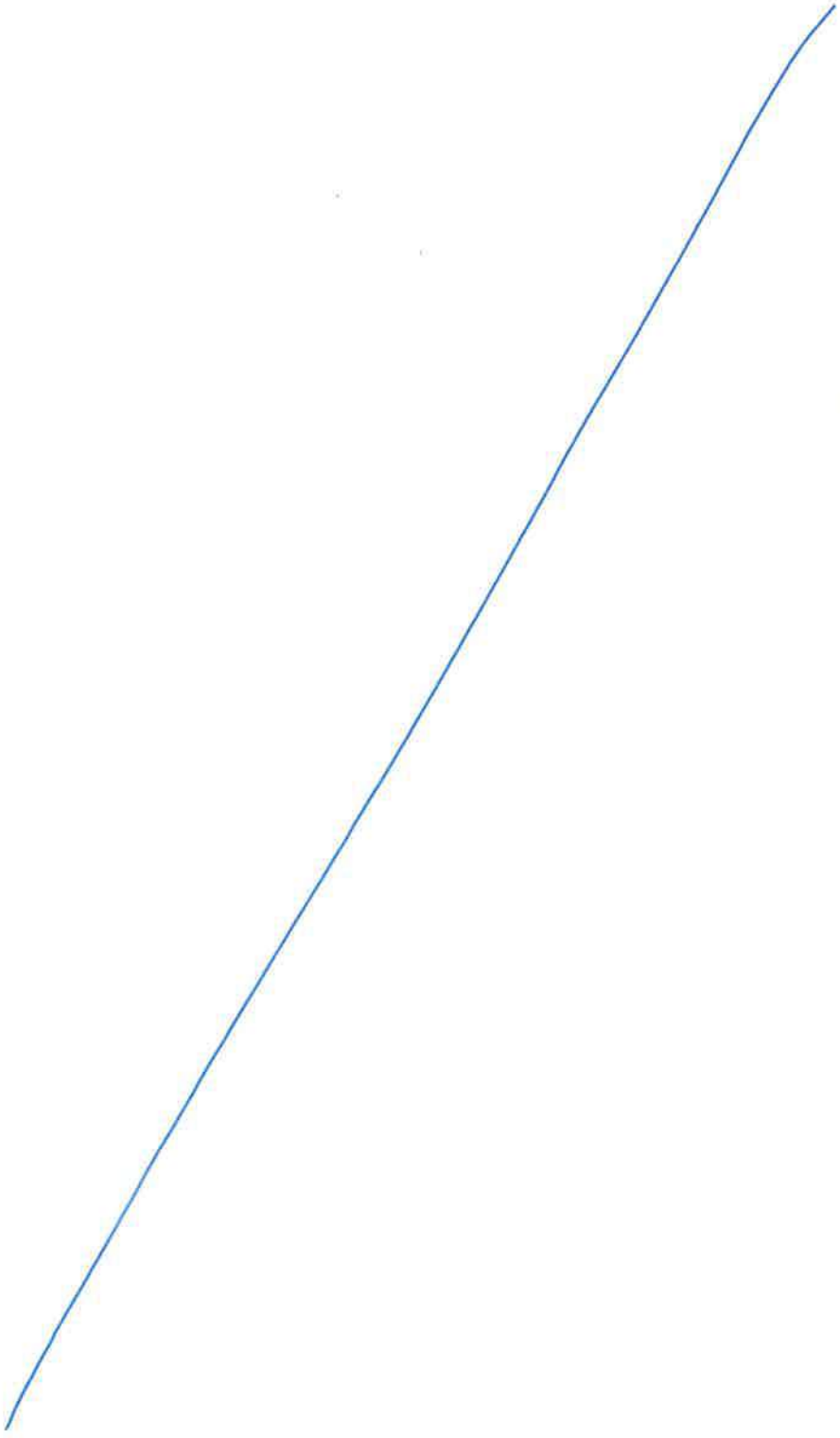
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	The projects can further be commissioned in parts of at least 25 MW batch size, with last part could be the balance capacity;
"Unit Commercial Operation Date (UCOD)"	shall mean the date of issuance of commissioning certificate for the respective part(s) of the Power Project subsequent to the demonstration of the compliance of commissioning as per this Agreement and witnessed by the Committee duly constituted and also start of injection and scheduling power from the Power Project to the Delivery Point and availability / installation of all necessary arrangements / equipment including RTU for scheduling of power generated from the Project and transmission of data to the concerned authority as per applicable regulation;
"Week"	shall mean a calendar week commencing from 00:00 hours of Monday, and ending at 24:00 hours of the following Sunday;
"Wind Power"	Shall mean power generated from the Wind Power Projects;
"Wind Power Project"	shall mean the project that uses wind for conversion into electricity and that is being set up by the HPD to provide Wind Power to Buyer as per the terms and conditions of this Agreement;
"Wind Solar Hybrid Power Project"	means the wind-solar hybrid power project where the rated power capacity of one resource is atleast 33% of the Contracted Capacity.

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1.2 Interpretation

Save where the contrary is indicated, any reference in this Agreement to:

1.2.1 "Agreement" shall be construed as including a reference to its Schedules and/or Appendices and/or Annexures;

1.2.2 An "Article", a "Recital", a "Schedule" and a "paragraph / clause" shall be construed as a reference to an Article, a Recital, a Schedule and a paragraph/clause respectively of this Agreement;

1.2.3 A "crore" means a reference to ten million (10,000,000) and a "lakh" means a reference to one tenth of a million (1,00,000);

1.2.4 An "encumbrance" shall be construed as a reference to a mortgage, charge, pledge, lien or other encumbrance securing any obligation of any person or any other type of preferential arrangement (including, without limitation, title transfer and retention arrangements) having a similar effect;

1.2.5 "Indebtedness" shall be construed so as to include any obligation (whether incurred as principal or surety) for the payment or repayment of money, whether present or future, actual or contingent;

1.2.6 A "person" shall be construed as a reference to any person, firm, company, corporation, society, trust, government, state or agency of a state or any association or partnership (whether or not having separate legal personality) of two or more of the above and a person shall be construed as including a reference to its successors, permitted transferees and permitted assigns in accordance with their respective interests;

1.2.7 "Rupee", "Rupees", "Rs" or new rupee symbol "₹ " shall denote Indian Rupees, the lawful currency of India;

1.2.8 The "Winding-up", "dissolution", "insolvency", or "reorganization" of a company or corporation shall be construed so as to include any equivalent or analogous proceedings under the Law of the jurisdiction in which such company or corporation is incorporated or any jurisdiction in which such company or corporation carries on business including the seeking of liquidation, Winding-up, reorganization, dissolution, arrangement, protection or relief of debtors;

1.2.9 Words importing the singular shall include the plural and vice versa;

1.2.10 This Agreement itself or any other agreement or document shall be construed as a reference to this or to such other agreement or document as it may have been, or may from time to time be, amended, varied, novated, replaced or supplemented;

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1.2.11 A Law shall be construed as a reference to such Law including its amendments or re- enactments from time to time;

1.2.12 A time of day shall, save as otherwise provided in any agreement or document be construed as a reference to Indian Standard Time;

1.2.13 Different parts of this Agreement are to be taken as mutually explanatory and supplementary to each other and if there is any inconsistency between or among the parts of this Agreement, they shall be interpreted in a harmonious manner so as to give effect to each part;

1.2.14 The tables of contents and any headings or sub-headings in this Agreement have been inserted for ease of reference only and shall not affect the interpretation of this Agreement;

1.2.15 All interest, if applicable and payable under this Agreement, shall accrue from day to day and be calculated on the basis of a year of three hundred and sixty five (365) days;

1.2.16 The words "hereof" or "herein", if and when used in this Agreement shall mean a reference to this Agreement;

1.2.17 The terms "including" or "including without limitation" shall mean that any list of examples following such term shall in no way restrict or limit the generality of the word or provision in respect of which such examples are provided;

1.2.18 This Agreement and other documents such as Request for Selection Documents, Guidelines including subsequent clarifications, amendments and further clarifications in regard to the tender shall be read in conjunction with each other and interpreted in harmonious manner. However, in case of any mismatch/contradiction between provisions of different documents, following shall be the order of precedence:

1. Power Purchase Agreement
2. RfS Documents

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ARTICLE 2: TERM OF AGREEMENT

2.1 ***Effective Date***

2.1.1 This Agreement shall come into effect from 27.07.2021 and such date shall be referred to as the Effective Date.

2.1.2 The Parties agree that decisions pertaining to adoption of the Tariff and approval of the same, for procurement of contracted capacity, shall be binding on all Parties concerned, as contained in the Electricity Act, 2003 and any amendments thereof.

2.1.3 Notwithstanding the Effective Date, the condition precedent for the enforcement of the obligations of either party against the other under this Agreement shall be that, within 120 days after the Effective Date of this Agreement, SECI and/or the Buying Entity (ies) shall obtain adoption of tariff from its State Electricity Regulatory Commission and/ or CERC (as applicable), on the terms and conditions contained in this Agreement read with the terms and conditions contained in the Power Sale Agreement entered into between SECI and the Buying Entity(ies). The Parties agree that in the event, the order of adoption of tariff as mentioned above is not issued by the SERC and/ or CERC (as applicable) within the time specified above, the provisions of Article 2.1.4 shall apply.

2.1.4 Pursuant to Article 4.2.6, if parties have mutually extended the time period as stipulated under Article 2.1.1 and the order from the SERC and/ or CERC (as applicable) is issued within the timeline as per Article 2.1.3, no extension for Financial Closure or Scheduled Commissioning Date shall be given. However, if the requisite SERC and/ or CERC (as applicable) order is issued after the timeline as per Article 2.1.3, this shall entail a corresponding extension in Scheduled Financial Closure and the Scheduled Commissioning Date for equal number of days for which the SERC and / or CERC order has been delayed beyond such period as specified in Article 2.1.3.

2.2 ***Term of Agreement***

2.2.1 Subject to Article 2.3 and 2.4 of this Agreement, this Agreement shall be valid for a term from the Effective Date until the Expiry Date. This Agreement may be extended for a further period at least one hundred eighty (180) days prior to the Expiry Date, on mutually agreed terms and conditions.

2.2.2 The HPD is free to operate their plants beyond the Expiry Date if other conditions like land lease / Right to Use of Land (as applicable), permits, approvals and

clearances etc. allow. In such case unless otherwise agreed by the SECI, SECI shall not be obligated to procure power beyond the Expiry Date.

2.3 ***Early Termination***

2.3.1 This Agreement shall terminate before the Expiry Date if either SECI or HPD terminates the Agreement, pursuant to Article 13 of this Agreement.

2.4 ***Survival***

2.4.1 The expiry or termination of this Agreement shall not affect any accrued rights, obligations and liabilities of the Parties under this Agreement, including the right to receive penalty as per the terms of this Agreement, nor shall it affect the survival of any continuing obligations for which this Agreement provides, either expressly or by necessary implication, which are to survive after the Expiry Date or termination including those under Article 11 (Force Majeure), Article 13 (Events of Default and Termination), Article 14 (Liability and Indemnification), Article 16 (Governing Law and Dispute Resolution), Article 17 (Miscellaneous Provisions), and other Articles and Schedules of this Agreement which expressly or by their nature survive the Term or termination of this Agreement shall continue and survive any expiry or termination of this Agreement.

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ARTICLE 3: CONDITIONS SUBSEQUENT

3.1 Satisfaction of conditions subsequent by the HPD

The HPD agrees and undertakes to duly perform and complete all of the following activities including Financial Closure at the HPD's own cost and risk within 12 Months from the Effective Date, unless such completion is affected by any Force Majeure event, or for the activities specifically waived in writing by SECI:

a) The HPD shall make Project financing arrangements its Projects(s) and shall provide necessary certificates to SECI in this regard;

The HPD shall submit to SECI the relevant documents as stated above, complying with the Conditions Subsequent, within twelve (12) months from the Effective Date i.e 27.07.2022.

3.2 Consequences of non-fulfilment of conditions subsequent and financial closure

3.2.1 In case of a failure to submit the documents as above, SECI shall encash the Performance Bank Guarantee/ POI submitted by the HPD, terminate this Agreement and remove the Project from the list of the selected Projects by giving a notice to the HPD in writing of at least seven (7) days, unless the delay (subject to the conditions that HPD has made / is making all possible efforts) is on account of delay in allotment of Land by the Government not owing to any action or inaction on the part of the HPD or caused due to a Force Majeure. Unless extended as per provisions of Article 3.2.1 (i) of this Agreement in writing, the termination of the Agreement shall take effect upon the expiry of the 7th day of the above notice.

3.2.1 (i) An extension, without any impact on the Scheduled Commissioning Date, can however be considered, on the sole request of HPD, on payment of Rs. 1000/- per day per MW to SECI. Such extension charges are required to be paid to SECI in advance, for the period of extension required. In case of any delay in depositing this extension charge, HPD shall pay an interest on this extension charge for the days lapsed beyond due date of Financial Closure @ SBI-MCLR (1Year). In case such delay in making payment of the extension charges to SECI is more than 7 days, the termination of the Agreement shall take effect upon the expiry of such 7th day. This amount will go into the Payment Security Mechanism. In case of the HPD meeting the requirements of conditions subsequent and financial closure before the last date of such proposed delay period, the remaining amount deposited by the HPD shall be returned by SECI without interest. This extension will not have any impact on the Scheduled Commissioning

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Date. Any extension charges paid so by the HPD, shall be returned to the HPD without any interest on achievement of successful commissioning within the Scheduled Commissioning Date, on pro-rata basis, based on the project capacity commissioned as on Scheduled Commissioned Date. However, in case the HPD fails to commission the Contract Capacity by Scheduled Commissioning Date, the extension charges deposited by the HPD shall not be refunded by SECI.

3.2.2 For the avoidance of doubt, it is clarified that this Article shall survive the termination of this Agreement.

3.2.4 In case of inability of the HPD to fulfil the conditions specified in Article 3.1 due to any Force Majeure event, the time period for fulfilment of the Conditions Subsequent and Financial Closure as mentioned in Article 3.1, shall be extended for the period of such Force Majeure event.

Further, any delay in adoption of tariff by the Appropriate Commission, beyond 120 (one hundred twenty days) days after the Effective Date of this Agreement, shall entail a corresponding extension in the deadline as stipulated in Article 3.1.

3.2.5 Provided that due to the provisions of this Article 3.2.4, any increase in the time period for completion of conditions subsequent and financial closure mentioned under Article 3.1, shall also lead to an equal extension in the Scheduled Commissioning Date.

3.3 Performance Bank Guarantee/ Payment on Order Instrument (POI)

3.3.1 The Performance Bank Guarantee (PBG)/ Payment on Order Instrument having validity from the date of submission of PBG/POI until thirty (30) months from the Effective Date and of Rs. 10 Lakh/MW has been furnished under this Agreement shall be for guaranteeing the commencement of the supply of power up to the Contracted Capacity within the time specified in this Agreement as per format provided in Schedule 1/Schedule 3.

3.3.2 The failure on the part of the HPD to furnish and maintain the Performance Bank Guarantee/POI shall be a material breach of the term of this Agreement on the part of the HPD.

3.3.3 If the HPD fails to commence supply of power from the Scheduled Commissioning Date specified in this Agreement or any further extension thereof granted by SECI, subject to conditions mentioned in Article 4.5, SECI shall encash the Performance Bank Guarantee/POI equivalent to the amount calculated as per liquidated damages applicable under Article 4.6 as on the date of encashment without prejudice to the

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other rights of SECI under this Agreement. It is to be noted that the damages/dues recovered by SECI by encashing the PBG/POI, upon the default of the HPD under the PPA, shall be credited to the payment security fund maintained by SECI under the PPA.

3.4 Return of Performance Bank Guarantee/ Payment on Order Instrument

3.4.1 Subject to Article 3.3, SECI shall return / release the Performance Bank Guarantee/ POI immediately after the successful Commissioning of the Project after taking into account any liquidated damages / penalties due to delays in commissioning as per provisions stipulated in this Agreement.

3.4.2 The return / release of the Performance Bank Guarantee/ POI shall be without prejudice to other rights of SECI under this Agreement.

ARTICLE 4: CONSTRUCTION & DEVELOPMENT OF THE PROJECT

4.1 ***HPD's Obligations***

4.1.1 The HPD undertakes to be responsible, at HPD's own cost and risk, for:

a) The HPD shall be solely responsible and make arrangements for Land & associated infrastructure for development of the Project and for Connectivity with the CTU System for confirming the evacuation of power by the Scheduled Commissioning date and all clearances related thereto;

On or before Scheduled Commissioning Date, the HPD shall demonstrate possession of 100% (Hundred Percent) of the land identified for the Project in its name for a period not less than the complete Term of this Agreement. In this regard, the HPD shall submit documents/ Lease Agreement to establish possession/ right to use 100% of the required land in the same of the HPD or its Affiliate. In case the land is in the name of the Affiliate, the land should be transferred in the name of the HPD prior to the SCD. Wherever leasing of private land is involved, the lease should allow transfer of land to the lenders or SECI, in case of default of the HPD. The HPD shall submit a sworn affidavit from the authorized signatory of the HPD listing the details of the land and certifying that total land required for the Project is under clear possession of the HPD;

b) Obtaining all Consents, Clearances and Permits as required and maintaining all Consents, Clearances and Permits in full force and effect during the Term of this Agreement. SECI shall have no obligation to recommend to any department/agency or the Govt. for the grant/permission for the Hybrid Power project. The Hybrid Power Developer shall, on his own, obtain permissions/ sanctions from Government authorities, if any required for establishing the project. Any steps that may be taken by SECI in regard to grant of such consents and permits or any other approval to be taken by the HPD shall only be a voluntary endeavour with no intention of being bound by any legal or binding obligation.

c) designing, constructing, erecting, commissioning, completing and testing the Power Project in accordance with the applicable Law, the Grid Code, the terms and conditions of this Agreement and Prudent Utility Practices.

d) the commencement of supply of power up to the Contracted Capacity to SECI no later than the Scheduled Commissioning Date and continuance of the supply of power throughout the term of the Agreement;

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e) connecting the Power Project switchyard with the Interconnection Facilities at the Delivery Point; The HPD shall make adequate arrangements to connect the Power Project switchyard with the Interconnection Facilities at Interconnection / Metering / Delivery Point.

f) owning the Power Project throughout the Term of Agreement free and clear of encumbrances, except those expressly permitted under Article 15;

g) maintaining its controlling shareholding (controlling shareholding shall mean more than 50% of the voting rights and paid-up share capital) prevalent at the time of signing of PPA up to a period of one (1) year after Commercial Operation Date of the Project in line with Clause 3.20 of the RfS; However transfer of controlling shareholding within the same Group Companies will be allowed with the permission of SECI after COD subject to the condition that the management control remains within the same Group Companies; and

f) fulfilling all obligations undertaken by the HPD under this Agreement.

g) Obtaining Long Term Access (LTA) and executing transmission service agreement with CTU/STU as the case may be, for evacuation of the Contracted Capacity and maintaining it throughout the term of the Agreement.

h) The HPD shall be responsible to for directly coordinating and dealing with the corresponding Buying Utility(ies), Load Dispatch Centres, Regional Power Committees, and other authorities in all respects in regard to declaration of availability, scheduling and dispatch of hybrid Power and due compliance with deviation and settlement mechanism and the applicable Grid code/State/Central Regulations, acknowledging that the HPD and the corresponding Buying Utility(ies) are the Grid connected entities and SECI as an Intermediary Procurer/ trading licensee is not a Grid connected entity in respect of the Hybrid Power contracted under this Agreement.

i) The HPD shall fulfil the technical requirements according to criteria mentioned under Annexure II–Technical requirement for Grid Connected Solar PV Power Stations under Guidelines for Tariff Based Competitive Bidding Process for Procurement of Power from Grid Connected Solar Power Projects, issued by Ministry of Power, vide resolution no.23/27/2017-R&R dated 03.08.2017, including subsequent amendments and clarifications. Further, the type-certified wind turbine models listed in Revised List of Models and Manufacturers (RLMM) issued by MNRE as updated as on the date of commissioning of the Projects will be allowed for deployment under this Agreement. The wind power

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projects will be developed as per Guidelines issued by MNRE on Development of Onshore Wind Power Projects

j) Further, the Project being implemented under this Agreement shall fulfil the criteria as per Central Electricity Authority (Technical Standards for Connectivity to the Grid) Regulations, 2007, and subsequent amendments and clarifications thereof,

k) As part of scheduling of power from the Project, the HPD will be required to punch-in their respective schedules and subsequent revisions, by themselves, at the interfaces of all the RLDCs concerned for the corridor of power flow, including the RLDC of the Buying Entity/Discom, as per the Regulations in force, under intimation to SECI. SECI may facilitate in identification of any discrepancy and assist the HPD for its early rectification without any liability on SECI. The HPD shall be solely responsible for discrepancy identification and its rectification to avoid any rejection/less payment of invoices.

l) making a payment security deposit of 19,00,00,000(Indian Rupees Nineteen Crores only) to the designated account as intimated by the SECI towards Payment Security Fund as per clause 3.12 of Section 3 of RfS.

4.2 ***Information regarding Interconnection Facilities***

4.2.1 The HPD shall be required to obtain all information from the STU/CTU/concerned authority with regard to the Interconnection Facilities as is reasonably necessary to enable it to design, install and operate all interconnection plant and apparatus on the HPD's side of the Delivery Point to enable delivery of electricity at the Delivery Point. The transmission of power up to the point of interconnection where the metering is done for energy accounting shall be the responsibility of the HPD at his own cost.

4.2.2 Penalties, fines and charges imposed by the CTU/ STU under any statute or regulation in relation to delay in commissioning of Project shall be payable by the HPD to the extent the delay is attributable to the HPD.

4.2.3 The responsibility of getting connectivity with the transmission system up to the Interconnection Point, will lie with the HPD. The transmission of power up to the point of interconnection where the metering is done for energy accounting shall be the responsibility of the HPD at his own cost. The maintenance of Transmission system up to the designated point as per the applicable terms and conditions shall be the responsibility of the HPD. All costs and charges including but not limited to the

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wheeling charges and losses up to and including at the Interconnection Point associated with this arrangement will also be borne by the HPD.

4.2.4 In case of Pooling substation, losses in the transmission line shall be apportioned among the HPDs who share such a Pooling arrangement and duly signed by all HPDs, based on their monthly generation.

4.2.5 The arrangement of connectivity shall be made by the HPD through a dedicated transmission line. The entire cost of transmission including cost of construction of line, any other charges, losses etc. from the Project up to the Interconnection Point will be borne by the HPD. In case of non-availability of Grid and Transmission System during Term of this Agreement, for reasons not attributable to the HPD, provisions of Article 4.10 shall be applicable.

4.2.6 Government of India from time to time issues order for waiver of inter-state transmission system (ISTS) charges and losses on transmission of wind/solar power till a certain date. In case the commissioning of the Project gets delayed beyond the applicable date of ISTS waiver, arising out of any reasons whatsoever, SECI shall bear no liability with respect to transmission charges and losses levied, if any. Further, in case SCD of the Project is prior to the above deadline of waiver of ISTS charges and losses, and commissioning of the Project is delayed beyond the above date for the reasons attributable to the HPD, the applicable transmission charges and losses shall be borne by the HPD.

4.3 Purchase and sale of Contracted Capacity

4.3.1 Subject to the terms and conditions of this Agreement, the HPD undertakes to sell to SECI and SECI undertakes to pay Tariff for all the energy supplied at the Delivery Point corresponding to the Contracted Capacity.

4.3.2 Energy procured from the Project under this Agreement shall be allocated on a pro-rata basis, to all the Buying Entities which have signed their respective Power Sale Agreements with SECI under the referred RfS.

4.4 *Right to Contracted Capacity & Energy*

4.4.1 The HPD will declare the CUF of the Project and will be allowed to revise the same once within three years after COD of the full project capacity. Subsequent to commissioning/part-commissioning of the Project, SECI, in any Contract Year except for the first year of operation, shall not be obliged to purchase any additional energy from the HPD beyond **1668.4714** Million kWh (MU) .

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If for any Contract Year except for first year of operation, it is found that the HPD has not been able to generate minimum energy of **1251.3535** .Million kWh (MU) of the energy generated from the Project on account of reasons solely attributable to the HPD, the non-compliance by HPD shall make the HPD liable to pay the compensation provided in the respective PSA as payable to Buying Entity(ies) by Buyer to enable Buyer to remit the amount to Buying Entity(ies). In case of full commissioning of the Project, energy supplied between COD and the commencement of first financial year after COD will not be taken into consideration for the purpose of calculation of CUF. In case of part commissioning of the Project, the above limits shall be considered on pro-rata basis till the commissioning of full Contracted Capacity of the Project.

The lower limit will, however be relaxable by Buyer to the extent of grid non-availability for evacuation which is beyond the control of the HPD (as certified by the SLDC/RLDC). This compensation shall be applied to the amount of shortfall in generation during the Contract Year. The amount of such compensation shall be will be calculated @ 50% (fifty percent) of the PPA tariff for the shortfall in energy terms, in accordance with the terms of the PPA. This compensation shall not be applicable in events of Force Majeure identified under PPA with SECI affecting supply of power by HPD.

4.4.2 Any excess generation over and above as per Article 4.4.1, may be purchased by SECI at the tariff in term of as per Article 9, provided the Buying Entity consents to purchase such power. While the HPD would be free to install the DC solar field as per its design of required output, including its requirement of auxiliary consumption and to repower the Project from time to time during the term of the PPA in line with applicable MNRE guidelines, it will not be allowed to sell any excess power to any other entity other than SECI (unless refused by SECI). Further, any addition to the installed capacity (including but not limited to solar panels and/or wind turbines) subsequent to commissioning of the full capacity/part capacity of the Project (as applicable), shall not be eligible for any future claims made by the HPD, seeking compensation on account of any changes in the applicable provisions covered under Change in Law as defined in this Agreement.

The HPD will be free to re-power their plants during the PPA duration. However, after repowering, the minimum ratio of both the resources shall be maintained.

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The HPD shall be required to intimate SECI about the proposed excess quantum of energy likely to be generated from the Project within any Contract Year, at least 60 days prior to the proposed date of commencement of excess generation. SECI shall be required to intimate its approval/refusal to the HPD, for buying such excess generation not later than 30 days of receiving the above offer from the HPD. In the event the offer of the HPD is not accepted by SECI within the said period of 30 days, such right shall cease to exist and the HPD shall, at its sole discretion, may sell such excess power to any third party.

However, in case at any point of time, the peak of capacity reached is higher than the contracted capacity and causes disturbance in the system at the point where power is injected, the HPD will have to forego the excess generation and reduce the output to the rated capacity and shall also have to pay the penalty/charges (if applicable) as per applicable regulations / requirements / guidelines of CERC / SERC /SLDC or any other competent agency.

Any energy produced and flowing into the grid before Scheduled Commissioning Date shall not be at the cost of SECI. SECI may agree to buy such power at a tariff as agreed to between SECI and the Buying Entity (including SECI's trading margin), provided the Buying Utility consents for purchase of such power.

4.5 ***Extensions of Time***

4.5.1 In the event that the HPD is prevented from performing its obligations under Article 4.1 by the Scheduled Commissioning Date due to:

a) any SECI Event of Default; or

b) Force Majeure Events affecting SECI/ Buying Entity(ies) , or

c) Force Majeure Events affecting the HPD,

the Scheduled Commissioning Date and the Expiry Date shall be deferred, subject to Article 4.5.6, for a reasonable period but not less than 'day for day' basis, to permit the HPD or SECI/ Buying Entity(ies) through the use of due diligence, to overcome the effects of the Force Majeure Events affecting the HPD or SECI/Buying Entity(ies), or till such time such Event of Default is rectified by SECI.

4.5.2 Subsequent to grant of connectivity, in case there is a delay in grant/operationalization of LTA by the CTU and/or there is a delay in readiness of the ISTS substation at the Delivery Point, including readiness of the power evacuation and transmission infrastructure of the ISTS network until SCD of the Project, and it is established that:

(i) The HPD has complied with the complete application formalities as per RfS,

(ii) The HPD has adhered to the applicable Procedure in this regard as notified by the CERC/CTU, and

(iii) The delay in grant of connectivity/LTA by the CTU and/or delay in readiness of the ISTS substation at the Delivery Point, including readiness of the power evacuation and transmission infrastructure of the ISTS network, is a factor attributable to the CTU/transmission licensee and is beyond the control of the HPD;

The above shall be treated as delays beyond the control of the HPD and SCD for such Projects shall be revised as the date as on 60 days subsequent to the readiness of the Delivery Point and power evacuation infrastructure and/or operationalization of LTA. Decision on requisite extension on account of the above factor shall be taken by SECI.

Further, any delay in adoption of tariff by the Appropriate Commission, beyond 120 days after Effective Date of this Agreement, shall entail a corresponding extension in Scheduled Commissioning Date.

4.5.3 In case of extension due to reasons specified in Article 4.5.1(b) and (c), and if such Force Majeure Event continues even after a maximum period of 180 days from the date of the Force Majeure Notice, any of the Parties may choose to terminate the Agreement as per the provisions of Article 11.10. In case neither party terminates the Agreement under this clause, the Agreement shall stand terminated on the expiry of twelve (12) months of the continuation of the Force Majeure event unless the parties mutually agree to extend the Agreement for the further period.

4.5.4 If the Parties have not agreed, within thirty (30) days after the affected Party's performance has ceased to be affected by the relevant circumstance, on the time period by which the Scheduled Commissioning Date or the Expiry Date should be deferred, any Party may raise the Dispute to be resolved in accordance with Article 16.

4.5.5 As a result of such extension on account of Article 4.5.1 or Article 4.5.2, the newly determined Scheduled Commissioning Date and newly determined Expiry Date shall be deemed to be the Scheduled Commissioning Date and the Expiry Date for the purposes of this Agreement.

4.5.6 Not Used.

4.5.7 Delay in commissioning of the project beyond the scheduled commissioning date for reasons other than those specified in Article 4.5.1 & Article 4.5.2 shall be an event of default on part of the HPD and shall be subject to the consequences specified in the Article 4.6.

4.6 Liquidated Damages not amounting to penalty for delay in Commissioning

4.6.1 The Project shall be fully commissioned within the Scheduled Commissioning Date as defined in this Agreement. If the HPD is unable to commission the Project by the Scheduled Commissioning Date for the reasons other than those specified in Article 4.5.1 and 4.5.2, the HPD shall pay to SECI, damages for the delay in such commissioning and making the Contracted Capacity available for dispatch by the Scheduled Commissioning Date as per the following:

(a) Delay beyond the Scheduled Commissioning Date upto (& including) the date as on 6 months after the Scheduled Commissioning Date: The total PBG/POI amount shall be encashed on per day basis and proportionate to the balance capacity not commissioned. For example, in case of a Project of 240 MW capacity, if commissioning of 100 MW capacity is delayed by 18 days beyond the SCD, then the liquidated damages shall be: PBG/POI amount X (100/240) X (18/180). For the purpose of calculations of liquidated damages, 'month' shall be considered consisting of 30 days.

4.6.2 The maximum time period allowed for commissioning of the full Project Capacity with encashment of Performance Bank Guarantee/POI shall be limited to the date as on 6 months from the SCD of the Project. In case, the Commissioning of the Project is delayed beyond 6 months from the SCD, it shall be considered as an HPD Event of Default and provisions of Article 13 shall apply and the Contracted Capacity shall stand reduced / amended to the Project Capacity Commissioned within 6 months from the SCD and the PPA for the balance Capacity will stand terminated and shall be reduced from the project capacity.

4.6.3 The HPD further acknowledges that the amount of the liquidated damages fixed is genuine and reasonable pre-estimate of the damages that may be suffered by SECI/ Buying entity(s) as specified under this Agreement or in the PSA.

4.7 Acceptance/Performance Test

4.7.1 Prior to synchronization of the Power Project, the HPD shall be required to get the Project certified for the requisite acceptance/performance test as may be laid down

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by Central Electricity Authority or an agency identified by the central government to carry out testing and certification for the Hybrid power project.

4.8 Third Party Verification

4.8.1 The HPD shall be further required to provide entry to the site of the Power Project free of all encumbrances at all times during the Term of the Agreement to SECI and a third Party nominated by any Indian Governmental Instrumentality for inspection and verification of the works being carried out by the HPD at the site of the Power Project.

4.8.2 The third party may verify the construction works/operation of the Power Project being carried out by the HPD and if it is found that the construction works/operation of the Power Project is not as per the Prudent Utility Practices, it may seek clarifications from HPD or require the works to be stopped or to comply with the instructions of such third party.

4.9 Breach of Obligations

4.9.1 The Parties herein agree that during the subsistence of this Agreement, subject to SECI being in compliance of its obligations & undertakings under this Agreement, the HPD would have no right to negotiate or enter into any dialogue with any third party for the sale of Contracted Capacity of power which is the subject matter of this Agreement. It is the specific understanding between the Parties that such bar will apply throughout the entire term of this Agreement.

4.10 Generation compensation for Off-take constraints

4.10.1 Not Used.

4.10.2 Offtake constraints due to Backdown: The Hybrid Power Developer and Buying Entity shall follow the forecasting and scheduling process as per the regulations in this regard by the Appropriate Commission. The Government of India, as per Clause 5.2(u) of the Indian Electricity Grid Code (IEGC), encourages a status of "must-run" to wind and solar power projects. Therefore wind solar hybrid power plant, duly commissioned, should never be directed to back down by a Discom/ Load Dispatch Centre (LDC) except grid security or safety of any equipment or personnel where it should be duly recorded, the justification of which can be verified by any third party agency, and be notified in writing. No back-down / curtailment to be ordered without giving formal/ written instruction for the same. The details of back-down / curtailment, including justifications for such

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curtailment, specifying data to back such curtailment, to be made public by the concerned Load Dispatch Centre. In the event of any backing down, the HPD shall be eligible for a Generation Compensation, in the manner detailed below and there shall be no other claim, directly or indirectly against SECI:

Duration of Backdown	**Provision for Generation Compensation**
Hours of Backdown during a monthly billing cycle.	***Minimum Generation Compensation = 100% of [(Average Generation per hour during the month) (number of backdown hours during the month) X PPA tariff]*** Where, Average Generation per hour during the month (kWh) = Total generation in the month (kWh) ÷ Total hours of generation in the month

The Generation Compensation shall be paid as part of the energy bill for the successive month after receipt of Regional Energy Accounts (REA)/SEA/JMR. No Trading Margin shall be applicable on the Generation Compensation as provided in Article 4.10.2 only.

It is hereby clarified that for the purpose of Article 4.10, "generation" shall mean scheduled energy based on Energy Accounts. Notwithstanding anything mentioned above, the provisions of Article 4.10 shall be applicable subject to the acceptance of the same by the respective Buying Utility.

No compensation shall be payable, however, if the backdown/ curtailment is on account of considerations of grid security/ safety. Such a backdown will be recorded and reported to RLDC/ NLDC. RLDC/ NLDC will examine the issue of grid safety/ security and give a finding that the issue of grid safety existed.

ARTICLE 5: SYNCHRONISATION, COMMISSIONING AND COMMERCIAL OPERATION

5.1 Synchronization, Commissioning and Commercial Operation

5.1.1 The HPD shall give the concerned RLDC/SLDC and SECI and also Buying Entity at least sixty (60) days' advanced preliminary written notice and at least thirty (30)

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days' advanced final written notice, of the date on which it intends to synchronize the Power Project to the Grid System.

5.1.2 Subject to Article 5.1.1, the Power Project may be synchronized by the HPD to the Grid System when it meets all the connection conditions prescribed in applicable Grid Code then in effect and otherwise meets all other Indian legal requirements for synchronization to the Grid System.

5.1.3 The synchronization equipment and all necessary arrangements / equipment including RTU for scheduling of power generated from the Project and transmission of data to the concerned authority as per applicable regulation shall be installed by the HPD at its generation facility of the Power Project at its own cost. The HPD shall synchronize its system with the Grid System only after the approval of synchronization scheme is granted by the head of the concerned substation/Grid System and checking/verification is made by the concerned authorities of the Grid System.

5.1.4 The HPD shall immediately after each synchronization/tripping of generator, inform the sub-station of the Grid System to which the Power Project is electrically connected in accordance with applicable Grid Code under intimation to SECI. In addition, the HPD will inject in-firm power to grid time to time to carry out operational/ functional test prior to commercial operation. For avoidance of doubt, it is clarified that Synchronization / Connectivity of the Project with the grid shall not to be considered as Commissioning of the Project.

5.1.5 The HPD shall commission the Project as detailed in "Schedule 2: Commissioning Procedure" within the SCD as per this Agreement. Declaration of COD / UCOD shall only be done subject to the demonstration of the compliances as per Schedule-2 and subsequent upon the successful visit by the Commissioning Committee.

5.1.6 There can be part Commissioning of the Project. Part commissioning of the project shall mean that all equipment corresponding to the part capacity have been installed and commissioned and corresponding energy has flown into the grid.

Part commissioning cannot be construed by just installing one source of generation, the HPD shall install both solar and wind capacities in proposed ratio on pro-rata basis.

5.1.7 The Parties agree that for the purpose of commencement of the supply of electricity by HPD to SECI, liquidated damages for delay etc., the Scheduled Commissioning Date or extended Scheduled Commissioning Date as defined in this Agreement shall be the relevant date.

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5.1.8 Early Commissioning

The HPD shall be permitted for full commissioning as well as part commissioning of the Project even prior to the Scheduled Commissioning Date, subject to availability of transmission connectivity and Long-Term Access (LTA).

Early commissioning of the Project will be allowed solely at the risk and cost of the HPD, and SECI shall purchase the energy from such early commissioned Project at the PPA tariff, only in the case Discom agrees to purchase power from the Project at an earlier date, and at the PPA tariff plus trading margin. Such intimation for early commissioning shall be provided to SECI at least 60 days prior to the proposed early commissioning date. In case there is no response provided by SECI within 30 days from the receipt of such intimation, such early commissioned capacity shall be deemed to have been refused by SECI.

In case SECI does not agree to purchase such energy, early part/full commissioning of the Project shall still be allowed and the HPD will be free to sell such energy to a third party; subject to operationalization of LTA, until SCD or the date of commencement of procurement of power from the Project as notified by SECI, whichever is earlier. COD of the Project under the PPA will be declared from the date of commencement of procurement of energy from the Project by SECI.

ARTICLE 6: DISPATCH AND SCHEDULING

6.1 ***Dispatch and Scheduling***

6.1.1 The HPD shall be required to schedule its power as per the applicable regulations / requirements / guidelines of CERC / SERC /SLDC / RLDC or any other competent agency and same being recognized by the SLDC or any other competent authority / agency as per applicable regulation/ law / direction and maintain compliance to the applicable Codes/ Grid Code requirements and directions, if any, as specified by concerned SLDC/RLDC from time to time. Any deviation from the Schedule will attract the provisions of applicable regulation / guidelines / directions and any financial implication on account of this shall be on the account of the HPD.

6.1.2 The HPD shall be responsible for directly coordinating and dealing with the Buying Entity, State Load Dispatch Centre's, Regional Power Committees, and other authorities in all respects in regard to declaration of availability, scheduling and dispatch of hybrid Power and due compliance with deviation and settlement mechanism and the applicable Grid code Regulations, acknowledging that the HPD and Buying Entity are the Grid connected entities and SECI as an intermediary procurer/ trading licensee is not a Grid connected entity in respect of the power contracted under this Agreement.

6.1.3 The HPD shall be responsible for any deviation from scheduling and for any resultant liabilities on account of charges for deviation as per applicable regulations. UI charges on this account shall be directly paid by the HPD.

6.1.4 Auxiliary power consumption will be treated as per the concerned Central/ State regulations.

6.1.5 Energy procured from the Project under the PPA shall be allocated on a pro-rata basis, to all the Buying Entities which have signed their respective Power Sale Agreements with SECI under the referred RfS.

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ARTICLE 7: METERING

7.1 *Meters*

7.1.1 For installation of Meters, Meter testing, Meter calibration and Meter reading and all matters incidental thereto, the HPD and SECI shall follow and be bound by the Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006, the Grid Code, as amended and revised from time to time.

7.1.2 The HPD shall bear all costs pertaining to installation, testing, calibration, maintenance, renewal and repair of meters at HPD's side of Delivery Point.

7.1.3 In addition to ensuring compliance of the applicable codes, the HPD shall install Main & Check meters at the Delivery Point, along with Stand-by meter(s) as per the applicable Central/State regulations.

7.1.4 In case of pooling of multiple Projects, power from multiple Projects can be pooled at a Pooling Substation prior to the Delivery point and the combined power can be fed at Delivery point through a common transmission line from the Pooling Substation. In such cases, ABT compliant sub-meters as per relevant regulation/approval are also to be set up at pooling substation for individual projects in addition to the meters at Delivery Point as described in clause 7.1.3.

7.2 Reporting of Metered Data and Parameters

7.2.1 The grid connected hybrid power plants will install necessary equipment for continuous monitoring of ambient air temperature, wind resource data (including wind speed), solar resource data and other weather parameters and simultaneously for monitoring of the electric power generated from the plant.

7.2.2 Online arrangement would have to be made by the HPD for submission of above data regularly for the entire period of this Power Purchase Agreement to the SLDC, SECI, National Institute of Wind Energy (NIWE) and the concerned Ministry or concerned agency as per applicable regulation / directions.

7.2.3 Reports on above parameters on monthly basis (or as required by regulation / guidelines) shall be submitted by the HPD to Ministry of New and Renewable Energy/ SECI/National Institute of Solar Energy/ National Institute of Wind Energy through SECI for entire period of PPA.

7.2.4 In addition to the abovementioned data, the HPD shall also be required to submit information, as required by SECI, for regular monitoring of status of the Project.

ARTICLE 8: INSURANCES

8.1 ***Insurance***

8.1.1 The HPD shall effect and maintain or cause to be effected and maintained, at its own cost and expense, throughout the Term of PPA, Insurances against such risks to keep the Project in good condition and shall take Industrial All Risk insurance policy covering risks against any loss or damage, with such deductibles and with such endorsements and co-insured(s), which the Prudent Utility Practices would ordinarily merit maintenance of and as required under the Financing Agreements, Implementation and Support Agreement and under the applicable laws.

8.2 ***Application of Insurance Proceeds***

8.2.1 In case of the Project not being implemented through Financing Agreement(s), save as expressly provided in this Agreement or the Insurances, the proceeds of any insurance claim made due to loss or damage to the Power Project or any part of the Power Project shall be first applied to reinstatement, replacement or renewal of such loss or damage.

In case of the Project being financed through Financing Agreement(s), save as expressly provided in this Agreement or the Insurances, the proceeds of any insurance claim made due to loss or damage to the Power Project or any part of the Power Project shall be applied as per such Financing Agreements.

8.2.2 If a Force Majeure Event renders the Power Project no longer economically and technically viable and the insurers under the Insurances make payment on a "total loss" or equivalent basis, SECI shall have claim on such proceeds of such Insurance limited to outstanding dues of SECI against the Buying Utility(ies) as per PSA entered into and any other dues of the Buying Utility(ies) against HPD.

8.3 ***Effect on liability of SECI***

8.3.1 Notwithstanding any liability or obligation that may arise under this Agreement, any loss, damage, liability, payment, obligation or expense which is insured or not or for which the HPD can claim compensation, under any Insurance shall not be charged to or payable by Buyer. It is for the HPD to ensure that appropriate insurance

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coverage is taken for payment by the insurer for the entire loss and there is no under insurance or short adjustment etc.

ARTICLE 9: APPLICABLE TARIFF

9.1 The HPD shall be entitled to receive the Tariff of Rs.2.41./ kWh , fixed for the entire term of this Agreement, with effect from the SCD, for the power sold by the Buyer to the Buying Entity for the scheduled energy as reflected in the Energy Accounts. In case of early commissioning, subject to the consent for such purchase by the Buying Utility, SECI may purchase the generation at the PPA tariff.

9.2 Any excess generation over and above energy specified in Article 4.4.1, will be purchased by SECI at 75% (seventy-five per cent) of the tariff as per Article 9.1, provided the Buying Entity consents for purchase of such excess generation. Any energy produced and flowing into the grid before SCD shall not be at the cost of SECI. SECI may agree to buy such power provided Buying Entity consents to purchase such energy. However, the HPD will not be allowed to sell energy generated prior to SCD or excess energy during any Contract Year to any other entity other than SECI (unless refused by SECI).

9.3 Early Commissioning:

Early commissioning of the Project will be allowed solely at the risk and cost of the HPD, and SECI shall purchase the energy from such early commissioned Project at the PPA tariff, only in the case Discom agrees to purchase power from the Project at an earlier date, and at the PPA tariff plus trading margin.

Such intimation for early commissioning shall be provided to SECI at least 60 days before the proposed early commissioning date. In case there is no response provided by SECI within 30 days from the receipt of such intimation, such early commissioned capacity shall be deemed to have been rejected by SECI.

ARTICLE 10: BILLING AND PAYMENT

10.1 *General*

10.1.1 Pursuant to Article 4.1.1 (l), SECI shall set up a payment security fund for Hybrid Power Projects in order to ensure timely payment. This fund will have a corpus to cover 3 months' payment.

10.1.2 From the commencement of supply of power, SECI shall pay to the HPD the monthly Tariff Payments subject to the adjustments as per provisions of this Agreement including Article 6, in accordance with Article 9. All Tariff Payments by SECI shall be in Indian Rupees.

10.1.3 For the purpose of payment of the bills raised by the HPD(s), in case Energy Account is published on cumulative basis, payment to the HPD(s) for the energy delivered shall be apportioned based on JMR taken for the HPD's Project at the Pooling substation/metering point.

10.1.4 The HPD shall be required to make arrangements and payments for import of energy (if any) as per applicable regulations.

10.2 *Delivery and Content of Monthly Bills/Supplementary Bills*

10.2.1 The HPD shall issue to SECI hard copy of a signed Monthly Bill/Supplementary Bill for the immediately preceding Month/relevant period based on the issuance of Energy Accounts along with all relevant documents (payments made by HPD for drawal of power, payment of reactive energy charges, Metering charges or any other charges as per guidelines of SERC/CERC, if applicable.

Each Monthly Bill shall include all charges as per this Agreement for the energy supplied for the relevant Month based on Energy Accounts issued by RPC or any other competent authority which shall be binding on both the Parties. The Monthly Bill amount shall be the product of the energy as per Energy Accounts and the Applicable Tariff. Energy drawn from the grid will be regulated as per the applicable Central/State regulations.

10.2.2 As per applicable regulation(s) of the Appropriate Commission(s)/respective SERC(s), all charges pertaining to obtaining open access and scheduling of power, if any, shall be borne by the HPD.

10.3 ***Payment of Monthly Bills***

10.3.1 SECI shall pay the amount payable under the Monthly Bill/Supplementary Bill by the Due Date to such account of the HPD, as shall have been previously notified by the HPD as below.

10.3.2 All payments required to be made under this Agreement shall also include any deduction or set off for:

i) deductions required by the Law; and

ii) amount claimed by SECI, if any, from the HPD, will be adjusted from the monthly energy payment. In case of any excess payment adjustment, 1.25% surcharge will be applicable on day to day basis.

The HPD shall open a bank account (the "HPD's Designated Account") for all Tariff Payments (including Supplementary Bills) to be made by SECI to the HPD, and notify SECI of the details of such account at least ninety (90) Days before the dispatch of the first Monthly Bill. SECI shall also designate a bank account at New Delhi ("SECI Designated Account") for payments to be made by the HPD to SECI, if any, and notify the HPD of the details of such account ninety (90) Days before the Scheduled Commissioning Date. SECI and the HPD shall instruct their respective bankers to make all payments under this Agreement to the HPD's Designated Account or SECI's Designated Account, as the case may be, and shall notify either Party of such instructions on the same day.

10.3.3 Late Payment Surcharge

Late Payment Surcharge In the event of payment of a Monthly Bill by SECI beyond thirty days, a Late Payment Surcharge (LPS) shall be payable to the HPD on the payment outstanding after the Due Date, at the base rate of Late Payment Surcharge applicable for the period for the first month of default. "Base rate of Late Payment Surcharge" means the marginal cost of funds-based lending rate for one year of the State Bank of India, as applicable on the 1st April of the financial year in which the period lies, plus five percent. The Late Payment Surcharge shall be claimed by HPD through the Supplementary Bill. Late Payment Surcharge shall be payable on the payment outstanding after the Due Date at the base rate of Late Payment Surcharge applicable for the period for the first month of default subject to such late payment

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surcharge being duly received by SECI under the PSA from the Buying Entity(ies). The rate of Late Payment Surcharge for the successive months of default shall increase by 0.5 percent for every month of delay provided that the Late Payment Surcharge shall not be more than 3 percent higher than the base rate at any time: (a) Provided that the rate at which Late Payment Surcharge shall be payable shall not be higher than 1.25% per month at any time for purchase of power.

10.3.4 Subject to the Article 9 of this Agreement, in the event of early Commissioning of the Project and subject to acceptance by SECI, the payment for the power fed to the grid may be accounted from the date of UCOD, and HPD would be allowed to raise Bills against such power as per Article 10.2.1, subject to the conditions as stipulated in Article 9. However, payment against the 1st such bill raised by the HPD, will be made subject to acceptance of the bill by the Discom.

10.3.5 **Rebate**

For payment of any Bill on or before Due Date, the following Rebate shall be paid by the HPD to SECI in the following manner.

a) A Rebate of 1.5% shall be payable to the SECI for the payments made within a period of 10 (ten) days of the presentation of hard copy of Bill.
b) Any payments made after ten (10) days of the date of presentation of Bill through hard copy up to the Due Date shall be allowed a rebate of 1 %.
c) For the above purpose, the date of presentation of Bill shall be the next Business Day of delivery of the physical copy of the Bill at SECI. .
d) No Rebate shall be payable on the Bills raised on account of Change in Law (except in case of annuity tariff model being implemented, where rebate will be applicable) relating to taxes, duties, cess etc. and on Supplementary Bill.

For the above purpose date of presentation of bill shall be the same day of delivery in hard copy. However, for consideration of rebate, next business day shall be considered.

10.4 **Payment Security Mechanism**

Letter of Credit (LC):

10.4.1 SECI shall provide to the HPD, in respect of payment of its Monthly Bills and/or Supplementary Bills, a monthly unconditional, revolving and irrevocable letter of

credit ("Letter of Credit"), opened and maintained which may be drawn upon by the HPD in accordance with this Article.

10.4.2 Before the start of supply, SECI through a scheduled bank open a Letter of Credit in favour of the HPD, to be made operative from a date prior to the Due Date of its first Monthly Bill under this Agreement. The Letter of Credit shall have a term of twelve (12) Months and shall be renewed annually, for an amount equal to:

i) for the first Contract Year, equal to the estimated average monthly billing;
ii) for each subsequent Contract Year, equal to the average of the monthly billing of the previous Contract Year.

10.4.3 Provided that the HPD shall not draw upon such Letter of Credit prior to 30 days beyond the Due Date of the relevant Monthly Bill and/or Supplementary Bill, and shall not make more than one drawal in a Month.

10.4.4 Provided further that if at any time, such Letter of Credit amount falls short of the amount specified in Article 10.4.2 due to any reason whatsoever, SECI shall restore such shortfall before next drawl.

10.4.5 SECI shall cause the scheduled bank issuing the Letter of Credit to intimate the HPD, in writing regarding establishing of such irrevocable Letter of Credit.

10.4.6 SECI shall ensure that the Letter of Credit shall be renewed not later than its expiry.

10.4.7 All costs relating to opening, maintenance of the Letter of Credit shall be borne by SECI.

10.4.8 If SECI fails to pay undisputed Monthly Bill or Supplementary Bill or a part thereof within and including the date as on 30 days beyond the Due Date, then, subject to Article 10.4.6 & 10.5.2, the HPD may draw upon the Letter of Credit, and accordingly the bank shall pay without any reference or instructions from SECI, an amount equal to such Monthly Bill or Supplementary Bill or part thereof, in accordance with Article 10.4.3 above, by presenting to the scheduled bank issuing the Letter of Credit, the following documents:

i) a copy of the Monthly Bill or Supplementary Bill which has remained unpaid to HPD and;

ii) a certificate from the HPD to the effect that the bill at item (i) above, or specified part thereof, is in accordance with the Agreement and has remained unpaid beyond the Due Date;

10.5 Disputed Bill

10.5.1 If the SECI does not dispute a Monthly Bill or a Supplementary Bill raised by the HPD within thirty (30) days of receiving such Bill shall be taken as conclusive.

10.5.2 If the SECI disputes the amount payable under a Monthly Bill or a Supplementary Bill, as the case may be, it shall pay 50% of the invoice amount and it shall within thirty (30) days of receiving such Bill, issue a notice
(the "Bill Dispute Notice") to the invoicing Party setting out:

i) the details of the disputed amount;

ii) its estimate of what the correct amount should be; and iii)

all written material in support of its claim.

10.5.3 If the HPD agrees to the claim raised in the Bill Dispute Notice issued pursuant to Article 10.5.2, the HPD shall revise such Bill and present along with the next Monthly Bill. In such a case excess amount shall be refunded along with interest at the same rate as Late Payment Surcharge, which shall be applied from the date on which such excess payment was made by the disputing Party to the invoicing Party and up to and including the date on which such payment has been received as refund.

10.5.4 If the HPD does not agree to the claim raised in the Bill Dispute Notice issued pursuant to Article 10.5.2, it shall, within fifteen (15) days of receiving the Bill Dispute Notice, furnish a notice (Bill Disagreement Notice) to the SECI providing:

i) reasons for its disagreement;

ii) its estimate of what the correct amount should be; and

iii) all written material in support of its counter-claim.

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10.5.5 Upon receipt of the Bill Disagreement Notice by the SECI under Article 10.5.4, authorized representative(s) or a director of the board of directors/ member of board of the SECI and HPD shall meet and make best endeavours to amicably resolve such dispute within fifteen (15) days of receipt of the Bill Disagreement Notice.

10.5.6 If the Parties do not amicably resolve the Dispute within fifteen (15) days of receipt of Bill Disagreement Notice pursuant to Article 10.5.4, the matter shall be referred to Dispute resolution in accordance with Article 16.

10.5.7 For the avoidance of doubt, it is clarified the despite a Dispute regarding an invoice, SECI shall, without prejudice to its right to Dispute, be under an obligation to make payment of 50% of the invoice amount in the Monthly Bill.

10.6 Quarterly and Annual Reconciliation

10.6.1 The Parties acknowledge that all payments made against Monthly Bills and Supplementary Bills shall be subject to quarterly reconciliation within 30 days of the end of the quarter at the beginning of the following quarter of each Contract Year and annual reconciliation at the end of each Contract Year within 30 days to take into account the Energy Accounts, Tariff adjustment payments, Tariff Rebate, Late Payment Surcharge, or any other reasonable circumstance provided under this Agreement.

10.6.2 The Parties, therefore, agree that as soon as all such data in respect of any quarter of a Contract Year or a full Contract Year as the case may be has been finally verified and adjusted, the HPD and SECI shall jointly sign such reconciliation statement. Within fifteen (15) days of signing of a reconciliation statement, the HPD shall make appropriate adjustments in the next Monthly Bill. Late Payment Surcharge/ interest shall be payable in such a case from the date on which such payment had been made to the invoicing Party or the date on which any payment was originally due, as may be applicable. Any Dispute with regard to the above reconciliation shall be dealt with in accordance with the provisions of Article 16.

10.7 *Payment of Supplementary Bill*

10.7.1 HPD may raise a ("Supplementary Bill") for payment on account of:

i) Adjustments required by the Energy Accounts (if applicable); or

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ii) Change in Law as provided in Article 12, or

iii) Payment under Article 4.10,

And such Supplementary Bill shall be paid by the other Party.

10.7.2 SECI shall remit all amounts due under a Supplementary Bill raised by the HPD to the HPD's Designated Account by the Due Date, except open access charges, RLDC or scheduling charges and transmission charges (if applicable). For Supplementary Bill on account of adjustment required by energy account and payments under Article 4.10, Rebate as applicable to Monthly Bills pursuant to Article 10.3.5 shall equally apply. Payment will be made after realization of the same from the Buying Utility. No surcharge will be applicable other than that on the monthly energy payment and associated debit and credit note.

10.7.3 Not Used.

ARTICLE 11: FORCE MAJEURE

11.1 *Definition of Force Majeure*

A 'Force Majeure' (FM) would mean one or more of the following acts, events or circumstances or a combination of acts, events or circumstances or the consequence(s) thereof, that wholly or partly prevents or unavoidably delays the performance by the Party (the Affected Party) of its obligations under the relevant Power Purchase Agreement, but only if and to the extent that such events or circumstances are not within the reasonable control, directly or indirectly, of the Affected Party and could not have been avoided if the Affected Party had taken reasonable care or complied with Prudent Utility Practices.

An Affected Party means SECI or the HPD whose performance has been affected by an event of Force Majeure.

11.2 *Categorization of Force Majeure Events:*

11.2.1 **Natural Force Majeure Event**

a) Act of God, including, but not limited to lightning, drought, fire and explosion (to the extent originating from a source external to the site), earthquake, volcanic eruption, landslide, flood, cyclone, typhoon or tornado if it is declared / notified by the competent state / central authority / agency (as applicable), or verified to the satisfaction of Procurer;

b) radioactive contamination or ionising radiation originating from a source in India or resulting from another Force Majeure Event mentioned above excluding circumstances where the source or cause of contamination or radiation is brought or has been brought into or near the Project by the Affected Party or those employed or engaged by the Affected Party;

c) the discovery of geological conditions, toxic contamination or archaeological remains on the Project land that could not reasonably have been expected to be discovered through an inspection of the Project land; or

d) any event or circumstances of a nature analogous to any of the events as specified under Article 11.2.1 (a), 11.2.1 (b) and 11.2.1 (c).

11.2.2 Non-Natural Force Majeure Event

a) any act of war (whether declared or undeclared), invasion, armed conflict or act of foreign enemy, blockade, embargo, revolution, riot, insurrection, terrorist or military action;

b) nation/state-wide strike, lockout, boycotts or other industrial disputes which are not directly and solely attributable to the actions of the Affected Party, but does not include strike or labour unrest limited to the Affected Party or its contractors;

c) nationalisation or any compulsory acquisition by any Indian Governmental Instrumentality/ State Government in national interest or expropriation of any material Project assets or rights of the HPD, as a result of which the HPD or its shareholders are deprived (wholly or partly) of their rights or entitlements under the Power Purchase Agreement. Provided that such action does not constitute remedies or sanctions lawfully exercised by the Procurer or any other Government Authority as a result of any breach of any of the Applicable Laws or the Applicable Permits by the HPD or the HPD related parties;

d) action of a Government Authority having Material Adverse Effect including but not limited to Change in Law, only if consequences thereof cannot be dealt with under and in accordance with the provisions of Article 12 of this Agreement; any unlawful or unauthorised or without jurisdiction revocation of, or delay in, or refusal, or failure to renew or grant without valid cause, any Permits of the HPD or any of the clearance, licence, authorization to be obtained by the contractors to perform their respective obligations under the relevant PPA and/or the Project Documents; provided that such delay, modification, denial, refusal or revocation did not result from the HPD's or any contractor's inability or failure to comply with any condition relating to grant, maintenance or renewal of such Permits or clearance, licence, authorization, as the case may be.

11.3 Force Majeure Exclusions

11.3.1 Force Majeure shall not include (i) any event or circumstance which is within the reasonable control of the Parties and (ii) the following conditions, except to the extent that they are consequences of an event of Force Majeure:

a. Unavailability, late delivery, or changes in cost of the plant, machinery, equipment, materials, spare parts or consumables for the Power Project;

b. Delay in the performance of any contractor, sub-contractor or their agents;

c. Non-performance resulting from normal wear and tear typically experienced in power generation materials and equipment;

d. Strikes at the facilities of the Affected Party;

e. Insufficiency of finances or funds or the agreement becoming onerous to perform; and

f. Non-performance caused by, or connected with, the Affected Party's:

i. Negligent or intentional acts, errors or omissions;

ii. Failure to comply with an Indian Law; or

iii. Breach of, or default under this Agreement.

11.4 ***Notification of Force Majeure Event***

11.4.1 The Affected Party shall give notice to the other Party of any event of Force Majeure as soon as reasonably practicable, but not later than fifteen (15) days after the date on which such Party knew or should reasonably have known of the commencement of the event of Force Majeure and SECI shall take a decision on the Affected Party's claim within 15 days of the receipt of the intimation. If an event of Force Majeure results in a breakdown of communications rendering it unreasonable to give notice within the applicable time limit specified herein, then the Party claiming Force Majeure shall give such notice as soon as reasonably practicable after reinstatement of communications, but not later than one (1) day after such reinstatement.

11.4.2 Provided that such notice shall be a pre-condition to the Affected Party's entitlement to claim relief under the PPA. Such notice shall include full particulars of the event of Force Majeure, its effects on the Party claiming relief and the remedial measures proposed. The Affected Party shall give the other Party regular (and not less than weekly) reports on the progress of those remedial measures and such other information as the other Party may reasonably request about the Force Majeure Event.

11.4.3 The Affected Party shall give notice to the other Party of (i) the cessation of the relevant event of Force Majeure; and (ii) the cessation of the effects of such event of Force Majeure on the performance of its rights or obligations under the PPA, as soon as practicable after becoming aware of each of these cessations.

11.5 Performance Excused

11.5.1 The Affected Party, to the extent rendered unable to perform its obligations or part of the obligation thereof under the PPA as a consequence of the Force Majeure Event, shall be excused from performance of the obligations, provided that the period shall not exceed 180 (one hundred and eighty) Days from the date of issuance of the FM Notice. The Parties may mutually agree to extend the period for which performance is excused due to a Force Majeure Event.

11.5.2 For the time period, as mutually agreed by the Parties, during which the performance shall be excused, the generator shall be entitled for a day to day extension of the period provided for Financial Closure or Scheduled Commissioning Period or the PPA period, as the case may be.

11.5.3 Provided always that a Party shall be excused from performance only to the extent reasonably warranted by the Force Majeure Event.

11.5.4 Provided further that, nothing shall absolve the Affected Party from any payment obligations accrued prior to the occurrence of the underlying Force Majeure Event.

11.6 No Liability for Other Losses

Save as otherwise provided in this Agreement, no Party shall be liable in any manner, whatsoever, to the other Parties in respect of any loss relating to or arising out of the occurrence or existence of any Force Majeure Event.

11.7 Resumption of Performance

During the period that a Force Majeure Event is subsisting, the Affected Party shall, in consultation with the other Parties, make all reasonable efforts to limit or mitigate the effects of such Force Majeure Event on the performance of its obligations under the PPA. The Affected Party shall also make efforts to resume performance of its obligations under this Agreement as soon as possible and upon resumption, shall notify other Parties of the same in writing. The other Parties shall afford all reasonable assistance to the Affected Party in this regard.

11.8 Duty to Perform and Duty to Mitigate

To the extent not prevented by a Force Majeure Event pursuant to Article 11.2, the Affected Party shall continue to perform its obligations pursuant to this Agreement, in line with provisions of Article 11.5. The Affected Party shall use its reasonable efforts to mitigate the effect of any Force Majeure Event as soon as practicable.

11.9 Available Relief for a Force Majeure Event

Subject to this Article 11:

a) no Party shall be in breach of its obligations pursuant to this Agreement except to the extent that the performance of its obligations was prevented, hindered or delayed due to a Force Majeure Event;

b) every Party shall be entitled to claim relief in relation to a Force Majeure Event in regard to its obligations, including but not limited to those specified under Article 4.5;

c) For avoidance of doubt, neither Party's obligation to make payments of money due and payable prior to occurrence of Force Majeure events under this Agreement shall be suspended or excused due to the occurrence of a Force Majeure Event in respect of such Party.

d) Provided that no payments shall be made by either Party affected by a Force Majeure Event for the period of such event on account of its inability to perform its obligations due to such Force Majeure Event.

11.10 Termination Due to Force Majeure Event

11.10.1 Termination due to Natural Force Majeure Event

a) If, prior to the completion of the 180 (one hundred and eighty) Day period (or any extended period) for a Natural Force Majeure Event commencing from the date of issuance of the Force Majeure Notice, the Parties are of the reasonable view that a Natural Force Majeure Event is likely to continue beyond such 180 (one hundred and eighty) Day period or any extended period agreed in pursuance of Article 11.5 (Performance Excused); or that it is uneconomic or impractical to restore the affected Unit, then the Parties may mutually decide to terminate the PPA, and the termination shall take effect from the date on which such decision is taken.

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b) Without prejudice to the provisions of Article 11.10.1.(a) above, the Affected Party shall, after the expiry of the period of 180 (one hundred and eighty) Days or any other mutually extended period, be entitled to forthwith terminate the PPA in its sole discretion by issuing a notice to that effect.

c) On termination of the PPA pursuant to Article 11.10.1(b):

i. no Termination Compensation shall be payable to the HPD.

ii. the HPD shall be eligible for undisputed payments under outstanding Monthly Bill(s), before the occurrence of Force Majeure Event.

11.10.2 Termination due to Non-Natural Force Majeure Event

a) Upon occurrence of a Non-Natural Force Majeure Event, the HPD shall, at its discretion, have the right to terminate the PPA forthwith after the completion of the period of 180 (one hundred and eighty) Days from the date of the Force Majeure Notice.

b) On termination of the PPA pursuant to Article 11.10.2(a):

i. SECI shall pay to the HPD, 'Force Majeure Termination Compensation' equivalent to the amount of the Debt Due and the 110% (one hundred and ten per cent) of the Adjusted Equity, as defined in the PPA, and takeover the Project assets.

ii. the HPD shall be eligible for undisputed payments under outstanding Monthly Bill(s), before the occurrence of Force Majeure Event.

ARTICLE 12: CHANGE IN LAW

12.1 *Definitions*

In this Article 12, the following terms shall have the following meanings:

12.1.1 In this Article 12, the term Change in Law shall refer to the occurrence of any of the following events pertaining to this project only after 7.12.2020 including (i) the enactment of any new law; or (ii) an amendment, modification or repeal of an existing law; or (iii) the requirement to obtain a new consent, permit or license; or (iv) any modification to the prevailing conditions prescribed for obtaining an consent, permit or license, not owing to any default of the Hybrid Power Developer; or (v) any change in the rates of any Taxes including any duties and cess or introduction of any new tax/cess/duty made applicable for setting up the hybrid power project and supply of power from the Project by the HPD which have a direct effect on the Project. It is further clarified that, in case the applicability of Safeguard Duty on "Solar Cells whether or not assembled in modules or panels", which is currently applicable until 29.07.2021, gets extended and has a direct effect on the Project, resulting in change in Project Cost, such extension will also qualify under "Change in Law" as per timeline and procedure indicated under this Article.

However, Change in Law shall not include (i) any change in taxes on corporate income or (ii) any change in any withholding tax on income or dividends distributed to the shareholders of the HPD.

12.1.2 In the event of occurrence of any of events as provided under Article 12.1.1 which results in any increase/ decrease in the Project Cost **(i.e. cost incurred by the HPD towards supply and services only for the Project concerned, upto Actual Commissioning Date of the last part capacity, or Scheduled Commissioning Date/extended Scheduled Commissioning Date, whichever is earlier),** the HPD/ SECI / Buying Utility(ies) shall be entitled for compensation by the other party, as the case may be, subject to the condition that the such 'Change in Law' is recognized by the Appropriate Commission. Compensation payment on account of such 'Change in Law' shall be determined and shall be effective from such date as may be decided by the Appropriate Commission. For eg., in case the Actual Commissioning Date of the last part capacity is 15.04.2022, Scheduled Commissioning Date is 15.03.2022 and extended

Scheduled Commissioning Date is 01.04.2022, the Project Cost shall be determined as the cost incurred by the HPD upto 01.04.2022.

12.1.3 However, in case of change in rates of safeguard duty, GST and basic customs duty after 07.12.2020 and resulting in change in Project Cost, then such change will be treated as 'Change in Law' and the quantum of compensation payment on account of change in rates of such duties and shall be provided to the affected party by the other party as per Article 12.2.3, subject to the provision that Appropriate Commission recognizes such provisions at the time of adoption of tariff by the Appropriate Commission and any decision in this regard shall be governing on HPD and Buying Entity.

12.2 *Relief for Change in Law*

12.2.1 Save and except as provided under Article 12.1.3, the aggrieved Party shall be required to approach the Hon'ble CERC for seeking approval of Change in Law.

12.2.2 The decision of the Hon'ble CERC to acknowledge a Change in Law and the date from which it will become effective, provide relief for the same, shall be final and governing on HPD and Buying Entity.

12.2.3 In case of Change in Law as approved by the Appropriate Commission pursuant to Article 12.2.1 or as provided under Article 12.1.3, the HPD/ SECI/ Buying Entities (as the case may be) shall be entitled for relief as follows:

Every net increase/decrease of Rs.1 lakh per MW in the Project Cost, for reasons other than those wherein such extension is on account of payment of liquidated damages, penalty or any other charges, as the case may be), shall be liable for corresponding increase/decrease of an amount equal to Rs 0.0049 /kWh.

Any such change, shall be considered upto three digits after the decimal point, and remaining digits, if any, shall be ignored.

For e.g. in case the change in tariff payable is calculated as Rs. 0.14678/kWh, it shall be modified as Rs. 0.146/kWh

12.2.4 In case Change in Law results in delay in commissioning or supply of power, where cause and effect between these two can be clearly established, the SECI under intimation to the Buying Entities may provide suitable time-extension in Scheduled Commissioning Date or Scheduled Date of Commencement of Supply of Power, as the case may be.

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12.2.5 It the event of any decrease in the project cost by the HPD or any income to the HPD on account of any of the events as indicated above, HPD shall pass on the benefit of such reduction at a rate as provided in Article 12.2.3 to SECI which shall be further passed on to the Buying Entity. In the event of the HPD failing to comply with the above requirement, SECI shall make such deductions in the monthly tariff payments on immediate basis. Further, at the time of raising of 1st Monthly Tariff Payment Bill, HPD shall be required to provide a statutory auditor certificate supported by Board Resolution in regard to implications (loss/ gain) arising out of Article 12.

12.3 Notification of Change in Law

12.3.1 If the HPD is affected by Change in Law in accordance with Article 12 and wishes to claim a Change in Law under this Article, it shall give notice to the SECI and Buying Utility (s) of such Change in Law as soon as reasonably practicable (but no later than 60 days from the date of occurrence of such Change in Law).

12.3.2 Any notice service pursuant to this Article 12.3.1 and 12.1.3, shall provide, amongst other things, precise details of the Change in Law and its effect on the Project Cost, supported by documentary evidences including Statutory Auditor Certificate to this effect so as to establish one to one correlation and its impact on the Project Cost.

ARTICLE 13: EVENTS OF DEFAULT AND TERMINATION

13.1 *HPD Event of Default*

13.1.1 The occurrence and/or continuation of any of the following events, unless any such event occurs as a result of a Force Majeure Event or a breach by SECI or Buying Entity(ies) of its obligations under this Agreement, shall constitute an HPD Event of Default:

(i) the failure to commence supply of power to SECI up to the Contracted Capacity, by the end of the period specified in Article 4, or failure to continue supply of Contracted Capacity to SECI after Commercial Operation Date throughout the term of this Agreement, or

if

a) the HPD assigns, mortgages or charges or purports to assign, mortgage or charge any of its assets or rights related to the Power Project in contravention of the provisions of this Agreement; or

b) the HPD transfers or novates any of its rights and/ or obligations under this agreement, in a manner contrary to the provisions of this Agreement; except where such transfer

- is in pursuance of a Law; and does not affect the ability of the transferee to perform, and such transferee has the financial capability to perform, its obligations under this Agreement or

- is to a transferee who assumes such obligations under this Agreement and the Agreement remains effective with respect to the transferee;

(ii) if (a) the HPD becomes voluntarily or involuntarily the subject of any bankruptcy or insolvency or winding up proceedings and such proceedings remain uncontested for a period of thirty (30) days, or (b) any winding up or bankruptcy or insolvency order is passed against the HPD, or (c) the HPD goes into liquidation or dissolution or has a receiver or any similar officer appointed over all or substantially all of its assets or official liquidator is appointed to manage its affairs, pursuant to Law, provided that a dissolution or liquidation of the HPD will not be a HPD Event of Default if such dissolution or liquidation is for the purpose of a merger, consolidation or reorganization and where the resulting company retains

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creditworthiness similar to the HPD and expressly assumes all obligations of the HPD under this Agreement and is in a position to perform them; or

(iii) the HPD repudiates this Agreement and does not rectify such breach within a period of thirty (30) days from a notice from SECI in this regard; or

(iv) except where due to any SECI's failure to comply with its material obligations, the HPD is in breach of any of its material obligations pursuant to this Agreement, and such material breach is not rectified by the HPD within thirty (30) days of receipt of first notice in this regard given by SECI.

(v) change in controlling shareholding before the specified time frame as mentioned in Article 4.1.1 of this Agreement; or

(vi) occurrence of any other event which is specified in this Agreement to be a material breach/ default of the HPD.

(vii) except where due to any SECI's failure to comply with its material obligations, the HPD is in breach of any of its material obligations pursuant to this Agreement, and such material breach is not rectified by the HPD within thirty (30) days of receipt of first notice in this regard given by SECI.

13.2 *SECI Event of Default*

13.2.1 The occurrence and the continuation of any of the following events, unless any such event occurs as a result of a Force Majeure Event or a breach by the HPD of its obligations under this Agreement, shall constitute the Event of Default on the part of defaulting SECI:

(i) SECI fails to pay (with respect to a Monthly Bill or a Supplementary Bill), subject to Article 10.5, for a period of ninety (90) days after the Due Date and the HPD is unable to recover the amount outstanding to the HPD through the Letter of Credit,

(ii) SECI repudiates this Agreement and does not rectify such breach even within a period of sixty (60) days from a notice from the HPD in this regard; or

(iii) except where due to any HPD's failure to comply with its obligations, SECI is in material breach of any of its obligations pursuant to this Agreement, and such material breach is not rectified by SECI within sixty (60) days of receipt of notice in this regard from the HPD to SECI; or if

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- SECI becomes voluntarily or involuntarily the subject of any bankruptcy or insolvency or winding up proceedings and such proceedings remain uncontested for a period of sixty (60) days, or

- any winding up or bankruptcy or insolvency order is passed against SECI, or

- SECI goes into liquidation or dissolution or a receiver or any similar officer is appointed over all or substantially all of its assets or official liquidator is appointed to manage its affairs, pursuant to Law, provided that it shall not constitute a SECI Event of Default, where such dissolution or liquidation of Buyer or SECI is for the purpose of a merger, consolidation or reorganization and where the resulting entity has the financial standing to perform its obligations under this Agreement and has creditworthiness similar to SECI and expressly assumes all obligations of SECI and is in a position to perform them; or;

(iv) If Buying Entities are subject to any of the above defaults and SECI does not designate another or other Buying Entities for purchase of power.

(v) Occurrence of any other event which is specified in this Agreement to be a material breach or default of SECI.

13.3 ***Procedure for cases of HPD Event of Default***

13.3.1 Upon the occurrence and continuation of any HPD Event of Default under Article 13.1, SECI shall have the right to deliver to the HPD, with a copy to the representative of the lenders to the HPD with whom the HPD has executed the Financing Agreements, a notice stating its intention to terminate this Agreement (SECI Preliminary Default Notice), which shall specify in reasonable detail, the circumstances giving rise to the issue of such notice.

13.3.2 Following the issue of a SECI Preliminary Default Notice, the Consultation Period of ninety (90) days or such longer period as the Parties may agree, shall apply and it shall be the responsibility of the Parties to discuss as to what steps shall be taken with a view to mitigate the consequences of the relevant Event of Default having regard to all the circumstances.

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13.3.3 During the Consultation Period, the Parties shall continue to perform their respective obligations under this Agreement.

13.3.4 Within a period of seven (7) days following the expiry of the Consultation Period unless the Parties shall have otherwise agreed to the contrary or the HPD Event of Default giving rise to the Consultation Period shall have ceased to exist or shall have been remedied, SECI may terminate this Agreement by giving a written Termination Notice of sixty (60) days to the HPD.

13.3.5 Subject to the terms of this Agreement, upon occurrence of a HPD Event of Default under this Agreement, the HPD shall be liable to pay to SECI, liquidated damages, as provided in Article 4.6 of the PPA for failure to commission within stipulated time and Article 4.4.1 for failure to supply power in terms of the PPA. For other cases, the HPD shall be liable pay to SECI, damages, equivalent to 6 (six) months, or balance PPA period whichever is less, of charges for its contracted capacity. SECI shall have the right to recover the said damages by way of forfeiture of bank guarantee, if any, without prejudice to resorting to any other legal course or remedy. In addition to the levy of damages as aforesaid, the lenders in concurrence with the Buying Entity and SECI, may exercise their rights, if any, under Financing Agreements, to seek substitution of the HPD by a selectee for the residual period of the Agreement, for the purpose of securing the payments of the total debt amount from the HPD and performing the obligations of the HPD. However, in the event the lenders are unable to substitute the defaulting HPD within the stipulated period, SECI may terminate the PPA and the Buying Entity may acquire the Project assets for an amount equivalent to 90% of the Debt Due or less as mutually agreed, failing which, the lenders may exercise their mortgage rights and liquidate the Project assets. Provided that any substitution under this Agreement can only be made with the prior consent of SECI including the condition that the selectee meets the eligibility requirements of Request for Selection (RfS) issued by SECI and accepts the terms and conditions of this Agreement.

13.3.6 The lenders in concurrence with the Buying Utility and SECI, may seek to exercise right of substitution under Article 13.3.5 by an amendment or novation of the PPA in favour of the selectee. The HPD shall cooperate with SECI to carry out such

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substitution and shall have the duty and obligation to continue to operate the Power Project in accordance with this PPA till such time as the substitution is finalized. In the event of Change in Shareholding/Substitution of Promoters triggered by the Financial Institutions leading to signing of fresh PPA with a new entity, an amount of Rs. 10 Lakh per Project+ 18% GST per transaction as facilitation fee (non-refundable) shall be deposited by the HPD to SECI.

13.3.7 In the event the lenders are unable to substitute the defaulting HPD within the stipulated period, SECI may terminate the PPA and the Buying Utility may acquire the Project assets for an amount equivalent to 90% of the debt due, failing which, the lenders may exercise their mortgage rights and liquidate the Project assets.

13.4 ***Procedure for cases of SECI Event of Default***

13.4.1 Upon the occurrence and continuation of any SECI Event of Default specified in Article 13.2, the HPD shall have the right to deliver to SECI, a HPD Preliminary Default Notice, which notice shall specify in reasonable detail the circumstances giving rise to its issue.

13.4.2 Following the issue of a HPD Preliminary Default Notice, the Consultation Period of ninety (90) days or such longer period as the Parties may agree, shall apply and it shall be the responsibility of the Parties to discuss as to what steps shall be taken with a view to mitigate the consequences of the relevant Event of Default having regard to all the circumstances.

13.4.3 During the Consultation Period, the Parties shall continue to perform their respective obligations under this Agreement.

13.4.4 After a period of two hundred ten (210) days following the expiry of the Consultation Period and unless the Parties shall have otherwise agreed to the contrary or SECI Event of Default giving rise to the Consultation Period shall have ceased to exist or shall have been remedied, SECI under intimation to the Buying Entity and the HPD shall, subject to the prior consent of the HPD, novate its part of the PPA to any third party, including its Affiliates within the stipulated period. In the event the aforesaid novation is not acceptable to the HPD, or if no offer of novation is made by SECI within the stipulated period, then the HPD may terminate the PPA and at its

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discretion require Buying Entity to either (i) takeover the Project assets by making a payment of the termination compensation equivalent to the amount of the Debt Due and 110% (one hundred and ten per cent) of the Adjusted Equity, less Insurance Cover, if any, or, (ii) pay to the HPD, damages, equivalent to 6 (six) months, or balance PPA period whichever is less, of charges for its contracted capacity, with the Project assets being retained by the HPD.

Provided further that at the end of three (3) months period from the period mentioned in this Article 13.4.4, this Agreement may be terminated by the HPD.

In the event of termination of PPA, any damages or charges payable to the STU/ CTU, for the connectivity of the plant, shall be borne by the Buying Entity.

13.5 Not Used.

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ARTICLE 14: LIABILITY AND INDEMNIFICATION

14.1 *Indemnity*

14.1.1 The HPD shall indemnify, defend and hold SECI harmless against:

a) any and all third party claims against SECI for any loss of or damage to property of such third party, or death or injury to such third party, arising out of a breach by the HPD of any of its obligations under this Agreement; and

b) any and all losses, damages, costs and expenses including legal costs, fines, penalties and interest actually suffered or incurred by SECI from third party claims arising by reason of a breach by the HPD of any of its obligations under this Agreement, (provided that this Article 14 shall not apply to such breaches by the HPD, for which specific remedies have been provided for under this Agreement).

14.1.2 SECI shall cause the Buying Entity(ies) to indemnify, defend and hold the HPD harmless against:

a) any and all third party claims against the HPD, for any loss of or damage to property of such third party, or death or injury to such third party, arising out of a breach by Buying Entity(ies) of any of their obligations under this Agreement; and

b) any and all losses, damages, costs and expenses including legal costs, fines, penalties and interest ('Indemnifiable Losses') actually suffered or incurred by the HPD from third party claims arising by reason of a breach by Buying Entity(ies) of any of its obligations. SECI shall incorporate appropriate covenants in the PSA for the above obligations of Buying Entity(ies). In so far as indemnity to HPD is concerned, Buying Entity(ies) shall be the indemnifying party and not SECI.

14.2 Procedure for claiming Indemnity

14.2.1 ***Third party claims***

a. Where the Indemnified Party is entitled to indemnification from the Indemnifying Party pursuant to Article 14.1.1(a) or 14.1.2(a), the Indemnified Party shall promptly notify the Indemnifying Party of such claim referred to in Article 14.1.1(a) or 14.1.2(a) in respect of which it is entitled to be indemnified.

Such notice shall be given as soon as reasonably practicable after the Indemnified Party becomes aware of such claim. The Indemnifying Party shall be liable to settle the indemnification claim within thirty (30) days of receipt of the above notice. Provided however that, if:

i) the Parties choose to refer the dispute in accordance with Article 16.3.2; and
ii) the claim amount is not required to be paid/ deposited to such third party pending the resolution of the Dispute,

the Indemnifying Party shall become liable to pay the claim amount to the Indemnified Party or to the third party, as the case may be, promptly following the resolution of the Dispute, if such Dispute is not settled in favour of the Indemnified Party.

b. The Indemnified Party may contest the claim by referring to the Appropriate Commission for which it is entitled to be Indemnified under Article 14.1.1(a) or 14.1.2(a) and the Indemnifying Party shall reimburse to the Indemnified Party all reasonable costs and expenses incurred by the Indemnified party. However, such Indemnified Party shall not settle or compromise such claim without first getting the consent of the Indemnifying Party, which consent shall not be unreasonably withheld or delayed.

An Indemnifying Party may, at its own expense, assume control of the defence of any proceedings brought against the Indemnified Party if it acknowledges its obligation to indemnify such Indemnified Party, gives such Indemnified Party prompt notice of its intention to assume control of the defence, and employs an independent legal counsel at its own cost that is reasonably satisfactory to the Indemnified Party.

14.3 *Indemnifiable Losses*

14.3.1 Where an Indemnified Party is entitled to Indemnifiable Losses from the Indemnifying Party pursuant to Article 14.1.1(b) or 14.1.2(b), the Indemnified Party shall promptly notify the Indemnifying Party of the Indemnifiable Losses actually incurred by the Indemnified Party. The Indemnifiable Losses shall be reimbursed by the Indemnifying Party within thirty (30) days of receipt of the notice seeking Indemnifiable Losses by the Indemnified Party. In case of nonpayment of such

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losses after a valid notice under this Article 14.3, such event shall constitute a payment default under Article 13.

14.4 ***Limitation on Liability***

14.4.1 Except as expressly provided in this Agreement, neither the HPD nor SECI nor Buying Entity(ies) nor its/ their respective officers, directors, agents, employees or affiliates (or their officers, directors, agents or employees), shall be liable or responsible to the other Party or its affiliates, officers, directors, agents, employees, successors or permitted assigns or their respective insurers for incidental, indirect or consequential damages, connected with or resulting from performance or non-performance of this Agreement, or anything done in connection herewith, including claims in the nature of lost revenues, income or profits (other than payments expressly required and properly due under this Agreement), any increased expense of, reduction in or loss of power generation or equipment used therefore, irrespective of whether such claims are based upon breach of warranty, tort (including negligence, whether of Buying Entity(ies) , the HPD or others), strict liability, contract, breach of statutory duty, operation of law or otherwise.

14.4.2 SECI shall have no recourse against any officer, director or shareholder of the HPD or any Affiliate of the HPD or any of its officers, directors or shareholders for such claims excluded under this Article. The HPD shall have no recourse against any officer, director or shareholder of Buyer or Buying Entity(ies) , or any affiliate of Buyer or any of its officers, directors or shareholders for such claims excluded under this Article.

14.5 SECI's Liability

14.5.1 Notwithstanding anything to the contrary contained in this Agreement, the Parties acknowledge and accept that the SECI is an Intermediary Company to purchase and resell the electricity to the Buying Utility(ies) to enable them to fulfill the Renewable Purchase Obligations (RPO) and, therefore, the performance of the obligations of the SECI under this Agreement shall be subject to the ability of the SECI to enforce the corresponding obligations assumed by the Buying Utility(ies) on re-sale under the Power Sale Agreement to be entered into by the Buying Utility(ies) with SECI. It is however, specifically agreed that the payment of money becoming due from the SECI

to the HPD under this Agreement for supply of Power to the extent of the Contracted Capacity shall not be on a back to back basis and will be as per:

(i) the recourse under the Payment Security Mechanism provided in the PPA and PSA, as follows:

a) Letter of Credit;

(b) State Government Guarantee/ Tri-Partite Agreement (TPA) signed between Reserve Bank of India, Central Government and State Government of the Buying Entity, covering security for payment of energy charges, as applicable

(c) Payment Security Fund provided by the Buying Entity, and

(ii) Payment security fund as referred in Article 10.1.1 of the PPA. SECI shall discharge the tariff payment obligation in terms of the provisions of this Agreement.

14.5.2 The parties agree that in respect of the obligations other than the tariff payment obligation specifically mentioned herein above, in the event the HPD has any claim against the SECI in regard to the performance of any obligation of the SECI under this Agreement or enforcement of any right of the HPD against the SECI under this Agreement, the same shall be subject to the ability of the SECI to enforce the corresponding obligations assumed by the Buying Utility(ies) under the Power Sale Agreement to be entered into between the SECI and the Buying Utility(ies) on resale on mutatis mutandis basis and not otherwise.

14.6 Duty to Mitigate

14.6.1 The Parties shall endevour to take all reasonable steps so as mitigate any loss or damage which has occurred under this Article 14.

ARTICLE 15: ASSIGNMENTS AND CHARGES

15.1 ***Assignments***

This Agreement shall be binding upon, and inure to the benefit of the Parties and their respective successors and permitted assigns. This Agreement shall not be assigned by any Party, except to the Project Lenders or Lender's Representative as security for their debt under the Financing Agreements, other than by mutual consent between the Parties to be evidenced in writing. Such assignment shall be agreed to by SECI subject to the compliance of provisions contained in this Agreement and more specifically to the provisions of Article 4.1.1 of this Agreement. In no case, such assignment shall be permissible prior to the declaration of COD.

Provided that, SECI shall permit assignment of any of HPD's rights and obligations under this Agreement in favour of the lenders to the HPD, if required under the Financing Agreements.

Provided that, such consent shall not be withheld if SECI seeks to transfer to any transferee all of its rights and obligations under this Agreement.

The enforcement of the rights and obligation between the HPD and the Buying Utility (ies) provided in this Agreement and in the PSA shall not be treated as an assignment but an enforcement of the terms agreed under this Agreement.

Provided further that any successor(s) or permitted assign(s) identified after mutual agreement between the Parties may be required to execute a new agreement on the same terms and conditions as are included in this Agreement. An amount of Rs. 5 Lakh per Transaction as Facilitation Fee (non-refundable) shall be deposited by the HPD to SECI. Provided further that, such consent shall not be withheld by the HPD if SECI seeks to transfer to any affiliate all of its rights and obligations under this Agreement.

In the event of Change in Shareholding/Substitution of Promoters triggered by the Financial Institutions leading to signing of fresh PPA with a New Entity, an amount of Rs. 10 Lakh per Transaction as Facilitation Fee (non-refundable) shall be deposited by the HPD to SECI.

15.2 ***Permitted Charges***

15.2.1 HPD shall not create or permit to subsist any encumbrance over all or any of its rights and benefits under this Agreement, other than as set forth in Article 15.1 and the Guidelines.

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ARTICLE 16: GOVERNING LAW AND DISPUTE RESOLUTION

16.1 *Governing Law*

16.1.1 This Agreement shall be governed by and construed in accordance with the Laws of India. Any legal proceedings in respect of any matters, claims or disputes under this Agreement shall be under the jurisdiction of appropriate courts in Delhi.

16.2 *Amicable Settlement and Dispute Resolution*

16.2.1 *Amicable Settlement*

i. Either Party is entitled to raise any claim, dispute or difference of whatever nature arising under, out of or in connection with this Agreement ("Dispute") by giving a written notice (Dispute Notice) to the other Party, which shall contain:

(a) a description of the Dispute;

(b) the grounds for such Dispute; and

(c) all written material in support of its claim.

ii. The other Party shall, within thirty (30) days of issue of Dispute Notice issued under Article 16.2.1(i), furnish:

(a) counter-claim and defences, if any, regarding the Dispute; and

(b) all written material in support of its defences and counter-claim.

iii. Within thirty (30) days of issue of Dispute Notice by any Party pursuant to Article 16

(i) if the other Party does not furnish any counter claim or defence under Article 16

(ii) or thirty (30) days from the date of furnishing counter claims or defence by the other Party, both the Parties to the Dispute shall meet to settle such Dispute amicably. If the Parties fail to resolve the Dispute amicably within thirty (30) days from the later of the dates mentioned in this Article 16.2.1.

(iii) the Dispute shall be referred for dispute resolution in accordance with Article 16.3.

16.3 ***Dispute Resolution***

16.3.1 **Dispute Resolution by the Appropriate Commission**

i) Where any Dispute or differences arises in relation to this agreement of any nature whatsoever including the construction, interpretation or implementation of the provisions of this agreement as well as claim made by any Party for any change in or determination of the Tariff or any matter related to Tariff or claims made by any Party which partly or wholly relate to any change in the Tariff or determination of any of such claims could result in change in the Tariff, and relates to any matter agreed to be referred to the Appropriate Commission, shall be submitted to adjudication by the Appropriate Commission. Appeal against the decisions of the Appropriate Commission shall be made only as per the provisions of the Electricity Act, 2003, as amended from time to time.

ii) SECI shall be entitled to co-opt the Buying Entity(ies) and/or the lenders (if any) as a supporting party in such proceedings before the Appropriate Commission.

16.3.2 **Not used.**

16.4 ***Parties to Perform Obligations***

16.4.1 Notwithstanding the existence of any Dispute and difference referred to the Appropriate Commission and save as the Appropriate Commission may otherwise direct by a final or interim order, the Parties hereto shall continue to perform their respective obligations (which are not in dispute) under this Agreement.

ARTICLE 17: MISCELLANEOUS PROVISIONS

17.1 *Amendment*

17.1.1 This Agreement may only be amended or supplemented by a written agreement between the Parties.

17.2 *Third Party Beneficiaries*

17.2.1 Subject to provisions contained in this agreement relating to back to back implications of the PPA as well as PSA, this Agreement is solely for the benefit of the Parties and their respective successors and permitted assigns and shall not be construed as creating any duty, standard of care or any liability to, any person not a party to this Agreement.

17.3 *Waiver*

17.3.1 No waiver by either Party of any default or breach by the other Party in the performance of any of the provisions of this Agreement shall be effective unless in writing duly executed by an authorised representative of such Party.

17.3.2 Neither the failure by either Party to insist on any occasion upon the performance of the terms, conditions and provisions of this Agreement nor time or other indulgence granted by one Party to the other Parties shall act as a waiver of such breach or acceptance of any variation or the relinquishment of any such right or any other right under this Agreement, which shall remain in full force and effect.

17.4 *Confidentiality*

17.4.1 The Parties undertake to hold in confidence this Agreement and not to disclose the terms and conditions of the transaction contemplated hereby to third parties, except:

a) to their professional advisors;

b) to their officers, contractors, employees, agents or representatives, financiers, who need to have access to such information for the proper performance of their activities; or

c) disclosures required under Law, without the prior written consent of the other Party.

17.5 *Severability*

17.5.1 The invalidity or unenforceability, for any reason, of any part of this Agreement shall not prejudice or affect the validity or enforceability of the remainder of this Agreement, unless the part held invalid or unenforceable is fundamental to this Agreement.

17.6 *Notices*

17.6.1 All notices or other communications which are required to be given under this Agreement shall be in writing and in the English language.

17.6.2 If to the HPD, all notices or other communications which are required must be delivered personally or by registered post or facsimile or any other method duly acknowledged to the addresses below:

Address : House number 6-3-680/3, Plot Number 3, PMR Plaza, First Floor, Thakur Mansion Lane, Somajiguda, Hyderabad, 500082.

Attention : Mr. Suman Kumar
Email : ksharma@brookfieldrenewable.in
Fax. No: +91-4023412314
Telephone No : +91 8459123980

17.6.3 If to SECI, all notices or communications must be delivered personally or by registered post or facsimile or any other mode duly acknowledged to the address(es) below:

Address : 6th Floor, Plate-B,NBCC Office Block Tower-2,
East Kidwai Nagar, New Delhi-110023.
Attention : Y.B.K Reddy
Email : ybkreddy@seci.co.in
Telephone No. : 011-24666-218

17.6.4 All notices or communications given by facsimile shall be confirmed by sending a copy of the same via post office in an envelope properly addressed to the appropriate Party for delivery by registered mail. All notices shall be deemed validly delivered upon receipt evidenced by an acknowledgement of the recipient, unless the Party delivering the notice can prove in case of delivery through the registered post that

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the recipient refused to acknowledge the receipt of the notice despite efforts of the postal authorities.

17.6.5 Any Party may by notice of at least fifteen (15) days to the other Party change the address and/or addresses to which such notices and communications to it are to be delivered or mailed.

17.7 *Language*

17.7.1 All agreements, correspondence and communications between the Parties relating to this Agreement and all other documentation to be prepared and supplied under the Agreement shall be written in English, and the Agreement shall be construed and interpreted in accordance with English language.

17.7.2 If any of the agreements, correspondence, communications or documents are prepared in any language other than English, the English translation of such agreements, correspondence, communications or documents shall prevail in matters of interpretation.

17.8 *Restriction of Shareholders / Owners' Liability*

17.8.1 Parties expressly agree and acknowledge that none of the shareholders of the Parties hereto shall be liable to the other Parties for any of the contractual obligations of the concerned Party under this Agreement. Further, the financial liabilities of the shareholder/s of each Party to this Agreement, shall be restricted to the extent provided in the Indian Companies Act, 2013.

17.9 *Taxes and Duties*

17.9.1 The HPD shall bear and promptly pay all statutory taxes, duties, levies and cess, assessed/ levied on the HPD, contractors or their employees that are required to be paid by the HPD as per the Law in relation to the execution of the Agreement and for supplying power as per the terms of this Agreement.

17.9.2 SECI shall be indemnified and held harmless by the HPD against any claims that may be made against SECI in relation to the matters set out in Article 17.9.1.

17.9.3 SECI shall not be liable for any payment of, taxes, duties, levies, cess whatsoever for discharging any obligation of the HPD by SECI on behalf of HPD.

17.10 ***Independent Entity***

17.10.1 The HPD shall be an independent entity performing its obligations pursuant to the Agreement.

17.10.2 Subject to the provisions of the Agreement, the HPD shall be solely responsible for the manner in which its obligations under this Agreement are to be performed. All employees and representatives of the HPD or contractors engaged by the HPD in connection with the performance of the Agreement shall be under the complete control of the HPD and shall not be deemed to be employees, representatives, contractors of SECI and nothing contained in the Agreement or in any agreement or contract awarded by the HPD shall be construed to create any contractual relationship between any such employees, representatives or contractors and SECI.

17.11 ***Compliance with Law***

Despite anything contained in this Agreement but without prejudice to this Article, if any provision of this Agreement shall be in deviation or inconsistent with or repugnant to the provisions contained in the Electricity Act, 2003, or any rules and regulations made there under, such provision of this Agreement shall be deemed to be amended to the extent required to bring it into compliance with the aforesaid relevant provisions as amended from time to time.

17.12. The duly executed Power Sale Agreement between SECI and Buying entity(s) as attached to this Agreement shall be read along with this Agreement as a composite back to back agreement for Generation and supply of electricity to the Buying entity(s), particularly, to fulfill the Renewable Purchase Obligations under the provisions of the Electricity Act, 2003 and the Regulations notified thereunder.

17.13 ***Breach of Obligations***

The Parties acknowledge that a breach of any of the obligations contained herein would result in injuries. The Parties further acknowledge that the amount of the liquidated damages or the method of calculating the liquidated damages specified in this Agreement is a genuine and reasonable pre-estimate of the damages that may be suffered by the non-defaulting party in each case specified under this Agreement.

17.14 ***Order of priority in application***

In case of inconsistencies between the agreement(s) executed between the Parties, applicable Law including rules and regulations framed thereunder, the order of priority as between them shall be the order in which they are placed below:

i. applicable Law, rules and regulations framed thereunder;
ii. the Grid Code; and
iii. the terms and conditions of this Agreement;

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IN WITNESS WHEREOF the Parties have caused the Agreement to be executed through their duly authorized representatives as of the date and place set forth above.

For and on behalf of [SECI]

Y.B.K Reddy, AGM
Solar Energy Corporation of India Limited(SECI)
6th Floor, Plate-B,NBCC Office Block Tower-2
East Kidwai Nagar, New Delhi-110023

Witness:
1.

2. (Padam Narayan)

For and on behalf of (ABCR(RJ-03)EPL)

Mr. Suman Kumar (Director)
ABC Renewable Energy (RJ-03) Private Limited (ABCR(RJ-03)EPL)

House number 6-3-680/3, Plot Number 3, PMR Plaza, First Floor, Thakur Mansion Lane, Somajiguda, Hyderabad, 500082.

Witness:
1. VARUN GUPTA

2. KAPIL SHARMA

INDIA NON JUDICIAL

Government of National Capital Territory of Delhi

e-Stamp

सत्यमेव जयते

Certificate No.	:	**IN-DL95564283252405T**
Certificate Issued Date	:	09-Jul-2021 04:22 PM
Account Reference	:	IMPACC (IV)/ dl915803/ DELHI/ DL-DLH
Unique Doc. Reference	:	SUBIN-DLDL91580389424723825322T
Purchased by	:	SOLAR ENERGY CORPORATION OF INDIA LTD
Description of Document	:	Article 5 General Agreement
Property Description	:	Not Applicable
Consideration Price (Rs.)	:	0 (Zero)
First Party	:	SOLAR ENERGY CORPORATION OF INDIA LTD
Second Party	:	AMP ENERGY EIGHT PVT LTD
Stamp Duty Paid By	:	SOLAR ENERGY CORPORATION OF INDIA LTD
Stamp Duty Amount(Rs.)	:	100 (One Hundred only)

Please write or type below this line

This Power Purchase Agreement is made on the **19th day of July of 2021 at New Delhi**.

Between

AMP Energy Green Eight Private Limited, a Company incorporated under the Companies Act 1956 or Companies Act 2013, having its registered office at 309, 3rd Floor, Rectangle One,

AMP ENERGY GREEN EIGHT PVT. LTD.

Statutory Alert:

1. The authenticity of this Stamp certificate should be verified at 'www.shcilestamp.com' or using e-Stamp Mobile App of Stock Holding. Any discrepancy in the details on this Certificate and as available on the website / Mobile App renders it invalid.
2. The onus of checking the legitimacy is on the users of the certificate.
3. In case of any discrepancy please inform the Competent Authority.

Behind Sheraton Hotel, Saket, New Delhi 110017 (hereinafter referred to as "**Hybrid Power Developer or HPD**", which expression shall, unless repugnant to the context or meaning thereof, be deemed to include its successors and permitted assigns) as a Party of the **First Part**;

And

Solar Energy Corporation of India Limited, a company incorporated under the Companies Act 1956, having its registered office at 1st Floor, A-Wing, D-3, District Centre, Saket, New Delhi-110017 and New address at Plate-B, 6th Floor, Tower-2, NBCC Office Block, East Kidwayi Nagar, New Delhi- 110023 (hereinafter referred to as "SECI", or "Procurer" or "Buyer" which expression shall, unless repugnant to the context or meaning thereof, be deemed to include its successors and assignees) as a Party of the **Second Part**;

The HPD and SECI are individually referred to as 'Party' and collectively referred to as 'Parties'.

WHEREAS:

A. SECI has been designated as the implementing agency for implementation of the scheme for setting-up of ISTS-connected Wind-Solar Hybrid Power Projects, under the National Wind-Solar Hybrid Policy issued by MNRE dated 14.05.2018.

B. The Ministry of New and Renewable Energy, Government of India has issued the "Guidelines for Tariff Based Competitive Bidding Process for procurement of power from Grid Connected Wind Solar Hybrid Projects" issued by the Ministry of New and Renewable Energy vide F.No. 238/78/2017-Wind dated 14.10.2020, including subsequent amendments and clarifications, if any.

C. SECI had initiated a Tariff Based Competitive Bid Process for procurement of 1200 MW of the power generated from the ISTS connected Wind-Solar Hybrid Power Projects on the terms and conditions contained in the Request for Selection (herein after referred to as **'RFS')** issued by SECI vide RFS No SECI/C&P/HPD/T3/1200MW/RfS/012020_ dated 14.01.2020 .

D. The Hybrid Power Developer (hereinafter referred to as **'HPD'**) has been selected in the Competitive Bidding Process for development, generation and supply of electricity from the 130 MW Hybrid Power Project to be established by HPD anywhere in India and for supply of such electricity by SECI as an Intermediary Agency to the Buying Utility(ies)

[as defined] under a Power Sale Agreement to be entered into between SECI and such Buying Utility (ies);

E. SECI has issued the Letter of Award No SECI/C&P/HPD/T3/LoA/AMPEGPL/P1/40593 dated 31.12.2020 in favour of the AMP Energy Green Private Limited for development and establishment of the 130 MW Hybrid Power Project in the State of Rajasthan as per the terms and conditions contained in the RfS, draft of this Power Purchase Agreement circulated at the time of the bidding and other bidding documents as well as the conditions contained in the Letter of Award;

F. SECI has agreed to purchase such power from the HPD as an Intermediary Procurer and sell it to Buying Utility on back-to-back basis as per the provisions of the RfS. Accordingly, SECI has agreed to sign/has signed a Power Sale Agreement with the Buying Utility to sell such power as per the provisions of the above said scheme;

G. In terms of the RfS and the Bidding Documents, the HPD has furnished the Performance Bank Guarantee/ Payment on Order Instrument in the sum of Rs. 13,00,00,000 /-.(INR Thirteen Crores Only) in favour of SECI as per the format provided as a part of the Bidding Documents and a copy of the Bank Guarantee/POI provided is in Schedule – 1/ Schedule-3 to this Agreement;

H. The HPD has fulfilled the terms of the bidding and the terms of the Letter of Award for signing this Power Purchase Agreement as a definitive agreement for establishing the Hybrid Power Project of 130 MW at Village-Neemba, Tehsil-Fatehgarh, District-Jaisalmer, State-Rajasthan for generation and sale of electricity by the HPD to SECI to enable SECI to make available such power to the Buying Utility(ies), as SECI may consider appropriate, under a Power Sale Agreement and on a back-to-back basis to the Power Purchase Agreement to be entered into with the HPD;

I. SECI has signed the Power Sale Agreement with the Buying Utility(ies) of States in India.

J. The parties have agreed to execute this Power Purchase Agreement in terms of the provisions of the RfS, the bidding documents and the Letter of Award in regard to

the terms and conditions for establishment of the Hybrid Power Project at Rajasthan and for generation and supply of electricity by the HPD to SECI.

Now therefore, in consideration of the premises and mutual agreements, covenants and conditions set forth herein, it is hereby agreed by and between the Parties as follows:





ARTICLE 1: DEFINITIONS AND INTERPRETATION

1.1 *Definitions*

The terms used in this Agreement, unless as defined below or repugnant to the context, shall have the same meaning as assigned to them by the Electricity Act, 2003 and the rules or regulations framed there under, including those issued / framed by the Appropriate Commission (as defined hereunder), as amended or re-enacted from time to time.

"Act" or "Electricity Act, 2003"	shall mean the Electricity Act, 2003 and include any modifications, amendments and substitution from time to time;
"Adjusted Equity"	shall mean the Equity funded in Indian Rupees and adjusted on the first day of the current month (the "Reference Date"), in the manner set forth below, to reflect the change in its value on account of depreciation and variations in Wholesale Price Index (WPI), and for any Reference Date occurring between the first day of the month of Appointed Date (the date of achievement of Financial Closure) and the Reference Date; i. On or before Commercial Operation Date (COD), the Adjusted Equity shall be a sum equal to the Equity funded in Indian Rupees and expended on the Project, revised to the extent of one half of the variation in WPI occurring between the first day of the month of Appointed Date and Reference Date; ii. An amount equal to the Adjusted Equity as on COD shall be deemed to be the base (the "Base Adjusted Equity"); iii. After COD, the Adjusted Equity hereunder shall be a sum equal to the Base Adjusted Equity, reduced by 0.333% (zero point three three three percent) thereof at the commencement of each month following the COD [reduction of 1% (one percent) per quarter of an year] and the amount so arrived at shall be revised to the extent of variation in WPI occurring between the COD and the Reference Date; For the avoidance of doubt, the Adjusted Equity shall, in the event of termination, be computed as on the Reference Date immediately preceding the Transfer Date; provided that no reduction in the Adjusted Equity shall be made for a period equal to the duration, if any, for which the PPA period is extended, but the revision on account of WPI shall continue to be made.
"Agreement" or "Power Purchase Agreement" or "PPA"	shall mean this Power Purchase Agreement including its recitals and Schedules, amended or modified from time to time in accordance with the terms hereof;
"Appropriate Commission"	Unless otherwise stated, Appropriate Commission shall mean Central Electricity Regulatory Commission;
"Bill Dispute Notice"	shall mean the notice issued by a Party raising a Dispute regarding a Monthly Bill or a Supplementary Bill issued by the other Party;

"Business Day"	shall mean with respect to HPD and SECI, a day other than Sunday or a statutory holiday, on which the banks remain open for business in Delhi;
"Buying Entity"	Shall mean Distribution companies and shall include wherever admissible the Distribution licensees or buying entity in any State or any bulk consumer who agreed to purchase the wind-solar hybrid power from SECI and execute the Power Sale Agreement from time to time with SECI, and requires hybrid power to fulfil its solar and non-solar RPO under respective RPO regulations;
"Capacity Utilization Factor" or "CUF"	shall have the same meaning as provided in CERC (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2009 as amended from time to time; However for avoidance of any doubt, it is clarified that the CUF shall be calculated on the Contracted Capacity; In any Contract Year, if 'X' MWh of energy has been metered out at the Delivery Point for 'Y' MW Project capacity, CUF= (X MWh/(Y MW*8766)) X100%;
"CERC"	shall mean the Central Electricity Regulatory Commission of India, constituted under sub – section (1) of Section 76 of the Electricity Act, 2003, or its successors;
"CTU" or "Central Transmission Utility"	shall mean the Government Company notified by the Central Government under Sub-Section (1) of Section 38 of the Electricity Act, 2003.
"Change in Law"	shall have the meaning ascribed thereto in Article 12 of this Agreement;
"Commissioning"	The Project will be considered as commissioned if all equipment as per rated Project Capacity has been installed and energy has flown into grid, in line with the Commissioning procedures defined in the PPA.
"Commercial Operation Date (COD)"	The Commercial Operation Date (COD) shall be considered as the actual date of commissioning of the project as declared by the Commissioning Committee constituted by procurer. In case of part commissioning COD will be declared only for that part of project capacity;
"Competent Court of Law"	shall mean any court or tribunal or any similar judicial or quasi- judicial body in India that has jurisdiction to adjudicate upon issues relating to this Agreement;
"Consents, Clearances and Permits"	shall mean all authorizations, licenses, approvals, registrations, permits, waivers, privileges, acknowledgements, agreements, or concessions required to be obtained from or provided by any concerned authority for the purpose of setting up of the generation facilities and/ or supply of power;

"Consultation Period"	shall mean the period of ninety (90) days or such other longer period as the Parties may agree, commencing from the date of issuance of a HPD Preliminary Default Notice or SECI Preliminary Default Notice as provided in Article 13 of this Agreement, for consultation between the Parties to mitigate the consequence of the relevant event having regard to all the circumstances;
"Contract Year"	shall mean the period beginning from the Effective Date and ending on the immediately succeeding March 31 and thereafter each period of 12 months beginning on April 1 and ending on March 31 provided that: (i) in the financial year in which the Scheduled Commissioning Date would occur, the Contract Year shall end on the date immediately before the Scheduled Commissioning Date and a new Contract Year shall commence once again from the Scheduled Commissioning Date and end on the immediately succeeding March 31, and thereafter each period of twelve (12) months commencing on April 1 and ending on March 31, and (ii) provided further that the last Contract Year of this Agreement shall end on the last day of the Term of this Agreement
"Contracted Capacity"	shall mean 130 MW contracted with SECI for supply by the HPD to SECI at the Delivery Point from the Hybrid Power Project. It shall be equal to the Project Capacity as defined;
"Day"	shall mean a day, if not a Business Day, the immediately succeeding Business Day.
"Debt Due"	shall mean the aggregate of the following sums expressed in Indian Rupees outstanding on the Transfer Date: i. The principal amount of the debt provided by the Senior Lenders under the Financing Agreements for financing the Total Project Cost (the 'Principal') but excluding any part of the principal that had fallen due for repayment prior to the Transfer Date; ii. All accrued interest, financing fees and charges payable under the Financing Agreements on, or in respect of, the debt referred to in sub-clause (i) above until the Transfer Date but excluding: (i) any interest, fees or charges that had fallen due one year prior to the Transfer Date, (ii) any penal interest or charges payable under the Financing Agreements to any Senior Lender, (iii) any pre-payment charges in relation to accelerated repayment of debt except where such charges have arisen due to Utility Default, and (iv) any Subordinated Debt which is included in the Financial Package and disbursed by lenders for financing the Total Project Cost. Provided that if all or any part of the Debt Due is convertible into Equity at the option of Senior Lenders and/or the Concessionaire, it shall for the purposes of this Agreement be deemed not to be Debt Due even if no such conversion has taken place and the principal thereof shall be dealt with as if such conversion had been undertaken.

	Provided further that the Debt Due, on or after COD, shall in no case exceed 80% (eighty percent) of the Total Project Cost.
"Delivery Point"	"Delivery Point" shall mean a single point or multiple points at the voltage level of 220 kV or above of the CTU Sub-station(s) including the dedicated transmission lines connecting the Project/ individual component with the substation system as specified in the RfS document. Interconnection at 132kV will be allowed exclusively in case the project is granted connectivity at an available bay of an existing ISTS substation, if any. Metering shall be done at this interconnection point where the power is injected into. For interconnection with grid and metering, the HPD shall abide by the relevant and applicable regulations, Grid Code notified by the CERC or and Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006 as amended and revised from time to time, or orders passed thereunder by the appropriate commission or CEA. Pursuant to Article 4.2.6, all charges and losses related to Transmission of power from project up to Delivery Point (including but not limited to open access, transmission, wheeling, Unscheduled Interchange, Scheduling, Reactive power, RLDC/SLDC charges etc.) as notified by the competent authority / regulator shall be borne by the HPD and beyond the Delivery Point all charges and losses as notified by the competent authority / regulator from time to time shall be borne by the Buying Utilities. In case it is paid by SECI on behalf of Buying Utilities / HPD, the same shall be recovered from the Buying Utilities / HPD (as applicable);
"Discoms"	shall mean the Buying Entity or the distribution utilities who have signed/will sign the PSA (s) with SECI for purchase of Power;
"Dispute"	shall mean any dispute or difference of any kind between SECI and the HPD, in connection with or arising out of this Agreement including but not limited to any issue on the interpretation and scope of the terms of this Agreement as provided in Article 16 of this Agreement;
"Due Date"	Due Date shall mean the forty-fifth (45th) day after a Monthly Bill (including all the relevant documents) or a Supplementary Bill is received in hard copy and duly acknowledged by the SECI or, if such day is not a Business Day, the immediately succeeding Business Day, by which date such Monthly Bill or a Supplementary Bill is payable by the SECI.
"Effective Date"	shall have the meaning ascribed thereto in Article 2.1 of this Agreement;
"Electricity Laws"	shall mean the Electricity Act, 2003 and the rules and regulations made there under from time to time along with amendments thereto and replacements thereof and any other Law pertaining to electricity including regulations framed by the Appropriate Commission;

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"Energy Accounts"	shall mean the regional energy accounts/state energy accounts as specified in the Grid Code issued by the appropriate agency for each Month (as per their prescribed methodology), including the revisions and amendments thereof or where such regional energy accounts/ state energy accounts are not issued, Joint Meter Reading (JMR) will be considered; SECI reserves the right to choose from any of the above, i.e. JMR/SEA/REA, based on the acceptance of the same by the Buying Utility;
"Event of Default"	shall mean the events as defined in Article 13 of this Agreement;
"Expiry Date"	Shall mean the date occurring twenty five (25) years from the Scheduled Commissioning Date subject to that the supply of power shall be limited for a period of 25 years from the Scheduled Commissioning Date unless extended by the Parties as per this Agreement;
"Financial Closure"	shall mean compliance with the requirements under Article 3.1 of this Agreement;
"Financing Agreements"	shall mean the agreements pursuant to which the HPD has sought financing for the Power Project including the loan agreements, security documents, notes, indentures, security agreements, letters of credit and other documents, as may be amended, modified, or replaced from time to time, but without in anyway increasing the liabilities of SECI;
"Force Majeure" or "Force Majeure Event"	shall have the meaning ascribed thereto in Article 11 of this Agreement;
"Guidelines: or "Scheme"	shall mean the "Guidelines for Tariff Based Competitive Bidding Process for procurement of power from Grid Connected Wind Solar Hybrid Projects" issued by the Ministry of New and Renewable Energy vide F.No. 238/78/2017-Wind dated 14.10.2020, including subsequent amendments and clarifications, if any
"Grid Code" / "IEGC" or "State Grid Code"	shall mean the Grid Code specified by the CERC under Clause (h) of Sub-section (1) of Section 79 of the Electricity Act, as amended from time to time, and/or the State Grid Code as specified by the concerned State Commission, referred under Clause (h) of Sub- section (1) of Section 86 of the Electricity Act 2003, as applicable;
"Indian Governmental Instrumentality"	shall mean the Government of India, Governments of state(s) Rajasthan and New Delhi and any ministry, department, board, authority, agency, corporation, commission under the direct or indirect control of Government of India or the above state Government(s) or both, any political sub-division of any of them; including any court or Appropriate Commission(s) or tribunal or judicial or quasi-judicial body in India;
"Insurances"	shall mean the insurance cover to be obtained and maintained by the HPD in accordance with Article 8 of this Agreement;

"Interconnection Facilities"	shall mean the facilities on HPD's side of the Delivery Point for scheduling, transmitting and metering the electrical output in accordance with this Agreement and which shall include, without limitation, all other transmission lines and associated equipment, transformers, relay and switching equipment and protective devices, safety equipment and RTU, Data Transfer and Acquisition facilities for transmitting data subject to Article 7, the Metering System required for supply of power as per the terms of this Agreement;
Intermediary agency or Intermediary nodal agency or Intermediary Procurer"	shall mean Solar Energy Corporation of India Limited;
"Invoice" or "Bill"	shall mean either a Monthly Bill / Supplementary Bill or a Monthly Invoice/ Supplementary Invoice raised by any of the Parties;
"Joint Control"	shall mean a situation where none of the promoter shareholders has at least 51 % shareholding in the paid up share capital and voting rights in the HPD, and the control is exercised jointly;
"Late Payment Surcharge"	shall have the meaning ascribed thereto in Article 10.3.3 of this Agreement;
"Law"	shall mean in relation to this Agreement, all laws including Electricity Laws in force in India and any statute, ordinance, regulation, notification or code, rule, or any interpretation of any of them by an Indian Governmental Instrumentality and having force of law and shall further include without limitation all applicable rules, regulations, orders, notifications by an Indian Governmental Instrumentality pursuant to or under any of them and shall include without limitation all rules, regulations, decisions and orders of the Appropriate Commissions;
"Letter of Credit" or "L/C"	shall have the meaning ascribed thereto in Article 10.4 of this Agreement;
"MNRE"	shall mean the Ministry of New and Renewable Energy, Government of India;
"Month"	shall mean a period of thirty (30) days from (and excluding) the date of the event, where applicable, else a calendar month;
"Party" and "Parties"	shall have the meaning ascribed thereto in the recital to this Agreement;
"Payment Security Mechanism"	shall have the meaning ascribed thereto in Article 10.4 of this Agreement;
"Payment on Order Instrument"	shall mean the irrevocable unconditional letter of undertaking issued by either of the three institutions, viz., (i) Indian Renewable Development agency Limited (IREDA) or (ii) Power Finance Corporation Limited or (iii) REC Limited., as an alternative to submission of Performance Bank Guarantee by the HPD, issued in the form attached hereto as Schedule 3;

"Performance Bank Guarantee"	shall mean the irrevocable unconditional bank guarantee, submitted by the HPD to SECI in the form attached hereto as Schedule 1;
"Pooling Substation/ Pooling Point"	means a point where more than one project may connect to a common transmission system. Multiple projects can be connected to a pooling substation from where common transmission system shall be constructed and maintained by the HPD(s) to get connected to the ISTS substation. The voltage level for such common line shall be 220 kV and above. Further, the metering of the pooled power shall be done at the injection point, i.e. the ISTS substation. However, the voltage level of transmission system of individual projects up to the pooling substation may be at 33 kV and above. Sub-meters shall be installed at the pooling substation for metering and forecasting and scheduling of individual projects. The losses in the common transmission system up to the injection point shall be apportioned to the individual Projects for the purpose of billing. In such case, it shall be responsibility of the HPD to obtain and furnish the meter reading jointly by the HPD and any competent authority (State Government or Central Government) (if applicable).
"Power Project" or "Project"	shall mean the Wind-Solar hybrid power generation facility of Contracted Capacity of 130 MW, located at Village-Neemba, Tehsil-Fatehgarh, District- Jaisalmer, State- Rajasthan having a separate control system, metering and a single point or separate points of injection into the grid at Delivery/Interconnection/Metering point(s) at ISTS substation or in case of sharing of transmission lines, by separate injection at pooling point. The rated capacities of the various components are as follows: Solar PV component: 112.5 MW Wind Power component: 44.1 MW This includes all units and auxiliaries such as water supply, treatment or storage facilities; bay/s for transmission system in the switchyard, dedicated transmission line up to the Delivery Point and all the other assets, buildings/structures, equipment, plant and machinery, facilities and related assets required for the efficient and economic operation of the power generation facility; whether completed or at any stage of development and construction or intended to be developed and constructed for the purpose of supply of power as per this Agreement;
"Power Sale Agreement" or "PSA"	shall mean the power sale agreement entered between the Buying Entity and SECI (Buyer- Buying Entity(ies) PSA) for selling the power as per the provisions of Guidelines;
"Preliminary Default Notice"	shall have the meaning ascribed thereto in Article 13 of this Agreement;
"Project Capacity"	shall mean the maximum AC capacity of the Project at the point of injection on which the Power Purchase Agreement has been signed.

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"Prudent Utility Practices"	shall mean the practices, methods and standards that are generally accepted internationally from time to time by electric utilities for the purpose of ensuring the safe, efficient and economic design, construction, commissioning, operation and maintenance of power generation equipment and which practices, methods and standards shall be adjusted as necessary, to take account of: a) operation and maintenance guidelines recommended by the manufacturers of the plant and equipment to be incorporated in the Power Project; b) the requirements of Indian Law; and the physical conditions at the site of the Power Project
"RBI"	shall mean the Reserve Bank of India;
"Rebate"	shall have the same meaning as ascribed thereto in Article 10.3.4 of this Agreement;
"RLDC"	shall mean the relevant Regional Load Dispatch Centre established under Sub-section (1) of Section 27 of the Electricity Act, 2003;
"RPC"	shall mean the relevant Regional Power Committee established by the Government of India for a specific region in accordance with the Electricity Act, 2003 for facilitating integrated operation of the power system in that region;
"Rupees", "Rs.", "₹"	shall mean Indian rupees, the lawful currency of India;
"Scheduled Commissioning Date" or "SCD" of the Project	shall mean 19-01-2023
"SERC"	shall mean the Electricity Regulatory Commission of any State in India constituted under Section-82 of the Electricity Act, 2003 or its successors, and includes a Joint Commission constituted under Subsection (1) of Section 83 of the Electricity Act 2003;
"SLDC"	shall mean the centre established under Sub-section (1) of Section 31 of the Electricity Act 2003, relevant for the State(s) where the Delivery Point is located;
"SLDC Charges"	shall mean the charges levied by the SLDC of the state wherein the Hybrid Power Project is located;
"Solar Photovoltaic Project" or "Solar PV Project"	shall mean the solar photovoltaic power project that uses sunlight for conversion into electricity and that is being set up by the HPD to provide Solar Power to SECI as per the terms and conditions of this Agreement;
"Solar Power"	shall mean power generated from the Solar Photovoltaic Power Project;
"SECI"	shall mean Solar Energy Corporation of India Limited;

"State Transmission Utility" or "STU"	shall mean the Board or the Government company notified by the respective State Government under Sub-section (1) of Section 39 of the Act;
"Sub-pooling Substation"	shall mean the intermediate pooling point where power from the Solar and Wind Project components of the Hybrid Power Project is injected into and from where the hybrid power is evacuated through a single transmission line and injected into Delivery Point;
"Tariff"	Shall have the same meaning as provided for in Article 9 of this Agreement;
"Tariff Payment"	shall mean the payments to be made under Monthly Bills as referred to in Article 10 and the relevant Supplementary Bills;
"Termination Notice"	shall mean the notice given by either Parties for termination of this Agreement in accordance with Article 13 of this Agreement;
"Term of Agreement"	shall have the meaning ascribed thereto in Article 2 of this Agreement;
"Unit/ Part Commissioning"	Subject to the compliance of conditions / procedure as detailed under Schedule-2 of this Agreement, Unit / Part Commissioning shall mean the Hybrid Power Capacity (AC MW) to be commissioned as per provisions of this Agreement and RfS document. The minimum capacity for acceptance of first part commissioning at one project site shall be at least 50 MW, without prejudice to the imposition of penalty, in terms of this PPA on the part which is not commissioned. The projects can further be commissioned in parts of at least 25 MW batch size, with last part could be the balance capacity;
"Unit Commercial Operation Date (UCOD)"	shall mean the date of issuance of commissioning certificate for the respective part(s) of the Power Project subsequent to the demonstration of the compliance of commissioning as per this Agreement and witnessed by the Committee duly constituted and also start of injection and scheduling power from the Power Project to the Delivery Point and availability / installation of all necessary arrangements / equipment including RTU for scheduling of power generated from the Project and transmission of data to the concerned authority as per applicable regulation;
"Week"	shall mean a calendar week commencing from 00:00 hours of Monday, and ending at 24:00 hours of the following Sunday;
"Wind Power"	Shall mean power generated from the Wind Power Projects;
"Wind Power Project"	shall mean the project that uses wind for conversion into electricity and that is being set up by the HPD to provide Wind Power to Buyer as per the terms and conditions of this Agreement;
"Wind Solar Hybrid Power Project"	means the wind-solar hybrid power project where the rated power capacity of one resource is atleast 33% of the Contracted Capacity.

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1.2 Interpretation

Save where the contrary is indicated, any reference in this Agreement to:

1.2.1 "Agreement" shall be construed as including a reference to its Schedules and/or Appendices and/or Annexures;

1.2.2 An "Article", a "Recital", a "Schedule" and a "paragraph / clause" shall be construed as a reference to an Article, a Recital, a Schedule and a paragraph/clause respectively of this Agreement;

1.2.3 A "crore" means a reference to ten million (10,000,000) and a "lakh" means a reference to one tenth of a million (1,00,000);

1.2.4 An "encumbrance" shall be construed as a reference to a mortgage, charge, pledge, lien or other encumbrance securing any obligation of any person or any other type of preferential arrangement (including, without limitation, title transfer and retention arrangements) having a similar effect;

1.2.5 "Indebtedness" shall be construed so as to include any obligation (whether incurred as principal or surety) for the payment or repayment of money, whether present or future, actual or contingent;

1.2.6 A "person" shall be construed as a reference to any person, firm, company, corporation, society, trust, government, state or agency of a state or any association or partnership (whether or not having separate legal personality) of two or more of the above and a person shall be construed as including a reference to its successors, permitted transferees and permitted assigns in accordance with their respective interests;

1.2.7 "Rupee", "Rupees", "Rs" or new rupee symbol "₹ " shall denote Indian Rupees, the lawful currency of India;

1.2.8 The "Winding-up", "dissolution", "insolvency", or "reorganization" of a company or corporation shall be construed so as to include any equivalent or analogous proceedings under the Law of the jurisdiction in which such company or corporation is incorporated or any jurisdiction in which such company or corporation carries on business including the seeking of liquidation, Winding-up, reorganization, dissolution, arrangement, protection or relief of debtors;

1.2.9 Words importing the singular shall include the plural and vice versa;

1.2.10 This Agreement itself or any other agreement or document shall be construed as a reference to this or to such other agreement or document as it may have been, or may from time to time be, amended, varied, novated, replaced or supplemented;

1.2.11 A Law shall be construed as a reference to such Law including its amendments or re- enactments from time to time;

1.2.12 A time of day shall, save as otherwise provided in any agreement or document be construed as a reference to Indian Standard Time;

1.2.13 Different parts of this Agreement are to be taken as mutually explanatory and supplementary to each other and if there is any inconsistency between or among the parts of this Agreement, they shall be interpreted in a harmonious manner so as to give effect to each part;

1.2.14 The tables of contents and any headings or sub-headings in this Agreement have been inserted for ease of reference only and shall not affect the interpretation of this Agreement;

1.2.15 All interest, if applicable and payable under this Agreement, shall accrue from day to day and be calculated on the basis of a year of three hundred and sixty five (365) days;

1.2.16 The words "hereof" or "herein", if and when used in this Agreement shall mean a reference to this Agreement;

1.2.17 The terms "including" or "including without limitation" shall mean that any list of examples following such term shall in no way restrict or limit the generality of the word or provision in respect of which such examples are provided;

1.28 This Agreement and other documents such as Request for Selection Documents, Guidelines including subsequent clarifications, amendments and further clarifications in regard to the tender shall be read in conjunction with each other and interpreted in harmonious manner. However, in case of any mismatch/contradiction between provisions of different documents, following shall be the order of precedence:

1. Power Purchase Agreement
2. RfS Documents

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ARTICLE 2: TERM OF AGREEMENT

2.1 ***Effective Date***

2.1.1 This Agreement shall come into effect from 19.07.2021 and such date shall be referred to as the Effective Date.

2.1.2 The Parties agree that decisions pertaining to adoption of the Tariff and approval of the same, for procurement of contracted capacity, shall be binding on all Parties concerned, as contained in the Electricity Act, 2003 and any amendments thereof.

2.1.3 Notwithstanding the Effective Date, the condition precedent for the enforcement of the obligations of either party against the other under this Agreement shall be that, within 120 days after the Effective Date of this Agreement, SECI and/or the Buying Entity (ies) shall obtain adoption of tariff from its State Electricity Regulatory Commission and/ or CERC (as applicable), on the terms and conditions contained in this Agreement read with the terms and conditions contained in the Power Sale Agreement entered into between SECI and the Buying Entity(ies). The Parties agree that in the event, the order of adoption of tariff as mentioned above is not issued by the SERC and/ or CERC (as applicable) within the time specified above, the provisions of Article 2.1.4 shall apply.

2.1.4 Pursuant to Article 4.2.6, if parties have mutually extended the time period as stipulated under Article 2.1.1 and the order from the SERC and/ or CERC (as applicable) is issued within the timeline as per Article 2.1.3, no extension for Financial Closure or Scheduled Commissioning Date shall be given. However, if the requisite SERC and/ or CERC (as applicable) order is issued after the timeline as per Article 2.1.3, this shall entail a corresponding extension in Scheduled Financial Closure and the Scheduled Commissioning Date for equal number of days for which the SERC and / or CERC order has been delayed beyond such period as specified in Article 2.1.3.

2.2 ***Term of Agreement***

2.2.1 Subject to Article 2.3 and 2.4 of this Agreement, this Agreement shall be valid for a term from the Effective Date until the Expiry Date. This Agreement may be extended for a further period at least one hundred eighty (180) days prior to the Expiry Date, on mutually agreed terms and conditions.

2.2.2 The HPD is free to operate their plants beyond the Expiry Date if other conditions like land lease / Right to Use of Land (as applicable), permits, approvals and

clearances etc. allow. In such case unless otherwise agreed by the SECI, SECI shall not be obligated to procure power beyond the Expiry Date.

2.3 ***Early Termination***

2.3.1 This Agreement shall terminate before the Expiry Date if either SECI or HPD terminates the Agreement, pursuant to Article 13 of this Agreement.

2.4 ***Survival***

2.4.1 The expiry or termination of this Agreement shall not affect any accrued rights, obligations and liabilities of the Parties under this Agreement, including the right to receive penalty as per the terms of this Agreement, nor shall it affect the survival of any continuing obligations for which this Agreement provides, either expressly or by necessary implication, which are to survive after the Expiry Date or termination including those under Article 11 (Force Majeure), Article 13 (Events of Default and Termination), Article 14 (Liability and Indemnification), Article 16 (Governing Law and Dispute Resolution), Article 17 (Miscellaneous Provisions), and other Articles and Schedules of this Agreement which expressly or by their nature survive the Term or termination of this Agreement shall continue and survive any expiry or termination of this Agreement.

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ARTICLE 3: CONDITIONS SUBSEQUENT

3.1 Satisfaction of conditions subsequent by the HPD

The HPD agrees and undertakes to duly perform and complete all of the following activities including Financial Closure at the HPD's own cost and risk within 12 Months from the Effective Date, unless such completion is affected by any Force Majeure event, or for the activities specifically waived in writing by SECI:

a) The HPD shall make Project financing arrangements its Projects(s) and shall provide necessary certificates to SECI in this regard;

The HPD shall submit to SECI the relevant documents as stated above, complying with the Conditions Subsequent, within twelve (12) months from the Effective Date i.e 19.07.2022.

3.2 Consequences of non-fulfilment of conditions subsequent and financial closure

3.2.1 In case of a failure to submit the documents as above, SECI shall encash the Performance Bank Guarantee/ POI submitted by the HPD, terminate this Agreement and remove the Project from the list of the selected Projects by giving a notice to the HPD in writing of at least seven (7) days, unless the delay (subject to the conditions that HPD has made / is making all possible efforts) is on account of delay in allotment of Land by the Government not owing to any action or inaction on the part of the HPD or caused due to a Force Majeure. Unless extended as per provisions of Article 3.2.1 (i) of this Agreement in writing, the termination of the Agreement shall take effect upon the expiry of the 7th day of the above notice.

3.2.1 (i) An extension, without any impact on the Scheduled Commissioning Date, can however be considered, on the sole request of HPD, on payment of Rs. 1000/- per day per MW to SECI. Such extension charges are required to be paid to SECI in advance, for the period of extension required. In case of any delay in depositing this extension charge, HPD shall pay an interest on this extension charge for the days lapsed beyond due date of Financial Closure @ SBI-MCLR (1Year). In case such delay in making payment of the extension charges to SECI is more than 7 days, the termination of the Agreement shall take effect upon the expiry of such 7th day. This amount will go into the Payment Security Mechanism. In case of the HPD meeting the requirements of conditions subsequent and financial closure before the last date of such proposed delay period, the remaining amount deposited by the HPD shall be returned by SECI without interest. This extension will not have any impact on the

Scheduled Commissioning Date. Any extension charges paid so by the HPD, shall be returned to the HPD without any interest on achievement of successful commissioning within the Scheduled Commissioning Date, on pro-rata basis, based on the project capacity commissioned as on Scheduled Commissioned Date. However, in case the HPD fails to commission the Contract Capacity by Scheduled Commissioning Date, the extension charges deposited by the HPD shall not be refunded by SECI.

3.2.2 For the avoidance of doubt, it is clarified that this Article shall survive the termination of this Agreement.

3.2.4 In case of inability of the HPD to fulfil the conditions specified in Article 3.1 due to any Force Majeure event, the time period for fulfilment of the Conditions Subsequent and Financial Closure as mentioned in Article 3.1, shall be extended for the period of such Force Majeure event.

Further, any delay in adoption of tariff by the Appropriate Commission, beyond 120 (one hundred twenty days) days after the Effective Date of this Agreement, shall entail a corresponding extension in the deadline as stipulated in Article 3.1.

3.2.5 Provided that due to the provisions of this Article 3.2.4, any increase in the time period for completion of conditions subsequent and financial closure mentioned under Article 3.1, shall also lead to an equal extension in the Scheduled Commissioning Date.

3.3 Performance Bank Guarantee/ Payment on Order Instrument (POI)

3.3.1 The Performance Bank Guarantee (PBG)/ Payment on Order Instrument having validity from the date of submission of PBG/POI until thirty (30) months from the Effective Date and of Rs. 10 Lakh/MW has been furnished under this Agreement shall be for guaranteeing the commencement of the supply of power up to the Contracted Capacity within the time specified in this Agreement as per format provided in Schedule 1/Schedule 3.

3.3.2 The failure on the part of the HPD to furnish and maintain the Performance Bank Guarantee/POI shall be a material breach of the term of this Agreement on the part of the HPD.

3.3.3 If the HPD fails to commence supply of power from the Scheduled Commissioning Date specified in this Agreement or any further extension thereof granted by SECI, subject to conditions mentioned in Article 4.5, SECI shall encash the Performance

Bank Guarantee/POI equivalent to the amount calculated as per liquidated damages applicable under Article 4.6 as on the date of encashment without prejudice to the other rights of SECI under this Agreement. It is to be noted that the damages/dues recovered by SECI by encashing the PBG/POI, upon the default of the HPD under the PPA, shall be credited to the payment security fund maintained by SECI under the PPA.

3.4 Return of Performance Bank Guarantee/ Payment on Order Instrument

3.4.1 Subject to Article 3.3, SECI shall return / release the Performance Bank Guarantee/ POI immediately after the successful Commissioning of the Project after taking into account any liquidated damages / penalties due to delays in commissioning as per provisions stipulated in this Agreement.

3.4.2 The return / release of the Performance Bank Guarantee/ POI shall be without prejudice to other rights of SECI under this Agreement.

ARTICLE 4: CONSTRUCTION & DEVELOPMENT OF THE PROJECT

4.1 *HPD's Obligations*

4.1.1 The HPD undertakes to be responsible, at HPD's own cost and risk, for:

a) The HPD shall be solely responsible and make arrangements for Land & associated infrastructure for development of the Project and for Connectivity with the CTU System for confirming the evacuation of power by the Scheduled Commissioning date and all clearances related thereto;

On or before Scheduled Commissioning Date, the HPD shall demonstrate possession of 100% (Hundred Percent) of the land identified for the Project in its name for a period not less than the complete Term of this Agreement. In this regard, the HPD shall submit documents/ Lease Agreement to establish possession/ right to use 100% of the required land in the same of the HPD or its Affiliate. In case the land is in the name of the Affiliate, the land should be transferred in the name of the HPD prior to the SCD. Wherever leasing of private land is involved, the lease should allow transfer of land to the lenders or SECI, in case of default of the HPD. The HPD shall submit a sworn affidavit from the authorized signatory of the HPD listing the details of the land and certifying that total land required for the Project is under clear possession of the HPD;

b) Obtaining all Consents, Clearances and Permits as required and maintaining all Consents, Clearances and Permits in full force and effect during the Term of this Agreement. SECI shall have no obligation to recommend to any department/agency or the Govt. for the grant/permission for the Hybrid Power project. The Hybrid Power Developer shall, on his own, obtain permissions/ sanctions from Government authorities, if any required for establishing the project. Any steps that may be taken by SECI in regard to grant of such consents and permits or any other approval to be taken by the HPD shall only be a voluntary endeavour with no intention of being bound by any legal or binding obligation.

c) designing, constructing, erecting, commissioning, completing and testing the Power Project in accordance with the applicable Law, the Grid Code, the terms and conditions of this Agreement and Prudent Utility Practices;

d) the commencement of supply of power up to the Contracted Capacity to SECI no later than the Scheduled Commissioning Date and continuance of the supply of power throughout the term of the Agreement;

e) connecting the Power Project switchyard with the Interconnection Facilities at the Delivery Point; The HPD shall make adequate arrangements to connect the Power Project switchyard with the Interconnection Facilities at Interconnection / Metering / Delivery Point.

f) owning the Power Project throughout the Term of Agreement free and clear of encumbrances, except those expressly permitted under Article 15;

g) maintaining its controlling shareholding (controlling shareholding shall mean more than 50% of the voting rights and paid-up share capital) prevalent at the time of signing of PPA up to a period of one (1) year after Commercial Operation Date of the Project in line with Clause 3.20 of the RfS; However transfer of controlling shareholding within the same Group Companies will be allowed with the permission of SECI after COD subject to the condition that the management control remains within the same Group Companies; and

f) fulfilling all obligations undertaken by the HPD under this Agreement.

g) Obtaining Long Term Access (LTA) and executing transmission service agreement with CTU/STU as the case may be, for evacuation of the Contracted Capacity and maintaining it throughout the term of the Agreement.

h) The HPD shall be responsible to for directly coordinating and dealing with the corresponding Buying Utility(ies), Load Dispatch Centres, Regional Power Committees, and other authorities in all respects in regard to declaration of availability, scheduling and dispatch of hybrid Power and due compliance with deviation and settlement mechanism and the applicable Grid code/State/Central Regulations, acknowledging that the HPD and the corresponding Buying Utility(ies) are the Grid connected entities and SECI as an Intermediary Procurer/ trading licensee is not a Grid connected entity in respect of the Hybrid Power contracted under this Agreement.

i) The HPD shall fulfil the technical requirements according to criteria mentioned under Annexure II–Technical requirement for Grid Connected Solar PV Power Stations under Guidelines for Tariff Based Competitive Bidding Process for Procurement of Power from Grid Connected Solar Power Projects, issued by Ministry of Power, vide resolution no.23/27/2017-R&R dated 03.08.2017 including subsequent amendments and clarifications. Further, the type-certified

wind turbine models listed in Revised List of Models and Manufacturers (RLMM) issued by MNRE as updated as on the date of commissioning of the Projects will be allowed for deployment under this Agreement. The wind power projects will be developed as per Guidelines issued by MNRE on Development of Onshore Wind Power Projects

j) Further, the Project being implemented under this Agreement shall fulfil the criteria as per Central Electricity Authority (Technical Standards for Connectivity to the Grid) Regulations, 2007, and subsequent amendments and clarifications thereof,

k) As part of scheduling of power from the Project, the HPD will be required to punch-in their respective schedules and subsequent revisions, by themselves, at the interfaces of all the RLDCs concerned for the corridor of power flow, including the RLDC of the Buying Entity/Discom, as per the Regulations in force, under intimation to SECI. SECI may facilitate in identification of any discrepancy and assist the HPD for its early rectification without any liability on SECI. The HPD shall be solely responsible for discrepancy identification and its rectification to avoid any rejection/less payment of invoices.

l) making a payment security deposit of 6,50,00,000 (Indian Rupees Six Crores and Fifty Lakhs only) to the designated account as intimated by the SECI towards Payment Security Fund as per clause 3.12 of Section 3 of RfS.

4.2 ***Information regarding Interconnection Facilities***

4.2.1 The HPD shall be required to obtain all information from the STU/CTU/concerned authority with regard to the Interconnection Facilities as is reasonably necessary to enable it to design, install and operate all interconnection plant and apparatus on the HPD's side of the Delivery Point to enable delivery of electricity at the Delivery Point. The transmission of power up to the point of interconnection where the metering is done for energy accounting shall be the responsibility of the HPD at his own cost.

4.2.2 Penalties, fines and charges imposed by the CTU/ STU under any statute or regulation in relation to delay in commissioning of Project shall be payable by the HPD to the extent the delay is attributable to the HPD.

4.2.3 The responsibility of getting connectivity with the transmission system up to the Interconnection Point, will lie with the HPD. The transmission of power up to the point of interconnection where the metering is done for energy accounting shall be the responsibility of the HPD at his own cost. The maintenance of Transmission

system up to the designated point as per the applicable terms and conditions shall be the responsibility of the HPD. All costs and charges including but not limited to the wheeling charges and losses up to and including at the Interconnection Point associated with this arrangement will also be borne by the HPD.

4.2.4 In case of Pooling substation, losses in the transmission line shall be apportioned among the HPDs who share such a Pooling arrangement and duly signed by all HPDs, based on their monthly generation.

4.2.5 The arrangement of connectivity shall be made by the HPD through a dedicated transmission line. The entire cost of transmission including cost of construction of line, any other charges, losses etc. from the Project up to the Interconnection Point will be borne by the HPD. In case of non-availability of Grid and Transmission System during Term of this Agreement, for reasons not attributable to the HPD, provisions of Article 4.10 shall be applicable.

4.2.6 Government of India from time to time issues order for waiver of inter-state transmission system (ISTS) charges and losses on transmission of wind/solar power till a certain date. In case the commissioning of the Project gets delayed beyond the applicable date of ISTS waiver, arising out of any reasons whatsoever, SECI shall bear no liability with respect to transmission charges and losses levied, if any. Further, in case SCD of the Project is prior to the above deadline of waiver of ISTS charges and losses, and commissioning of the Project is delayed beyond the above date for the reasons attributable to the HPD, the applicable transmission charges and losses shall be borne by the HPD.

4.3 Purchase and sale of Contracted Capacity

4.3.1 Subject to the terms and conditions of this Agreement, the HPD undertakes to sell to SECI and SECI undertakes to pay Tariff for all the energy supplied at the Delivery Point corresponding to the Contracted Capacity.

4.3.2 Energy procured from the Project under this Agreement shall be allocated on a pro-rata basis, to all the Buying Entities which have signed their respective Power Sale Agreements with SECI under the referred RfS.

4.4 *Right to Contracted Capacity & Energy*

4.4.1 The HPD will declare the CUF of the Project and will be allowed to revise the same once within three years after COD of the full project capacity. Subsequent to commissioning/part-commissioning of the Project, SECI, in any Contract Year

except for the first year of operation, shall not be obliged to purchase any additional energy from the HPD beyond **581.1858** Million kWh (MU) .

If for any Contract Year except for first year of operation, it is found that the HPD has not been able to generate minimum energy of **435.8894** .Million kWh (MU) of the energy generated from the Project on account of reasons solely attributable to the HPD, the non-compliance by HPD shall make the HPD liable to pay the compensation provided in the respective PSA as payable to Buying Entity(ies) by Buyer to enable Buyer to remit the amount to Buying Entity(ies). In case of full commissioning of the Project, energy supplied between COD and the commencement of first financial year after COD will not be taken into consideration for the purpose of calculation of CUF. In case of part commissioning of the Project, the above limits shall be considered on pro-rata basis till the commissioning of full Contracted Capacity of the Project.

The lower limit will, however be relaxable by Buyer to the extent of grid non-availability for evacuation which is beyond the control of the HPD (as certified by the SLDC/RLDC). This compensation shall be applied to the amount of shortfall in generation during the Contract Year. The amount of such compensation shall be will be calculated @ 50% (fifty percent) of the PPA tariff for the shortfall in energy terms, in accordance with the terms of the PPA. This compensation shall not be applicable in events of Force Majeure identified under PPA with SECI affecting supply of power by HPD.

4.4.2 Any excess generation over and above as per Article 4.4.1, may be purchased by SECI at the tariff in term of as per Article 9, provided the Buying Entity consents to purchase such power. While the HPD would be free to install the DC solar field as per its design of required output, including its requirement of auxiliary consumption and to repower the Project from time to time during the term of the PPA in line with applicable MNRE guidelines, it will not be allowed to sell any excess power to any other entity other than SECI (unless refused by SECI). Further, any addition to the installed capacity (including but not limited to solar panels and/or wind turbines) subsequent to commissioning of the full capacity/part capacity of the Project (as applicable), shall not be eligible for any future claims made by the HPD, seeking compensation on account of any changes in the applicable provisions covered under Change in Law as defined in this Agreement.

The HPD will be free to re-power their plants during the PPA duration. However, after repowering, the minimum ratio of both the resources shall be maintained.

The HPD shall be required to intimate SECI about the proposed excess quantum of energy likely to be generated from the Project within any Contract Year, at least 60 days prior to the proposed date of commencement of excess generation. SECI shall be required to intimate its approval/refusal to the HPD, for buying such excess generation not later than 30 days of receiving the above offer from the HPD. In the event the offer of the HPD is not accepted by SECI within the said period of 30 days, such right shall cease to exist and the HPD shall, at its sole discretion, may sell such excess power to any third party.

However, in case at any point of time, the peak of capacity reached is higher than the contracted capacity and causes disturbance in the system at the point where power is injected, the HPD will have to forego the excess generation and reduce the output to the rated capacity and shall also have to pay the penalty/charges (if applicable) as per applicable regulations / requirements / guidelines of CERC / SERC /SLDC or any other competent agency.

Any energy produced and flowing into the grid before Scheduled Commissioning Date shall not be at the cost of SECI. SECI may agree to buy such power at a tariff as agreed to between SECI and the Buying Entity (including SECI's trading margin), provided the Buying Utility consents for purchase of such power.

4.5 ***Extensions of Time***

4.5.1 In the event that the HPD is prevented from performing its obligations under Article 4.1 by the Scheduled Commissioning Date due to:

a) any SECI Event of Default; or

b) Force Majeure Events affecting SECI/ Buying Entity(ies) , or

c) Force Majeure Events affecting the HPD,

the Scheduled Commissioning Date and the Expiry Date shall be deferred, subject to Article 4.5.6, for a reasonable period but not less than 'day for day' basis, to permit the HPD or SECI/ Buying Entity(ies) through the use of due diligence, to overcome the effects of the Force Majeure Events affecting the HPD or SECI/Buying Entity(ies), or till such time such Event of Default is rectified by SECI.

4.5.2 Subsequent to grant of connectivity, in case there is a delay in grant/operationalization of LTA by the CTU and/or there is a delay in readiness

of the ISTS substation at the Delivery Point, including readiness of the power evacuation and transmission infrastructure of the ISTS network until SCD of the Project, and it is established that:

(i) The HPD has complied with the complete application formalities as per RfS,

(ii) The HPD has adhered to the applicable Procedure in this regard as notified by the CERC/CTU, and

(iii) The delay in grant of connectivity/LTA by the CTU and/or delay in readiness of the ISTS substation at the Delivery Point, including readiness of the power evacuation and transmission infrastructure of the ISTS network, is a factor attributable to the CTU/transmission licensee and is beyond the control of the HPD;

The above shall be treated as delays beyond the control of the HPD and SCD for such Projects shall be revised as the date as on 60 days subsequent to the readiness of the Delivery Point and power evacuation infrastructure and/or operationalization of LTA. Decision on requisite extension on account of the above factor shall be taken by SECI.

Further, any delay in adoption of tariff by the Appropriate Commission, beyond 120 days after Effective Date of this Agreement, shall entail a corresponding extension in Scheduled Commissioning Date.

4.5.3 In case of extension due to reasons specified in Article 4.5.1(b) and (c), and if such Force Majeure Event continues even after a maximum period of 180 days from the date of the Force Majeure Notice, any of the Parties may choose to terminate the Agreement as per the provisions of Article 11.10. In case neither party terminates the Agreement under this clause, the Agreement shall stand terminated on the expiry of twelve (12) months of the continuation of the Force Majeure event unless the parties mutually agree to extend the Agreement for the further period.

4.5.4 If the Parties have not agreed, within thirty (30) days after the affected Party's performance has ceased to be affected by the relevant circumstance, on the time period by which the Scheduled Commissioning Date or the Expiry Date should be deferred, any Party may raise the Dispute to be resolved in accordance with Article 16.

4.5.5 As a result of such extension on account of Article 4.5.1 or Article 4.5.2, the newly determined Scheduled Commissioning Date and newly determined Expiry Date

shall be deemed to be the Scheduled Commissioning Date and the Expiry Date for the purposes of this Agreement.

4.5.6 Not Used.

4.5.7 Delay in commissioning of the project beyond the scheduled commissioning date for reasons other than those specified in Article 4.5.1 & Article 4.5.2 shall be an event of default on part of the HPD and shall be subject to the consequences specified in the Article 4.6.

4.6 Liquidated Damages not amounting to penalty for delay in Commissioning

4.6.1 The Project shall be fully commissioned within the Scheduled Commissioning Date as defined in this Agreement. If the HPD is unable to commission the Project by the Scheduled Commissioning Date for the reasons other than those specified in Article 4.5.1 and 4.5.2, the HPD shall pay to SECI, damages for the delay in such commissioning and making the Contracted Capacity available for dispatch by the Scheduled Commissioning Date as per the following:

(a) Delay beyond the Scheduled Commissioning Date upto (& including) the date as on 6 months after the Scheduled Commissioning Date: The total PBG/POI amount shall be encashed on per day basis and proportionate to the balance capacity not commissioned. For example, in case of a Project of 240 MW capacity, if commissioning of 100 MW capacity is delayed by 18 days beyond the SCD, then the liquidated damages shall be: PBG/POI amount X (100/240) X (18/180). For the purpose of calculations of liquidated damages, 'month' shall be considered consisting of 30 days.

4.6.2 The maximum time period allowed for commissioning of the full Project Capacity with encashment of Performance Bank Guarantee/POI shall be limited to the date as on 6 months from the SCD of the Project. In case, the Commissioning of the Project is delayed beyond 6 months from the SCD, it shall be considered as an HPD Event of Default and provisions of Article 13 shall apply and the Contracted Capacity shall stand reduced / amended to the Project Capacity Commissioned within 6 months from the SCD and the PPA for the balance Capacity will stand terminated and shall be reduced from the project capacity.

4.6.3 The HPD further acknowledges that the amount of the liquidated damages fixed is genuine and reasonable pre-estimate of the damages that may be suffered by SECI/ Buying entity(s) as specified under this Agreement or in the PSA.

4.7 Acceptance/Performance Test

4.7.1 Prior to synchronization of the Power Project, the HPD shall be required to get the Project certified for the requisite acceptance/performance test as may be laid down by Central Electricity Authority or an agency identified by the central government to carry out testing and certification for the Hybrid power project.

4.8 Third Party Verification

4.8.1 The HPD shall be further required to provide entry to the site of the Power Project free of all encumbrances at all times during the Term of the Agreement to SECI and a third Party nominated by any Indian Governmental Instrumentality for inspection and verification of the works being carried out by the HPD at the site of the Power Project.

4.8.2 The third party may verify the construction works/operation of the Power Project being carried out by the HPD and if it is found that the construction works/operation of the Power Project is not as per the Prudent Utility Practices, it may seek clarifications from HPD or require the works to be stopped or to comply with the instructions of such third party.

4.9 Breach of Obligations

4.9.1 The Parties herein agree that during the subsistence of this Agreement, subject to SECI being in compliance of its obligations & undertakings under this Agreement, the HPD would have no right to negotiate or enter into any dialogue with any third party for the sale of Contracted Capacity of power which is the subject matter of this Agreement. It is the specific understanding between the Parties that such bar will apply throughout the entire term of this Agreement.

4.10 Generation compensation for Off-take constraints

4.10.1 Not Used.

4.10.2 Offtake constraints due to Backdown: The Hybrid Power Developer and Buying Entity shall follow the forecasting and scheduling process as per the regulations in this regard by the Appropriate Commission. The Government of India, as per Clause 5.2(u) of the Indian Electricity Grid Code (IEGC), encourages a status of "must-run" to wind and solar power projects. Therefore wind solar hybrid power plant, duly commissioned, should never be directed to back down by a Discom/ Load Dispatch Centre (LDC) except grid security or safety of any equipment or personnel where it should be duly recorded, the justification of which can be verified by any third party agency, and be notified in writing. No back-down

curtailment to be ordered without giving formal/ written instruction for the same. The details of back-down / curtailment, including justifications for such curtailment, specifying data to back such curtailment, to be made public by the concerned Load Dispatch Centre. In the event of any backing down, the HPD shall be eligible for a Generation Compensation, in the manner detailed below and there shall be no other claim, directly or indirectly against SECI:

Duration of Backdown	**Provision for Generation Compensation**
Hours of Backdown during a monthly billing cycle.	***Minimum Generation Compensation = 100% of [(Average Generation per hour during the month) (number of backdown hours during the month) X PPA tariff]*** Where, Average Generation per hour during the month (kWh) = Total generation in the month (kWh) ÷ Total hours of generation in the month

The Generation Compensation shall be paid as part of the energy bill for the successive month after receipt of Regional Energy Accounts (REA)/SEA/JMR. No Trading Margin shall be applicable on the Generation Compensation as provided in Article 4.10.2 only.

It is hereby clarified that for the purpose of Article 4.10, "generation" shall mean scheduled energy based on Energy Accounts. Notwithstanding anything mentioned above, the provisions of Article 4.10 shall be applicable subject to the acceptance of the same by the respective Buying Utility.

No compensation shall be payable, however, if the backdown/ curtailment is on account of considerations of grid security/ safety. Such a backdown will be recorded and reported to RLDC/ NLDC. RLDC/ NLDC will examine the issue of grid safety/ security and give a finding that the issue of grid safety existed.

ARTICLE 5: SYNCHRONISATION, COMMISSIONING AND COMMERCIAL OPERATION

5.1 Synchronization, Commissioning and Commercial Operation

5.1.1 The HPD shall give the concerned RLDC/SLDC and SECI and also Buying Entity at least sixty (60) days' advanced preliminary written notice and at least thirty (30) days' advanced final written notice, of the date on which it intends to synchronize the Power Project to the Grid System.

5.1.2 Subject to Article 5.1.1, the Power Project may be synchronized by the HPD to the Grid System when it meets all the connection conditions prescribed in applicable Grid Code then in effect and otherwise meets all other Indian legal requirements for synchronization to the Grid System.

5.1.3 The synchronization equipment and all necessary arrangements / equipment including RTU for scheduling of power generated from the Project and transmission of data to the concerned authority as per applicable regulation shall be installed by the HPD at its generation facility of the Power Project at its own cost. The HPD shall synchronize its system with the Grid System only after the approval of synchronization scheme is granted by the head of the concerned substation/Grid System and checking/verification is made by the concerned authorities of the Grid System.

5.1.4 The HPD shall immediately after each synchronization/tripping of generator, inform the sub-station of the Grid System to which the Power Project is electrically connected in accordance with applicable Grid Code under intimation to SECI. In addition, the HPD will inject in-firm power to grid time to time to carry out operational/ functional test prior to commercial operation. For avoidance of doubt, it is clarified that Synchronization / Connectivity of the Project with the grid shall not to be considered as Commissioning of the Project.

5.1.5 The HPD shall commission the Project as detailed in "Schedule 2: Commissioning Procedure" within the SCD as per this Agreement. Declaration of COD / UCOD shall only be done subject to the demonstration of the compliances as per Schedule-2 and subsequent upon the successful visit by the Commissioning Committee.

5.1.6 There can be part Commissioning of the Project. Part commissioning of the project shall mean that all equipment corresponding to the part capacity have been installed and commissioned and corresponding energy has flown into the grid.

Part commissioning cannot be construed by just installing one source of generation, the HPD shall install both solar and wind capacities in proposed ratio on pro-rata basis.

5.1.7 The Parties agree that for the purpose of commencement of the supply of electricity by HPD to SECI, liquidated damages for delay etc., the Scheduled Commissioning

Date or extended Scheduled Commissioning Date as defined in this Agreement shall be the relevant date.

5.1.8 **Early Commissioning**

The HPD shall be permitted for full commissioning as well as part commissioning of the Project even prior to the Scheduled Commissioning Date, subject to availability of transmission connectivity and Long-Term Access (LTA).

Early commissioning of the Project will be allowed solely at the risk and cost of the HPD, and SECI shall purchase the energy from such early commissioned Project at the PPA tariff, only in the case Discom agrees to purchase power from the Project at an earlier date, and at the PPA tariff plus trading margin. Such intimation for early commissioning shall be provided to SECI at least 60 days prior to the proposed early commissioning date. In case there is no response provided by SECI within 30 days from the receipt of such intimation, such early commissioned capacity shall be deemed to have been refused by SECI.

In case SECI does not agree to purchase such energy, early part/full commissioning of the Project shall still be allowed and the HPD will be free to sell such energy to a third party; subject to operationalization of LTA, until SCD or the date of commencement of procurement of power from the Project as notified by SECI, whichever is earlier. COD of the Project under the PPA will be declared from the date of commencement of procurement of energy from the Project by SECI.

ARTICLE 6: DISPATCH AND SCHEDULING

6.1 *Dispatch and Scheduling*

6.1.1 The HPD shall be required to schedule its power as per the applicable regulations / requirements / guidelines of CERC / SERC /SLDC / RLDC or any other competent agency and same being recognized by the SLDC or any other competent authority / agency as per applicable regulation/ law / direction and maintain compliance to the applicable Codes/ Grid Code requirements and directions, if any, as specified by concerned SLDC/RLDC from time to time. Any deviation from the Schedule will attract the provisions of applicable regulation / guidelines / directions and any financial implication on account of this shall be on the account of the HPD.

6.1.2 The HPD shall be responsible for directly coordinating and dealing with the Buying Entity, State Load Dispatch Centre's, Regional Power Committees, and other authorities in all respects in regard to declaration of availability, scheduling and dispatch of hybrid Power and due compliance with deviation and settlement mechanism and the applicable Grid code Regulations, acknowledging that the HPD and Buying Entity are the Grid connected entities and SECI as an intermediary procurer/ trading licensee is not a Grid connected entity in respect of the power contracted under this Agreement.

6.1.3 The HPD shall be responsible for any deviation from scheduling and for any resultant liabilities on account of charges for deviation as per applicable regulations. UI charges on this account shall be directly paid by the HPD.

6.1.4 Auxiliary power consumption will be treated as per the concerned Central/ State regulations.

6.1.5 Energy procured from the Project under the PPA shall be allocated on a pro-rata basis, to all the Buying Entities which have signed their respective Power Sale Agreements with SECI under the referred RfS.

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ARTICLE 7: METERING

7.1 ***Meters***

7.1.1 For installation of Meters, Meter testing, Meter calibration and Meter reading and all matters incidental thereto, the HPD and SECI shall follow and be bound by the Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006, the Grid Code, as amended and revised from time to time.

7.1.2 The HPD shall bear all costs pertaining to installation, testing, calibration, maintenance, renewal and repair of meters at HPD's side of Delivery Point.

7.1.3 In addition to ensuring compliance of the applicable codes, the HPD shall install Main & Check meters at the Delivery Point, along with Stand-by meter(s) as per the applicable Central/State regulations.

7.1.4 In case of pooling of multiple Projects, power from multiple Projects can be pooled at a Pooling Substation prior to the Delivery point and the combined power can be fed at Delivery point through a common transmission line from the Pooling Substation. In such cases, ABT compliant sub-meters as per relevant regulation/approval are also to be set up at pooling substation for individual projects in addition to the meters at Delivery Point as described in clause 7.1.3.

7.2 Reporting of Metered Data and Parameters

7.2.1 The grid connected hybrid power plants will install necessary equipment for continuous monitoring of ambient air temperature, wind resource data (including wind speed), solar resource data and other weather parameters and simultaneously for monitoring of the electric power generated from the plant.

7.2.2 Online arrangement would have to be made by the HPD for submission of above data regularly for the entire period of this Power Purchase Agreement to the SLDC, SECI, National Institute of Wind Energy (NIWE) and the concerned Ministry or concerned agency as per applicable regulation / directions.

7.2.3 Reports on above parameters on monthly basis (or as required by regulation / guidelines) shall be submitted by the HPD to Ministry of New and Renewable

Energy/ SECI/National Institute of Solar Energy/ National Institute of Wind Energy through SECI for entire period of PPA.

7.2.4 In addition to the abovementioned data, the HPD shall also be required to submit information, as required by SECI, for regular monitoring of status of the Project.

ARTICLE 8: INSURANCES

8.1 ***Insurance***

8.1.1 The HPD shall effect and maintain or cause to be effected and maintained, at its own cost and expense, throughout the Term of PPA, Insurances against such risks to keep the Project in good condition and shall take Industrial All Risk insurance policy covering risks against any loss or damage, with such deductibles and with such endorsements and co-insured(s), which the Prudent Utility Practices would ordinarily merit maintenance of and as required under the Financing Agreements, Implementation and Support Agreement and under the applicable laws.

8.2 ***Application of Insurance Proceeds***

8.2.1 In case of the Project not being implemented through Financing Agreement(s), save as expressly provided in this Agreement or the Insurances, the proceeds of any insurance claim made due to loss or damage to the Power Project or any part of the Power Project shall be first applied to reinstatement, replacement or renewal of such loss or damage.

In case of the Project being financed through Financing Agreement(s), save as expressly provided in this Agreement or the Insurances, the proceeds of any insurance claim made due to loss or damage to the Power Project or any part of the Power Project shall be applied as per such Financing Agreements.

8.2.2 If a Force Majeure Event renders the Power Project no longer economically and technically viable and the insurers under the Insurances make payment on a "total loss" or equivalent basis, SECI shall have claim on such proceeds of such Insurance limited to outstanding dues of SECI against the Buying Utility(ies) as per PSA entered into and any other dues of the Buying Utility(ies) against HPD.

8.3 ***Effect on liability of SECI***

8.3.1 Notwithstanding any liability or obligation that may arise under this Agreement, any loss, damage, liability, payment, obligation or expense which is insured or not or for which the HPD can claim compensation, under any Insurance shall not be charged to or payable by Buyer. It is for the HPD to ensure that appropriate insurance coverage is taken for payment by the insurer for the entire loss and there is no under insurance or short adjustment etc.

ARTICLE 9: APPLICABLE TARIFF

9.1 The HPD shall be entitled to receive the Tariff of Rs.2.41./ kWh , fixed for the entire term of this Agreement, with effect from the SCD, for the power sold by the Buyer to the Buying Entity for the scheduled energy as reflected in the Energy Accounts. In case of early commissioning, subject to the consent for such purchase by the Buying Utility, SECI may purchase the generation at the PPA tariff.

9.2 Any excess generation over and above energy specified in Article 4.4.1, will be purchased by SECI at 75% (seventy-five per cent) of the tariff as per Article 9.1, provided the Buying Entity consents for purchase of such excess generation. Any energy produced and flowing into the grid before SCD shall not be at the cost of SECI. SECI may agree to buy such power provided Buying Entity consents to purchase such energy. However, the HPD will not be allowed to sell energy generated prior to SCD or excess energy during any Contract Year to any other entity other than SECI (unless refused by SECI).

9.3 Early Commissioning:

Early commissioning of the Project will be allowed solely at the risk and cost of the HPD, and SECI shall purchase the energy from such early commissioned Project at the PPA tariff, only in the case Discom agrees to purchase power from the Project at an earlier date, and at the PPA tariff plus trading margin.

Such intimation for early commissioning shall be provided to SECI at least 60 days before the proposed early commissioning date. In case there is no response provided by SECI within 30 days from the receipt of such intimation, such early commissioned capacity shall be deemed to have been rejected by SECI.

ARTICLE 10: BILLING AND PAYMENT

10.1 *General*

10.1.1 Pursuant to Article 4.1.1 (l), SECI shall set up a payment security fund for Hybrid Power Projects in order to ensure timely payment. This fund will have a corpus to cover 3 months' payment.

10.1.2 From the commencement of supply of power, SECI shall pay to the HPD the monthly Tariff Payments subject to the adjustments as per provisions of this Agreement including Article 6, in accordance with Article 9. All Tariff Payments by SECI shall be in Indian Rupees.

10.1.3 For the purpose of payment of the bills raised by the HPD(s), in case Energy Account is published on cumulative basis, payment to the HPD(s) for the energy delivered shall be apportioned based on JMR taken for the HPD's Project at the Pooling substation/metering point.

10.1.4 The HPD shall be required to make arrangements and payments for import of energy (if any) as per applicable regulations.

10.2 *Delivery and Content of Monthly Bills/Supplementary Bills*

10.2.1 The HPD shall issue to SECI hard copy of a signed Monthly Bill/Supplementary Bill for the immediately preceding Month/relevant period based on the issuance of Energy Accounts along with all relevant documents (payments made by HPD for drawal of power, payment of reactive energy charges, Metering charges or any other charges as per guidelines of SERC/CERC, if applicable.

Each Monthly Bill shall include all charges as per this Agreement for the energy supplied for the relevant Month based on Energy Accounts issued by RPC or any other competent authority which shall be binding on both the Parties. The Monthly Bill amount shall be the product of the energy as per Energy Accounts and the Applicable Tariff. Energy drawn from the grid will be regulated as per the applicable Central/State regulations.

10.2.2 As per applicable regulation(s) of the Appropriate Commission(s)/respective SERC(s), all charges pertaining to obtaining open access and scheduling of power, if any, shall be borne by the HPD.

10.3 ***Payment of Monthly Bills***

10.3.1 SECI shall pay the amount payable under the Monthly Bill/Supplementary Bill by the Due Date to such account of the HPD, as shall have been previously notified by the HPD as below.

10.3.2 All payments required to be made under this Agreement shall also include any deduction or set off for:

i) deductions required by the Law; and

ii) amount claimed by SECI, if any, from the HPD, will be adjusted from the monthly energy payment. In case of any excess payment adjustment, 1.25% surcharge will be applicable on day to day basis.

The HPD shall open a bank account (the "HPD's Designated Account") for all Tariff Payments (including Supplementary Bills) to be made by SECI to the HPD, and notify SECI of the details of such account at least ninety (90) Days before the dispatch of the first Monthly Bill. SECI shall also designate a bank account at New Delhi ("SECI Designated Account") for payments to be made by the HPD to SECI, if any, and notify the HPD of the details of such account ninety (90) Days before the Scheduled Commissioning Date. SECI and the HPD shall instruct their respective bankers to make all payments under this Agreement to the HPD's Designated Account or SECI's Designated Account, as the case may be, and shall notify either Party of such instructions on the same day.

10.3.3 Late Payment Surcharge

Late Payment Surcharge In the event of payment of a Monthly Bill by SECI beyond thirty days, a Late Payment Surcharge (LPS) shall be payable to the HPD on the payment outstanding after the Due Date, at the base rate of Late Payment Surcharge applicable for the period for the first month of default. "Base rate of Late Payment Surcharge" means the marginal cost of funds-based lending rate for one year of the State Bank of India, as applicable on the 1st April of the financial year in which the period lies, plus five percent. The Late Payment Surcharge shall be claimed by HPD through the Supplementary Bill. Late Payment Surcharge shall be payable on the payment outstanding after the Due Date at the base rate of Late Payment Surcharge applicable for the period for the first month of default subject

to such late payment surcharge being duly received by SECI under the PSA from the Buying Entity(ies). The rate of Late Payment Surcharge for the successive months of default shall increase by 0.5 percent for every month of delay provided that the Late Payment Surcharge shall not be more than 3 percent higher than the base rate at any time: (a) Provided that the rate at which Late Payment Surcharge shall be payable shall not be higher than 1.25% per month at any time for purchase of power.

10.3.4 Subject to the Article 9 of this Agreement, in the event of early Commissioning of the Project and subject to acceptance by SECI, the payment for the power fed to the grid may be accounted from the date of UCOD, and HPD would be allowed to raise Bills against such power as per Article 10.2.1, subject to the conditions as stipulated in Article 9. However, payment against the 1st such bill raised by the HPD, will be made subject to acceptance of the bill by the Discom.

10.3.5 **Rebate**

For payment of any Bill on or before Due Date, the following Rebate shall be paid by the HPD to SECI in the following manner.

a) A Rebate of 1.5% shall be payable to the SECI for the payments made within a period of 10 (ten) days of the presentation of hard copy of Bill.
b) Any payments made after ten (10) days of the date of presentation of Bill through hard copy up to the Due Date shall be allowed a rebate of 1 %.
c) For the above purpose, the date of presentation of Bill shall be the next Business Day of delivery of the physical copy of the Bill at SECI. .
d) No Rebate shall be payable on the Bills raised on account of Change in Law (except in case of annuity tariff model being implemented, where rebate will be applicable) relating to taxes, duties, cess etc. and on Supplementary Bill.

For the above purpose date of presentation of bill shall be the same day of delivery in hard copy. However, for consideration of rebate, next business day shall be considered.

10.4 **Payment Security Mechanism**

Letter of Credit (LC):

10.4.1 SECI shall provide to the HPD, in respect of payment of its Monthly Bills and/or Supplementary Bills, a monthly unconditional, revolving and irrevocable letter of credit ("Letter of Credit"), opened and maintained which may be drawn upon by the HPD in accordance with this Article.

10.4.2 Before the start of supply, SECI through a scheduled bank open a Letter of Credit in favour of the HPD, to be made operative from a date prior to the Due Date of its first Monthly Bill under this Agreement. The Letter of Credit shall have a term of twelve (12) Months and shall be renewed annually, for an amount equal to:

i) for the first Contract Year, equal to the estimated average monthly billing;
ii) for each subsequent Contract Year, equal to the average of the monthly billing of the previous Contract Year.

10.4.3 Provided that the HPD shall not draw upon such Letter of Credit prior to 30 days beyond the Due Date of the relevant Monthly Bill and/or Supplementary Bill, and shall not make more than one drawal in a Month.

10.4.4 Provided further that if at any time, such Letter of Credit amount falls short of the amount specified in Article 10.4.2 due to any reason whatsoever, SECI shall restore such shortfall before next drawl.

10.4.5 SECI shall cause the scheduled bank issuing the Letter of Credit to intimate the HPD, in writing regarding establishing of such irrevocable Letter of Credit.

10.4.6 SECI shall ensure that the Letter of Credit shall be renewed not later than its expiry.

10.4.7 All costs relating to opening, maintenance of the Letter of Credit shall be borne by SECI.

10.4.8 If SECI fails to pay undisputed Monthly Bill or Supplementary Bill or a part thereof within and including the date as on 30 days beyond the Due Date, then, subject to Article 10.4.6 & 10.5.2, the HPD may draw upon the Letter of Credit, and accordingly the bank shall pay without any reference or instructions from SECI, an amount equal to such Monthly Bill or Supplementary Bill or part thereof.

in accordance with Article 10.4.3 above, by presenting to the scheduled bank issuing the Letter of Credit, the following documents:

i) a copy of the Monthly Bill or Supplementary Bill which has remained unpaid to HPD and;

ii) a certificate from the HPD to the effect that the bill at item (i) above, or specified part thereof, is in accordance with the Agreement and has remained unpaid beyond the Due Date;

10.5 Disputed Bill

10.5.1 If the SECI does not dispute a Monthly Bill or a Supplementary Bill raised by the HPD within thirty (30) days of receiving such Bill shall be taken as conclusive.

10.5.2 If the SECI disputes the amount payable under a Monthly Bill or a Supplementary Bill, as the case may be, it shall pay 50% of the invoice amount and it shall within thirty (30) days of receiving such Bill, issue a notice
(the "Bill Dispute Notice") to the invoicing Party setting out:

i) the details of the disputed amount;

ii) its estimate of what the correct amount should be; and

iii) all written material in support of its claim.

10.5.3 If the HPD agrees to the claim raised in the Bill Dispute Notice issued pursuant to Article 10.5.2, the HPD shall revise such Bill and present along with the next Monthly Bill. In such a case excess amount shall be refunded along with interest at the same rate as Late Payment Surcharge, which shall be applied from the date on which such excess payment was made by the disputing Party to the invoicing Party and up to and including the date on which such payment has been received as refund.

10.5.4 If the HPD does not agree to the claim raised in the Bill Dispute Notice issued pursuant to Article 10.5.2, it shall, within fifteen (15) days of receiving the Bill Dispute Notice, furnish a notice (Bill Disagreement Notice) to the SECI providing:

i) reasons for its disagreement;

ii) its estimate of what the correct amount should be; and

iii) all written material in support of its counter-claim.

10.5.5 Upon receipt of the Bill Disagreement Notice by the SECI under Article 10.5.4, authorized representative(s) or a director of the board of directors/ member of board of the SECI and HPD shall meet and make best endeavours to amicably resolve such dispute within fifteen (15) days of receipt of the Bill Disagreement Notice.

10.5.6 If the Parties do not amicably resolve the Dispute within fifteen (15) days of receipt of Bill Disagreement Notice pursuant to Article 10.5.4, the matter shall be referred to Dispute resolution in accordance with Article 16.

10.5.7 For the avoidance of doubt, it is clarified the despite a Dispute regarding an invoice, SECI shall, without prejudice to its right to Dispute, be under an obligation to make payment of 50% of the invoice amount in the Monthly Bill.

10.6 Quarterly and Annual Reconciliation

10.6.1 The Parties acknowledge that all payments made against Monthly Bills and Supplementary Bills shall be subject to quarterly reconciliation within 30 days of the end of the quarter at the beginning of the following quarter of each Contract Year and annual reconciliation at the end of each Contract Year within 30 days to take into account the Energy Accounts, Tariff adjustment payments, Tariff Rebate, Late Payment Surcharge, or any other reasonable circumstance provided under this Agreement.

10.6.2 The Parties, therefore, agree that as soon as all such data in respect of any quarter of a Contract Year or a full Contract Year as the case may be has been finally verified and adjusted, the HPD and SECI shall jointly sign such reconciliation statement. Within fifteen (15) days of signing of a reconciliation statement, the HPD shall make appropriate adjustments in the next Monthly Bill. Late Payment Surcharge/ interest shall be payable in such a case from the date on which such payment had been made to the invoicing Party or the date on which any payment was originally due, as may be applicable. Any Dispute with regard to the

above reconciliation shall be dealt with in accordance with the provisions of Article 16.

10.7 ***Payment of Supplementary Bill***

10.7.1 HPD may raise a ("Supplementary Bill") for payment on account of:

i) Adjustments required by the Energy Accounts (if applicable); or
ii) Change in Law as provided in Article 12, or
iii) Payment under Article 4.10,

And such Supplementary Bill shall be paid by the other Party.

10.7.2 SECI shall remit all amounts due under a Supplementary Bill raised by the HPD to the HPD's Designated Account by the Due Date, except open access charges, RLDC or scheduling charges and transmission charges (if applicable). For Supplementary Bill on account of adjustment required by energy account and payments under Article 4.10, Rebate as applicable to Monthly Bills pursuant to Article 10.3.5 shall equally apply. Payment will be made after realization of the same from the Buying Utility. No surcharge will be applicable other than that on the monthly energy payment and associated debit and credit note.

10.7.3 Not Used.

ARTICLE 11: FORCE MAJEURE

11.1 *Definition of Force Majeure*

A 'Force Majeure' (FM) would mean one or more of the following acts, events or circumstances or a combination of acts, events or circumstances or the consequence(s) thereof, that wholly or partly prevents or unavoidably delays the performance by the Party (the Affected Party) of its obligations under the relevant Power Purchase Agreement, but only if and to the extent that such events or circumstances are not within the reasonable control, directly or indirectly, of the Affected Party and could not have been avoided if the Affected Party had taken reasonable care or complied with Prudent Utility Practices.

An Affected Party means SECI or the HPD whose performance has been affected by an event of Force Majeure.

11.2 *Categorization of Force Majeure Events:*

11.2.1 **Natural Force Majeure Event**

a) Act of God, including, but not limited to lightning, drought, fire and explosion (to the extent originating from a source external to the site), earthquake, volcanic eruption, landslide, flood, cyclone, typhoon or tornado if it is declared / notified by the competent state / central authority / agency (as applicable), or verified to the satisfaction of Procurer;

b) radioactive contamination or ionising radiation originating from a source in India or resulting from another Force Majeure Event mentioned above excluding circumstances where the source or cause of contamination or radiation is brought or has been brought into or near the Project by the Affected Party or those employed or engaged by the Affected Party;

c) the discovery of geological conditions, toxic contamination or archaeological remains on the Project land that could not reasonably have been expected to be discovered through an inspection of the Project land; or

d) any event or circumstances of a nature analogous to any of the events as specified under Article 11.2.1 (a), 11.2.1 (b) and 11.2.1 (c).

11.2.2 Non-Natural Force Majeure Event

a) any act of war (whether declared or undeclared), invasion, armed conflict or act of foreign enemy, blockade, embargo, revolution, riot, insurrection, terrorist or military action;

b) nation/state-wide strike, lockout, boycotts or other industrial disputes which are not directly and solely attributable to the actions of the Affected Party, but does not include strike or labour unrest limited to the Affected Party or its contractors;

c) nationalisation or any compulsory acquisition by any Indian Governmental Instrumentality/ State Government in national interest or expropriation of any material Project assets or rights of the HPD, as a result of which the HPD or its shareholders are deprived (wholly or partly) of their rights or entitlements under the Power Purchase Agreement. Provided that such action does not constitute remedies or sanctions lawfully exercised by the Procurer or any other Government Authority as a result of any breach of any of the Applicable Laws or the Applicable Permits by the HPD or the HPD related parties;

d) action of a Government Authority having Material Adverse Effect including but not limited to Change in Law, only if consequences thereof cannot be dealt with under and in accordance with the provisions of Article 12 of this Agreement; any unlawful or unauthorised or without jurisdiction revocation of, or delay in, or refusal, or failure to renew or grant without valid cause, any Permits of the HPD or any of the clearance, licence, authorization to be obtained by the contractors to perform their respective obligations under the relevant PPA and/or the Project Documents; provided that such delay, modification, denial, refusal or revocation did not result from the HPD's or any contractor's inability or failure to comply with any condition relating to grant, maintenance or renewal of such Permits or clearance, licence, authorization, as the case may be.

11.3 Force Majeure Exclusions

11.3.1 Force Majeure shall not include (i) any event or circumstance which is within the reasonable control of the Parties and (ii) the following conditions, except to the extent that they are consequences of an event of Force Majeure:

a. Unavailability, late delivery, or changes in cost of the plant, machinery, equipment, materials, spare parts or consumables for the Power Project;

b. Delay in the performance of any contractor, sub-contractor or their agents;

c. Non-performance resulting from normal wear and tear typically experienced in power generation materials and equipment;

d. Strikes at the facilities of the Affected Party;

e. Insufficiency of finances or funds or the agreement becoming onerous to perform; and

f. Non-performance caused by, or connected with, the Affected Party's:

i. Negligent or intentional acts, errors or omissions;

ii. Failure to comply with an Indian Law; or

iii. Breach of, or default under this Agreement.

11.4 ***Notification of Force Majeure Event***

11.4.1 The Affected Party shall give notice to the other Party of any event of Force Majeure as soon as reasonably practicable, but not later than fifteen (15) days after the date on which such Party knew or should reasonably have known of the commencement of the event of Force Majeure and SECI shall take a decision on the Affected Party's claim within 15 days of the receipt of the intimation. If an event of Force Majeure results in a breakdown of communications rendering it unreasonable to give notice within the applicable time limit specified herein, then the Party claiming Force Majeure shall give such notice as soon as reasonably practicable after reinstatement of communications, but not later than one (1) day after such reinstatement.

11.4.2 Provided that such notice shall be a pre-condition to the Affected Party's entitlement to claim relief under the PPA. Such notice shall include full particulars of the event of Force Majeure, its effects on the Party claiming relief and the remedial measures proposed. The Affected Party shall give the other Party regular (and not less than weekly) reports on the progress of those remedial measures and such other information as the other Party may reasonably request about the Force Majeure Event.

11.4.3 The Affected Party shall give notice to the other Party of (i) the cessation of the relevant event of Force Majeure; and (ii) the cessation of the effects of such event

of Force Majeure on the performance of its rights or obligations under the PPA, as soon as practicable after becoming aware of each of these cessations.

11.5 Performance Excused

11.5.1 The Affected Party, to the extent rendered unable to perform its obligations or part of the obligation thereof under the PPA as a consequence of the Force Majeure Event, shall be excused from performance of the obligations, provided that the period shall not exceed 180 (one hundred and eighty) Days from the date of issuance of the FM Notice. The Parties may mutually agree to extend the period for which performance is excused due to a Force Majeure Event.

11.5.2 For the time period, as mutually agreed by the Parties, during which the performance shall be excused, the generator shall be entitled for a day to day extension of the period provided for Financial Closure or Scheduled Commissioning Period or the PPA period, as the case may be.

11.5.3 Provided always that a Party shall be excused from performance only to the extent reasonably warranted by the Force Majeure Event.

11.5.4 Provided further that, nothing shall absolve the Affected Party from any payment obligations accrued prior to the occurrence of the underlying Force Majeure Event.

11.6 No Liability for Other Losses

Save as otherwise provided in this Agreement, no Party shall be liable in any manner, whatsoever, to the other Parties in respect of any loss relating to or arising out of the occurrence or existence of any Force Majeure Event.

11.7 Resumption of Performance

During the period that a Force Majeure Event is subsisting, the Affected Party shall, in consultation with the other Parties, make all reasonable efforts to limit or mitigate the effects of such Force Majeure Event on the performance of its obligations under the PPA. The Affected Party shall also make efforts to resume performance of its obligations under this Agreement as soon as possible and

upon resumption, shall notify other Parties of the same in writing. The other Parties shall afford all reasonable assistance to the Affected Party in this regard.

11.8 Duty to Perform and Duty to Mitigate

To the extent not prevented by a Force Majeure Event pursuant to Article 11.2, the Affected Party shall continue to perform its obligations pursuant to this Agreement, in line with provisions of Article 11.5. The Affected Party shall use its reasonable efforts to mitigate the effect of any Force Majeure Event as soon as practicable.

11.9 Available Relief for a Force Majeure Event

Subject to this Article 11:

a) no Party shall be in breach of its obligations pursuant to this Agreement except to the extent that the performance of its obligations was prevented, hindered or delayed due to a Force Majeure Event;

b) every Party shall be entitled to claim relief in relation to a Force Majeure Event in regard to its obligations, including but not limited to those specified under Article 4.5;

c) For avoidance of doubt, neither Party's obligation to make payments of money due and payable prior to occurrence of Force Majeure events under this Agreement shall be suspended or excused due to the occurrence of a Force Majeure Event in respect of such Party.

d) Provided that no payments shall be made by either Party affected by a Force Majeure Event for the period of such event on account of its inability to perform its obligations due to such Force Majeure Event.

11.10 Termination Due to Force Majeure Event

11.10.1 Termination due to Natural Force Majeure Event

a) If, prior to the completion of the 180 (one hundred and eighty) Day period (or any extended period) for a Natural Force Majeure Event commencing from the date of issuance of the Force Majeure Notice, the Parties are of the

reasonable view that a Natural Force Majeure Event is likely to continue beyond such 180 (one hundred and eighty) Day period or any extended period agreed in pursuance of Article 11.5 (Performance Excused); or that it is uneconomic or impractical to restore the affected Unit, then the Parties may mutually decide to terminate the PPA, and the termination shall take effect from the date on which such decision is taken.

b) Without prejudice to the provisions of Article 11.10.1.(a) above, the Affected Party shall, after the expiry of the period of 180 (one hundred and eighty) Days or any other mutually extended period, be entitled to forthwith terminate the PPA in its sole discretion by issuing a notice to that effect.

c) On termination of the PPA pursuant to Article 11.10.1(b):

i. no Termination Compensation shall be payable to the HPD.

ii. the HPD shall be eligible for undisputed payments under outstanding Monthly Bill(s), before the occurrence of Force Majeure Event.

11.10.2 Termination due to Non-Natural Force Majeure Event

a) Upon occurrence of a Non-Natural Force Majeure Event, the HPD shall, at its discretion, have the right to terminate the PPA forthwith after the completion of the period of 180 (one hundred and eighty) Days from the date of the Force Majeure Notice.

b) On termination of the PPA pursuant to Article 11.10.2(a):

i. SECI shall pay to the HPD, 'Force Majeure Termination Compensation' equivalent to the amount of the Debt Due and the 110% (one hundred and ten per cent) of the Adjusted Equity, as defined in the PPA, and takeover the Project assets.

ii. the HPD shall be eligible for undisputed payments under outstanding Monthly Bill(s), before the occurrence of Force Majeure Event.





ARTICLE 12: CHANGE IN LAW

12.1 *Definitions*

In this Article 12, the following terms shall have the following meanings:

12.1.1 In this Article 12, the term Change in Law shall refer to the occurrence of any of the following events pertaining to this project only after 7.12.2020 including (i) the enactment of any new law; or (ii) an amendment, modification or repeal of an existing law; or (iii) the requirement to obtain a new consent, permit or license; or (iv) any modification to the prevailing conditions prescribed for obtaining an consent, permit or license, not owing to any default of the Hybrid Power Developer; or (v) any change in the rates of any Taxes including any duties and cess or introduction of any new tax/cess/duty made applicable for setting up the hybrid power project and supply of power from the Project by the HPD which have a direct effect on the Project. It is further clarified that, in case the applicability of Safeguard Duty on "Solar Cells whether or not assembled in modules or panels", which is currently applicable until 29.07.2021, gets extended and has a direct effect on the Project, resulting in change in Project Cost, such extension will also qualify under "Change in Law" as per timeline and procedure indicated under this Article.

However, Change in Law shall not include (i) any change in taxes on corporate income or (ii) any change in any withholding tax on income or dividends distributed to the shareholders of the HPD.

12.1.2 In the event of occurrence of any of events as provided under Article 12.1.1 which results in any increase/ decrease in the Project Cost **(i.e. cost incurred by the HPD towards supply and services only for the Project concerned, upto Actual Commissioning Date of the last part capacity, or Scheduled Commissioning Date/extended Scheduled Commissioning Date, whichever is earlier),** the HPD/ SECI / Buying Utility(ies) shall be entitled for compensation by the other party, as the case may be, subject to the condition that the such 'Change in Law' is recognized by the Appropriate Commission. Compensation payment on account of such 'Change in Law' shall be determined and shall be effective from such date as may be decided by the Appropriate Commission. For eg., in case the Actual Commissioning Date of

the last part capacity is 15.04.2022, Scheduled Commissioning Date is 15.03.2022 and extended Scheduled Commissioning Date is 01.04.2022, the Project Cost shall be determined as the cost incurred by the HPD upto 01.04.2022.

12.1.3 However, in case of change in rates of safeguard duty, GST and basic customs duty after 07.12.2020 and resulting in change in Project Cost, then such change will be treated as 'Change in Law' and the quantum of compensation payment on account of change in rates of such duties and shall be provided to the affected party by the other party as per Article 12.2.3, subject to the provision that Appropriate Commission recognizes such provisions at the time of adoption of tariff by the Appropriate Commission and any decision in this regard shall be governing on HPD and Buying Entity.

12.2 *Relief for Change in Law*

12.2.1 Save and except as provided under Article 12.1.3, the aggrieved Party shall be required to approach the Hon'ble CERC for seeking approval of Change in Law.

12.2.2 The decision of the Hon'ble CERC to acknowledge a Change in Law and the date from which it will become effective, provide relief for the same, shall be final and governing on HPD and Buying Entity.

12.2.3 In case of Change in Law as approved by the Appropriate Commission pursuant to Article 12.2.1 or as provided under Article 12.1.3, the HPD/ SECI/ Buying Entities (as the case may be) shall be entitled for relief as follows:

Every net increase/decrease of Rs.1 lakh per MW in the Project Cost, for reasons other than those wherein such extension is on account of payment of liquidated damages, penalty or any other charges, as the case may be), shall be liable for corresponding increase/decrease of an amount equal to Rs 0.0049 /kWh.

Any such change, shall be considered upto three digits after the decimal point, and remaining digits, if any, shall be ignored.

For e.g. in case the change in tariff payable is calculated as Rs. 0.14678/kWh, it shall be modified as Rs. 0.146/kWh

12.2.4 In case Change in Law results in delay in commissioning or supply of power, where cause and effect between these two can be clearly established, the SECI under intimation to the Buying Entities may provide suitable time-extension in Scheduled Commissioning Date or Scheduled Date of Commencement of Supply of Power, as the case may be.

12.2.5 It the event of any decrease in the project cost by the HPD or any income to the HPD on account of any of the events as indicated above, HPD shall pass on the benefit of such reduction at a rate as provided in Article 12.2.3 to SECI which shall be further passed on to the Buying Entity. In the event of the HPD failing to comply with the above requirement, SECI shall make such deductions in the monthly tariff payments on immediate basis. Further, at the time of raising of 1st Monthly Tariff Payment Bill, HPD shall be required to provide a statutory auditor certificate supported by Board Resolution in regard to implications (loss/ gain) arising out of Article 12.

12.3 Notification of Change in Law

12.3.1 If the HPD is affected by Change in Law in accordance with Article 12 and wishes to claim a Change in Law under this Article, it shall give notice to the SECI and Buying Utility (s) of such Change in Law as soon as reasonably practicable (but no later than 60 days from the date of occurrence of such Change in Law).

12.3.2 Any notice service pursuant to this Article 12.3.1 and 12.1.3, shall provide, amongst other things, precise details of the Change in Law and its effect on the Project Cost, supported by documentary evidences including Statutory Auditor Certificate to this effect so as to establish one to one correlation and its impact on the Project Cost.

ARTICLE 13: EVENTS OF DEFAULT AND TERMINATION

13.1 *HPD Event of Default*

13.1.1 The occurrence and/or continuation of any of the following events, unless any such event occurs as a result of a Force Majeure Event or a breach by SECI or Buying Entity(ies) of its obligations under this Agreement, shall constitute an HPD Event of Default:

(i) the failure to commence supply of power to SECI up to the Contracted Capacity, by the end of the period specified in Article 4, or failure to continue supply of Contracted Capacity to SECI after Commercial Operation Date throughout the term of this Agreement, or

if

a) the HPD assigns, mortgages or charges or purports to assign, mortgage or charge any of its assets or rights related to the Power Project in contravention of the provisions of this Agreement; or

b) the HPD transfers or novates any of its rights and/ or obligations under this agreement, in a manner contrary to the provisions of this Agreement; except where such transfer

- is in pursuance of a Law; and does not affect the ability of the transferee to perform, and such transferee has the financial capability to perform, its obligations under this Agreement or

- is to a transferee who assumes such obligations under this Agreement and the Agreement remains effective with respect to the transferee;

(ii) if (a) the HPD becomes voluntarily or involuntarily the subject of any bankruptcy or insolvency or winding up proceedings and such proceedings remain uncontested for a period of thirty (30) days, or (b) any winding up or bankruptcy or insolvency order is passed against the HPD, or (c) the HPD goes into liquidation or dissolution or has a receiver or any similar officer appointed over all or substantially all of its assets or official liquidator is appointed to manage its affairs, pursuant to Law, provided that a dissolution or liquidation of the HPD will not be a HPD Event of Default if such dissolution or liquidation is for the purpose of a merger, consolidation or reorganization and where the resulting company retains

creditworthiness similar to the HPD and expressly assumes all obligations of the HPD under this Agreement and is in a position to perform them; or

(iii) the HPD repudiates this Agreement and does not rectify such breach within a period of thirty (30) days from a notice from SECI in this regard; or

(iv) except where due to any SECI's failure to comply with its material obligations, the HPD is in breach of any of its material obligations pursuant to this Agreement, and such material breach is not rectified by the HPD within thirty (30) days of receipt of first notice in this regard given by SECI.

(v) change in controlling shareholding before the specified time frame as mentioned in Article 4.1.1 of this Agreement; or

(vi) occurrence of any other event which is specified in this Agreement to be a material breach/ default of the HPD.

(vii) except where due to any SECI's failure to comply with its material obligations, the HPD is in breach of any of its material obligations pursuant to this Agreement, and such material breach is not rectified by the HPD within thirty (30) days of receipt of first notice in this regard given by SECI.

13.2 *SECI Event of Default*

13.2.1 The occurrence and the continuation of any of the following events, unless any such event occurs as a result of a Force Majeure Event or a breach by the HPD of its obligations under this Agreement, shall constitute the Event of Default on the part of defaulting SECI:

(i) SECI fails to pay (with respect to a Monthly Bill or a Supplementary Bill), subject to Article 10.5, for a period of ninety (90) days after the Due Date and the HPD is unable to recover the amount outstanding to the HPD through the Letter of Credit,

(ii) SECI repudiates this Agreement and does not rectify such breach even within a period of sixty (60) days from a notice from the HPD in this regard; or

(iii) except where due to any HPD's failure to comply with its obligations, SECI is in material breach of any of its obligations pursuant to this

Agreement, and such material breach is not rectified by SECI within sixty (60) days of receipt of notice in this regard from the HPD to SECI; or if

- SECI becomes voluntarily or involuntarily the subject of any bankruptcy or insolvency or winding up proceedings and such proceedings remain uncontested for a period of sixty (60) days, or

- any winding up or bankruptcy or insolvency order is passed against SECI, or

- SECI goes into liquidation or dissolution or a receiver or any similar officer is appointed over all or substantially all of its assets or official liquidator is appointed to manage its affairs, pursuant to Law, provided that it shall not constitute a SECI Event of Default, where such dissolution or liquidation of Buyer or SECI is for the purpose of a merger, consolidation or reorganization and where the resulting entity has the financial standing to perform its obligations under this Agreement and has creditworthiness similar to SECI and expressly assumes all obligations of SECI and is in a position to perform them; or;

(iv) If Buying Entities are subject to any of the above defaults and SECI does not designate another or other Buying Entities for purchase of power.

(v) Occurrence of any other event which is specified in this Agreement to be a material breach or default of SECI.

13.3 ***Procedure for cases of HPD Event of Default***

13.3.1 Upon the occurrence and continuation of any HPD Event of Default under Article 13.1, SECI shall have the right to deliver to the HPD, with a copy to the representative of the lenders to the HPD with whom the HPD has executed the Financing Agreements, a notice stating its intention to terminate this Agreement (SECI Preliminary Default Notice), which shall specify in reasonable detail, the circumstances giving rise to the issue of such notice.

13.3.2 Following the issue of a SECI Preliminary Default Notice, the Consultation Period of ninety (90) days or such longer period as the Parties may agree, shall apply and it shall be the responsibility of the Parties to discuss as to what steps

shall be taken with a view to mitigate the consequences of the relevant Event of Default having regard to all the circumstances.

13.3.3 During the Consultation Period, the Parties shall continue to perform their respective obligations under this Agreement.

13.3.4 Within a period of seven (7) days following the expiry of the Consultation Period unless the Parties shall have otherwise agreed to the contrary or the HPD Event of Default giving rise to the Consultation Period shall have ceased to exist or shall have been remedied, SECI may terminate this Agreement by giving a written Termination Notice of sixty (60) days to the HPD.

13.3.5 Subject to the terms of this Agreement, upon occurrence of a HPD Event of Default under this Agreement, the HPD shall be liable to pay to SECI, liquidated damages, as provided in Article 4.6 of the PPA for failure to commission within stipulated time and Article 4.4.1 for failure to supply power in terms of the PPA. For other cases, the HPD shall be liable pay to SECI, damages, equivalent to 6 (six) months, or balance PPA period whichever is less, of charges for its contracted capacity. SECI shall have the right to recover the said damages by way of forfeiture of bank guarantee, if any, without prejudice to resorting to any other legal course or remedy. In addition to the levy of damages as aforesaid, the lenders in concurrence with the Buying Entity and SECI, may exercise their rights, if any, under Financing Agreements, to seek substitution of the HPD by a selectee for the residual period of the Agreement, for the purpose of securing the payments of the total debt amount from the HPD and performing the obligations of the HPD. However, in the event the lenders are unable to substitute the defaulting HPD within the stipulated period, SECI may terminate the PPA and the Buying Entity may acquire the Project assets for an amount equivalent to 90% of the Debt Due or less as mutually agreed, failing which, the lenders may exercise their mortgage rights and liquidate the Project assets. Provided that any substitution under this Agreement can only be made with the prior consent of SECI including the condition that the selectee meets the eligibility requirements of Request for Selection (RfS) issued by SECI and accepts the terms and conditions of this Agreement.

13.3.6 The lenders in concurrence with the Buying Utility and SECI, may seek to exercise right of substitution under Article 13.3.5 by an amendment or novation of the PPA in favour of the selectee. The HPD shall cooperate with SECI to carry out such substitution and shall have the duty and obligation to continue to operate the Power Project in accordance with this PPA till such time as the substitution is finalized. In the event of Change in Shareholding/Substitution of Promoters triggered by the Financial Institutions leading to signing of fresh PPA with a new entity, an amount of Rs. 10 Lakh per Project+ 18% GST per transaction as facilitation fee (non-refundable) shall be deposited by the HPD to SECI.

13.3.7 In the event the lenders are unable to substitute the defaulting HPD within the stipulated period, SECI may terminate the PPA and the Buying Utility may acquire the Project assets for an amount equivalent to 90% of the debt due, failing which, the lenders may exercise their mortgage rights and liquidate the Project assets.

13.4 *Procedure for cases of SECI Event of Default*

13.4.1 Upon the occurrence and continuation of any SECI Event of Default specified in Article 13.2, the HPD shall have the right to deliver to SECI, a HPD Preliminary Default Notice, which notice shall specify in reasonable detail the circumstances giving rise to its issue.

13.4.2 Following the issue of a HPD Preliminary Default Notice, the Consultation Period of ninety (90) days or such longer period as the Parties may agree, shall apply and it shall be the responsibility of the Parties to discuss as to what steps shall be taken with a view to mitigate the consequences of the relevant Event of Default having regard to all the circumstances.

13.4.3 During the Consultation Period, the Parties shall continue to perform their respective obligations under this Agreement.

13.4.4 After a period of two hundred ten (210) days following the expiry of the Consultation Period and unless the Parties shall have otherwise agreed to the contrary or SECI Event of Default giving rise to the Consultation Period shall have ceased to exist or shall have been remedied, SECI under intimation to the Buying

Entity and the HPD shall, subject to the prior consent of the HPD, novate its part of the PPA to any third party, including its Affiliates within the stipulated period. In the event the aforesaid novation is not acceptable to the HPD, or if no offer of novation is made by SECI within the stipulated period, then the HPD may terminate the PPA and at its discretion require Buying Entity to either (i) takeover the Project assets by making a payment of the termination compensation equivalent to the amount of the Debt Due and 110% (one hundred and ten per cent) of the Adjusted Equity, less Insurance Cover, if any, or, (ii) pay to the HPD, damages, equivalent to 6 (six) months, or balance PPA period whichever is less, of charges for its contracted capacity, with the Project assets being retained by the HPD.

Provided further that at the end of three (3) months period from the period mentioned in this Article 13.4.4, this Agreement may be terminated by the HPD.

In the event of termination of PPA, any damages or charges payable to the STU/ CTU, for the connectivity of the plant, shall be borne by the Buying Entity.

13.5 Not Used.

ARTICLE 14: LIABILITY AND INDEMNIFICATION

14.1 *Indemnity*

14.1.1 The HPD shall indemnify, defend and hold SECI harmless against:

a) any and all third party claims against SECI for any loss of or damage to property of such third party, or death or injury to such third party, arising out of a breach by the HPD of any of its obligations under this Agreement; and

b) any and all losses, damages, costs and expenses including legal costs, fines, penalties and interest actually suffered or incurred by SECI from third party claims arising by reason of a breach by the HPD of any of its obligations under this Agreement, (provided that this Article 14 shall not apply to such breaches by the HPD, for which specific remedies have been provided for under this Agreement).

14.1.2 SECI shall cause the Buying Entity(ies) to indemnify, defend and hold the HPD harmless against:

a) any and all third party claims against the HPD, for any loss of or damage to property of such third party, or death or injury to such third party, arising out of a breach by Buying Entity(ies) of any of their obligations under this Agreement; and

b) any and all losses, damages, costs and expenses including legal costs, fines, penalties and interest ('Indemnifiable Losses') actually suffered or incurred by the HPD from third party claims arising by reason of a breach by Buying Entity(ies) of any of its obligations. SECI shall incorporate appropriate covenants in the PSA for the above obligations of Buying Entity(ies). In so far as indemnity to HPD is concerned, Buying Entity(ies) shall be the indemnifying party and not SECI.

14.2 Procedure for claiming Indemnity

14.2.1 ***Third party claims***

a. Where the Indemnified Party is entitled to indemnification from the Indemnifying Party pursuant to Article 14.1.1(a) or 14.1.2(a), the Indemnified Party shall promptly notify the Indemnifying Party of such claim referred to in Article 14.1.1(a) or 14.1.2(a) in respect of which it is entitled to be indemnified.

Such notice shall be given as soon as reasonably practicable after the Indemnified Party becomes aware of such claim. The Indemnifying Party shall be liable to settle the indemnification claim within thirty (30) days of receipt of the above notice. Provided however that, if:

i) the Parties choose to refer the dispute in accordance with Article 16.3.2; and

ii) the claim amount is not required to be paid/ deposited to such third party pending the resolution of the Dispute,

the Indemnifying Party shall become liable to pay the claim amount to the Indemnified Party or to the third party, as the case may be, promptly following the resolution of the Dispute, if such Dispute is not settled in favour of the Indemnified Party.

b. The Indemnified Party may contest the claim by referring to the Appropriate Commission for which it is entitled to be Indemnified under Article 14.1.1(a) or 14.1.2(a) and the Indemnifying Party shall reimburse to the Indemnified Party all reasonable costs and expenses incurred by the Indemnified party. However, such Indemnified Party shall not settle or compromise such claim without first getting the consent of the Indemnifying Party, which consent shall not be unreasonably withheld or delayed.

An Indemnifying Party may, at its own expense, assume control of the defence of any proceedings brought against the Indemnified Party if it acknowledges its obligation to indemnify such Indemnified Party, gives such Indemnified Party prompt notice of its intention to assume control of the defence, and employs an independent legal counsel at its own cost that is reasonably satisfactory to the Indemnified Party.

14.3 *Indemnifiable Losses*

14.3.1 Where an Indemnified Party is entitled to Indemnifiable Losses from the Indemnifying Party pursuant to Article 14.1.1(b) or 14.1.2(b), the Indemnified Party shall promptly notify the Indemnifying Party of the Indemnifiable Losses actually incurred by the Indemnified Party. The Indemnifiable Losses shall be reimbursed by the Indemnifying Party within thirty (30) days of receipt of the

notice seeking Indemnifiable Losses by the Indemnified Party. In case of nonpayment of such losses after a valid notice under this Article 14.3, such event shall constitute a payment default under Article 13.

14.4 *Limitation on Liability*

14.4.1 Except as expressly provided in this Agreement, neither the HPD nor SECI nor Buying Entity(ies) nor its/ their respective officers, directors, agents, employees or affiliates (or their officers, directors, agents or employees), shall be liable or responsible to the other Party or its affiliates, officers, directors, agents, employees, successors or permitted assigns or their respective insurers for incidental, indirect or consequential damages, connected with or resulting from performance or non-performance of this Agreement, or anything done in connection herewith, including claims in the nature of lost revenues, income or profits (other than payments expressly required and properly due under this Agreement), any increased expense of, reduction in or loss of power generation or equipment used therefore, irrespective of whether such claims are based upon breach of warranty, tort (including negligence, whether of Buying Entity(ies) , the HPD or others), strict liability, contract, breach of statutory duty, operation of law or otherwise.

14.4.2 SECI shall have no recourse against any officer, director or shareholder of the HPD or any Affiliate of the HPD or any of its officers, directors or shareholders for such claims excluded under this Article. The HPD shall have no recourse against any officer, director or shareholder of Buyer or Buying Entity(ies) , or any affiliate of Buyer or any of its officers, directors or shareholders for such claims excluded under this Article.

14.5 SECI's Liability

14.5.1 Notwithstanding anything to the contrary contained in this Agreement, the Parties acknowledge and accept that the SECI is an Intermediary Company to purchase and resell the electricity to the Buying Utility(ies) to enable them to fulfill the Renewable Purchase Obligations (RPO) and, therefore, the performance of the obligations of the SECI under this Agreement shall be subject to the ability of the SECI to enforce the corresponding obligations assumed by the Buying Utility(ies) on re-sale under the Power Sale Agreement to be entered into by the Buying

Utility(ies) with SECI. It is however, specifically agreed that the payment of money becoming due from the SECI to the HPD under this Agreement for supply of Power to the extent of the Contracted Capacity shall not be on a back to back basis and will be as per:

(i) the recourse under the Payment Security Mechanism provided in the PPA and PSA, as follows:

a) Letter of Credit;

(b) State Government Guarantee/ Tri-Partite Agreement (TPA) signed between Reserve Bank of India, Central Government and State Government of the Buying Entity, covering security for payment of energy charges, as applicable

(c) Payment Security Fund provided by the Buying Entity, and

(ii) Payment security fund as referred in Article 10.1.1 of the PPA. SECI shall discharge the tariff payment obligation in terms of the provisions of this Agreement.

14.5.2 The parties agree that in respect of the obligations other than the tariff payment obligation specifically mentioned herein above, in the event the HPD has any claim against the SECI in regard to the performance of any obligation of the SECI under this Agreement or enforcement of any right of the HPD against the SECI under this Agreement, the same shall be subject to the ability of the SECI to enforce the corresponding obligations assumed by the Buying Utility(ies) under the Power Sale Agreement to be entered into between the SECI and the Buying Utility(ies) on resale on mutatis mutandis basis and not otherwise.

14.6 Duty to Mitigate

14.6.1 The Parties shall endevour to take all reasonable steps so as mitigate any loss or damage which has occurred under this Article 14.

ARTICLE 15: ASSIGNMENTS AND CHARGES

15.1 ***Assignments***

This Agreement shall be binding upon, and inure to the benefit of the Parties and their respective successors and permitted assigns. This Agreement shall not be assigned by any Party, except to the Project Lenders or Lender's Representative as security for their debt under the Financing Agreements, other than by mutual consent between the Parties to be evidenced in writing. Such assignment shall be agreed to by SECI subject to the compliance of provisions contained in this Agreement and more specifically to the provisions of Article 4.1.1 of this Agreement. In no case, such assignment shall be permissible prior to the declaration of COD.

Provided that, SECI shall permit assignment of any of HPD's rights and obligations under this Agreement in favour of the lenders to the HPD, if required under the Financing Agreements.

Provided that, such consent shall not be withheld if SECI seeks to transfer to any transferee all of its rights and obligations under this Agreement.

The enforcement of the rights and obligation between the HPD and the Buying Utility (ies) provided in this Agreement and in the PSA shall not be treated as an assignment but an enforcement of the terms agreed under this Agreement.

Provided further that any successor(s) or permitted assign(s) identified after mutual agreement between the Parties may be required to execute a new agreement on the same terms and conditions as are included in this Agreement. An amount of Rs. 5 Lakh per Transaction as Facilitation Fee (non-refundable) shall be deposited by the HPD to SECI. Provided further that, such consent shall not be withheld by the HPD if SECI seeks to transfer to any affiliate all of its rights and obligations under this Agreement.

In the event of Change in Shareholding/Substitution of Promoters triggered by the Financial Institutions leading to signing of fresh PPA with a New Entity, an amount of Rs. 10 Lakh per Transaction as Facilitation Fee (non-refundable) shall be deposited by the HPD to SECI.

15.2 ***Permitted Charges***

15.2.1 HPD shall not create or permit to subsist any encumbrance over all or any of its rights and benefits under this Agreement, other than as set forth in Article 15.1 and the Guidelines.

ARTICLE 16: GOVERNING LAW AND DISPUTE RESOLUTION

16.1 *Governing Law*

16.1.1 This Agreement shall be governed by and construed in accordance with the Laws of India. Any legal proceedings in respect of any matters, claims or disputes under this Agreement shall be under the jurisdiction of appropriate courts in Delhi.

16.2 *Amicable Settlement and Dispute Resolution*

16.2.1 ***Amicable Settlement***

i. Either Party is entitled to raise any claim, dispute or difference of whatever nature arising under, out of or in connection with this Agreement ("Dispute") by giving a written notice (Dispute Notice) to the other Party, which shall contain:

(a) a description of the Dispute;

(b) the grounds for such Dispute; and

(c) all written material in support of its claim.

ii. The other Party shall, within thirty (30) days of issue of Dispute Notice issued under Article 16.2.1(i), furnish:

(a) counter-claim and defences, if any, regarding the Dispute; and

(b) all written material in support of its defences and counter-claim.

iii. Within thirty (30) days of issue of Dispute Notice by any Party pursuant to Article 16

(i) if the other Party does not furnish any counter claim or defence under Article 16

(ii) or thirty (30) days from the date of furnishing counter claims or defence by the other Party, both the Parties to the Dispute shall meet to settle such Dispute amicably. If the Parties fail to resolve the Dispute amicably within thirty (30) days from the later of the dates mentioned in this Article 16.2.1.

(iii) the Dispute shall be referred for dispute resolution in accordance with Article 16.3.

16.3 ***Dispute Resolution***

16.3.1 **Dispute Resolution by the Appropriate Commission**

i) Where any Dispute or differences arises in relation to this agreement of any nature whatsoever including the construction, interpretation or implementation of the provisions of this agreement as well as claim made by any Party for any change in or determination of the Tariff or any matter related to Tariff or claims made by any Party which partly or wholly relate to any change in the Tariff or determination of any of such claims could result in change in the Tariff, and relates to any matter agreed to be referred to the Appropriate Commission, shall be submitted to adjudication by the Appropriate Commission. Appeal against the decisions of the Appropriate Commission shall be made only as per the provisions of the Electricity Act, 2003, as amended from time to time.

ii) SECI shall be entitled to co-opt the Buying Entity(ies) and/or the lenders (if any) as a supporting party in such proceedings before the Appropriate Commission.

16.3.2 **Not used.**

16.4 ***Parties to Perform Obligations***

16.4.1 Notwithstanding the existence of any Dispute and difference referred to the Appropriate Commission and save as the Appropriate Commission may otherwise direct by a final or interim order, the Parties hereto shall continue to perform their respective obligations (which are not in dispute) under this Agreement.

AMP ENERGY GREEN EIGHT PVT. LTD.

ARTICLE 17: MISCELLANEOUS PROVISIONS

17.1 *Amendment*

17.1.1 This Agreement may only be amended or supplemented by a written agreement between the Parties.

17.2 *Third Party Beneficiaries*

17.2.1 Subject to provisions contained in this agreement relating to back to back implications of the PPA as well as PSA, this Agreement is solely for the benefit of the Parties and their respective successors and permitted assigns and shall not be construed as creating any duty, standard of care or any liability to, any person not a party to this Agreement.

17.3 *Waiver*

17.3.1 No waiver by either Party of any default or breach by the other Party in the performance of any of the provisions of this Agreement shall be effective unless in writing duly executed by an authorised representative of such Party.

17.3.2 Neither the failure by either Party to insist on any occasion upon the performance of the terms, conditions and provisions of this Agreement nor time or other indulgence granted by one Party to the other Parties shall act as a waiver of such breach or acceptance of any variation or the relinquishment of any such right or any other right under this Agreement, which shall remain in full force and effect.

17.4 *Confidentiality*

17.4.1 The Parties undertake to hold in confidence this Agreement and not to disclose the terms and conditions of the transaction contemplated hereby to third parties, except:

a) to their professional advisors;

b) to their officers, contractors, employees, agents or representatives, financiers, who need to have access to such information for the proper performance of their activities; or

c) disclosures required under Law, without the prior written consent of the other Party.

17.5 *Severability*

17.5.1 The invalidity or unenforceability, for any reason, of any part of this Agreement shall not prejudice or affect the validity or enforceability of the remainder of this Agreement, unless the part held invalid or unenforceable is fundamental to this Agreement.

17.6 *Notices*

17.6.1 All notices or other communications which are required to be given under this Agreement shall be in writing and in the English language.

17.6.2 If to the HPD, all notices or other communications which are required must be delivered personally or by registered post or facsimile or any other method duly acknowledged to the addresses below:

Address : 309, 3rd Floor, Rectangle One,
Behind Sheraton Hotel, Saket, New Delhi – 110 017 (INDIA)
Attention : Mr. Sourya Choudhary & Mr. Pinaki Bhattacharyya
Email : schoudhary@amp.energy & pinaki@amp.energy
Fax. No. :
Telephone No. : +91-11-43888900, 9320930693, 9910021310

17.6.3 If to SECI, all notices or communications must be delivered personally or by registered post or facsimile or any other mode duly acknowledged to the address(es) below:

Address : 6th Floor, Plate-B,NBCC Office Block Tower-2,
East Kidwai Nagar, New Delhi-110023.
Attention : Y.B.K Reddy
Email : ybkreddy@seci.co.in
Telephone No. : 011-24666-218

17.6.4 All notices or communications given by facsimile shall be confirmed by sending a copy of the same via post office in an envelope properly addressed to the appropriate Party for delivery by registered mail. All notices shall be deemed validly delivered upon receipt evidenced by an acknowledgement of the recipient, unless the Party delivering the notice can prove in case of delivery through the

registered post that the recipient refused to acknowledge the receipt of the notice despite efforts of the postal authorities.

17.6.5 Any Party may by notice of at least fifteen (15) days to the other Party change the address and/or addresses to which such notices and communications to it are to be delivered or mailed.

17.7 *Language*

17.7.1 All agreements, correspondence and communications between the Parties relating to this Agreement and all other documentation to be prepared and supplied under the Agreement shall be written in English, and the Agreement shall be construed and interpreted in accordance with English language.

17.7.2 If any of the agreements, correspondence, communications or documents are prepared in any language other than English, the English translation of such agreements, correspondence, communications or documents shall prevail in matters of interpretation.

17.8 *Restriction of Shareholders / Owners' Liability*

17.8.1 Parties expressly agree and acknowledge that none of the shareholders of the Parties hereto shall be liable to the other Parties for any of the contractual obligations of the concerned Party under this Agreement. Further, the financial liabilities of the shareholder/s of each Party to this Agreement, shall be restricted to the extent provided in the Indian Companies Act, 2013.

17.9 *Taxes and Duties*

17.9.1 The HPD shall bear and promptly pay all statutory taxes, duties, levies and cess, assessed/ levied on the HPD, contractors or their employees that are required to be paid by the HPD as per the Law in relation to the execution of the Agreement and for supplying power as per the terms of this Agreement.

17.9.2 SECI shall be indemnified and held harmless by the HPD against any claims that may be made against SECI in relation to the matters set out in Article 17.9.1.

17.9.3 SECI shall not be liable for any payment of, taxes, duties, levies, cess whatsoever for discharging any obligation of the HPD by SECI on behalf of HPD.

17.10 *Independent Entity*

17.10.1 The HPD shall be an independent entity performing its obligations pursuant to the Agreement.

17.10.2 Subject to the provisions of the Agreement, the HPD shall be solely responsible for the manner in which its obligations under this Agreement are to be performed. All employees and representatives of the HPD or contractors engaged by the HPD in connection with the performance of the Agreement shall be under the complete control of the HPD and shall not be deemed to be employees, representatives, contractors of SECI and nothing contained in the Agreement or in any agreement or contract awarded by the HPD shall be construed to create any contractual relationship between any such employees, representatives or contractors and SECI.

17.11 ***Compliance with Law***

Despite anything contained in this Agreement but without prejudice to this Article, if any provision of this Agreement shall be in deviation or inconsistent with or repugnant to the provisions contained in the Electricity Act, 2003, or any rules and regulations made there under, such provision of this Agreement shall be deemed to be amended to the extent required to bring it into compliance with the aforesaid relevant provisions as amended from time to time.

17.12. The duly executed Power Sale Agreement between SECI and Buying entity(s) as attached to this Agreement shall be read along with this Agreement as a composite back to back agreement for Generation and supply of electricity to the Buying entity(s), particularly, to fulfill the Renewable Purchase Obligations under the provisions of the Electricity Act, 2003 and the Regulations notified thereunder.

17.13 ***Breach of Obligations***

The Parties acknowledge that a breach of any of the obligations contained herein would result in injuries. The Parties further acknowledge that the amount of the liquidated damages or the method of calculating the liquidated damages specified in this Agreement is a genuine and reasonable pre-estimate of the damages that may be suffered by the non-defaulting party in each case specified under this Agreement.

17.14 ***Order of priority in application***

In case of inconsistencies between the agreement(s) executed between the Parties, applicable Law including rules and regulations framed thereunder, the order of priority as between them shall be the order in which they are placed below:

i. applicable Law, rules and regulations framed thereunder;
ii. the Grid Code; and
iii. the terms and conditions of this Agreement;

IN WITNESS WHEREOF the Parties have caused the Agreement to be executed through their duly authorized representatives as of the date and place set forth above.

For and on behalf of	For and on behalf of
[SECI]	[HPD- AMP Energy Green Eight Private Limited]

19.7.21

Y.B.K Reddy, AGM
Solar Energy Corporation of India Limited
6th Floor, Plate-B, NBCC Office Block Tower-2
East Kidwai Nagar, New Delhi-110023

Witness:
1. 19/7/2021 Ankit Agrawal Manager - SECI
2. MUTHURAJ R Deputy Manager – SECI

Sourya Choudhary
Authorized Signatory
309, 3rd Floor, Rectangle One, Behind
Sheraton Hotel, Saket, New Delhi-110 017
(India)

Witness:
1. Mukesh Kumar (MUKESH KUMAR, Sr. Dir + Head - Proj & Corp. finance) AMP Energy India
2. (Khushboo Birla) Manager, Project Finance Amp Energy India

सत्यमेव जयते

INDIA NON JUDICIAL

Government of National Capital Territory of Delhi

e-Stamp

Certificate No.	:	IN-DL58474387931323V
Certificate Issued Date	:	07-Feb-2023 11:25 AM
Account Reference	:	IMPACC (IV)/ dl720603/ DELHI/ DL-DLH
Unique Doc. Reference	:	SUBIN-DLDL72060390295698522960V
Purchased by	:	SOLAR ENERGY CORPORATION OF INDIA LTD
Description of Document	:	Article 5 General Agreement
Property Description	:	Not Applicable
Consideration Price (Rs.)	:	0 (Zero)
First Party	:	SOLAR ENERGY CORPORATION OF INDIA LTD
Second Party	:	Not Applicable
Stamp Duty Paid By	:	SOLAR ENERGY CORPORATION OF INDIA LTD
Stamp Duty Amount(Rs.)	:	100 (One Hundred only)

Please write or type below this line

This Power Purchase Agreement is made on the 02. day of May of 2023 At New Delhi.

Between

Adani Green Energy Twenty Six A Limited (CIN: U40100GJ2020PLC114736) (SPV of M/s Adani Renewable Energy Holding Four Limited), a Company incorporated under the Companies Act 1956 or Companies Act 2013, having its registered office at

Adani Green Energy Twenty Six A Limited

Solar Energy Corporation of India Ltd. New Delhi

Adani Corporate House, Shantigram, Nr. Vaishno Devi Circle, S.G. Highway, Khodiyar, Ahmedabad, Gujarat, India, 382421 (hereinafter referred to as "**Solar Power Developer or SPD**", which expression shall, unless repugnant to the context or meaning thereof, be deemed to include its successors and permitted assigns) as a Party of the **First Part**;

And

Solar Energy Corporation of India Limited (CIN: U40106DL2011GOI225263), a company incorporated under the Companies Act 1956, having its registered at 6th Floor, Plate-B, NBCC Office Block Tower-2, East Kidwai Nagar, New Delhi-110023 (hereinafter referred to as "SECI", which expression shall, unless repugnant to the context or meaning thereof, be deemed to include its successors and assignees) as a Party of the **Second Part**;

The SPD and SECI are individually referred to as 'Party' and collectively referred to as 'Parties'.

WHEREAS:

A. The Government of India has announced the Policy for promotion of the Solar Power in the country and has provided a target to achieve an aggregate installed capacity of 100 GW by the year 2022.

B. The Ministry of Power, Government of India has issued the Guidelines for the Tariff Based Competitive Bidding Process for procurement of power generated from the Grid connected Solar Power Project vide Resolution dated 3rd August 2017.

C. SECI has been designated as a Nodal Agency for developing and facilitating the establishment of the Grid connected Solar Power capacity in India in terms of the above Policy of the Government of India;

D. SECI had initiated a Tariff Based Competitive Bid Process for procurement of 7000 MW of the power generated from ISTS connected Solar Power Project linked with Manufacturing on the terms and conditions contained in the Request for Selection (herein after referred to as **`RfS'**) issued by SECI vide RfS No SECI/C&P/RfS/2GW MANUFACTURING/P-3/R1/062019 dated 25.06.2019 including amendments and clarifications.

E. The Solar Power Developer (hereinafter referred to as **'SPD'**) has been selected in the Competitive Bidding Process for development, generation and supply of electricity from the **8000 MW** Solar Power Project along with setting up of

manufacturing facilities to be established by SPD as per the Manufacturing Contract Agreement "MCA" (Schedule-4) anywhere in India and for supply of such electricity by SECI as an Intermediary Agency to the Buying Utility(ies) [as defined] under a Power Sale Agreement to be entered into between SECI and such Buying Utility (ies);

F. SECI has issued the Letter of Award No SECI/C&P/RfS/2GW MANUFACTURING/LOA/Adani/34738 dated 10.12.2019 and Addendum to Letter of Award No.: SECI/C&P/RfS/2GW MANUFACTURING/LOA-A/Adani/ 37292 dated 08.06.2020 in favour of the SPD for the development and establishment of the 8000 MW Solar Power Project anywhere in India along with setting up of manufacturing facilities as per MCA as per the terms and conditions contained in the RfS, draft of this Power Purchase Agreement and MCA issued at the time of the bidding and other bidding documents as well as the conditions contained in the Letter of Award;

G. M/s Adani Renewable Energy Holding Four Limited (Earlier known as Adani Green Energy Four Limited) has been awarded a cumulative capacity of 8000 MW under Bidding Package A and as per the provisions of the RfS and as detailed in the LOA. The project configuration of awarded cumulative capacity is detailed at Annexure-I

H. In line with the provisions of the aforementioned RfS Document, M/s Adani Renewable Energy Holding Four Limited (Earlier known as Adani Green Energy Four Limited) has signed Manufacturing Contract Agreement (MCA) dated 30-September-2021 with SECI as given in Schedule-4 as per provisions and requirement of RFS documents for the demonstration and fulfillment of manufacturing obligations of the SPD. Both Parties agree that non fulfillment of obligations under MCA by the M/s Mundra Solar Energy Limited will lead to tariff being worked out by Article 9.1(ii).

I. SECI has agreed to purchase such Solar Power from the SPD as an Intermediary Procurer and sell it to Buying Utility on back-to-back basis as per the provisions of the RfS & Guidelines. Accordingly, SECI has agreed to sign/ has signed a Power Sale Agreement with the Buying Utility to sell such power as per the provisions of the above said scheme to enable Buying Utility(ies) to fulfill the Renewable Purchase Obligations (RPO) specified under Section 86(1)(e) of the Electricity Act, 2003.";

J. In terms of the RfS, the SPD has furnished the Performance Bank Guarantee in the sum of Rs. 11,70,00,000/ in favour of SECI as per the format provided as a part of

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the Bidding Documents and a copy of the Bank Guarantee provided is in Schedule - 1 to this agreement;

K. The SPD has fulfilled the terms of the bidding and the terms of the Letter of Award for signing this Power Purchase Agreement as a definitive agreement for establishing the Solar Power Project of 234 MW at Village- Khavda, Tehsil- Bhuj, District- Kutchh, State- Gujarat for generation and sale of electricity by the SPD to SECI to enable SECI to resale such solar power to the Buying Utility(ies) , as SECI may consider appropriate, under a Power Sale Agreement and on a back-to-back basis to the Power Purchase Agreement to be entered into with the SPD;

L. SECI has signed the Power Sale Agreement with the Buying Utility(ies) of States in India.

M. The parties have agreed to execute this Power Purchase Agreement for the Project (ID: SPD-MANUFACTURING-ISTS-A1-2000:500) as detailed at Annexure I in terms of the provisions of the RfS and the Letter of Award in regard to the terms and conditions for establishment of the Solar Power Project and for generation and supply of electricity by the SPD to SECI.

Now therefore, in consideration of the premises and mutual agreements, covenants and conditions set forth herein, it is hereby agreed by and between the Parties as follows:

ARTICLE 1: DEFINITIONS AND INTERPRETATION

1.1 *Definitions*

The terms used in this Agreement, unless as defined below or repugnant to the context, shall have the same meaning as assigned to them by the Electricity Act, 2003 and the rules or regulations framed there under, including those issued/ framed by the Appropriate Commission (as defined hereunder), as amended or re-enacted from time to time.

"Act" or "Electricity Act, 2003"	shall mean the Electricity Act, 2003 and include any modifications, amendments and substitution from time to time;
Adjusted Equity	shall means the Equity funded in Indian Rupees and adjusted on the first day of the current month (the "Reference Date"), in the manner set forth below, to reflect the change in its value on account of depreciation and variations in Wholesale Price Index (WPI), and for any Reference Date occurring between the first day of the month of Appointed Date (the date of achievement of Financial Closure) and the Reference Date; i. On or before Commercial Operation Date (COD), the Adjusted Equity shall be a sum equal to the Equity funded in Indian Rupees and expended on the Project, revised to the extent of one half of the variation in WPI occurring between the first day of the month of Appointed Date and Reference Date; ii. An amount equal to the Adjusted Equity as on COD shall be deemed to be the base (the "Base Adjusted Equity"); iii. After COD, the Adjusted Equity hereunder shall be a sum equal to the Base Adjusted Equity, reduced by 0.333% (zero point three three three percent) thereof at the commencement of each month following the COD [reduction of 1% (one percent) per quarter of a year] and the amount so arrived at shall be revised to the extent of variation in WPI occurring between the COD and the Reference Date; For the avoidance of doubt, the Adjusted Equity shall, in the event of termination, be computed as on the Reference Date immediately preceding the Transfer Date; provided that no reduction in the Adjusted Equity shall be made for a period equal to the duration, if any, for which the PPA period is extended, but the revision on account of WPI shall continue to be made.
"Agreement" or "Power Purchase Agreement" or "PPA"	shall mean this Power Purchase Agreement including its recitals and Schedules, amended or modified from time to time in accordance with the terms hereof;
"Appropriate Commission"	Unless otherwise stated, Appropriate Commission shall be mean Hon'ble Central Electricity Regulatory Commission;
"Bidder"	Shall have same meaning as defined in the aforementioned RfS Documents;

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"Bidding Package"	shall refer to the individual Packages (i.e. Bidding Package A and Bidding Package B) meant for participation in the RfS in line with the RfS Documents including subsequent Amendments and Clarifications thereof;
"Bill Dispute Notice"	shall mean the notice issued by a Party raising a Dispute regarding a Monthly Bill or a Supplementary Bill issued by the other Party;
"Business Day"	shall mean with respect to SPD and SECI, a day other than Saturday, Sunday or a statutory holiday, on which the banks remain open for business in Delhi and [*insert name of State where SPD Registered Office is located*] both;
"Buying Entity"	Shall mean Distribution companies and shall include wherever admissible the Distribution licensees or buying entity in any State or any bulk consumer who agreed to purchase the solar power from SECI and execute the Power Sale Agreement from time to time with SECI, and requires Solar power to fulfil its solar RPO under respective RPO regulations;
"Capacity Utilization Factor" or "CUF"	shall have the same meaning as provided in CERC (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2009 as amended from time to time; However, for avoidance of any doubt, it is clarified that the CUF shall be calculated on the Contracted Capacity; In any Contract Year, if 'X' MWh of energy has been metered out at the Delivery Point for 'Y' MW Project capacity, CUF= [X MWh/ (Y MW*8766)] X100%;
"CERC"	shall mean the Central Electricity Regulatory Commission of India, constituted under sub - section (1) of Section 76 of the Electricity Act, 2003, or its successors;
"CTU" or "Central Transmission Utility"	shall mean the Government Company notified by the Central Government under Sub-Section (1) of Section 38 of the Electricity Act, 2003.
"Change in Law"	shall have the meaning ascribed thereto in Article 12 of this Agreement;
"Commercial Operation Date (COD)"	shall mean the date on which the commissioning certificate is issued upon successful commissioning (as per provisions of this Agreement) of the project or the last part capacity of the Project as the case may be;
"Competent Court of Law"	shall mean any court or tribunal or any similar judicial or quasi-judicial body in India that has jurisdiction to adjudicate upon issues relating to this Agreement;

"Consents, Clearances and Permits"	shall mean all authorizations, licenses, approvals, registrations, permits, waivers, privileges, acknowledgements, agreements, or concessions required to be obtained from or provided by any concerned authority for the purpose of setting up of the generation facilities and/ or supply of power;
"Consultation Period"	shall mean the period of ninety (90) days or such other longer period as the Parties may agree, commencing from the date of issuance of a SPD Preliminary Default Notice or SECI Preliminary Default Notice as provided in Article 13 of this Agreement, for consultation between the Parties to mitigate the consequence of the relevant event having regard to all the circumstances;
"Contract Year"	shall mean the period beginning from the Effective Date and ending on the immediately succeeding March 31 and thereafter each period of 12 months beginning on April 1 and ending on March 31 provided that: (i) in the financial year in which the Scheduled Commissioning Date would occur, the Contract Year shall end on the date immediately before the Scheduled Commissioning Date and a new Contract Year shall commence once again from the Scheduled Commissioning Date and end on the immediately succeeding March 31, and thereafter each period of twelve (12) months commencing on April 1 and ending on March 31, and (ii) provided further that the last Contract Year of this Agreement shall end on the last day of the Term of this Agreement
"Contracted Capacity"	shall mean 234 MW contracted with SECI for supply by the SPD to SECI at the Delivery Point from the Solar Power Project;
"Controlling Shareholding"	shall mean not less than 51% of the voting rights and paid-up share capital in case of successful bidder being a single company forms a 100% subsidiary for the execution of PPA. In case of Joint Control, it shall mean not less than 51% of the voting rights and paid-up share capital of the combined shareholding of the consortium members in the SPV/project company executing the PPA In case the successful bidder shall be itself executing the PPA, then it shall ensure that its promoters shall not cede control till three (3) years from the COD.
"Day"	shall mean a day, if not a Business Day, the immediately succeeding Business Day.
Debt Due	means the aggregate of the following sums expressed in Indian Rupees outstanding on the Transfer Date: i. The principal amount of the debt provided by the Senior Lenders under the Financing Agreements for financing the Total Project Cost

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	(the 'Principal') but excluding any part of the principal that had fallen due for repayment 2 (two) years prior to the Transfer Date; ii. All accrued interest, financing fees and charges payable under the Financing Agreements on, or in respect of, the debt referred to in (i) above until the Transfer Date but excluding: (i) any interest, fees or charges that had fallen due one year prior to the Transfer Date, (ii) any penal interest or charges payable under the Financing Agreements to any Senior Lender, (iii) any pre-payment charges in relation to accelerated repayment of debt except where such charges have arisen due to Utility Default, and (iv) any Subordinated Debt which is included in the Financial Package and disbursed by lenders for financing the Total Project Cost. Provided that if all or any part of the Debt Due is convertible into Equity at the option of Senior Lenders and/ or the Concessionaire, it shall for the purposes of this Agreement be deemed not to be Debt Due even if no such conversion has taken place and the principal thereof shall be dealt with as if such conversion had been undertaken. Provided further that the Debt Due, on or after COD, shall in no case exceed 80% (eighty percent) of the Total Project Cost."
"Delivery Point"	"Delivery Point" shall mean the point at the voltage level of 220 kV or above of the CTU Sub-station including the dedicated transmission line connecting the solar power Projects with the substation system as specified in the RfS document. Metering shall be done at this interconnection point where the power is injected into. For interconnection with grid and metering, the SPD shall abide by the relevant and applicable regulations, Grid Code notified by the CERC or and Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006 as amended and revised from time to time, or orders passed thereunder by the appropriate commission or CEA. All charges and losses related to Transmission of power from project up to Delivery Point (including but not limited to open access, transmission, wheeling, Unscheduled Interchange, Scheduling, Reactive power, RLDC/ SLDC charges etc.) as notified by the competent authority/ regulator shall be borne by the SPD and beyond the Delivery Point all charges and losses as notified by the competent authority/ regulator from time to time shall be borne by the Buying Utilities. In case it is paid by SECI on behalf of Buying Utilities/ SPD, the same shall be recovered from the Buying Utilities/ SPD (as applicable);
"Dispute"	shall mean any dispute or difference of any kind between SECI and the SPD, in connection with or arising out of this Agreement including but not limited to any issue on the interpretation and scope of the terms of this Agreement as provided in Article 16 of this Agreement;

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"Due Date"	Due Date shall mean the forty-fifth (45th) day after a Monthly Bill (including all the relevant documents) or a Supplementary Bill is received in hard copy and duly acknowledged by the SECI or, if such day is not a Business Day, the immediately succeeding Business Day, by which date such Monthly Bill or a Supplementary Bill is payable by the SECI.
"Effective Date"	shall have the meaning ascribed thereto in Article 2.1 of this Agreement;
"Electricity Laws"	shall mean the Electricity Act, 2003 and the rules and regulations made there under from time to time along with amendments thereto and replacements thereof and any other Law pertaining to electricity including regulations framed by the Appropriate Commission;
"Energy Accounts"	shall mean the regional energy accounts/ state energy accounts as specified in the Grid Code issued by the appropriate agency for each Month (as per their prescribed methodology), including the revisions and amendments thereof or where such regional energy accounts/ state energy accounts are not issued, Joint Meter Reading (JMR) will be considered; SECI reserves the right to choose from any of the above, i.e. JMR/ SEA/ REA, based on the acceptance of the same by the Buying Utility;
"Event of Default"	shall mean the events as defined in Article 13 of this Agreement;
"Expiry Date"	Shall mean the date occurring twenty five (25) years from the Scheduled Commissioning Date subject to that the supply of power shall be limited for a period of 25 years from the Scheduled Commissioning Date unless extended by the Parties as per this Agreement;
"Financial Closure"	shall mean compliance with the requirements under Article 3.1 of this Agreement;
"Financing Agreements"	shall mean the agreements pursuant to which the SPD has sought financing for the Power Project including the loan agreements, security documents, notes, indentures, security agreements, letters of credit and other documents, as may be amended, modified, or replaced from time to time, but without in anyway increasing the liabilities of SECI;
"Force Majeure" or "Force Majeure Event"	shall have the meaning ascribed thereto in Article 11 of this Agreement;
"Guidelines" or "Scheme"	shall mean the Guidelines for Tariff Based Competitive Bidding Process for Procurement of Power from Grid Connected Solar PV Power Projects issued by the Ministry of Power on 3rd August 2017 including its amendment(s), corrigendum(s) and clarification(s) (if any) issued by GOI;

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"Grid Code"/ "IEGC" or "State Grid Code"	shall mean the Grid Code specified by the CERC under Clause (h) of Sub-section (1) of Section 79 of the Electricity Act, as amended from time to time, and/ or the State Grid Code as specified by the concerned State Commission, referred under Clause (h) of Sub- section (1) of Section 86 of the Electricity Act 2003, as applicable;
"Indian Governmental Instrumentality"	shall mean the Government of India, Governments of state(s) Gujarat, New Delhi and any ministry, department, board, authority, agency, corporation, commission under the direct or indirect control of Government of India or the above state Government(s) or both, any political sub-division of any of them; including any court or Appropriate Commission(s) or tribunal or judicial or quasi-judicial body in India;
"Insurances"	shall mean the insurance cover to be obtained and maintained by the SPD in accordance with Article 8 of this Agreement;
"Interconnection Facilities"	shall mean the facilities on SPD's side of the Delivery Point for scheduling, transmitting and metering the electrical output in accordance with this Agreement and which shall include, without limitation, all other transmission lines and associated equipment, transformers, relay and switching equipment and protective devices, safety equipment and RTU, Data Transfer and Acquisition facilities for transmitting data subject to Article 7, the Metering System required for supply of power as per the terms of this Agreement;
Intermediary agency or Intermediary nodal agency or Intermediary Procurer"	shall mean Solar Energy Corporation of India Limited;
"Invoice" or "Bill"	shall mean either a Monthly Bill/ Supplementary Bill or a Monthly Invoice/ Supplementary Invoice raised by any of the Parties;
"Late Payment Surcharge"	shall have the meaning ascribed thereto in Article 10.3.3 of this Agreement;
"Law"	shall mean in relation to this Agreement, all laws including Electricity Laws in force in India and any statute, ordinance, regulation, notification or code, rule, or any interpretation of any of them by an Indian Governmental Instrumentality and having force of law and shall further include without limitation all applicable rules, regulations, orders, notifications by an Indian Governmental Instrumentality pursuant to or under any of them and shall include without limitation all rules, regulations, decisions and orders of the Appropriate Commissions;
"Letter of Credit" or 0"L/C"	shall have the meaning ascribed thereto in Article 10.4 of this Agreement;

"Manufacturing Commercial Operation Date" of "MCOD"	shall have same meaning as per MCA/ RfS;
"Scheduled Manufacturing Commercial Date/ SMCD"	shall have same meaning/ date as per MCA/ RfS;
"Manufacturing Contract Agreement/ MCA"	shall mean Schedule-4, "Manufacturing Contract Agreement" dated 30-September-2021 signed by the Adani Renewable Energy Holding Four Limited (Earlier known as Adani Green Energy Four Limited and Mundra Solar Energy Limited) with SECI as per provisions and requirement of RfS documents for the demonstration and fulfillment of obligations of the setting up Solar Manufacturing Facility of 4×500 MW (per annum) corresponding to Solar PV Cells and Solar PV Modules.
"MNRE"	shall mean the Ministry of New and Renewable Energy, Government of India;
"Month"	shall mean a period of thirty (30) days from (and excluding) the date of the event, where applicable, else a calendar month;
"Package"	shall mean the phase wise break-up of the cumulative capacity of Solar PV Project awarded to a successful Bidder, for which PPAs shall be executed in line with Clause No. 14, Section-II, ITB of RfS including its Amendments and Clarifications;
"Party" and "Parties"	shall have the meaning ascribed thereto in the recital to this Agreement;
"Payment Security Mechanism"	shall have the meaning ascribed thereto in Article 10.4 of this Agreement;
"Performance Bank Guarantee"	shall mean the irrevocable unconditional bank guarantee, submitted by the SPD to SECI from a bank mentioned in Schedule 2 of this Agreement in the form attached hereto as Schedule1;
"Pooling Substation/ Pooling Point"	means a point where more than one Solar power projects may connect to a common transmission system. Multiple projects can be connected to a pooling substation from where common transmission system shall be constructed and maintained by the SPD(s) to get connected to the ISTS substation. The voltage level for such common line shall be 220 kV and above. Further, the metering of the pooled power shall be done at the injection point, i.e. the ISTS substation. However, the voltage level of transmission system of individual projects up to the pooling substation may be at 33 kV and above. Sub-meters shall be installed at the pooling substation for metering and forecasting and scheduling of individual projects. The losses in the common transmission system up to the injection point shall be apportioned to the individual Projects for the purpose of billing. In such case, it shall be responsibility of the SPD to obtain and furnish the meter reading

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	jointly by the SPD and any competent authority (State Government or Central Government) (if applicable).
"Power Project" or "Solar Power Project"	shall mean the Solar power generation facility as a part of Block and having Contracted Capacity of 234 MW, located at Village- Khavda, Tehsil- Bhuj, District- Kutchh, State- Gujarat having a separate control system, metering and separate points of injection into the grid at Delivery/ Interconnection/ Metering point at ISTS substation or in case of sharing of transmission lines, by separate injection at pooling point. This includes all units and auxiliaries such as water supply, treatment or storage facilities; bay/s for transmission system in the switchyard, dedicated transmission line up to the Delivery Point and all the other assets, buildings/ structures, equipment, plant and machinery, facilities and related assets required for the efficient and economic operation of the power generation facility; whether completed or at any stage of development and construction or intended to be developed and constructed for the purpose of supply of power as per this Agreement;
"Power Sale Agreement" or "PSA"	shall mean the power sale agreement entered between the Buying Entity and SECI (Buyer- Buying Entity(ies) PSA) for selling the Solar power as per the provisions of Guidelines;
"Preliminary Default Notice"	shall have the meaning ascribed thereto in Article 13 of this Agreement;
"Block"	shall mean the cumulative capacity of 2000 MW of Solar PV Power Projects and 500 MW of Solar Manufacturing Plant under Bidding Package-A.
"Block Capacity"	shall mean combination of (i) cumulative Solar Manufacturing Plant capacity and (ii) the maximum AC capacity of the Project at the point of injection on which the Power Purchase Agreement has been signed;
"Project Commissioning"	shall mean equipment as per rated project capacity of Solar PV Power Plant has been installed and energy has flown into grid, in line with the Commissioning procedures defined in the RfS/ PPA;
"Prudent Utility Practices"	shall mean the practices, methods and standards that are generally accepted internationally from time to time by electric utilities for the purpose of ensuring the safe, efficient and economic design, construction, commissioning, operation and maintenance of power generation equipment and which practices, methods and standards shall be adjusted as necessary, to take account of: a) operation and maintenance guidelines recommended by the manufacturers of the plant and equipment to be incorporated in the Power Project; b) the requirements of Indian Law; and the physical conditions at the site of the Power Project

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"RBI"	shall mean the Reserve Bank of India;
"Rebate"	shall have the same meaning as ascribed thereto in Article 10.3.4 of this Agreement;
"RLDC"	shall mean the relevant Regional Load Dispatch Centre established under Sub-section (1) of Section 27 of the Electricity Act, 2003;
"RPC"	shall mean the relevant Regional Power Committee established by the Government of India for a specific region in accordance with the Electricity Act, 2003 for facilitating integrated operation of the power system in that region;
"Rupees", "Rs.", "₹"	shall mean Indian rupees, the lawful currency of India;
"Scheduled Commissioning Date" or "SCD" of the Project	shall mean 09.12.2024;
"SERC"	shall mean the Electricity Regulatory Commission of any State in India constituted under Section-82 of the Electricity Act, 2003 or its successors, and includes a Joint Commission constituted under Subsection (1) of Section 83 of the Electricity Act 2003;
"SLDC"	shall mean the centre established under Sub-section (1) of Section 31 of the Electricity Act 2003, relevant for the State(s) where the Delivery Point is located;
"SLDC Charges"	shall mean the charges levied by the SLDC of the state wherein the Solar Power Project is located;
"Solar Manufacturing Plant"	shall mean Solar Manufacturing Facility established by the SPD and accepted by the SECI as per provisions of MCA/ RfS;
"Solar Photovoltaic Project" or "Solar PV Project"	shall mean the solar photovoltaic power Project that uses sunlight for conversion into electricity and that is being set up by the SPD to provide Solar Power to SECI as per the terms and conditions of this Agreement;
"Solar Power"	shall mean power generated from the Solar Photovoltaic Power Project;
"SECI"	shall mean Solar Energy Corporation of India Limited;
"State Transmission Utility" or "STU"	shall mean the Board or the Government company notified by the respective State Government under Sub-section (1) of Section 39 of the Act;
"Tariff"	Shall have the same meaning as provided for in Article 9 of this Agreement;
"Tariff Payment"	shall mean the payments to be made under Monthly Bills as referred to in Article 10 and the relevant Supplementary Bills;

"Termination Notice"	shall mean the notice given by either Parties for termination of this Agreement in accordance with Article 13 of this Agreement;
"Term of Agreement"	shall have the meaning ascribed thereto in Article 2 of this Agreement;
"Trading Margin"	shall mean margin payable towards the services provided by SECI for re-sale of power to Buying Utilities or End Procurer, which shall be Rs 0.07/ kWh fixed for the entire term of the Agreement.
"Unit/ Part Commissioning"	Subject to the compliance of conditions/ procedure as detailed under Schedule-6 of this Agreement, Unit / Part Commissioning shall mean the Solar PV Capacity (AC MW) to be commissioned as per provisions of this Agreement and RfS document. Part Commissioning shall not be applicable for Projects having capacity less than 50 MW;
"Unit Commercial Operation Date (UCOD)"	shall mean the date of issuance of commissioning certificate for the respective part(s) of the Power Project subsequent to the demonstration of the compliance of commissioning as per this Agreement and witnessed by the Committee duly constituted and also start of injection and scheduling power from the Power Project to the Delivery Point and availability/ installation of all necessary arrangements/ equipment including RTU for scheduling of power generated from the Project and transmission of data to the concerned authority as per applicable regulation;
"Week"	shall mean a calendar week commencing from 00:00 hours of Monday, and ending at 24:00 hours of the following Sunday;

1.2 ***Interpretation***

Save where the contrary is indicated, any reference in this Agreement to:

1.2.1 "Agreement" shall be construed as including a reference to its Schedules and/or Appendices and/ or Annexures;

1.2.2 An "Article", a "Recital", a "Schedule" and a "paragraph/ clause" shall be construed as a reference to an Article, a Recital, a Schedule and a paragraph/ clause respectively of this Agreement;

1.2.3 A "crore" means a reference to ten million (10,000,000) and a "lakh" means a reference to one tenth of a million (1,00,000);

1.2.4 An "encumbrance" shall be construed as a reference to a mortgage, charge, pledge, lien or other encumbrance securing any obligation of any person or any other type of preferential arrangement (including, without limitation, title transfer and retention arrangements) having a similar effect;

1.2.5 "Indebtedness" shall be construed so as to include any obligation (whether incurred as principal or surety) for the payment or repayment of money, whether present or future, actual or contingent;

1.2.6 A "person" shall be construed as a reference to any person, firm, company, corporation, society, trust, government, state or agency of a state or any association or partnership (whether or not having separate legal personality) of two or more of the above and a person shall be construed as including a reference to its successors, permitted transferees and permitted assigns in accordance with their respective interests;

1.2.7 "Rupee", "Rupees", "Rs" or new rupee symbol "₹ " shall denote Indian Rupees, the lawful currency of India;

1.2.8 The "Winding-up", "dissolution", "insolvency", or "reorganization" of a company or corporation shall be construed so as to include any equivalent or analogous proceedings under the Law of the jurisdiction in which such company or corporation is incorporated or any jurisdiction in which such company or corporation carries on business including the seeking of liquidation, Winding-up, reorganization, dissolution, arrangement, protection or relief of debtors;

1.2.9 Words importing the singular shall include the plural and vice versa;

1.2.10 This Agreement itself or any other agreement or document shall be construed as a reference to this or to such other agreement or document as it may have been, or may from time to time be, amended, varied, novated, replaced or supplemented;

1.2.11 A Law shall be construed as a reference to such Law including its amendments or re-enactments from time to time;

1.2.12 A time of day shall, save as otherwise provided in any agreement or document be construed as a reference to Indian Standard Time;

1.2.13 Different parts of this Agreement are to be taken as mutually explanatory and supplementary to each other and if there is any inconsistency between or among the parts of this Agreement, they shall be interpreted in a harmonious manner so as to give effect to each part;

1.2.14 The tables of contents and any headings or sub-headings in this Agreement have been inserted for ease of reference only and shall not affect the interpretation of this Agreement;

1.2.15 All interest, if applicable and payable under this Agreement, shall accrue from day to day and be calculated on the basis of a year of three hundred and sixty five (365) days;

1.2.16 The words "hereof" or "herein", if and when used in this Agreement shall mean a reference to this Agreement;

1.2.17 The terms "including" or "including without limitation" shall mean that any list of examples following such term shall in no way restrict or limit the generality of the word or provision in respect of which such examples are provided;

1.2.18 In line with the provisions of the aforementioned RfS Document, M/s Adani Renewable Energy Holding Four Limited (Earlier known as Adani Green Energy Four Limited) has signed Manufacturing Contract Agreement (MCA) dated 30-September-2021 with SECI as given in Schedule - 4 as per provisions and requirement of RFS documents for the demonstration and fulfillment of manufacturing obligations of the SPD. Both Parties agree that non fulfillment of obligations under MCA by the M/s Mundra Solar Energy Limited will lead to tariff being worked out by Article 9.1(ii).

1.2.19 This Agreement and other documents like Request for Selection Documents, Guidelines including subsequent clarifications, amendments and further clarifications in regard to the Scheme for PPA linked Manufacturing shall be read in conjunction with each other and interpreted in harmonious manner. However, in case of any mismatch/ contradiction between provisions of different documents, following shall be the order of precedence:

1. Power Purchase Agreement and Manufacturing Contract Agreement
2. RfS Documents

ARTICLE 2: TERM OF AGREEMENT

2.1 ***Effective Date & Conditions Precedent***

2.1.1 This Agreement shall come into effect from 09.12.2022 which shall be referred to as the Effective Date.

2.1.2 Notwithstanding the Effective Date, the condition precedent for the enforcement of the obligations of either party against the other under this Agreement shall be that within 60 days from the date of submission of petition to the Appropriate Commission, the Buying Entity (ies) shall obtain all requisite approvals including approval of PSA (including adoption of tariff and trading margin) from its State Electricity Regulatory Commission and/ or CERC (as applicable), on the terms and conditions contained in this Agreement read with the terms and conditions contained in the Power Sale Agreement entered into between SECI and the Buying Entity(ies). The Parties agree that in the event, the order of adoption of tariff, trading margin and the approval of PPA & PSA, as mentioned above is not issued by the SERC and/ or CERC (as applicable) within the time specified above, the provisions of Article 2.1.3 shall apply.

2.1.3 If parties have mutually extended the time period as stipulated under Article 2.1.2 and the order from the SERC and/ or CERC (as applicable) is within 60 days of submissions before Appropriate Commission, no extension for Financial Closure or Scheduled Commissioning Date shall be given. However, if SERC and/ or CERC (as applicable) order is obtained after 60 days of submission of the petition, this shall entail a corresponding extension in Scheduled Financial Closure and the Scheduled Commissioning Date for equal no of days for which the SERC and / or CERC order has been delayed beyond such 60 days period.

2.1.4 The parties agree that any modifications in this Agreement, as directed by the Appropriate Commission or Buying Entity(ies), as applicable, as a result of adoption of the Tariff and approving the procurement of the contracted capacity, shall be binding on both Parties to this Agreement.

2.2 ***Term of Agreement***

2.2.1 Subject to Article 2.1, 2.3 and 2.4 of this Agreement, this Agreement shall be valid for a term from the Effective Date until the Expiry Date. This Agreement may be

extended for a further period at least one hundred eighty (180) days prior to the Expiry Date, on mutually agreed terms and conditions.

2.2.2 The SPD is free to operate their plants beyond the Expiry Date if other conditions like land lease/ Right to Use of Land (as applicable), permits, approvals and clearances etc. allow. In such case unless otherwise agreed by the SECI, SECI shall not be obligated to procure power beyond the Expiry Date.

2.3 ***Early Termination***

2.3.1 This Agreement shall terminate before the Expiry Date:

i. if either SECI or SPD terminates the Agreement, pursuant to Article 13 or Article 2.1.2 of this Agreement.

ii. if the Power Sale Agreement between buying entity and SECI is terminated by the Buying Entity, SECI shall endeavor to sell this power to any other entity at the same tariff failing which the capacity under this agreement shall be reduced but only to that extent on pro rata basis without any liability to SECI. In such case SPD shall be liable for termination compensation as per Article 13.4.4.

2.4 ***Survival***

2.4.1 The expiry or termination of this Agreement shall not affect any accrued rights, obligations and liabilities of the Parties under this Agreement, including the right to receive penalty as per the terms of this Agreement, nor shall it affect the survival of any continuing obligations for which this Agreement provides, either expressly or by necessary implication, which are to survive after the Expiry Date or termination including those under Article 11 (Force Majeure), Article 13 (Events of Default and Termination), Article 14 (Liability and Indemnification), Article 16 (Governing Law and Dispute Resolution), Article 17 (Miscellaneous Provisions), and other Articles and Schedules of this Agreement which expressly or by their nature survive the Term or termination of this Agreement shall continue and survive any expiry or termination of this Agreement.





ARTICLE 3: CONDITIONS SUBSEQUENT

3.1 Satisfaction of conditions subsequent by the SPD

Subject to the Article 2.1.3, the SPD agrees and undertakes to duly perform and complete all of the following activities including Financial Closure at the SPD's own cost and risk on or before 09.12.2023, unless such completion is affected by any Force Majeure event, or for the activities specifically waived in writing by SECI:

a) The SPDs shall report 100% tie-up of Financing Arrangements for all the Projects corresponding to the respective PPAs Capacity. In this regard, the SPD shall submit a certificate/ necessary documents from all financing agencies regarding the tie-up of the 100% of the funds indicated for the Project, including arrangements of funds in the form of Equity. The SPD shall submit the details as per Annexure-F and Performa A-1 of the RfS Documents.

b) The SPD shall also submit the Detailed Project Report (DPR) for the Project, indicating SPD's plans to meet the power delivery obligations. The SPD shall also demonstrate the technology tie-ups for major equipment, such as Solar PV Modules, Inverters and other RE generation components, as per the DPR for the Project.

The SPD shall submit to SECI the relevant documents as stated above at least 14 days prior to Schedule Financial Closure Date, complying with the Conditions Subsequent, on or before 09.12.2023. In case of delay in submission of aforementioned documents, SECI shall not be liable for delay in verification of documents and subsequent delay.

3.2 Consequences of non-fulfilment of conditions subsequent and financial closure

3.2.1 In case of a failure to submit the documents as above, SECI shall encash the Performance Bank Guarantee submitted by the SPD, terminate this Agreement and remove the Project from the list of the selected Projects by giving a notice to the SPD in writing of at least seven (7) days, unless the delay (subject to the conditions that SPD has made / is making all possible efforts) is on account of delay in allotment of Land by the Government not owing to any action or inaction on the part of the SPD or caused due to a Force Majeure. Unless extended as per provisions of Article 3.2.1 (i) of this Agreement in writing, the termination of the Agreement shall take effect upon the expiry of the 7th day of the above notice.

3.2.1 An extension, without any impact on the Scheduled Commissioning Date, can however be considered, on the sole request of SPD, on payment of Rs. 1000/- per day

per MW to SECI. Such extension charges are required to be paid to SECI in advance, for the period of extension required. In case of any delay in depositing this extension charge, SPD shall pay an interest on this extension charge for the days lapsed beyond due date of Financial Closure @ SBI-MCLR (1Year). In case such delay in making payment of the extension charges to SECI is more than 7 days, the termination of the Agreement shall take effect upon the expiry of such 7th day. This amount will go into the Payment Security Mechanism. In case of the SPD meeting the requirements of conditions subsequent and financial closure before the last date of such proposed delay period, the remaining amount deposited by the SPD shall be returned by SECI without interest. This extension will not have any impact on the Scheduled Commissioning Date. Any extension charges paid so by the SPD, shall be returned to the SPD without any interest on achievement of successful commissioning within the Scheduled Commissioning Date, on pro-rata basis, based on the project capacity commissioned as on Scheduled Commissioned Date. However, in case the SPD fails to commission the Contract Capacity by Scheduled Commissioning Date, the extension charges deposited by the SPD shall not be refunded by SECI.

3.2.2 For the avoidance of doubt, it is clarified that this Article shall survive the termination of this Agreement.

3.2.4 In case of inability of the SPD to fulfil the conditions specified in Article 3.1 due to any Force Majeure event, the time period for fulfilment of the Conditions Subsequent and Financial Closure as mentioned in Article 3.1, shall be extended for the period of such Force Majeure event.

3.2.5 Provided that due to the provisions of this Article 3.2.4, any increase in the time period for completion of conditions subsequent and financial closure mentioned under Article 3.1, shall also lead to an equal extension in the Scheduled Commissioning Date.

3.3 Performance Bank Guarantee

3.3.1 Two Performance Bank Guarantees (PBGs) having validity until Seventy Five (75) months from the date of issuance of Letter of Award (LoA) and for a value of Rs. 5 Lakh/ MW to be furnished under this RfS shall be for guaranteeing the commencement of the supply of power up to the Contracted Capacity within the time specified in this Agreement as per format provided in Schedule 1. In the event of grant of extension of

SCD, the SPD shall extend the validities of the Performance Bank Guarantees at least 3 month beyond the extended SCD.

3.3.2 Not Used.

3.3.3 The failure on the part of the SPD to furnish and maintain the Performance Bank Guarantees shall be a material breach of the term of this Agreement on the part of the SPD.

3.3.4 If the SPD fails to commence supply of power from the Scheduled Commissioning Date specified in this Agreement or any further extension thereof granted by SECI, subject to conditions mentioned in Article 4.5, SECI shall impose liquidated damages in line with Article 4.6, without prejudice to the other rights of SECI under this Agreement.

3.4 Return of Performance Bank Guarantee

3.4.1 Subject to Article 3.3, SECI shall return/ release the Performance Bank Guarantee immediately after the successful Commissioning of the Project after taking into account any liquidated damages due to delays in commissioning as per provisions stipulated in this Agreement.

3.4.2 Not Used.

3.4.3 The PBG shall be released within 03 (Three) Months subject to commissioning of the Solar PV Project within maximum time allowed for commissioning in line with provisions of this Agreement.

3.4.4 The return/ release of the Performance Bank Guarantee shall be without prejudice to other rights of SECI under this Agreement.

ARTICLE 4: CONSTRUCTION & DEVELOPMENT OF THE PROJECT

4.1 ***SPD's Obligations***

4.1.1 The SPD undertakes to be responsible, at SPD's own cost and risk, for:

a) On or before Scheduled Commissioning Date, the SPD shall demonstrate possession of 100% (Hundred Percent) of the land identified for the Project in its name for a period not less than the complete Term of this Agreement. In this regard, the SPD shall submit documents/ Lease Agreement to establish possession/ right to use 100% of the required land in the same of the SPD or its Affiliate. In case the land is in the name of the Affiliate, the land should be transferred in the name of the SPD prior to the SCD. Wherever leasing of private land is involved, the lease should allow transfer of land to the lenders or SECI, in case of default of the SPD. The SPD shall submit a sworn affidavit from the authorized signatory of the SPD listing the details of the land and certifying that total land required (@1.5 ha per MW per Project) for the Project is under clear possession of the SPD.

b) The SPD shall be solely responsible for all associated infrastructure for development of the Project and for Connectivity with the CTU System including Long-Term open Access (LTA) approval for confirming the evacuation of power by the Scheduled Commissioning date and all clearances related thereto;

c) Obtaining all Consents, Clearances and Permits as required and maintaining all Consents, Clearances and Permits in full force and effect during the Term of this Agreement. SECI shall have no obligation to recommend to any department/agency or the Govt. for the grant/permission for the Solar Power project. The Solar Power Developer shall, on his own, obtain permissions/ sanctions from Government authorities, if any required for establishing the project. Any steps that may be taken by SECI in regard to grant of such consents and permits or any other approval to be taken by the SPD shall only be a voluntary endeavor with no intention of being bound by any legal or binding obligation.

d) designing, constructing, erecting, commissioning, completing and testing the Power Project in accordance with the applicable Law, the Grid Code, the terms and conditions of this Agreement and Prudent Utility Practices.

e) the commencement of supply of power up to the Contracted Capacity to SECI no later than the Scheduled Commissioning Date and continuance of the supply of power throughout the term of the Agreement;

f) connecting the Power Project switchyard with the Interconnection Facilities at the Delivery Point; The SPD shall make adequate arrangements to connect the Power Project switchyard with the Interconnection Facilities at Interconnection/ Metering/ Delivery Point.

g) owning the Power Project throughout the Term of Agreement free and clear of encumbrances, except those expressly permitted under Article 15;

h) maintaining its Shareholding (voting rights and paid up share capital) as per the following provisions: if being a single company, shall ensure that its shareholding in the SPV/ Project Company executing the PPA shall not fall below 51% (fifty-one per cent) at any time prior to 3 (three) years from the COD, except with the prior approval of the Procurer. In the event the successful bidder is a consortium, then the combined shareholding of the consortium members in the SPV/ Project Company executing the PPA, shall not fall below 51% at any time prior to 3 (three) years from the COD, except with the prior approval of the Procurer. Further, the successful bidder shall ensure that its none of the promoters shall not cede control of the bidding company/ consortium/ joint control (none of promoters has shareholding of more than 50%) till 3 (three) years from the COD, except with the prior approval of the Procurer. prevalent at the time of signing of PPA up to a period of three (3) year after Commercial Operation Date of the Project; . Any change in the shareholding after the expiry of 3(three) years from the COD can be undertaken under intimation to SECI.

i) fulfilling all obligations undertaken by the SPD under this Agreement including RfS Documents.

j) Obtaining Connectivity, Long Term Access (LTA) and executing transmission service agreement with CTU/ STU as the case may be, for evacuation of the Contracted Capacity and maintaining it throughout the term of the Agreement.

k) The SPD shall be responsible to for directly coordinating and dealing with the corresponding Buying Utility(ies), Load Dispatch Centres, Regional Power Committees, and other authorities in all respects in regard to declaration of availability, scheduling and dispatch of Solar Power and due compliance with deviation and settlement mechanism and the applicable Grid code/ State/ Central Regulations, acknowledging that the SPD and the corresponding Buying

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Utility(ies) are the Grid connected entities and SECI as an Intermediary Procurer/ trading licensee is not a Grid connected entity in respect of the Solar Power contracted under this Agreement.

l) The SPD shall fulfil the technical requirements according to criteria mentioned under Annexure II–Technical requirement for Grid Connected Solar PV Power Stations under Guidelines for Tariff Based Competitive Bidding Process for Procurement of Power from Grid Connected Solar Power Projects, issued by Ministry of Power, vide Gazette Resolution no. 23/27/2017-R&R dated 03.08.2017.

m) In the event, for any reason, there is no willing Buying Utility(ies) to enter into a PSA and procure the power from Solar Energy Corporation of India Limited fully or in part, then to the extent of such quantum for which the Buying Utility(ies) are not forthcoming, the PPA shall not be entered into with Adani Renewable Energy Holding Four Limited (Earlier known as Adani Green Energy Four Limited) / any SPV of Adani Renewable Energy Holding Four Limited (Earlier known as Adani Green Energy Four Limited) and there shall not be any legal or financial implication to Solar Energy Corporation of India Limited in relation to such quantum including associated quantum of manufacturing facilities.

n) In case STU issues conditional NOC for LTA due to transmission constraint and if the SCD is prior to completion of transmission lines, under these circumstances, SPD shall not claim any compensation or damages from SECI/ Buying entity.

o) Government of India from time to time issues order for waiver of interstate transmission system (ISTS) charges and losses on transmission of wind/solar power till a certain date. Further, in case SCD of the Project is prior to the above deadline of waiver of ISTS charges and losses, and commissioning of the Project is delayed beyond the above date for the reasons attributable to the SPD, the applicable transmission charges and losses shall be borne by the SPD. In case the SCD of the Project is before the date till above ISTS waiver is applicable, and if the Project is granted extension in the SCD on account of Force Majeure, or for delay on the part of the transmission provider in providing the transmission even after having taken the requisite steps in time, or on account of delays on the part of any Government Agency, and the Project is commissioned before the extended SCD; it will get benefit of waiver of interstate transmission charges and losses . However, in case the commissioning of the project gets delayed beyond the applicable date of ISTS waiver/extended SCD as above, due to reasons

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attributable to the SPD, the liability of transmission charges and losses would be to the account of the SPD.

4.2 ***Information regarding Interconnection Facilities***

4.2.1 The SPD shall be required to obtain all information from the STU/ CTU/ concerned authority with regard to the Interconnection Facilities as is reasonably necessary to enable it to design, install and operate all interconnection plant and apparatus on the SPD's side of the Delivery Point to enable delivery of electricity at the Delivery Point. The transmission of power up to the point of interconnection where the metering is done for energy accounting shall be the responsibility of the SPD at his own cost.

4.2.2 Penalties, fines and charges imposed by the CTU/ STU under any statute or regulation in relation to delay in commissioning of Project shall be payable by the SPD to the extent the delay is attributable to the SPD.

4.2.3 The responsibility of getting connectivity with the transmission system up to the Interconnection Point, will lie with the SPD. The transmission of power up to the point of interconnection where the metering is done for energy accounting shall be the responsibility of the SPD at his own cost. The maintenance of Transmission system up to the designated point as per the applicable terms and conditions shall be the responsibility of the SPD. All costs and charges including but not limited to the wheeling charges and losses up to and including at the Interconnection Point associated with this arrangement will also be borne by the SPD.

4.2.4 In case of Pooling substation, losses in the transmission line shall be apportioned among the SPDs who share such a Pooling arrangement and duly signed by all SPDs, based on their monthly generation.

4.2.5 The arrangement of connectivity shall be made by the SPD through a dedicated transmission line. The entire cost of transmission including cost of construction of line, any other charges, losses etc. from the Project up to the Interconnection Point will be borne by the SPD. In case of non-availability of Grid and Transmission System during Term of this Agreement, for reasons not attributable to the SPD, provisions of Article 4.10 shall be applicable.

4.2.6 With regard to applicability of ISTS-transmission charges after 31st March 2022, it is clarified that the Project would be eligible for waiver of such charges after 2022, in line with the MNRE directives.

4.3 Purchase and sale of Contracted Capacity

4.3.1 Subject to the terms and conditions of this Agreement, the SPD undertakes to sell to SECI and SECI undertakes to pay Tariff for all the energy supplied at the Delivery Point corresponding to the Contracted Capacity.

4.4 ***Right to Contracted Capacity & Energy***

4.4.1 SECI, in any Contract Year, shall not be obliged to purchase any additional energy from the SPD beyond 631.78 Million kWh (MU). Subsequent to commissioning of the Project, if for any Contract Year, it is found that the SPD has not been able to generate minimum energy of 488.20Million kWh (MU) till the end of 10 years from the SCD and 459.48Million kWh (MU) for the rest of the Term of the Agreement, on account of reasons solely attributable to the SPD, the noncompliance by SPD shall make the SPD liable to pay the compensation provided in the respective PSA as payable to Buying Entity(ies) by Buyer to enable Buyer to remit the amount to Buying Entity(ies). For the first year of operation, the above limits shall be considered on pro-rata basis. In case of part commissioning of the Project, the above limits shall be considered on pro-rata basis till the commissioning of full capacity of the Project. The lower limit will, however be relaxable by Buyer to the extent of grid non-availability for evacuation which is beyond the control of the SPD (as certified by the SLDC/ RLDC). This compensation shall be applied to the amount of shortfall in generation during the Contract Year. The amount of such penalty shall be as determined by the respective State Electricity Regulatory Commission of the corresponding Buying Entity/ any such Authority, and such penalty shall ensure that the Buying Entity(ies) is/ are offset for all potential costs associated with low generation and supply of power under the PPA. However, the minimum compensation payable to SECI by the SPD shall be 25% (twenty-five percent) of the cost of this shortfall in energy terms, calculated at PPA tariff. This compensation shall not be applicable in events of Force Majeure identified under PPA with SECI affecting supply of solar power by SPD.

4.4.2 Any excess generation over and above as per Article 4.4.1, may be purchased by SECI at the 75% of Applicable tariff in term of as per Article 9, provided the Buying Entity consents to purchase such power. While the SPD would be free to reconfigure and repower the Project from time to time during the term of the PPA, it will not be allowed to sell any excess power to any other entity other than SECI (unless refused by SECI). The SPD shall be required to intimate SECI about the proposed excess quantum of energy likely to be generated from the Project within any Contract Year,

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at least 90 days prior to the proposed date of commencement of excess generation. SECI shall be required to intimate its approval/ refusal to the SPD, for buying such excess generation not later than 60 days of receiving the above offer from the SPD. In the event the offer of the SPD is not accepted by SECI within the said period of 60 days, such right shall cease to exist and the SPD shall, at its sole discretion, may sell such excess power to any third party.

However, at any point of time, if the peak of capacity reached is higher than the contracted capacity and causes disturbance in the system, the SPD will have to forego the excess generation and reduce the output to the rated capacity and shall also have to pay the penalty/ charges (if applicable) as per applicable regulations/ requirements/ guidelines of CERC/ SERC/ SLDC or any other competent agency.

Any energy produced and flowing into the grid before Scheduled Commissioning Date shall not be at the cost of SECI. SECI may agree to buy such power at a tariff as agreed to between SECI and the Buying Entity (including SECI's trading margin), provided the Buying Utility consents for purchase of such power.

4.5 ***Extensions of Time***

4.5.1 In the event that the SPD is prevented from performing its obligations under Article 4.1 by the Scheduled Commissioning Date due to:

a) any SECI Event of Default; or

b) Force Majeure Events affecting SECI/ Buying Entity(ies) , or

c) Force Majeure Events affecting the SPD, the Scheduled Commissioning Date and the Expiry Date shall be deferred, subject to Article 4.5.6, for a reasonable period but not less than 'day for day' basis, to permit the SPD or SECI/ Buying Entity(ies) through the use of due diligence, to overcome the effects of the Force Majeure Events affecting the SPD or SECI/ Buying Entity(ies), or till such time such Event of Default is rectified by SECI.

4.5.2 Subsequent to grant of connectivity, in case of delay in grant/ operationalization of LTA by the CTU and/ or delay in readiness of the ISTS substation at the Delivery Point, including readiness of the power evacuation and transmission infrastructure of the ISTS network until SCD of the Project, and it is established that:

(i) The SPD has complied with the complete application formalities as per RfS,

(ii) The SPD has adhered to the applicable Procedure in this regard as notified by the CERC/ CTU, and

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(iii) The delay in grant of connectivity/ LTA by the CTU and/ or delay in readiness of the ISTS substation at the Delivery Point, including readiness of the power evacuation and transmission infrastructure of the ISTS network, is a factor attributable to the CTU/ transmission licensee and is beyond the control of the SPD;

The above shall be treated as delays beyond the control of the SPD and SCD shall be extended (without any financial implication to the SPD) for such Projects SCD shall be 60th day from the date of operationalization of LTA.

4.5.3 In case of extension due to reasons specified in Article 4.5.1(b) and (c), and if such Force Majeure Event continues even after a maximum period of 180 days from the date of the Force Majeure Notice, any of the Parties may choose to terminate the Agreement as per the provisions of Article 13.5. In case neither party terminates the agreement under this clause, the agreement shall stand terminated on the expiry of twelve (12) months of the continuation of the Force majeure event unless the parties mutually agree to extend the agreement for the further period.

4.5.4 If the Parties have not agreed, within thirty (30) days after the affected Party's performance has ceased to be affected by the relevant circumstance, on the time period by which the Scheduled Commissioning Date or the Expiry Date should be deferred, any Party may raise the Dispute to be resolved in accordance with Article 16.

4.5.5 As a result of such extension on account of Article 4.5.1 or Article 4.5.2, the newly determined Scheduled Commissioning Date and newly determined Expiry Date shall be deemed to be the Scheduled Commissioning Date and the Expiry Date for the purposes of this Agreement.

4.5.6 Notwithstanding anything to the contrary contained in this Agreement, any extension of the Scheduled Commissioning Date arising due to any reason envisaged in this Agreement shall not be allowed beyond the date pursuant to Article 4.6.2.

4.5.7 Delay in commissioning of the project beyond the scheduled commissioning date for reasons other than those specified in Article 4.5.1 & Article 4.5.2 shall be an event of default on part of the SPD and shall be subject to the consequences specified in the Article 4.6.

4.6 Liquidated Damages not amounting to penalty for delay in Commissioning

4.6.1 If the SPD is unable to commission the Project by the Scheduled Commissioning Date other than for the reasons specified in Article 4.5.1 and 4.5.2, the SPD shall pay to

SECI, damages for the delay in such commissioning and making the Contracted Capacity available for dispatch by the Scheduled Commissioning Date as per the following:

(a) Delay beyond the Scheduled Commissioning Date upto (& including) the date as on 12 months from the Scheduled Commissioning Date (SCD), i.e., 09.12.2024: For the uncommissioned capacity, the PPA tariff discovered after reverse auction for setting up of Solar Power Plant shall be reduced at the rate of Rs. 0.0005 kWh per day of delay until 12 (Twelve) months from SCD.

Delay beyond 12 months from SCD: The PBG shall be encashed on pro-rata basis @ Rs. 5 Lacs/ MW for the un-commissioned capacity.

4.6.2 The maximum time period allowed for commissioning of the full Project Capacity with tariff reduction shall be limited to 12 months from SCD. In case, the Commissioning of the Project is delayed beyond 12 months from SCD, it shall be considered as an SPD Event of Default and the Contracted Capacity shall stand reduced/ amended to the Project Capacity Commissioned within 12 months of SCD, and the PPA for the balance Capacity will stand terminated and shall be reduced from the project capacity.

4.6.3 The SPD further acknowledges that the amount of the liquidated damages fixed is genuine and reasonable pre-estimate of the damages that may be suffered by SECI/ Buying entity(s) as specified under this Agreement or in the PSA.

4.7 Acceptance/ Performance Test

4.7.1 Prior to synchronization of the Power Project, the SPD shall be required to get the Project certified for the requisite acceptance/ performance test as may be laid down by Central Electricity Authority or an agency identified by the central government to carry out testing and certification for the Solar power projects.

4.8 Third Party Verification

4.8.1 The SPD shall be further required to provide entry to the site of the Power Project free of all encumbrances at all times during the Term of the Agreement to SECI and a third Party nominated by any Indian Governmental Instrumentality for inspection and verification of the works being carried out by the SPD at the site of the Power Project.

4.8.2 The third party may verify the construction works/ operation of the Power Project being carried out by the SPD and if it is found that the construction works/operation of the Power Project is not as per the Prudent Utility Practices, it may seek clarifications

from SPD or require the works to be stopped or to comply with the instructions of such third party.

4.9 Breach of Obligations

4.9.1 The Parties herein agree that during the subsistence of this Agreement, subject to SECI being in compliance of its obligations & undertakings under this Agreement, the SPD would have no right to negotiate or enter into any dialogue with any third party for the sale of Contracted Capacity of power which is the subject matter of this Agreement. It is the specific understanding between the Parties that such bar will apply throughout the entire term of this Agreement.

4.10 Generation compensation for Off-take constraints

4.10.1 Generation Compensation in offtake constraint due to Transmission Infrastructure not complete/ ready (Transmission constraint): After the Scheduled Commissioning Date, subject to the submission of documentary evidences from the Competent Authority, if the plant is ready in all respects including the dedicated transmission line to be established by the SPD to connect to the grid but the necessary power evacuation/ transmission infrastructure is not ready, for reasons not attributable to the SPD, leading to offtake constraint, the generation compensation shall be restricted to the following and there shall be no other claim, directly or indirectly against SECI:

Transmission Constraint	**Provision for Generation Compensation**
If the Project is ready but the necessary power evacuation/transmission infrastructure is not ready, leading to offtake constraint	a. The normative CUF of 19% (nineteen per cent) or committed CUF, whichever is lower, for the period of grid unavailability, shall be taken for the purpose of calculation of generation loss. Corresponding to this generation loss, the excess generation by the SPD in the succeeding 3 (three) Contract Years, shall be procured by SECI at the PPA tariff so as to offset this loss. b. If the transmission delay is directly attributable to the organization building the transmission network and some penalty is imposed on him, then a part of that penalty may be utilized by SECI for compensating the generation loss.

However, it is clarified that if the project is ready for commissioning prior to the Scheduled Commissioning Date, but the offtake is constrained because of inadequate/incomplete power evacuation infrastructure, no compensation shall be permissible.

4.10.2 Generation Compensation in offtake constraints due to Grid Unavailability: During the operation of the plant, there can be some periods where the Project can generate power but due to temporary transmission unavailability, the power is not evacuated, for reasons not attributable to the Solar Power Developer. In such cases, subject to the submission of documentary evidences from the competent authority, the generation compensation shall be restricted to the following and there shall be no other claim, directly or indirectly against SECI:

Duration of Grid unavailability	**Provision for Generation Compensation**
Grid unavailability in a contract year as defined in the PPA: (only period from 8 am to 6 pm to be counted):	***Generation Loss = [(Average Generation per hour during the Contract Year) × (number of hours of grid unavailability during the Contract Year)]*** Where, Average Generation per hour during the Contract Year (kWh) = Total generation in the Contract Year (kWh) ÷ Total hours of generation in the Contract Year.

The excess generation by the SPD equal to this generation loss shall be procured by SECI at the PPA tariff so as to offset this loss in the succeeding 3 (three) Contract Years.

4.10.3 Offtake constraints due to Backdown: The Solar Power Developer and Buying Entity shall follow the forecasting and scheduling process as per the regulations in this regard by the Appropriate Commission. The Government of India, as per Clause 5.2(u) of the Indian Electricity Grid Code (IEGC), encourages a status of "must-run" to solar power projects. Accordingly, no solar power plant, duly commissioned, should be directed to back down by a Discom/ Load Dispatch

Centre (LDC). In the eventuality of backdown, including backdown on account of non-dispatch of power due to non-compliance with "Order No. 23/22/2019-R&R dated 28.06.2019 of Ministry of Power regarding Opening and maintaining of adequate Letter of Credit (LC) as Payment Security Mechanism under Power Purchase Agreements by Distribution Licensees" and any clarifications or amendment thereto, except for the cases where the Backdown is on account of events like consideration of grid security or safety of any equipment or personnel or other such conditions, subject to the submission of documentary evidences from the competent authority, the SPD shall be eligible for a minimum generation compensation, from Buying Entity, restricted to the following and there shall be no other claim, directly or indirectly against SECI:

Duration of Backdown	**Provision for Generation Compensation**
Hours of Backdown during a monthly billing cycle.	***Generation Compensation = 100% of [(Average Generation per hour during the month) X (number of backdown hours during the month)] X PPA tariff*** Where, Average Generation per hour during the month (kWh) = Total generation in the month (kWh) ÷ Total hours of generation in the month

The SPD shall not be eligible for any compensation in case the Backdown is on account of events like consideration of grid security or safety of any equipment or personnel or other such conditions.

The Generation Compensation shall be paid as part of the energy bill for the successive month after receipt of Regional Energy Accounts (REA)/ SEA/ JMR. No Trading Margin shall be applicable on the Generation Compensation as provided in Article 4.10.3 only. It is hereby clarified that for the purpose of Article 4.10, "generation" shall mean scheduled energy based on Energy Accounts.

ARTICLE 5: SYNCHRONISATION, COMMISSIONING AND COMMERCIAL OPERATION

5.1 Synchronization, Commissioning and Commercial Operation

5.1.1 The SPD shall give the concerned RLDC/ SLDC and SECI and also Buying Entity at least sixty (60) days' advanced preliminary written notice and at least thirty (30) days' advanced final written notice, of the date on which it intends to synchronize the Power Project to the Grid System.

5.1.2 Subject to Article 5.1.1, the Power Project may be synchronized by the SPD to the Grid System when it meets all the connection conditions prescribed in applicable Grid Code then in effect and otherwise meets all other Indian legal requirements for synchronization to the Grid System.

5.1.3 The synchronization equipment and all necessary arrangements/ equipment including RTU for scheduling of power generated from the Project and transmission of data to the concerned authority as per applicable regulation shall be installed by the SPD at its generation facility of the Power Project at its own cost. The SPD shall synchronize its system with the Grid System only after the approval of synchronization scheme is granted by the head of the concerned substation/ Grid System and checking/verification is made by the concerned authorities of the Grid System.

5.1.4 The SPD shall immediately after each synchronization/ tripping of generator, inform the sub-station of the Grid System to which the Power Project is electrically connected in accordance with applicable Grid Code under intimation to SECI. In addition, the SPD will inject in-firm power to grid time to time to carry out operational/ functional test prior to commercial operation. For avoidance of doubt, it is clarified that Synchronization/ Connectivity of the Project with the grid shall not to be considered as Commissioning of the Project.

5.1.5 The SPD shall commission the Project as detailed in "Schedule 6: Commissioning Procedure" within Twenty Four (24) Months of the Effective Date. Declaration of COD/ UCOD shall only be done subject to the demonstration of the compliances as per Schedule-6 including possession of land as per provisions of this Agreement and RfS Document and subsequent upon the successful visit by the Commissioning Committee.

5.1.6 There can be part Commissioning of the project. Part commissioning of the project shall mean that all equipment corresponding to the part capacity have been installed and commissioned and corresponding energy has flown into the grid.

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5.1.7 The Parties agree that for the purpose of commencement of the supply of electricity by SPD to SECI, liquidated damages for delay etc., the Scheduled Commissioning Date as defined in this Agreement shall be the relevant date.





ARTICLE 6: DISPATCH AND SCHEDULING

6.1 Dispatch and Scheduling

6.1.1 The SPD shall be required to schedule its power as per the applicable regulations/ requirements/ guidelines of CERC/ SERC/ SLDC/ RLDC or any other competent agency and same being recognized by the SLDC or any other competent authority/ agency as per applicable regulation/ law/ direction and maintain compliance to the applicable Codes/ Grid Code requirements and directions, if any, as specified by concerned SLDC/ RLDC from time to time. Any deviation from the Schedule will attract the provisions of applicable regulation/ guidelines/ directions and any financial implication on account of this shall be on the account of the SPD.

6.1.2 The SPD shall be responsible for directly coordinating and dealing with the Buying Entity, State Load Dispatch Centre's, Regional Power Committees, and other authorities in all respects in regard to declaration of availability, scheduling and dispatch of Solar Power and due compliance with deviation and settlement mechanism and the applicable Grid code Regulations, acknowledging that the SPD and Buying Entity are the Grid connected entities and SECI as an intermediary procurer/ trading licensee is not a Grid connected entity in respect of the Solar Power contracted under this Agreement.

6.1.3 The SPD shall be responsible for any deviation from scheduling and for any resultant liabilities on account of charges for deviation as per applicable regulations. UI charges on this account shall be directly paid by the SPD.

6.1.4 Auxiliary power consumption will be treated as per the concern state regulations.

6.1.5 As part of scheduling of power from the Project, the SPD will be required to punch-in their respective schedules and subsequent revisions, by themselves, at the interfaces of all the RLDCs concerned for the corridor of power flow, including the RLDC of the Buying Entity/Discom, as per the Regulations in force, under intimation to SECI. The SPD shall be solely responsible for discrepancy identification and its rectification to avoid any rejection/less payment of invoices without any liability on SECI.

ARTICLE 7: METERING

7.1 *Meters*

7.1.1 For installation of Meters, Meter testing, Meter calibration and Meter reading and all matters incidental thereto, the SPD and SECI shall follow and be bound by the Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006, the Grid Code, as amended and revised from time to time.

7.1.2 The SPD shall bear all costs pertaining to installation, testing, calibration, maintenance, renewal and repair of meters at SPD's side of Delivery Point.

7.1.3 In addition to ensuring compliance of the applicable codes, the SPD shall install Main & Check meters at the Delivery Point, along with Stand-by meter(s) as per the applicable Central/ State regulations.

7.1.4 In case of pooling of multiple Projects, power from multiple Projects can be pooled at a Pooling Substation prior to the Delivery point and the combined power can be fed at Delivery point through a common transmission line from the Pooling Substation. In such cases, ABT compliant sub-meters (two meters, each with separate CT, PT) are also to be set up at pooling substation for individual projects in addition to the meters at Delivery Point as described in clause 7.1.3.

7.2 Reporting of Metered Data and Parameters

7.2.1 The grid connected Solar PV power plants will install necessary equipment for regular monitoring of solar irradiance (including GHI, DHI and solar radiation in the module plane), ambient air temperature, wind speed and other weather parameters and simultaneously for monitoring of the electric power (both DC and AC) generated from the Project.

7.2.2 Online arrangement would have to be made by the SPD for submission of above data regularly for the entire period of this Power Purchase Agreement to the SLDC, SECI and the concerned Ministry or concerned agency as per applicable regulation/ directions.

7.2.3 Reports on above parameters on monthly basis (or as required by regulation/ guidelines) shall be submitted by the SPD to Ministry of New and Renewable Energy/ SECI/ National Institute of Solar Energy through SECI for entire period of PPA.

ARTICLE 8: INSURANCES

8.1 ***Insurance***

8.1.1 The SPD shall effect and maintain or cause to be effected and maintained, at its own cost and expense, throughout the Term of PPA, Insurances against such risks to keep the Project in good condition and shall take Industrial All Risk insurance policy covering risks against any loss or damage, with such deductibles and with such endorsements and co-insured(s), which the Prudent Utility Practices would ordinarily merit maintenance of and as required under the Financing Agreements, Implementation and Support Agreement and under the applicable laws.

8.2 ***Application of Insurance Proceeds***

8.2.1 In case of the Project not being implemented through Financing Agreement(s), save as expressly provided in this Agreement or the Insurances, the proceeds of any insurance claim made due to loss or damage to the Power Project or any part of the Power Project shall be first applied to reinstatement, replacement or renewal of such loss or damage.

In case of the Project being financed through Financing Agreement(s), save as expressly provided in this Agreement or the Insurances, the proceeds of any insurance claim made due to loss or damage to the Power Project or any part of the Power Project shall be applied as per such Financing Agreements.

8.2.2 If a Force Majeure Event renders the Power Project no longer economically and technically viable and the insurers under the Insurances make payment on a "total loss" or equivalent basis, SECI shall have claim on such proceeds of such Insurance limited to outstanding dues of SECI against the Buying Utility(ies) as per PSA entered into and any other dues of the Buying Utility(ies) against SPD.

8.3 ***Effect on liability of SECI***

8.3.1 Notwithstanding any liability or obligation that may arise under this Agreement, any loss, damage, liability, payment, obligation or expense which is insured or not or for which the SPD can claim compensation, under any Insurance shall not be charged to or payable by Buyer. It is for the SPD to ensure that appropriate insurance coverage is taken for payment by the insurer for the entire loss and there is no under insurance or short adjustment etc.

ARTICLE 9: APPLICABLE TARIFF

9.1 (i) The SPD shall be entitled to receive the Tariff of Rs. 2.54 / kWh, fixed for the entire term of this Agreement, with effect from the SCD, for the power sold by the Buyer to the Buying Entity for the scheduled energy as reflected in the Energy Accounts. In case of early part-commissioning, till SCD, subject to the consent for such purchase by the Buying Utility, SECI may purchase the generation @ 75% (seventy-five per cent) of the PPA tariff. However, in case the entire Project capacity is commissioned prior to SCD, SECI may purchase energy supplied till SCD at Rs. 2.54 / kWh.

(ii) In case, the MCOD of the Solar Manufacturing Plant is delayed beyond Scheduled MCD as per the Manufacturing Contract Agreement, the tariff as mentioned at Article 9.1 (i) shall be reduced by INR 0.18/kWh Accordingly, any recovery, applicable on such cases shall be done by SECI along with interest equivalent to the applicable late payment surcharge rate on per day basis. However, in case of any reduction in tariff in line with the terms of the PPA, same shall be passed on to the Buying Entity.

9.2 Any excess generation over and above energy specified in Article 4.4.1, will be purchased by SECI at a tariff of 75% of the tariff as per Article 9.1, provided the Buying Entity consents for purchase of such excess generation. Any energy produced and flowing into the grid before SCD shall not be at the cost of SECI. SECI may agree to buy such power provided Buying Entity consents to purchase such energy. However, the SPD will not be allowed to sell energy generated prior to SCD or excess energy during any Contract Year to any other entity other than SECI (unless refused by SECI).

ARTICLE 10: BILLING AND PAYMENT

10.1 *General*

10.1.1 Subject to the funds being made available by MNRE, SECI shall set up a payment security fund in order to ensure timely payment to the SPDs. This fund will have a corpus to cover 3 months' payment.

10.1.2 From the commencement of supply of power, SECI shall pay to the SPD the monthly Tariff Payments subject to the adjustments as per provisions of this Agreement including Article 6, in accordance with Article 9. All Tariff Payments by SECI shall be in Indian Rupees.

10.1.3 For the purpose of payment of the bills raised by the SPD(s), in case Energy Account is published on cumulative basis, payment to the SPD(s) for the energy delivered shall be apportioned based on JMR taken for the SPD's Project at the Pooling substation/metering point.

10.1.4 The SPD shall be required to make arrangements and payments for import of energy (if any) as per applicable regulations.

10.2 ***Delivery and Content of Monthly Bills/ Supplementary Bills***

10.2.1 The SPD shall issue to SECI hard copy of a signed Monthly Bill/ Supplementary Bill for the immediately preceding Month/ relevant period based on the issuance of Energy Accounts along with all relevant documents (payments made by SPD for drawal of power, payment of reactive energy charges, Metering charges or any other charges as per guidelines of SERC/ CERC, if applicable.

Each Monthly Bill shall include all charges as per this Agreement for the energy supplied for the relevant Month based on Energy Accounts issued by RPC or any other competent authority which shall be binding on both the Parties. The Monthly Bill amount shall be the product of the energy as per Energy Accounts and the Applicable Tariff. Energy drawn from the grid will be regulated as per the regulations of respective State the Project is located in.

10.2.2 As per applicable regulation(s) of the Appropriate Commission(s)/ respective SERC(s), all charges pertaining to obtaining open access and scheduling of power, if any, shall be borne by the SPD.

10.3 ***Payment of Monthly Bills***

10.3.1 SECI shall pay the amount payable under the Monthly Bill/ Supplementary Bill by the Due Date to such account of the SPD, as shall have been previously notified by the SPD in accordance with Article 10.3.2 iii) below.

10.3.2 All payments required to be made under this Agreement shall also include any deduction or set off for:

i) deductions required by the Law; and

ii) amount claimed by SECI, if any, from the SPD, will be adjusted from the monthly energy payment. In case of any excess payment adjustment, 1.25% per month surcharge will be applicable on day to day basis.

The SPD shall open a bank account (the "SPD's Designated Account") for all Tariff Payments (including Supplementary Bills) to be made by SECI to the SPD, and notify SECI of the details of such account at least ninety (90) Days before the dispatch of the first Monthly Bill. SECI shall also designate a bank account at New Delhi ("SECI Designated Account") for payments to be made by the SPD to SECI, if any, and notify the SPD of the details of such account ninety (90) Days before the Scheduled Commissioning Date. SECI and the SPD shall instruct their respective bankers to make all payments under this Agreement to the SPD's Designated Account or SECI's Designated Account, as the case may be, and shall notify either Party of such instructions on the same day.

10.3.3 Late Payment Surcharge

In the event of delay in payment of a Monthly Bill by SECI beyond 30 days after due date, a Late Payment Surcharge (LPS) shall be payable by SECI to SPD on the outstanding payment, at the base rate of Late Payment Surcharge applicable for the period for the first month of default. "Base rate of Late Payment Surcharge" means the marginal cost of funds based lending rate for one year of the State Bank of India, as applicable on the 1st April of the financial year in which the period lies, plus five percent (500 bps) and in the absence of marginal cost of funds based lending rate, any other arrangement that substitutes it, which the Central Government may, by notification, in the Official Gazette, specify: The Late Payment Surcharge shall be claimed by SPD through the Supplementary Bill. Late Payment Surcharge shall be

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payable on the outstanding Payment beyond 30 days of its due date at the base rate of Late Payment Surcharge applicable for the period for the first month of default. The rate of Late Payment Surcharge for the successive months of default shall increase by 0.5 percent (50 bps) for every month of delay provided that the Late Payment Surcharge shall not be more than 3 percent higher than the base rate at any time.

a) Provided that the rate at which Late Payment Surcharge shall be payable shall not be higher than 1.25% per month at any time for purchase of power.

(b) If the period of default lies in two or more financial years, the base rate of Late Payment Surcharge shall be calculated separately for the periods falling in different years.

(c) The above payment will be made by SECI subject to such late payment surcharge being duly received by SECI under the PSA from the Buying Entity (ies).

10.3.4 Subject to the Article 9 of this Agreement, in the event of early Commissioning of the Project and subject to acceptance by SECI, the payment for the power fed to the grid may be accounted from the date of UCOD, but SPD would be allowed to raise Bills against such power only from the Scheduled Commissioning Date or UCOD whichever is later subject to the conditions as stipulated in Article 9.

10.3.5 **Rebate**

For payment of any Bill on or before Due Date, the following Rebate shall be paid by the SPD to SECI in the following manner.

a) A Rebate of 2% shall be payable to the SECI for the payments made within a period of 10 (ten) days of the presentation of hard copy of Bill along with required supporting documents at SECI office.

b) Any payments made after ten (10) days of the date of presentation of hard copy of the Bill along with the required supporting documents at SECI office up to the Due Date shall be allowed a rebate of 1 %.

c) For the above purpose, the date of presentation of Bill shall be the next Business Day of delivery of the physical copy of the Bill at SECI.

d) No Rebate shall be payable on the Bills raised on account of Change in Law relating to taxes, duties, cess etc. and on Supplementary Bill.

For the above purpose date of presentation of bill shall be the same day of delivery in hard copy. However, for consideration of rebate, next business day shall be considered.

10.4 **Payment Security Mechanism**

Letter of Credit (LC):

10.4.1 Subject to opening and maintenance of Letter of Credit by the Buying Entities (as per terms of SECI-Buying Entity PSA) in favour of the Buyer, the SECI shall provide to the SPD, in respect of payment of its Monthly Bills and/or Supplementary Bills, a monthly unconditional, revolving and irrevocable letter of credit ("Letter of Credit"), opened and maintained which may be drawn upon by the SPD in accordance with this Article.

10.4.2 Subject to Article 10.4.1, not later than one (1) Month before the start of supply, SECI through a scheduled bank open a Letter of Credit in favour of the SPD, to be made operative from a date prior to the Due Date of its first Monthly Bill under this Agreement. The Letter of Credit shall have a term of twelve (12) Months and shall be renewed annually, for an amount equal to:

i) for the first Contract Year, equal to 110% of the estimated average monthly billing;
ii) for each subsequent Contract Year, equal to 110% of the average of the monthly billing of the previous Contract Year.

10.4.3 Provided that the SPD shall not draw upon such Letter of Credit prior to the Due Date of the relevant Monthly Bill and/or Supplementary Bill, and shall not make more than one drawal in a Month.

10.4.4 Provided further that if at any time, such Letter of Credit amount falls short of the amount specified in Article 10.4.2 due to any reason whatsoever, SECI shall restore such shortfall within fifteen (15) days.

10.4.5 SECI shall cause the scheduled bank issuing the Letter of Credit to intimate the SPD, in writing regarding establishing of such irrevocable Letter of Credit.

10.4.6 SECI shall ensure that the Letter of Credit shall be renewed not later than its expiry.

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10.4.7 All costs relating to opening, maintenance of the Letter of Credit shall be borne by SECI/ SPD.

10.4.8 If SECI fails to pay undisputed Monthly Bill or Supplementary Bill or a part thereof within and including the Due Date, then, subject to Article 10.4.6 & 10.5.2, the SPD may draw upon the Letter of Credit, and accordingly the bank shall pay without any reference or instructions from SECI, an amount equal to such Monthly Bill or Supplementary Bill or part thereof, in accordance with Article 10.4.3 above, by presenting to the scheduled bank issuing the Letter of Credit, the following documents:

i) a copy of the Monthly Bill or Supplementary Bill which has remained unpaid to SPD and;

ii) a certificate from the SPD to the effect that the bill at item (i) above, or specified part thereof, is in accordance with the Agreement and has remained unpaid beyond the Due Date;

10.5 Disputed Bill

10.5.1 If the SECI does not dispute a Monthly Bill or a Supplementary Bill raised by the SPD within fifteen (15) days of receiving such Bill shall be taken as conclusive.

10.5.2 If the SECI disputes the amount payable under a Monthly Bill or a Supplementary Bill, as the case may be, it shall pay 50% of the invoice amount and it shall within fifteen (15) days of receiving such Bill, issue a notice (the "Bill Dispute Notice") to the invoicing Party setting out:

i) the details of the disputed amount;

ii) its estimate of what the correct amount should be; and

iii) all written material in support of its claim.

10.5.3 If the SPD agrees to the claim raised in the Bill Dispute Notice issued pursuant to Article 10.5.2, the SPD shall revise such Bill and present along with the next Monthly Bill. In such a case excess amount shall be refunded along with interest at the same

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rate as Late Payment Surcharge, which shall be applied from the date on which such excess payment was made by the disputing Party to the invoicing Party and up to and including the date on which such payment has been received as refund.

10.5.4 If the SPD does not agree to the claim raised in the Bill Dispute Notice issued pursuant to Article 10.5.2, it shall, within fifteen (15) days of receiving the Bill Dispute Notice, furnish a notice (Bill Disagreement Notice) to the SECI providing:

i) reasons for its disagreement;

ii) its estimate of what the correct amount should be; and

iii) all written material in support of its counter-claim.

10.5.5 Upon receipt of the Bill Disagreement Notice by the SECI under Article 10.5.4, authorized representative(s) or a director of the board of directors/ member of board of the SECI and SPD shall meet and make best endeavors to amicably resolve such dispute within fifteen (15) days of receipt of the Bill Disagreement Notice.

10.5.6 If the Parties do not amicably resolve the Dispute within fifteen (15) days of receipt of Bill Disagreement Notice pursuant to Article 10.5.4, the matter shall be referred to Dispute resolution in accordance with Article 16.

10.5.7 For the avoidance of doubt, it is clarified the despite a Dispute regarding an invoice, SECI shall, without prejudice to its right to Dispute, be under an obligation to make payment of 50% of the invoice amount in the Monthly Bill.

10.6 Quarterly and Annual Reconciliation

10.6.1 The Parties acknowledge that all payments made against Monthly Bills and Supplementary Bills shall be subject to quarterly reconciliation within 30 days of the end of the quarter at the beginning of the following quarter of each Contract Year and annual reconciliation at the end of each Contract Year within 30 days to take into account the Energy Accounts, Tariff adjustment payments, Tariff Rebate, Late Payment Surcharge, or any other reasonable circumstance provided under this Agreement.

10.6.2 The Parties, therefore, agree that as soon as all such data in respect of any quarter of a Contract Year or a full Contract Year as the case may be has been finally verified and

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adjusted, the SPD and SECI shall jointly sign such reconciliation statement. Within fifteen (15) days of signing of a reconciliation statement, the SPD shall make appropriate adjustments in the next Monthly Bill. Late Payment Surcharge/ interest shall be payable in such a case from the date on which such payment had been made to the invoicing Party or the date on which any payment was originally due, as may be applicable. Any Dispute with regard to the above reconciliation shall be dealt with in accordance with the provisions of Article 16.

10.7 ***Payment of Supplementary Bill***

10.7.1 SPD may raise a ("Supplementary Bill") for payment on account of:

i) Adjustments required by the Energy Accounts (if applicable); or

ii) Change in Law as provided in Article 12, or

iii) Payment under Article 4.10, And such Supplementary Bill shall be paid by the other Party.

10.7.2 SECI shall remit all amounts due under a Supplementary Bill raised by the SPD to the SPD's Designated Account by the Due Date, except open access charges, RLDC or scheduling charges and transmission charges (if applicable). For Supplementary Bill on account of adjustment required by energy account and payments under Article 4.10, Rebate as applicable to Monthly Bills pursuant to Article 10.3.5 shall equally apply. Payment will be made after realization of the same from the Buying Utility. No surcharge will be applicable other than that on the monthly energy payment and associated debit and credit note.

10.7.3 In the event of delay in payment of a Supplementary Bill by either Party beyond its Due Date, a Late Payment Surcharge shall be payable at the same terms applicable to the Monthly Bill in Article 10.3.3.

ARTICLE 11: FORCE MAJEURE

11.1 *Definitions*

11.1.1 In this Article, the following terms shall have the following meanings:

11.2 *Affected Party*

11.2.1 An affected Party means SECI or the SPD whose performance has been affected by an event of Force Majeure.

11.3 *Force Majeure*

A 'Force Majeure' (FM) would mean one or more of the following acts, events or circumstances or a combination of acts, events or circumstances or the consequence(s) thereof as specified below, that wholly or partly prevents or unavoidably delays the performance by the Party (the Affected Party) of its obligations under the relevant Power Purchase Agreement, but only if and to the extent that such events or circumstances are not within the reasonable control, directly or indirectly, of the Affected Party and could not have been avoided if the Affected Party had taken reasonable care or complied with Prudent Utility Practices:

11.3.1 Categorization of Force Majeure Events:

11.3.1.1 **Natural Force Majeure Event**

a) Act of God, including, but not limited to lightning, drought, fire and explosion (to the extent originating from a source external to the site), earthquake, volcanic eruption, landslide, flood, cyclone, typhoon or tornado if it is declared/ notified by the competent state/ central authority/ agency (as applicable), or verified to the satisfaction of Procurer;

b) radioactive contamination or ionising radiation originating from a source in India or resulting from another Force Majeure Event mentioned above excluding circumstances where the source or cause of contamination or radiation is brought or has been brought into or near the Power Project by the Affected Party or those employed or engaged by the Affected Party;

c) the discovery of geological conditions, toxic contamination or archaeological remains on the Project land that could not reasonably have been expected to be discovered through an inspection of the Project land; or

d) any event or circumstances of a nature analogous to any of the events as specified under Article 11.3.1.1 (a), 11.3.1.1 (b) and 11.3.1.1 (c).

11.3.1.2 **Non-Natural Force Majeure Event**

a) any act of war (whether declared or undeclared), invasion, armed conflict or act of foreign enemy, blockade, embargo, revolution, riot, insurrection, terrorist or military action

b) nation/ state-wide strike, lockout, boycotts or other industrial disputes which are not directly and solely attributable to the actions of the Affected Party, but does not include strike or labour unrest limited to the Affected Party or its contractors;

c) nationalisation or any compulsory acquisition by any Indian Governmental Instrumentality/ State Government in national interest or expropriation of any material Project assets or rights of the Generator, as a result of which the Generator or its shareholders are deprived (wholly or partly) of their rights or entitlements under the Power Purchase Agreement. Provided that such action does not constitute remedies or sanctions lawfully excised by the Procurer or any other Government Authority as a result of any breach of any of the Applicable Laws or the Applicable Permits by the Generator or the Generator related parties.

d) action of a Government Authority having Material Adverse Effect including but not limited to change in law, only if consequences thereof cannot be dealt with under and in accordance with the provisions of Article 12 of this Agreement; any unlawful or unauthorised or without jurisdiction revocation of, or refusal, or failure to renew or grant without valid cause, any Permits of the Generator or any of the clearance, licence, authorization to be obtained by the Contractors to perform their respective obligations under the relevant PPA; provided that such delay, modification, denial, refusal or revocation did not result from the Generator's or any Contractors inability or failure to comply with any condition

relating to grant, maintenance or renewal of such Permits or clearance, licence, authorization, as the case may be.

11.4 ***Force Majeure Exclusions***

11.4.1 Force Majeure shall not include (i) any event or circumstance which is within the reasonable control of the Parties and (ii) the following conditions, except to the extent that they are consequences of an event of Force Majeure:

a. Unavailability, late delivery, or changes in cost of the plant, machinery, equipment, materials, spare parts or consumables for the Power Project;

b. Delay in the performance of any contractor, sub-contractor or their agents;

c. Non-performance resulting from normal wear and tear typically experienced in power generation materials and equipment;

d. Strikes at the facilities of the Affected Party;

e. Insufficiency of finances or funds or the agreement becoming onerous to perform; and

f. Non-performance caused by, or connected with, the Affected Party's:

i. Negligent or intentional acts, errors or omissions;
ii. Failure to comply with an Indian Law; or
iii. Breach of, or default under this Agreement.

11.5 ***Notification of Force Majeure Event***

11.5.1 The Affected Party shall give notice to the other Party of any event of Force Majeure as soon as reasonably practicable, but not later than seven (7) days after the date on which such Party knew or should reasonably have known of the commencement of the event of Force Majeure. If an event of Force Majeure results in a breakdown of communications rendering it unreasonable to give notice within the applicable time limit specified herein, then the Party claiming Force Majeure shall give such notice as soon as reasonably practicable after reinstatement of communications, but not later than one (1) day after such reinstatement.

11.5.2 Provided that such notice shall be a pre-condition to the Affected Party's entitlement to claim relief under this Agreement. Such notice shall include full particulars of the event of Force Majeure, its effects on the Party claiming relief and the remedial measures proposed. The Affected Party shall give the other Party regular (and not less than monthly) reports on the progress of those remedial measures and such other information as the other Party may reasonably request about the Force Majeure Event.

11.5.3 The Affected Party shall give notice to the other Party of (i) the cessation of the relevant event of Force Majeure; and (ii) the cessation of the effects of such event of Force Majeure on the performance of its rights or obligations under this Agreement, as soon as practicable after becoming aware of each of these cessations.

11.6 Performance Excused, *Duty to Perform and Duty to Mitigate*

11.6.1 To the extent not prevented by a Force Majeure Event pursuant to Article 11.3, the Affected Party shall continue to perform its obligations pursuant to this Agreement. The Affected Party shall use its reasonable efforts to mitigate the effect of any Force Majeure Event as soon as practicable.

11.6.2 The Affected Party, to the extent rendered unable to perform its obligations or part of the obligation thereof under the PPA as a consequence of the Force Majeure Event, shall be excused from performance of the obligations, provided that the period shall not exceed 180 (one hundred and eighty) Days for the Force Majeure Event from the date of issuance of the FM Notice. The Parties may mutually agree to extend the period for which performance is excused due to a Force Majeure Event

11.6.3. The time period, as mutually agreed by the Parties, during which the performance shall be excused, the SPD shall be entitled for a day to day extension of the period provided for Financial Closure or Scheduled Commissioning Period or the PPA period, as the case may be.

11.6.4. Provided always that a Party shall be excused from performance only to the extent reasonably warranted by the Force Majeure Event

11.6.5. Provided further that, nothing shall absolve the Affected Party from any payment obligations accrued prior to the occurrence of the underlying Force Majeure Event.

11.6.7 Save as otherwise provided in this Agreement, NO Party shall be liable in any manner, whatsoever, to the other Parties in respect of any Loss relating to or arising out of the occurrence or existence of any Force Majeure Event.

11.7 ***Available Relief for a Force Majeure Event***

11.7.1 Subject to this Article 11:

(a) no Party shall be in breach of its obligations pursuant to this Agreement except to the extent that the performance of its obligations was prevented, hindered or delayed due to a Force Majeure Event;

(b) every Party shall be entitled to claim relief in relation to a Force Majeure Event in regard to its obligations, including but not limited to those specified under Article 4.5;

(c) For avoidance of doubt, neither Party's obligation to make payments of money due and payable prior to occurrence of Force Majeure events under this Agreement shall be suspended or excused due to the occurrence of a Force Majeure Event in respect of such Party.

(d) Provided that no payments shall be made by either Party affected by a Force Majeure Event for the period of such event on account of its inability to perform its obligations due to such Force Majeure Event.

ARTICLE 12: CHANGE IN LAW

12.1 *Definitions*

In this Article 12, the following terms shall have the following meanings:

In this Article 12, the term Change in Law shall refer to the occurrence of any of the following events pertaining to this project only after the last date of the bid submission, including (i) the enactment of any new law; or (ii) an amendment, modification or repeal of an existing law; or (iii) the requirement to obtain a new consent, permit or license; or (iv) any modification to the prevailing conditions prescribed for obtaining an consent, permit or license, not owing to any default of the Solar Power Generator; or (v) any change in the rates of any Taxes including any duties and cess or introduction of any new tax made applicable for setting up the solar power project and supply of power from the Solar Power project by the SPD which have a direct effect on the Project.

However, Change in Law shall not include (i) any change in taxes on corporate income or (ii) any change in any withholding tax on income or dividends distributed to the shareholders of the SPD, or (iii) any change on account of regulatory measures by the Appropriate Commission.

In the event a Change in Law results in any adverse financial loss/ gain to the Solar Power Generator then, in order to ensure that the Solar Power Generator is placed in the same financial position as it would have been had it not been for the occurrence of the Change in Law, the Solar Power Generator/ Procurer shall be entitled to compensation by the other party, as the case may be, subject to the condition that the quantum and mechanism of compensation payment shall be determined and shall be effective from such date as may be decided by the Appropriate Commission.

It the event of any decrease in the recurring/ nonrecurring expenditure by the SPD or any income to the SPD on account of any of the events as indicated above, SPD shall file an application to the appropriate commission no later than sixty (60) days from the occurrence of such event, for seeking approval of Change in Law. In the event of the SPD failing to comply with the above requirement, in case of any gain to the SPD,

SECI shall withhold the monthly tariff payments on immediate basis, until compliance of the above requirement by the SPD.

12.2 *Relief for Change in Law*

12.2.1 The aggrieved Party shall be required to approach the Appropriate Commission for seeking approval of Change in Law.

12.2.2 The decision of the Appropriate Commission to acknowledge a Change in Law and the date from which it will become effective, provide relief for the same, shall be final and governing on both the Parties.

12.2.3 The following proposal of MNRE to impose BCD on solar cells and modules (without grandfathering of bid out projects) has been notified through MNRE OM dated 09.03.2021

Items	CTH	Upto 31.03.2022	w.e.f. 01.04.2022
Solar Module	85414012	0 %	40%
Solar Cell	85414011	0 %	25 %

As per commitment from SPD, there will not be any revision in their final offered tariff i.e. INR 2.54/ kWh in case of imposition of BCD (of up to 40% on Modules and up to 25% on Cells). Further, No Change in Law on account of BCD will be claimed by either party, as per the MNRE OM dated 09.03.2021.

ARTICLE 13: EVENTS OF DEFAULT AND TERMINATION

13.1 *SPD Event of Default*

13.1.1 The occurrence and/or continuation of any of the following events, unless any such event occurs as a result of a Force Majeure Event or a breach by SECI or Buying Entity(ies) of its obligations under this Agreement, shall constitute an SPD Event of Default:

(i) the failure to commence supply of power to SECI up to the Contracted Capacity, by the end of the period specified in Article 4, or failure to continue to supply Contracted Capacity to SECI after Commercial Operation Date throughout the term of this Agreement, or if

a) the SPD assigns, mortgages or charges or purports to assign, mortgage or charge any of its assets or rights related to the Power Project in contravention of the provisions of this Agreement; or

b) the SPD transfers or novates any of its rights and/ or obligations under this agreement, in a manner contrary to the provisions of this Agreement; except where such transfer

- is in pursuance of a Law; and does not affect the ability of the transferee to perform, and such transferee has the financial capability to perform, its obligations under this Agreement or

- is to a transferee who assumes such obligations under this Agreement and the Agreement remains effective with respect to the transferee;

(ii) if (a) the SPD becomes voluntarily or involuntarily the subject of any bankruptcy or insolvency or winding up proceedings and such proceedings remain uncontested for a period of thirty (30) days, or (b) any winding up or bankruptcy or insolvency order is passed against the SPD, or (c) the SPD goes into liquidation or dissolution or has a receiver or any similar officer appointed over all or substantially all of its assets or official liquidator is appointed to manage its affairs, pursuant to Law, provided that a dissolution or liquidation of the SPD will not be a SPD Event of Default if such dissolution or liquidation is for the purpose of a merger, consolidation or reorganization and where the resulting company retains creditworthiness similar to

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the SPD and expressly assumes all obligations of the SPD under this Agreement and is in a position to perform them; or

(iii) the SPD repudiates this Agreement and does not rectify such breach within a period of thirty (30) days from a notice from SECI in this regard; or

(iv) except where due to any SECI's failure to comply with its material obligations, the SPD is in breach of any of its material obligations pursuant to this Agreement, and such material breach is not rectified by the SPD within thirty (30) days of receipt of first notice in this regard given by SECI.

(v) change in controlling shareholding before the specified time frame as mentioned in Article 4.1.1 of this Agreement; or

(vi) occurrence of any other event which is specified in this Agreement to be a material breach/ default of the SPD.

(vii) except where due to any SECI's failure to comply with its material obligations, the SPD is in breach of any of its material obligations pursuant to this Agreement, and such material breach is not rectified by the SPD within thirty (30) days of receipt of first notice in this regard given by SECI.

13.2 ***SECI Event of Default***

13.2.1 The occurrence and the continuation of any of the following events, unless any such event occurs as a result of a Force Majeure Event or a breach by the SPD of its obligations under this Agreement, shall constitute the Event of Default on the part of defaulting SECI:

(i) SECI fails to pay (with respect to a Monthly Bill or a Supplementary Bill),subject to Article 10.5, for a period of ninety (90) days after the Due Date and the SPD is unable to recover the amount outstanding to the SPD through the Letter of Credit,

(ii) SECI repudiates this Agreement and does not rectify such breach even within a period of sixty (60) days from a notice from the SPD in this regard; or

(iii) except where due to any SPD's failure to comply with its obligations, SECI is in material breach of any of its obligations pursuant to this Agreement, and such material breach is not rectified by SECI within sixty (60) days of receipt of notice in this regard from the SPD to SECI; or if

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- SECI becomes voluntarily or involuntarily the subject of any bankruptcy or insolvency or winding up proceedings and such proceedings remain uncontested for a period of sixty (60) days, or

- any winding up or bankruptcy or insolvency order is passed against SECI, or

- SECI goes into liquidation or dissolution or a receiver or any similar officer is appointed over all or substantially all of its assets or official liquidator is appointed to manage its affairs, pursuant to Law, provided that it shall not constitute a SECI Event of Default, where such dissolution or liquidation of Buyer or SECI is for the purpose of a merger, consolidation or reorganization and where the resulting entity has the financial standing to perform its obligations under this Agreement and has creditworthiness similar to SECI and expressly assumes all obligations of SECI and is in a position to perform them; or;

(iv) If Buying Entities are subject to any of the above defaults and SECI does not designate another or other Buying Entities for purchase of power.

(v) Occurrence of any other event which is specified in this Agreement to be a material breach or default of SECI.

13.3 ***Procedure for cases of SPD Event of Default***

13.3.1 Upon the occurrence and continuation of any SPD Event of Default under Article 13.1, SECI shall have the right to deliver to the SPD, with a copy to the representative of the lenders to the SPD with whom the SPD has executed the Financing Agreements, a notice stating its intention to terminate this Agreement (SECI Preliminary Default Notice), which shall specify in reasonable detail, the circumstances giving rise to the issue of such notice.

13.3.2 Following the issue of a SECI Preliminary Default Notice, the Consultation Period of ninety (90) days or such longer period as the Parties may agree, shall apply and it shall be the responsibility of the Parties to discuss as to what steps shall be taken with a view to mitigate the consequences of the relevant Event of Default having regard to all the circumstances.

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13.3.3 During the Consultation Period, the Parties shall continue to perform their respective obligations under this Agreement.

13.3.4 Within a period of seven (7) days following the expiry of the Consultation Period unless the Parties shall have otherwise agreed to the contrary or the SPD Event of Default giving rise to the Consultation Period shall have ceased to exist or shall have been remedied, SECI may terminate this Agreement by giving a written Termination Notice of sixty (60) days to the SPD.

13.3.5 Subject to the terms of this Agreement, upon occurrence of a SPD Event of Default under this Agreement, the lenders in concurrence with the Buying Entity and SECI, may exercise their rights, if any, under Financing Agreements, to seek substitution of the SPD by a selectee for the residual period of the Agreement, for the purpose of securing the payments of the total debt amount from the SPD and performing the obligations of the SPD. However, in the event the lenders are unable to substitute the defaulting SPD within the stipulated period, SECI may terminate the PPA and the Buying Entity may acquire the Project assets for an amount equivalent to 90% of the Debt Due or less as mutually agreed, failing which, the lenders may exercise their mortgage rights and liquidate the Project assets.

Provided that any substitution under this Agreement can only be made with the prior consent of SECI including the condition that the selectee meets the eligibility requirements of Request for Selection (RfS) issued by SECI and accepts the terms and conditions of this Agreement.

13.3.6 The lenders in concurrence with the Buying Utility and SECI, may seek to exercise right of substitution under Article 13.3.5 by an amendment or novation of the PPA in favour of the selectee. The SPD shall cooperate with SECI to carry out such substitution and shall have the duty and obligation to continue to operate the Power Project in accordance with this PPA till such time as the substitution is finalized. In the event of Change in Shareholding/Substitution of Promoters triggered by the Financial Institutions leading to signing of fresh PPA with a new entity, an amount of Rs. 10 Lakh per Project+ 18% GST per transaction as facilitation fee (non-refundable) shall be deposited by the SPD to SECI.

13.3.7 In the event the lenders are unable to substitute the defaulting SPD within the stipulated period, SECI may terminate the PPA and the Buying Utility may acquire the Project assets for an amount equivalent to 90% of the debt due, failing which, the lenders may exercise their mortgage rights and liquidate the Project assets.

13.4 ***Procedure for cases of SECI Event of Default***

13.4.1 Upon the occurrence and continuation of any SECI Event of Default specified in Article 13.2, the SPD shall have the right to deliver to SECI, a SPD Preliminary Default Notice, which notice shall specify in reasonable detail the circumstances giving rise to its issue.

13.4.2 Following the issue of a SPD Preliminary Default Notice, the Consultation Period of ninety (90) days or such longer period as the Parties may agree, shall apply and it shall be the responsibility of the Parties to discuss as to what steps shall be taken with a view to mitigate the consequences of the relevant Event of Default having regard to all the circumstances.

13.4.3 During the Consultation Period, the Parties shall continue to perform their respective obligations under this Agreement.

13.4.4 After a period of two hundred ten (210) days following the expiry of the Consultation Period and unless the Parties shall have otherwise agreed to the contrary or SECI Event of Default giving rise to the Consultation Period shall have ceased to exist or shall have been remedied, SECI under intimation to the Buying Entity and the SPD shall, subject to the prior consent of the SPD, novate its part of the PPA to any third party, including its Affiliates within the stipulated period. In the event the aforesaid novation is not acceptable to the SPD, or if no offer of novation is made by SECI within the stipulated period, then the SPD may terminate the PPA and at its discretion require Buying Entity to either (i) takeover the Project assets by making a payment of the termination compensation equivalent to the amount of the debt due and 110% (one hundred and ten per cent) of the Adjusted Equity less Insurance Cover if any or, (ii) pay to the SPD, damages, equivalent to 6 (six) months, or balance PPA period whichever is less, of charges for its contracted capacity, with the Project assets being retained by the SPD.

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Provided further that at the end of three (3) months period from the period mentioned in this Article 13.4.4, this Agreement may be terminated by the SPD.

In the event of termination of PPA, any damages or charges payable to the STU/ CTU, for the connectivity of the plant, shall be borne by the Buying Entity.

13.5 ***Termination due to Force Majeure***

In an event of occurrence and continuance of Force Majeure Events, this Agreement shall terminate on the date of such Termination Notice as detailed below:

13.5.1 **Termination due to Natural Force Majeure Event**

a) If, prior to the completion of the 180 (one hundred and eighty) Day period (or any extended period) for a Natural Force Majeure Event commencing from the date of issuance of the Force Majeure Notice, the Parties are of the reasonable view that a Natural Force Majeure Event is likely to continue beyond such 180 (one hundred and eighty) Day period or any extended period agreed in pursuance of Article 11.6; or that it is uneconomic or impractical to restore the affected Unit, then the Parties may mutually decide to terminate the PPA, and the termination shall take effect from the date on which such decision is taken.

b) Without prejudice to the provisions of Article 13.5.1(a) above, the Affected Party shall, after the expiry of the period of 180 (one hundred and eighty) Days or any other mutually extended period, be entitled to forthwith terminate the PPA in its sole discretion by issuing a notice to that effect.

c) On termination of the PPA pursuant to this Article 13.5.1(b)

i. no Termination Compensation shall be payable to the SPD

ii. the SPD shall be eligible for undisputed payments under outstanding Monthly Bill(s), before the occurrence of Force Majeure Event

13.5.2 **Termination due to Non-Natural Force Majeure Event**

a) Upon occurrence of a Non-Natural Force Majeure Event, the SPD shall, at its discretion, have the right to terminate the PPA forthwith after the completion of the period of 180 (one hundred and eighty) Days from the date of the Force Majeure Notice.

b) On termination of the PPA pursuant to this Article 13.5.2(a):

i. the Procurer shall pay to the SPD, 'Force Majeure Termination Compensation' equivalent to the amount of the Debt Due and the 110% (one hundred and ten per cent) of the Adjusted Equity and takeover the Project assets

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ii. the SPD shall be eligible for undisputed payments under outstanding Monthly Bill(s), before the occurrence of Force Majeure Event





ARTICLE 14: LIABILITY AND INDEMNIFICATION

14.1 *Indemnity*

14.1.1 The SPD shall indemnify, defend and hold SECI harmless against:

a) any and all third party claims against SECI for any loss of or damage to property of such third party, or death or injury to such third party, arising out of a breach by the SPD of any of its obligations under this Agreement; and

b) any and all losses, damages, costs and expenses including legal costs, fines, penalties and interest actually suffered or incurred by SECI from third party claims arising by reason of a breach by the SPD of any of its obligations under this Agreement, (provided that this Article 14 shall not apply to such breaches by the SPD, for which specific remedies have been provided for under this Agreement).

14.1.2 SECI shall cause the Buying Entity(ies) to indemnify, defend and hold the SPD harmless against:

a) any and all third party claims against the SPD, for any loss of or damage to property of such third party, or death or injury to such third party, arising out of a breach by Buying Entity(ies) of any of their obligations under this Agreement; and

b) any and all losses, damages, costs and expenses including legal costs, fines, penalties and interest ('Indemnifiable Losses') actually suffered or incurred by the SPD from third party claims arising by reason of a breach by Buying Entity(ies) of any of its obligations. SECI shall incorporate appropriate covenants in the PSA for the above obligations of Buying Entity(ies). In so far as indemnity to SPD is concerned, Buying Entity(ies) shall be the indemnifying party and not SECI.

14.2 Procedure for claiming Indemnity

14.2.1 ***Third party claims***

a. Where the Indemnified Party is entitled to indemnification from the Indemnifying Party pursuant to Article 14.1.1(a) or 14.1.2(a), the Indemnified Party shall promptly notify the Indemnifying Party of such claim referred to in Article 14.1.1(a) or 14.1.2(a) in respect of which it is entitled to be indemnified.

Such notice shall be given as soon as reasonably practicable after the Indemnified

Party becomes aware of such claim. The Indemnifying Party shall be liable to settle the indemnification claim within thirty (30) days of receipt of the above notice. Provided however that, if:

i) the Parties choose to refer the dispute in accordance with Article 16.3.2; and

ii) the claim amount is not required to be paid/ deposited to such third party pending the resolution of the Dispute,

the Indemnifying Party shall become liable to pay the claim amount to the Indemnified Party or to the third party, as the case may be, promptly following the resolution of the Dispute, if such Dispute is not settled in favour of the Indemnified Party.

b. The Indemnified Party may contest the claim by referring to the Appropriate Commission for which it is entitled to be Indemnified under Article 14.1.1(a) or 14.1.2(a) and the Indemnifying Party shall reimburse to the Indemnified Party all reasonable costs and expenses incurred by the Indemnified party. However, such Indemnified Party shall not settle or compromise such claim without first getting the consent of the Indemnifying Party, which consent shall not be unreasonably withheld or delayed.

An Indemnifying Party may, at its own expense, assume control of the defence of any proceedings brought against the Indemnified Party if it acknowledges its obligation to indemnify such Indemnified Party, gives such Indemnified Party prompt notice of its intention to assume control of the defence, and employs an independent legal counsel at its own cost that is reasonably satisfactory to the Indemnified Party.

14.3 *Indemnifiable Losses*

14.3.1 Where an Indemnified Party is entitled to Indemnifiable Losses from the Indemnifying Party pursuant to Article 14.1.1(b) or 14.1.2(b), the Indemnified Party shall promptly notify the Indemnifying Party of the Indemnifiable Losses actually incurred by the Indemnified Party. The Indemnifiable Losses shall be reimbursed by the Indemnifying Party within thirty (30) days of receipt of the notice seeking Indemnifiable Losses by the Indemnified Party. In case of nonpayment of such losses after a valid notice under this Article 14.3, such event shall constitute a payment default under Article 13.

14.4 *Limitation on Liability*

14.4.1 Except as expressly provided in this Agreement, neither the SPD nor SECI nor Buying Entity(ies) nor its/ their respective officers, directors, agents, employees or affiliates (or their officers, directors, agents or employees), shall be liable or responsible to the other Party or its affiliates, officers, directors, agents, employees, successors or permitted assigns or their respective insurers for incidental, indirect or consequential damages, connected with or resulting from performance or non-performance of this Agreement, or anything done in connection herewith, including claims in the nature of lost revenues, income or profits (other than payments expressly required and properly due under this Agreement), any increased expense of, reduction in or loss of power generation or equipment used therefore, irrespective of whether such claims are based upon breach of warranty, tort (including negligence, whether of Buying Entity(ies) , the SPD or others), strict liability, contract, breach of statutory duty, operation of law or otherwise.

14.4.2 SECI shall have no recourse against any officer, director or shareholder of the SPD or any Affiliate of the SPD or any of its officers, directors or shareholders for such claims excluded under this Article. The SPD shall have no recourse against any officer, director or shareholder of Buyer or Buying Entity(ies), or any affiliate of Buyer or any of its officers, directors or shareholders for such claims excluded under this Article.

14.5 SECI's Liability

14.5.1 Notwithstanding anything to the contrary contained in this Agreement, the Parties acknowledge and accept that the SECI is an Intermediary Company to purchase and resell the electricity to the Buying Utility(ies) to enable them to fulfill the Renewable Purchase Obligations (RPO) and, therefore, the performance of the obligations of the SECI under this Agreement shall be subject to the ability of the SECI to enforce the corresponding obligations assumed by the Buying Utility(ies) on re-sale under the Power Sale Agreement to be entered into by the Buying Utility(ies) with SECI on back to back basis. It is however, specifically agreed that the payment of money becoming due at applicable tariff as per Article 9 from the SECI to the SPD under this Agreement for supply of Solar Power to the extent of the Contracted Capacity shall not be on a back to back basis and will be as per:

(i) the recourse under the Payment Security Mechanism provided in the PSA, as follows:

a) Letter of Credit opened by the Buying Entity;

(b) State Government Guarantee/ Tri-Partite Agreement (TPA) signed between Reserve Bank of India, Central Government and State Government of the Buying Entity, covering security for payment of energy charges, as applicable

(c) Payment Security Fund provided by the Buying Entity, and

(ii) Payment security fund as referred in Article 10.1.1 of the PPA. SECI shall discharge the tariff payment obligation in terms of the provisions of this Agreement.

14.5.2 The parties agree that in respect of the obligations other than the tariff payment obligation specifically mentioned herein above, in the event the SPD has any claim against the SECI in regard to the performance of any obligation of the SECI under this Agreement or enforcement of any right of the SPD against the SECI under this Agreement, the same shall be subject to the ability of the SECI to enforce the corresponding obligations assumed by the Buying Utility(ies) under the Power Sale Agreement to be entered into between the SECI and the Buying Utility(ies) on resale on mutatis mutandis basis and not otherwise.

14.6 Duty to Mitigate

14.6.1 The Parties shall endevour to take all reasonable steps so as mitigate any loss or damage which has occurred under this Article 14.

ARTICLE 15: ASSIGNMENTS AND CHARGES

15.1 *Assignments*

This Agreement shall be binding upon, and inure to the benefit of the Parties and their respective successors and permitted assigns. This Agreement shall not be assigned by any Party, except to the Project Lenders or Lender's Representative as security for their debt under the Financing Agreements, other than by mutual consent between the Parties to be evidenced in writing. Such assignment shall be agreed to by SECI subject to the compliance of provisions contained in this Agreement and more specifically to the provisions of Article 4.1.1 of this Agreement. In no case, such assignment shall be permissible prior to the declaration of COD.

Provided that, SECI shall permit assignment of any of SPD's rights and obligations under this Agreement in favour of the lenders to the SPD, if required under the Financing Agreements.

Provided that, such consent shall not be withheld if SECI seeks to transfer to any transferee all of its rights and obligations under this Agreement.

The enforcement of the rights and obligation between the SPD and the Buying Utility (ies) provided in this Agreement and in the PSA shall not be treated as an assignment but an enforcement of the terms agreed under this Agreement.

Provided further that any successor(s) or permitted assign(s) identified after mutual agreement between the Parties may be required to execute a new agreement on the same terms and conditions as are included in this Agreement. An amount of Rs. 5 Lakh per Transaction as Facilitation Fee (non-refundable) shall be deposited by the SPD to SECI. Provided further that, such consent shall not be withheld by the SPD if SECI seeks to transfer to any affiliate all of its rights and obligations under this Agreement.

In the event of Change in Shareholding/Substitution of Promoters triggered by the Financial Institutions leading to signing of fresh PPA with a New Entity, an amount of Rs. 10 Lakh per Transaction as Facilitation Fee (non-refundable) shall be deposited by the SPD to SECI.

15.2 *Permitted Charges*

15.2.1 SPD shall not create or permit to subsist any encumbrance over all or any of its rights and benefits under this Agreement, other than as set forth in Article 15.1 and the Guidelines.

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ARTICLE 16: GOVERNING LAW AND DISPUTE RESOLUTION

16.1 *Governing Law*

16.1.1 This Agreement shall be governed by and construed in accordance with the Laws of India. Any legal proceedings in respect of any matters, claims or disputes under this Agreement shall be under the jurisdiction of appropriate courts in Delhi.

16.2 *Amicable Settlement and Dispute Resolution*

16.2.1 *Amicable Settlement*

i. Either Party is entitled to raise any claim, dispute or difference of whatever nature arising under, out of or in connection with this Agreement ("Dispute") by giving a written notice (Dispute Notice) to the other Party, which shall contain:

(a) a description of the Dispute;

(b) the grounds for such Dispute; and

(c) all written material in support of its claim.

ii. The other Party shall, within thirty (30) days of issue of Dispute Notice issued under Article 16.2.1(i), furnish:

(a) counter-claim and defences, if any, regarding the Dispute; and

(b) all written material in support of its defences and counter-claim.

iii. Within thirty (30) days of issue of Dispute Notice by any Party pursuant to Article 16

(i) if the other Party does not furnish any counter claim or defence under Article 16

(ii) or thirty (30) days from the date of furnishing counter claims or defence by the other Party, both the Parties to the Dispute shall meet to settle such Dispute amicably. If the Parties fail to resolve the Dispute amicably within thirty (30) days from the later of the dates mentioned in this Article 16.2.1. the Dispute shall be referred for dispute resolution in accordance with Article 16.3.

16.3 ***Dispute Resolution***

16.3.1 **Dispute Resolution by the Central Commission**

i) Where any Dispute or differences arises in relation to this agreement of any nature whatsoever including the construction, interpretation or implementation of the provisions of this agreement as well as claim made by any Party for any change in or determination of the Tariff or any matter related to Tariff or claims made by any Party which partly or wholly relate to any change in the Tariff or determination of any of such claims could result in change in the Tariff, and relates to any matter agreed to be referred to the Central Commission, shall be submitted to adjudication by the Central Commission. Appeal against the decisions of the Central Commission shall be made only as per the provisions of the Electricity Act, 2003, as amended from time to time.

ii) SECI shall be entitled to co-opt the Buying Entity(ies) and/ or the lenders (if any) as a supporting party in such proceedings before the Appropriate Commission.

16.3.2 MNRE vide its No. 283/124/2018-GRID SOLAR dated 18.06.2019 has set up a Dispute Resolution Committee (DRC). The SPD may approach DRC for resolving disputes as per provisions notified by MNRE in regard to DRC.

16.4 ***Parties to Perform Obligations***

16.4.1 Notwithstanding the existence of any Dispute and difference referred to the Appropriate Commission and save as the Appropriate Commission may otherwise direct by a final or interim order, the Parties hereto shall continue to perform their respective obligations (which are not in dispute) under this Agreement.

ARTICLE 17: MISCELLANEOUS PROVISIONS

17.1 *Amendment*

17.1.1 This Agreement may only be amended or supplemented by a written agreement between the Parties.

17.2 *Third Party Beneficiaries*

17.2.1 Subject to provisions contained in this agreement relating to back to back implications of the PPA as well as PSA, this Agreement is solely for the benefit of the Parties and their respective successors and permitted assigns and shall not be construed as creating any duty, standard of care or any liability to, any person not a party to this Agreement.

17.3 *Waiver*

17.3.1 No waiver by either Party of any default or breach by the other Party in the performance of any of the provisions of this Agreement shall be effective unless in writing duly executed by an authorized representative of such Party.

17.3.2 Neither the failure by either Party to insist on any occasion upon the performance of the terms, conditions and provisions of this Agreement nor time or other indulgence granted by one Party to the other Parties shall act as a waiver of such breach or acceptance of any variation or the relinquishment of any such right or any other right under this Agreement, which shall remain in full force and effect.

17.4 *Confidentiality*

17.4.1 The Parties undertake to hold in confidence this Agreement and not to disclose the terms and conditions of the transaction contemplated hereby to third parties, except:

a) to their professional advisors;

b) to their officers, contractors, employees, agents or representatives, financiers, who need to have access to such information for the proper performance of their activities; or

c) disclosures required under Law, without the prior written consent of the other Party.

17.5 *Severability*

17.5.1 The invalidity or unenforceability, for any reason, of any part of this Agreement shall not prejudice or affect the validity or enforceability of the remainder of this Agreement, unless the part held invalid or unenforceable is fundamental to this Agreement.

17.6 *Notices*

17.6.1 All notices or other communications which are required to be given under this Agreement shall be in writing and in the English language.

17.6.2 If to the SPD, all notices or other communications which are required must be delivered personally or by registered post or facsimile or any other method duly acknowledged to the addresses below:

Address	Adani Corporate House, 4th Floor, South Wing Shantigram, Nr. Vaishno Devi Circle, S G Highway, Khodiyar, Ahmedabad, Gujarat, India, 382421
Attention	Sh. Durgesh Kumar Gupta
Email	Solar.bd@adani.com
Fax No.	079-25557294
Telephone No.	09-25557699/ +9198588872732

17.6.3 If to SECI, all notices or communications must be delivered personally or by registered post or facsimile or any other mode duly acknowledged to the address(es) below:

Address	6th Floor, Plate-B, NBCC Office Block Tower-2, East Kidwai Nagar, New Delhi-110023
Attention	Sh. Manas Ranjan Mishra, Senior Manager (Solar)
Email	manas@seci.co.in
Telephone No.	011-24666229

17.6.4 All notices or communications given by facsimile shall be confirmed by sending a copy of the same via post office in an envelope properly addressed to the appropriate Party for delivery by registered mail. All notices shall be deemed validly delivered upon receipt evidenced by an acknowledgement of the recipient, unless the Party delivering the notice can prove in case of delivery through the registered post that the

recipient refused to acknowledge the receipt of the notice despite efforts of the postal authorities.

17.6.5 Any Party may by notice of at least fifteen (15) days to the other Party change the address and/ or addresses to which such notices and communications to it are to be delivered or mailed.

17.7 ***Language***

17.7.1 All agreements, correspondence and communications between the Parties relating to this Agreement and all other documentation to be prepared and supplied under the Agreement shall be written in English, and the Agreement shall be construed and interpreted in accordance with English language.

17.7.2 If any of the agreements, correspondence, communications or documents are prepared in any language other than English, the English translation of such agreements, correspondence, communications or documents shall prevail in matters of interpretation.

17.8 ***Restriction of Shareholders / Owners' Liability***

17.8.1 Parties expressly agree and acknowledge that none of the shareholders of the Parties hereto shall be liable to the other Parties for any of the contractual obligations of the concerned Party under this Agreement. Further, the financial liabilities of the shareholder/s of each Party to this Agreement, shall be restricted to the extent provided in the Indian Companies Act, 2013.

17.9 ***Taxes and Duties***

17.9.1 The SPD shall bear and promptly pay all statutory taxes, duties, levies and cess, assessed/ levied on the SPD, contractors or their employees that are required to be paid by the SPD as per the Law in relation to the execution of the Agreement and for supplying power as per the terms of this Agreement.

17.9.2 SECI shall be indemnified and held harmless by the SPD against any claims that may be made against SECI in relation to the matters set out in Article 17.9.1.

17.9.3 SECI shall not be liable for any payment of, taxes, duties, levies, cess whatsoever for discharging any obligation of the SPD by SECI on behalf of SPD.

17.10 *Independent Entity*

17.10.1 The SPD shall be an independent entity performing its obligations pursuant to the Agreement.

17.10.2 Subject to the provisions of the Agreement, the SPD shall be solely responsible for the manner in which its obligations under this Agreement are to be performed. All employees and representatives of the SPD or contractors engaged by the SPD in connection with the performance of the Agreement shall be under the complete control of the SPD and shall not be deemed to be employees, representatives, contractors of SECI and nothing contained in the Agreement or in any agreement or contract awarded by the SPD shall be construed to create any contractual relationship between any such employees, representatives or contractors and SECI.

17.11 Compliance *with Law*

Despite anything contained in this Agreement but without prejudice to this Article, if any provision of this Agreement shall be in deviation or inconsistent with or repugnant to the provisions contained in the Electricity Act, 2003, or any rules and regulations made there under, such provision of this Agreement shall be deemed to be amended to the extent required to bring it into compliance with the aforesaid relevant provisions as amended from time to time.

17.12. The duly executed Power Sale Agreement between SECI and Buying entity(s) as attached to this Agreement shall be read along with this Agreement as a composite back to back agreement for Generation and supply of electricity to the Buying entity(s), particularly, to fulfill the Renewable Purchase Obligations under the provisions of the Electricity Act, 2003 and the Regulations notified thereunder.

17.13 Breach of Obligations

The Parties acknowledge that a breach of any of the obligations contained herein would result in injuries. The Parties further acknowledge that the amount of the liquidated damages or the method of calculating the liquidated damages specified in this Agreement is a genuine and reasonable pre-estimate of the damages that may be suffered by the non-defaulting party in each case specified under this Agreement.

IN WITNESS WHEREOF the Parties have caused the Agreement to be executed through their duly authorized representatives as of the date and place set forth above.

For and on behalf of
[SECI]

Name, Designation and Address

(SPD-MANUFACTURING-ISTS-AGEFL-A1-2000:500-P8)
Page

Signature with seal

Witness:
1.

2.

For and on behalf of
[SPD]

Name, Designation and Address

DURGESH KUMAR GUPTA
(Authorized Signatory)

Signature with seal

Witness:
1.

2.

SCHEDULE 1: FORMAT OF THE PERFORMANCE BANK GUARANTEE

(to be submitted separately for each Project)

(To be on non-judicial stamp paper of appropriate value as per Stamp Act relevant to place of execution.)

Reference: .....
Bank Guarantee No.: .....
Date: .....

In consideration of the _____ [*Insert name of the Bidder*] (hereinafter referred to as 'selected Solar Power Developer') submitting the response to RfS inter alia for selection of the Project of the capacity of ..... MW, at ..... *[Insert name of the place*], for setting up of Solar Manufacturing Plant ***(and)*** Project of the capacity of ..... MW, at .....*[Insert name of the place*], for supply of power there from on long term basis, in response to the RfS dated..... issued by Solar Energy Corporation of India Limited (hereinafter referred to as SECI) and SECI considering such response to the RfS of .....[*Insert name of the Bidder*] (which expression shall unless repugnant to the context or meaning thereof include its executers, administrators, successors and assignees) and selecting the Solar Manufacturing Plant ***(and)*** Solar PV Power Project of the Solar Power Developer and issuing Letter of Intent No _____ to _____ (*Insert Name of selected Solar Power Developer*) as per terms of RfS and the same having been accepted by the selected SPD resulting in a Power Purchase Agreement (PPA) to be entered into, for purchase of Power [from selected Solar Power Developer or a Project Company, M/s _____ {a Special Purpose Vehicle (SPV) formed for this purpose}, if applicable]. As per the terms of the RfS, the _____ [*Insert name & address of Bank*] hereby agrees unequivocally, irrevocably and unconditionally to pay to SECI at [*Insert Name of the Place from the address of the SECI*] forthwith on demand in writing from SECI or any Officer authorised by it in this behalf, any amount up to and not exceeding Rupees _____ [Total Value] only, on behalf of M/s _____ [*Insert name of the selected Solar Power Developer/ Project Company*]

This guarantee shall be valid and binding on this Bank up to and including ..... and shall not be terminable by notice or any change in the constitution of the Bank or the term of contract or by any other reasons whatsoever and our liability hereunder shall not be impaired or discharged by any extension of time or variations or alternations made, given, or agreed with or without our knowledge or consent, by or between parties to the respective agreement.

Our liability under this Guarantee is restricted to INR _____ (Indian Rupees _____ Only).

Our Guarantee shall remain in force until..... SECI shall be entitled to invoke this Guarantee till .....

The Guarantor Bank hereby agrees and acknowledges that SECI shall have a right to invoke this BANK GUARANTEE in part or in full, as it may deem fit.

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The Guarantor Bank hereby expressly agrees that it shall not require any proof in addition to the written demand by SECI, made in any format, raised at the above mentioned address of the Guarantor Bank, in order to make the said payment to SECI.

The Guarantor Bank shall make payment hereunder on first demand without restriction or conditions and notwithstanding any objection by _____ [*Insert name of the selected Solar Power Developer/ Project Company as applicable*] and/ or any other person. The Guarantor Bank shall not require SECI to justify the invocation of this BANK GUARANTEE, nor shall the Guarantor Bank have any recourse against SECI in respect of any payment made hereunder.

This BANK GUARANTEE shall be interpreted in accordance with the laws of India and the courts at New Delhi shall have exclusive jurisdiction.

The Guarantor Bank represents that this BANK GUARANTEE has been established in such form and with such content that it is fully enforceable in accordance with its terms as against the Guarantor Bank in the manner provided herein.

This BANK GUARANTEE shall not be affected in any manner by reason of merger, amalgamation, restructuring or any other change in the constitution of the Guarantor Bank.

This BANK GUARANTEE shall be a primary obligation of the Guarantor Bank and accordingly SECI shall not be obliged before enforcing this BANK GUARANTEE to take any action in any court or arbitral proceedings against the selected Solar Power Developer/ Project Company, to make any claim against or any demand on the selected Solar Power Developer/ Project Company or to give any notice to the selected Solar Power Developer/ Project Company or to enforce any security held by SECI or to exercise, levy or enforce any distress, diligence or other process against the selected Solar Power Developer/ Project Company .

The Guarantor Bank acknowledges that this BANK GUARANTEE is not personal to SECI and may be assigned, in whole or in part, (whether absolutely or by way of security) by SECI to any entity to whom SECI is entitled to assign its rights and obligations under the PPA.

Notwithstanding anything contained hereinabove, our liability under this Guarantee is restricted to INR _____ (Indian Rupees _____ Only) and it shall remain in force until ..... We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only if SECI serves upon us a written claim or demand.

Signature _____
Name_____
Power of Attorney No._____

For

_____[Insert Name of the Bank]__

E-mail ID of the bank:

Banker's Stamp and Full Address.

Dated this ____ day of ____, 20__

Witness:

1. .....
Signature

Name and Address

2. .....
Signature

Name and Address

Notes:

1. The Stamp Paper should be in the name of the Executing Bank and of appropriate value.
2. The Performance Bank Guarantee shall be executed by any of the Bank from the List of Banks enclosed.

SCHEDULE 2: List of Banks for Issuance of Performance Bank Guarantee

1. SCHEDULED COMMERCIAL BANKS	**3. FOREIGN BANKS**
SBI AND ASSOCIATES	24. A B BANK
1. State Bank of India	25. SHINHAN BANK
2. State Bank of Indore	26. CTBC BANK Co. Ltd.
NATIONALISED BANKS	27. MIZUHO BANK, Ltd.
1. Allahabad Bank	28. Krung Thai Bank Public Company Ltd.
2. Andhra Bank	29. Antwerp Diamond Bank N.V
3. Bank of India	30. Australia And New Zealand Banking Group Limited
4. Bank of Maharashtra	31. Sumitomo Mitsui Banking Corporation
5. Canara Bank	32. American Express Banking Corporation
6. Central Bank of India	33. CommonWealth Bank of Australia
7. Corporation Bank	34. Credit Suisse A.G
8. Dena Bank	35. FirstRand Bank Ltd.
9. Indian Bank	36. Industrial And Commercial Bank of China Ltd.
10. Indian Overseas Bank	37. JSC VTB Bank
11. Oriental Bank of Commerce	38. National Australia Bank
12. Punjab National Bank	39. Rabobank International
13. Punjab & Sind Bank	40. Sberbank
14. Syndicate Bank	41. USB AG
15. Union Bank of India	42. United Overseas Bank Ltd.
16. United Bank of India	43. Westpac Banking Corporation
17. UCO Bank	44. Woori Bank
18. Vijaya Bank	45. Doha Bank Qsc
19. Bank of Baroda	
20. EXIM Bank	**4. SCHEDULED PRIVATE BANKS**
2. OTHER PUBLIC SECTOR BANKS	1. Federal Bank Ltd.

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1. IDBI Bank Ltd.	2. ING Vysya Bank Ltd.
3. FOREIGN BANKS	3. Axis Bank Ltd.
1. Bank of America NA	4. ICICI Bank Ltd.
2. Bank of Tokyo Mitsubishi UFJ Ltd.	5. HDFC Bank Ltd.
3. BNP Paribas	6. Yes Bank Ltd.
4. Calyon Bank	7. Kotak Mahindra Bank
5. Citi Bank N.A.	8. IndusInd Bank Ltd.
6. Deutsche Bank A.G	9. Karur Vysya Bank
7. The HongKong and Shanghai Banking Corpn. Ltd.	10. Catholic Syrian Bank
8. Standard Chartered Bank	11. City Union Bank
9. SocieteGenerale	12. Dhanlaxmi Bank. Ltd
10. Barclays Bank	13. Jammu & Kashmir Bank Ltd
11. Royal Bank of Scotland	14. Karnataka Bank Ltd
12. Bank of Nova Scotia	15. Laxmi Vilas Bank Ltd
13. Development Bank of Singapore (DBS Bank Ltd.)	16. Nainital Bank Ltd
14. Crédit Agricole Corporate and Investment Bank	17. Ratnakar Bank Ltd
15. Abu Dhabi Commercial Bank Ltd	18. South Indian bank Ltd
16. Bank of Bahrain & Kuwait B.S.C	19. Tamilnadu Mercantile Bank Ltd
17. Mashreq Bank p.s.c	20. DCB Bank Ltd
18. HSBC Bank Oman S.A.O.G	21. IDFC Bank
19. Sonali Bank Ltd.	
20. J. P. Morgan Chase Bank, National Association	
21. State Bank of Mauritius Ltd.	
22. BANK of CEYLON	
23. BANK INTERNASIONAL INDONESIA	

Note: In addition to the banks listed above, the bidder can furnish the Bank Guarantees towards EMD/ PBG issued by any Scheduled Commercial Bank as per RBI.

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SCHEDULE 3: COMMISSIONING PROCEDURE:

□ Capacity of Solar PV Projects:

i) The Project configuration shall be allowed as per the following matrix:

Sr. No.	Solar PV Project Capacity Bid	Minimum DC Arrays Capacity to be installed	Minimum Rated Inverter Capacity*	Maximum AC Capacity Limit at Delivery point
1	50 MW	50 MW	50 MW	50 MW
2	100 MW	100 MW	100 MW	100 MW
3	150 MW	150 MW	150 MW	150 MW
4	200 MW	200 MW	200 MW	200 MW
5	250 MW	250 MW	250 MW	250 MW

*In case the rated inverter capacity is mentioned in kVA, the IEC test certificate declaring the power factor of the Inverter/PCU at rated power has to be submitted and the power factor shall be multiplied by the kVA rating to calculate the rated capacity of the inverter in kW.

ii) The SPD shall be required to demonstrate compliances with the "*Technical Requirements for Grid Connected Solar PV Power Plants*" as mentioned in the RfS and Guidelines. iii) Higher DC capacity arrays can also be allowed, subject to the condition that the AC capacity limit as mentioned in (i) above for scheduling at the Delivery Point as per

Article 4.4 "Right to Contracted Capacity & Energy" of the PPA is complied with.

iv) For commissioning of the Project, cumulative capacity of DC arrays and cumulative capacity of the inverters installed shall be considered. In case of part commissioning of the Project, it shall be required to have the DC Arrays Capacity and inverters capacity be installed not less than the proposed part commissioning capacity.

v) If generation at any time exceeds the maximum permissible AC capacity at delivery point, the excess generation during that period may not be considered under PPA.

Appendix-1

Commissioning Procedure

The Solar PV Project will be declared as commissioned when all equipment as per rated project capacity has been installed and energy from the Project has flown into the grid, which will be verified by a committee/agency identified by SECI/MNRE to witness the Commissioning of the Project.

Following is the chronology of the procedure to be followed for commissioning of the Project.

i) SPDs shall give to the concerned RLDC/SLDC, State Nodal Agency (SNA) and SECI at least thirty (30) days advance written notice, of the date on which it intends to synchronize the Power Project to the Grid System. The SPD shall be solely responsible for any delay or non-receipt of the notice by the concerned agencies, which may in turn affect the Commissioning Schedule of the Project. Early Commissioning of a Solar Project prior to the SCD is permitted on acceptance of power by SECI. In order to facilitate this, SPDs shall inform the concerned RLDC/SLDC and SECI well in advance, which is not less than 90 days prior to the date on which it intends to synchronize the Power Project to the Grid System.

ii) Not more than 7 days prior to the proposed commissioning date, the SPD shall give the final written notice to SECI, SNA and CTU requiting the commissioning committee/agency to visit the site to witness commissioning of the project. Following documents are required to be submitted by the SPD, physically in the office of SECI along with the above notice, duly stamped and signed by the Authorized Signatory (scanned copies may also be allowed):

1. Covering Letter
2. Board resolution for authorized signatory for signing the documents related to commissioning of the Project and witnessing the commissioning.
3. Installation report duly signed by the authorized signatory as per Appendix-2. The SPD is advised to take due care in furnishing such Installation Report. Discrepancy (if any) and observed by SECI, may be construed as misrepresentation of information by the SPD and SECI may take appropriate action as per this Agreement.
4. Plant Layout, Plant (AC & DC) SLD, along with Inverter-wise module details.
5. CEI/CEIG (as applicable) report containing approval for all the components, including modules, inverters, transformers and protection system, along with all annexures/attachments. It would be the responsibility of the SPD to obtain the certificate.
6. Connectivity and Long Term Access, along with Transmission Agreement.
7. Synchronization Certificate issued by CTU for ascertaining injection of power into grid.
8. Certificate from the SPPD/ SPIA confirming 100% payment towards Upfront Development Charges (UDC) to the SPPD/ SPIA and NOC for the same (if applicable)

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iii) After the submission/ upload of the documents by SPD, SECI shall verify the documents and intimate/reply with remarks. In case any additional supporting/revised documents are asked by SECI, the same have to be submitted by the SPD.

iv) Based on the submission of the above documents by the SPD, SECI shall intimate to the SPD about its readiness to visit the project site to witness the commissioning and shall notify the Commissioning Committee/Agency which shall visit the Project site to witness the commissioning of the Project. In case of a multi-agency Committee, the SPD shall ensure the presence of all the members of the Committee constituted to witness the commissioning, on the said date.

v) The Commissioning Committee/Agency shall visit the Project site to verify the technical compliance on site as per the information submitted by the SPD and to witness the commissioning. In case the committee finds discrepancy/deviation from the information submitted by the SPD during on site verification, the same shall be recorded in the minutes of meeting of the Committee/Agency. SECI shall decide the next date of visit of the Committee/Agency upon rectification of the discrepancies by the SPD.

vi) On the date of site-visit, the SPD shall be required to demonstrate that equipment of rated capacity as per table given at S.No. (i) has been installed, all the inverters of rated capacity are operating and energy from the project has flown into the grid.

vii) Joint Meter Reading (JMR) shall be taken at Delivery Point and Pooling Substation (if applicable)/plant premise on the date of site visit by the commissioning committee. This shall include information of respective meters installed at delivery/ interconnection point and pooling substation/plant premises.

viii)In case the Project meets the requirements as per the provisions of the RfS as verified by the Commissioning Committee/Agency witnessing the commissioning, the Project shall be declared as having been commissioned as on the date of synchronization with the grid, as indicated in the Synchronization Certificate. The date of Commissioning of the Project may be indicated in the Minutes of Meeting of the Committee/ recommendation of the Agency visiting the Project. Any other observation contrary to the above, shall be clearly indicated in the Minutes/recommendations and further decision on commissioning of the Project shall be taken by SECI in this regard.

ix) Subsequent to the visit of the Commissioning Committee/Agency to the Project site, the SPD shall submit the following documents in hard copy/scanned form, in order to fulfil the requirements for issuance of Commissioning Certificate:

a. Minutes of Meeting of the Commissioning Committee/recommendations of the Agency which has witnessed the commissioning of the Project.
b. Relevant documents from SLDC/ RLDC acknowledging successful data communication between plant end and SLDC/RLDC.
c. Invoices against purchase of the solar modules, Inverters/PCUs and DC cables along with the summary sheet containing the list of all the invoices, including details and number of items.

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d. All supporting documents towards meeting the technical compliance along with datasheet/ warranty certificates/ contract agreement etc. as mentioned in Annexure-A of the RfS).

e. Snap shots of the plant, including but not limited to, solar PV modules, all central inverters (showing instantaneous and total generation of a particular date), switchyards\switchgears, Power Transformers, metering (as per applicable regulations) at delivery point etc. along with the Installation Report.

x) In case of any deviations recorded by the Commissioning Committee/Agency which had prevented the declaration of commissioning of the Project as on the date of synchronization of the Project, the SPD shall be required to submit to SECI, the necessary documents towards rectification of the deviations observed. Upon successful verification of the required documents, the fresh date of visit of the Commissioning Committee/Agency to the Project, shall be notified by SECI. If the Commissioning Committee/Agency visiting the Project finds the deviations earlier noted having been suitably rectified by the SPD, the date of Commissioning of the Project in this case, shall be the actual date of visit of the Commissioning Committee/Agency, else, the entire process shall be repeated until the observed deviations are rectified by the SPD to the satisfaction of the Commissioning Committee/Agency visiting the Project.

xi) Based on the documents as per (ix) above and in line with the Minutes of Meeting of the Commissioning Committee/ recommendations of the Agency, SECI shall issue the recommendation to the respective State Nodal Agency (SNA) for issuance of Commissioning Certificate of the Project as per Appendix-3. The Commissioning Certificate shall declare the Project commissioned as on the date as intimated by SECI to the SNA.

xii) Subsequent to commissioning, the SPD shall provide the SCADA login details to SECI for online real time data monitoring of the Project. The SPD may be required to push the required plant related data to SECI designated server in xml/json formats.

Appendix-2

Installation Report

(To be provided by SPD and to be submitted at most 7 days prior to proposed commissioning date, which shall be verified by Commissioning Committee)

Sr. No.	Capacity of the Project (MW)	
	Capacity already commissioned (MW)	
	Capacity proposed to be commissioned (MW)	
I.	Technology used (Mono/Multi Crystalline / thin film / Others; please specify along with capacity of each type)	
II.	Type of Tilt (Fixed Tilt/Seasonal Tilt/Tracking)	
III.	Rating of the each module (Wp)	
IV.	Number of modules installed of each type (along with Serial Nos. of all the modules installed)	
V.	Make of Module(s) installed of each type (including name of the Supplier and country of origin)	
VI.	Number of PCUs / Inverters installed (along with Serial Nos. of all the PCUs/Inverters installed)	
VII.	Make of the PCUs / Inverters (including name of supplier and country of origin)	
IX.	Rating of PCUs / Inverters	
X.	Date of installation of full capacity (as per capacity proposed to be commissioned)	
	PV arrays	
	PCUs / Inverters	
	Transformers	

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Appendix-3

Sample Part Commissioning / Full Commissioning Certificate

of Solar PV Power Project

(To be issued by the State Nodal Agency)

This is to certify that <M/s> having its registered office at --------- has successfully commissioned Capacity < MW > out of total <MW> installed Capacity on (Date) of their Solar PV Power Generation Project at Village ------, Tehsil/Taluka ------- & Dist. ------

The Commissioning Certificate has been issued on the basis of the following documents enclosed:

(i) Installation Report including Snap shots of the Project from various angles
(ii) Electrical Inspector Report
(iii) Synchronization Certificate





Power Sale Agreement (PSA)

For procurement of 400 MW Wind - Solar Hybrid Power on Long Term Basis

Between

Solar Energy Corporation of India Limited (SECI)

And

Brihanmumbai Electric Supply & Transport Undertaking (BEST Undertaking)

June 2021

Solar Energy Corporation of India Ltd. New Delhi



सत्यमेव जयते

INDIA NON JUDICIAL

Government of National Capital Territory of Delhi

e-Stamp

Certificate No.	:	IN-DL78995285326622T
Certificate Issued Date	:	24-May-2021 10:51 AM
Account Reference	:	SELFPRINT (PU)/ dl-self/ NEHRU/ DL-DLH
Unique Doc. Reference	:	SUBIN-DLDL-SELF57341861002015T
Purchased by	:	SOLARENERGYCORPORATIONOF INDIALIMITED
Description of Document	:	Article 5 General Agreement
Property Description	:	NOT APPLICABLE
Consideration Price (Rs.)	:	0 (Zero)
First Party	:	SOLAR ENERGY CORPORATION OF INDIA LIMITED
Second Party	:	NOT APPLICABLE
Stamp Duty Paid By	:	SOLAR ENERGY CORPORATION OF INDIA LIMITED
Stamp Duty Amount(Rs.)	:	100 (One Hundred only)



SELF PRINTED CERTIFICATE
TO BE VERIFIED BY THE RECIPIENT

Please write or type below this line

This Power Sale Agreement is made on the 25th day of June of 2021 at Mumbai.

Between

Solar Energy Corporation of India Limited, a company incorporated under the Companies Act 1956, having its registered office at 6th Floor, Plate-B, NBCC Office Block Tower-2, East Kidwai





Statutory Alert:
1. The authenticity of this Stamp certificate should be verified at "www.shcilestamp.com" or using e-Stamp Mobile App of Stock Holding. Any discrepancy in the details on this Certificate and as available on the website / Mobile App renders it invalid.
2. The onus of checking the legitimacy is on the users of the certificate.
3. In case of any discrepancy please inform the Competent Authority.

Nagar, New Delhi – 110023 (hereinafter referred to as "Buyer", which expression shall, unless repugnant to the context or meaning thereof, be deemed to include its successors and permitted assigns) as a Party of the first part.

And

Brihanmumbai Electric Supply & Transport Undertaking (BEST Undertaking), statutory Undertaking of the Municipal Corporation of Greater Mumbai and is also encompassed by the definition of a "Local Authority" under Section 2(41) of the Electricity Act, 2003., having its registered office at BEST Bhavan, BEST Marg, Colaba, Mumbai – 400001 (hereinafter referred to as "Buying Entity", which expression shall, unless repugnant to the context or meaning thereof, be deemed to include its successors and permitted assigns) as a Party of the second part.

Buyer and Buying Entity are individually referred to as 'Party' and collectively referred to as 'Parties'.

Whereas:

A. The Government of India has announced the Policy for promotion of the Wind and Solar Power in the country and has provided a target to achieve an aggregate installed capacity of 160 GW out of these two sources by the year 2022. The Ministry of New & Renewable Energy (MNRE), Government of India has issued the "Guidelines for Tariff Based Competitive Bidding Process for procurement of power from Grid Connected Wind Solar Hybrid Projects" issued by the Ministry of New and Renewable Energy vide F.No. 238/78/2017-Wind dated 14.10.2020, under the National Wind-Solar Hybrid Policy issued by MNRE dated 14.05.2018, including subsequent amendments and clarifications, if any.

B. SECI will sign Power Purchase Agreements (PPAs) with the selected Hybrid Power Developers (hereinafter referred to as "HPDs") for procurement of 1110 MW hybrid power or the total capacity of projects selected under the provisions of Request for Selection (RfS) issued by RfS No SECI/C&P/HPD/T3/1200MW/RfS/012020 dated 14/01/2020 if it is less than 1110 MW, on a long term basis, as indicated at Schedule-1 and Schedule-2 respectively

C. Buying Entity has agreed to purchase hybrid power from the Buyer under the Scheme and accordingly, Buyer has agreed to sign Power Purchase Agreements (PPAs) with Hybrid Power developers for procurement of 1110 MW Hybrid Power on a long-term basis, as indicated at Schedule-1&2. This allocated capacity shall be used for solar and non-solar RPO requirement of Buying Utility. SECI shall intimate the same to CTU (PGCIL) for open access. Based on input from PGCIL and corridor availability, quantity (MW) may be revised.

D. Copy of the PPA(s) shall be submitted to Buying Entity within 30 days of the signing of the PPA(s) and such PPA(s) shall become integral part of this Agreement (Buyer-Buying Entity PSA).

E. Pursuant to the aforesaid objective, the Parties are desirous of entering into a Power Sale Agreement ("**PSA**") i.e. a definitive agreement, regarding purchase of power from the Project. Pending execution of the necessary agreements and other relevant documents in relation to the transaction contemplated herein, the Parties wish to execute this PSA setting out the respective obligations of the Parties and the steps necessary to complete the transactions contemplated herein.

F. To establish the commitment of Buying Entity to purchase and Buyer to sale power from the Project, the Parties have entered into this Agreement.

G. A bidder which has been selected as successful Bidder based on this RfS can also execute the Project through Special Purpose Vehicle (SPV) i.e. a Project Company especially incorporated to execute the project. SECI shall enter into PPA with Project Company as per the terms and condition of RfS.

H. Discom(s) acknowledge(s) and accept(s) that SECI is only an Intermediary Company and is facilitating the purchase of sale of electricity generated from the Projects and, therefore, cannot assume independently, any obligation, financial or otherwise, either to the HPD or to Discom(s), (unless otherwise specifically provided otherwise in the PPA), except on a back to back basis, namely, that whatever obligation is enforced by the HPD under the PPA against SECI, Discom(s)shall be bound to fulfil the obligation on a back to back basis towards SECI and similarly, whatever rights that Discom(s) may claim under this

Agreement against SECI, shall be subject to due enforcement of the corresponding rights on a back to back basis by SECI against HPD, without an independent obligation on the part of SECI.

Now therefore, in consideration of the premises and mutual agreements, covenants and conditions set forth herein, it is hereby agreed by and between the Parties as follows:

ARTICLE 1: DEFINITIONS AND INTERPRETATION

1.1 Definitions

The terms used in this Agreement, unless as defined below or repugnant to the context, shall have the same meaning as defined in the Buyer HPD PPA and as assigned to them by the Electricity Act, 2003 and the rules or regulations framed there under, including those issued / framed by the Appropriate Commission (as defined hereunder), as amended or re-enacted from time to time.

"Act" or "Electricity Act, 2003"	Electricity Act, 2003 and include any modifications, amendments and substitution from time to time;
"Adjusted Equity"	shall mean the Equity funded in Indian Rupees and adjusted on the first day of the current month (the "Reference Date"), in the manner set forth below, to reflect the change in its value on account of depreciation and variations in Wholesale Price Index (WPI), and for any Reference Date occurring between the first day of the month of Appointed Date (the date of achievement of Financial Closure) and the Reference Date; i. On or before Commercial Operation Date (COD), the Adjusted Equity shall be a sum equal to the Equity funded in Indian Rupees and expended on the Project, revised to the extent of one half of the variation in WPI occurring between the first day of the month of Appointed Date and Reference Date; ii. An amount equal to the Adjusted Equity as on COD shall be deemed to be the base(the "Base Adjusted Equity"); iii. After COD, the Adjusted Equity hereunder shall be a sum equal to the Base Adjusted Equity, reduced by 0.333% (zero point three three three percent) thereof at the commencement of each month following the COD [reduction of 1% (one percent) per quarter of an year] and the amount so arrived at shall be revised to the extent of variation in WPI occurring between the COD and the Reference Date; For the avoidance of doubt, the Adjusted Equity shall, in the event of termination, be computed as on the Reference Date immediately preceding the Transfer Date; provided that no reduction in the Adjusted Equity shall be made for a period equal to the duration, if any, for which the PPA period is extended, but the revision on account of WPI shall continue to be made.

"Agreement" or "Power Sale Agreement" or "PSA"	shall mean this Power Sale Agreement including its recitals and Schedules, amended or modified from time to time in accordance with the terms hereof;
"Appropriate Commission"	Unless otherwise stated, Appropriate Commission shall mean Central Electricity Regulatory Commission;
"Bill Dispute Notice"	shall mean the notice issued by a Party raising a Dispute regarding a Monthly Bill or a Supplementary Bill issued by the other Party;
"Business Day"	shall mean with respect to Buyer and Buying Entity, a day other than Sunday or a statutory holiday, on which the banks remain open for business in the State of Maharashtra and Delhi
"Buying Entity"	means an Entity that requires Hybrid Power to fulfil its solar and non-solar RPO under respective RPO regulations and intend to buy at least 400 MW of Hybrid Power under this RfS.
"Buyer-HPD PPA"	Shall mean the power purchase agreement signed between Buyer and HPD for procurement of 1110MW Hybrid Power by Buyer from HPD and annexed hereto as Schedule 1& 2 of this Agreement;
"Capacity Utilisation Factor" or "CUF"	shall have the same meaning as provided in CERC (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2009 as amended from time to time; However for avoidance of any doubt, it is clarified that the CUF shall be calculated on the Contracted Capacity; In any Contract Year, if 'X' MWh of energy has been metered out at the Delivery Point for 'Y'MW Project capacity, CUF= (X MWh/(YMW*8766)) X100%;
"CERC"	shall mean the Central Electricity Regulatory Commission of India, constituted under sub – section (1) of Section 76 of the Electricity Act, 2003, or its successors;
"Central Transmission Utility" or "CTU"	Shall mean the utility notified by the Central Government under Sub-Section (1) of Section-38 of the Electricity Act 2003;
"Change in Law"	shall have the meaning ascribed thereto in Article 8 of this Agreement;
"Commercial Operation Date"	shall mean the actual date of commissioning of the project as declared by the Commissioning Committee constituted by the State Nodal Agency (SNA). In case of part commissioning, COD will be declared only for that part of project capacity;
"Commissioning" or "Project Commissioning"	The Project will be considered as commissioned if all equipment as per rated Project Capacity has been installed and energy has flown into grid, in line with the Commissioning procedures defined in the Guidelines/PPA;

"Competent Court of Law"	shall mean any court or tribunal or any similar judicial or quasi- judicial body in India that has jurisdiction to adjudicate upon issues relating to this Agreement;
"Consultation Period"	shall mean the period of sixty (60) days or such other longer period as the Parties may agree, commencing from the date of issuance of a Buyer Preliminary Default Notice or Buying Entity Preliminary Default Notice as provided in Article 9 of this Agreement, for consultation between the Parties to mitigate the consequence of the relevant event having regard to all the circumstances;
"Contract Year"	Shall mean the period beginning from the Effective Date and ending on the immediately succeeding March 31 and thereafter each period of 12 months beginning on April 1 and ending on March 31 provided that: (i) in the financial year in which the Scheduled Commissioning Date would occur, the Contract Year shall end on the date immediately before the Scheduled Commissioning Date and a new Contract Year shall commence once again from the Scheduled Commissioning Date and end on the immediately succeeding March 31, and thereafter each period of twelve (12) months commencing on April 1 and ending on March 31, and (ii) provided further that the last Contract Year of this Agreement shall end on the last day of the Term of this Agreement;
"Contracted Capacity"	shall mean 400MW of Hybrid Power contracted with Buying Entity for sale of such power by Buyer to Buying Entity at the Delivery Point from the Hybrid Power Project;
"Debt Due"	shall mean the aggregate of the following sums expressed in Indian Rupees outstanding on the Transfer Date: i. The principal amount of the debt provided by the Senior Lenders under the Financing Agreements for financing the Total Project Cost (the 'Principal') but excluding any part of the principal that had fallen due for repayment 2 (two) years prior to the Transfer Date; ii. All accrued interest, financing fees and charges payable under the Financing Agreements on, or in respect of, the debt referred to in sub-clause (i) above until the Transfer Date but excluding: (i) any interest, fees or charges that had fallen due one year prior to the Transfer Date, (ii) any penal interest or charges payable under the Financing Agreements to any Senior Lender, (iii) any pre-payment charges in relation to accelerated repayment of debt except where such charges have arisen due to Utility Default, and (iv) any Subordinated Debt which is included in the Financial Package and disbursed by lenders for financing the Total Project Cost. Provided that if all or any part of the Debt Due is convertible into Equity at the option of Senior Lenders and/or the Concessionaire, it shall for the

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	purposes of this Agreement be deemed not to be Debt Due even if no such conversion has taken place and the principal thereof shall be dealt with as if such conversion had been undertaken. Provided further that the Debt Due, on or after COD, shall in no case exceed 80% (eighty percent) of the Total Project Cost.
"Delivery Point"	shall mean a single point or multiple points at 220 kV or above, where power from the Project is injected into the identified ISTS Substation (including the dedicated transmission line connecting the Projects with the substation system) as specified in the RfS document. Interconnection at 132kV will be allowed exclusively in case the project is granted connectivity at an available bay of an existing ISTS substation, if any. Metering shall be done at this interconnection point where the power will be injected into the ISTS i.e. the Delivery point. For interconnection with grid and metering, the HPD shall abide by the relevant CERC Regulations, Grid Code, and Central Electricity Authority Regulations as amended from time to time;
"Dispute"	shall mean any dispute or difference of any kind between Buyer and the Buying Entity in connection with or arising out of this Agreement including but not limited to any issue on the interpretation and scope of the terms of this Agreement as provided in Article 12 of this Agreement;
"Due Date"	shall mean the thirtieth (30th) day after a Monthly Bill or a Supplementary Bill is received and duly acknowledged by Buying Entity or, if such day is not a Business Day, the immediately succeeding Business Day, by which date such Monthly Bill or a Supplementary Bill is payable by Buying Entity;
"Effective Date"	Shall have the meaning ascribed thereto in Article 2.1 of this Agreement;
"Electricity Laws"	shall mean the Electricity Act, 2003 and the rules and regulations made there under from time to time along with amendments thereto and replacements thereof and any other Law pertaining to electricity including regulations framed by the Appropriate Commission;
"Energy Accounts"	shall mean the regional energy accounts/state energy accounts as specified in the Grid Code issued by the appropriate agency for each Month (as per their prescribed methodology), including the revisions and amendments thereof;
"Event of Default"	shall mean the events as defined in Article 9 of this Agreement;
"Expiry Date"	shall mean the date as on the expiry of 25 years from the SCD.
"Force Majeure" or "Force Majeure Event"	shall have the meaning ascribed thereto in Article 7 of this Agreement;

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"Guidelines: or "Scheme"	shall mean "Guidelines for Tariff Based Competitive Bidding Process for procurement of power from Grid Connected Wind Solar Hybrid Projects" issued by the Ministry of New and Renewable Energy vide F.No. 238/78/2017-Wind dated 14.10.2020, including subsequent amendments and clarifications, if any
"Grid Code" / "IEGC" or "State Grid Code"	shall mean the Grid Code specified by the Central Commission under Clause (h) of Sub-section (1) of Section 79 of the Electricity Act and/or the State Grid Code as specified by the concerned State Commission, referred under Clause (h) of Sub- section (1) of Section 86 of the Electricity Act 2003, as applicable;
"Indian Governmental Instrumentality"	shall mean the Government of India, Governments of state(s), where the Power Projects, Buyer and Buying Entity are located and any ministry, department, board, authority, agency, corporation, commission under the direct or indirect control of Government of India or any of the above state Government(s) or both, any political sub-division of any of them including any court or Appropriate Commission(s) or tribunal or judicial or quasi-judicial body in India;
"Interconnection Facilities"	shall mean the facilities on HPD's side of the Delivery Point for sending and metering the electrical output in accordance with this Agreement and, subject to Article 4, the Metering System required for supply of power;
"Invoice" or "Bill"	shall mean either a Monthly Invoice, Monthly Bill or a Supplementary Invoice /Supplementary Bill by any of the Parties;
"Late Payment Surcharge"	shall have the meaning ascribed thereto in Article 6.3.3 of this Agreement;
"Law"	Shall mean in relation to this Agreement, all laws including Electricity Laws in force in India and any statute, ordinance, regulation, notification or code, rule, or any interpretation of any of them by an Indian Governmental Instrumentality and having force of law and shall further include without limitation all applicable rules, regulations, orders, notifications by an Indian Governmental Instrumentality pursuant to or under any of them and shall include without limitation all rules, regulations, decisions and orders of the Appropriate Commission;
"Letter of Credit" or "L/C"	shall have the meaning ascribed thereto in Article 6.4 of this Agreement;
"Month"	shall mean a period of thirty (30) days from (and excluding) the date of the event, where applicable, else a calendar month;
" Open Access"	shall have the same meaning as provided in the Electricity Act 2003 as amended from time to time;
"Party" and "Parties"	shall have the meaning ascribed thereto in the recital to this Agreement;

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"Payment Security Mechanism"	shall have the meaning ascribed thereto in Article 6.4 of this Agreement;
"Pooling Substation/ Pooling Point"	Means a point where more than one Hybrid Power project may connect to a common transmission system. Multiple projects can be connected to a pooling substation from where common transmission system shall be constructed and maintained by the developer(s) to get connected to the ISTS substation. The voltage level for such common line shall be 220 kV and above. Further, the metering of the pooled power shall be done at the injection point, i.e. the ISTS substation. However, the voltage level of transmission system of individual projects up to the pooling substation may be at 33 kV and above. Sub-meters shall be installed at the pooling substation for metering and forecasting and scheduling of individual projects. The losses in the common transmission system up to the injection point shall be apportioned to the individual projects for the purpose of billing.
"Preliminary Default Notice"	shall have the meaning ascribed thereto in Article 9 of this Agreement;
"Project" or "Power Project"	shall mean the Wind-Solar hybrid power generation facility of Contracted Capacity of 1110MW, location as per details in signed PPA. The tentative installed capacities of the various Project components are as follows: Solar PV component: 1062.5MW Wind power component: 370.1MW
"Project Capacity"	Shall mean the maximum AC capacity of the Project at the point of injection on which the Power Sale Agreement has been signed.
"RBI"	shall mean the Reserve Bank of India;
"Rebate"	shall have the same meaning as ascribed thereto in Article 6.3.4 of this Agreement;
"RLDC"	shall mean the relevant Regional Load Dispatch Centre established under Sub-section (1) of Section 27 of the Electricity Act, 2003;
"RPC"	shall mean the relevant Regional Power Committee established by the Government of India for a specific region in accordance with the Electricity Act, 2003 for facilitating integrated operation of the power system in that region;
"Rupees" ,"Rs.", "₹ "	shall mean Indian rupees, the lawful currency of India;
"Scheduled Commissioning Date" or "SCD"	shall mean 18 months from the Effective Date of the SECI-HPD PPA;
"SERC"	shall mean the Electricity Regulatory Commission of any State in India constituted under Section-82 of the Electricity Act, 2003 or its successors.

	and includes a Joint Commission constituted under Subsection (1) of Section 83 of the Electricity Act 2003;
"SLDC Charges"	shall mean the charges levied by any of the relevant SLDCs on Buying Entity;
"SECI"	shall mean Solar Energy Corporation of India Limited;
"State Transmission Utility" or "STU"	shall mean the Board or the Government company notified by the respective State Government under Sub-section (1) of Section 39 of the Act;
"Tariff"	Shall have the same meaning as provided for in Article 5 of this Agreement;
"Tariff Payments"	shall mean the payments to be made under Monthly Bills as referred to in Article 6 and the relevant Supplementary Bills;
"Termination Notice"	shall mean the notice given by either Parties for termination of this Agreement in accordance with Article 9 of this Agreement;
"Term of Agreement"	shall have the meaning ascribed thereto in Article 2 of this Agreement;
Unit Commercial Operation Date (UCOD)	shall mean the date of issuance of commissioning certificate for the respective part(s) of the Power Project subsequent to the demonstration of the compliance of commissioning and also start of injection and scheduling power from the Power Project to the Delivery Point and availability / installation of all necessary arrangements / equipment including RTU for scheduling of power generated from the Project and transmission of data to the concerned authority as per applicable regulation;
"Week"	shall mean a calendar week commencing from 00:00 hours of Monday, and ending at 24:00 hours of the following Sunday;
"Solar Power Project"	shall mean the solar photovoltaic project that uses sunlight for direct conversion into electricity and that is being set up by the HPD to provide Solar Power to SECI;
"Solar Power"	Shall mean power generated from the Solar Power Project;
"Wind Power Project"	shall mean the project that uses wind for direct conversion into electricity and that is being set up by the HPD to provide Wind Power to Buyer;
"Wind Power"	Shall mean power generated from the Wind Power Project;
"Wind Solar Hybrid Power Project" or "Hybrid Power Project"	means the wind-solar hybrid power project where the rated power capacity of one resource is at least 33% of the Contracted Capacity.

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1.2 *Interpretation*

Save where the contrary is indicated, any reference in this Agreement to:

1.2.1 "Agreement" shall be construed as including a reference to its Schedules and/or Appendices and/or Annexures;

1.2.2 An "Article", a "Recital", a "Schedule" and a "paragraph / clause" shall be construed as a reference to an Article, a Recital, a Schedule and a paragraph/clause respectively of this Agreement;

1.2.3 A "crore" means a reference to ten million (10,000,000) and a "lakh" means a reference to one tenth of a million (1,00,000);

1.2.4 An "encumbrance" shall be construed as a reference to a mortgage, charge, pledge, lien or other encumbrance securing any obligation of any person or any other type of preferential arrangement (including, without limitation, title transfer and retention arrangements) having a similar effect;

1.2.5 "Indebtedness" shall be construed so as to include any obligation (whether incurred as surety) for the payment or repayment of money, whether present or future, actual or contingent;

1.2.6 A "person" shall be construed as a reference to any person, firm, company, corporation, society, trust, government, state or agency of a state or any association or partnership (whether or not having separate legal personality) of two or more of the above and a person shall be construed as including a reference to its successors, permitted transferees and permitted assigns in accordance with their respective interests;

1.2.7 "Rupee", "Rupees" "Rs." or new rupee symbol "₹"shall denote Indian Rupees, the lawful currency of India;

1.2.8 The "winding-up", "dissolution", "insolvency", or "reorganization" of a company or corporation shall be construed so as to include any equivalent or analogous proceedings under the Law of the jurisdiction in which such company or corporation is incorporated or any jurisdiction in which such company or corporation carries on business including the seeking of liquidation, winding-up, reorganization, dissolution, arrangement, protection or relief of debtors;

1.2.9 Words importing the singular shall include the plural and vice versa;

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1.2.10 This Agreement itself or any other agreement or document shall be construed as a reference to this or to such other agreement or document as it may have been, or may from time to time be, amended, varied, novated, replaced or supplemented only if agreed to between the parties;

1.2.11 A Law shall be construed as a reference to such Law including its amendments or re-enactments from time to time;

1.2.12 A time of day shall, save as otherwise provided in any agreement or document be construed as a reference to Indian Standard Time;

1.2.13 Different parts of this Agreement are to be taken as mutually explanatory and supplementary to each other and if there is any inconsistency between or among the parts of this Agreement, they shall be interpreted in a harmonious manner so as to give effect to each part;

1.2.14 The tables of contents and any headings or sub-headings in this Agreement have been inserted for ease of reference only and shall not affect the interpretation of this Agreement;

1.2.15 All interest, if applicable and payable under this Agreement, shall accrue from day to day and be calculated on the basis of a year of three hundred and sixty five (365) days;

1.2.16 The words "hereof" or "herein", if and when used in this Agreement shall mean a reference to this Agreement;

1.2.17 The terms "including" or "including without limitation" shall mean that any list of examples following such term shall in no way restrict or limit the generality of the word or provision in respect of which such examples are provided;

1.2.18 This Agreement and other documents such as Request for Selection Documents, Guidelines including subsequent clarifications, amendments and further clarifications in regard to the tender shall be read in conjunction with each other and interpreted in harmonious manner.

ARTICLE 2: TERM OF AGREEMENT

2.1 *Effective Date*

2.1.1 This Agreement shall come into effect from the date of signing of this Agreement and such date shall be referred to as the Effective Date.

2.1.2 The Parties agree that decisions pertaining to adoption of the Tariff and SECI's trading margin, and approval of the same, for procurement of contracted capacity, shall be binding on all Parties concerned, as contained in the Electricity Act, 2003 and any amendments thereof.

2.1.3 Notwithstanding the Effective Date, the condition precedent for the enforcement of the obligations of either party against the other under this Agreement shall be that, within 120 days after Effective Date of the PPA, SECI and/or the Buying Entity (ies) shall obtain adoption of tariff from its State Electricity Regulatory Commission and/ or CERC (as applicable), on the terms and conditions contained in this Agreement read with the terms and conditions contained in the Power Sale Agreement entered into between SECI and the Buying Entity(ies). The Parties agree that in the event, the order of adoption of tariff as mentioned above is not issued by the SERC and/ or CERC (as applicable) within the time specified above, the provisions of Article 2.1.4 shall apply.

2.1.4 If parties have mutually extended the time period as stipulated under Article 2.1.3 and the order from the SERC and/ or CERC (as applicable) is issued within the timeline as per Article 2.1.3, no extension for Financial Closure or Scheduled Commissioning Date shall be given. However, if the requisite SERC and/ or CERC (as applicable) order is issued after the timeline as per Article 2.1.3, this shall entail a corresponding extension in Scheduled Financial Closure and the Scheduled Commissioning Date for equal number of days for which the SERC and / or CERC order has been delayed beyond such period as specified in Article 2.1.3.

2.2 Term of Agreement

2.2.1 This Agreement subject to Article 2.3 and 2.4 shall be valid for a term from the Effective Date until the Expiry Date. This Agreement may be extended for a further period on mutually agreed terms and conditions at least one hundred eighty (180) days prior to the Expiry Date.

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2.3 *Early Termination*

2.3.1 This Agreement shall terminate before the Expiry Date:

I. if either SECI or Buying Entity terminates this Agreement, pursuant to Article 9 of this Agreement, or

II. if any SECI-HPD PPA gets terminated, the capacity under this agreement shall automatically be reduced but only to the extent of that particular SECI-HPD PPA capacity.

2.4 Survival

2.4.1 The expiry or termination of this Agreement shall not affect any accrued rights, obligations and liabilities of the Parties under this Agreement, including the right to receive liquidated damages as per the terms of this Agreement, nor shall it affect the survival of any continuing obligations for which this Agreement provides, either expressly or by necessary implication, which are to survive after the Expiry Date or termination including those under, Article 7 (Force Majeure), Article 9 (Events of Default and Termination), Article 10 (Liability and Indemnification), Article 12 (Governing Law and Dispute Resolution), Article 13 (Miscellaneous Provisions), and other Articles and Schedules of this Agreement which expressly or by their nature survive the Term or termination of this Agreement shall continue and survive any expiry or termination of this Agreement.

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ARTICLE 3: SUPPLY OF POWER TO BUYING ENTITY

3.1 *Obligations of Buying Entity:*

3.1.1 Buying Entity undertakes that it shall:-

(a) Ensure off take of the available capacity from the Commercial Operation Date/SCD of the Project as applicable.

(b) Ensure availability of the interconnection facility and evacuation of power from the CTUSTU interface of Buying Entity's state periphery from the Commercial Operation Date of the Project.

(c) be responsible for payment of the transmission related charges and applicable RLDC/SLDC Charges, limited to the charges applicable to the Contracted Capacity of Buying Entity under this Agreement, as determined by CERC from time to time.

(d) Make payment of the Monthly Bill/Supplementary Bill by the Due Date.

(e) Open and maintain Payment Security Mechanism as per Article 6.4 for the entire Term of the Agreement.

(f) Arrange for required consent/NOC from STU/SLDC/concerned agencies in the State of Maharashtra for availing open access/scheduling of the power, within 30 days of acceptance of such application from the HPD.

(g) Obtain necessary approvals of the PSA including trading margin from the SERC,

(h) Fulfil all the obligations undertaken by Buying Entity under this Agreement.

3.2 *Charges*

3.2.1 As per applicable regulation(s) of the Appropriate Commission(s), all charges as determined by Appropriate Commission from time to time pertaining to open access, CTU charges scheduling charges (if any) and any other charges from injection/delivery point to the receiving substation(s)of Buying Entity if any, shall be directly paid or reimbursed by Buying Entity. Invoicing for all transmission related charges shall be done through Supplementary Bills.

3.2.2 Buyer shall neither be liable for obtaining the open access nor for any payments to be made for such open access to the concerned STU/CTU by Buying Entity.

3.2.3 Government of India from time to time issues order for waiver of interstate transmission system (ISTS) charges and losses on transmission of wind/solar power till a certain date. In case the commissioning of the Project gets delayed beyond the applicable date of ISTS

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waiver, arising out of any reasons whatsoever. SECI shall bear no liability with respect to transmission charges and losses levied, if any. Further, in case SCD of the Project is prior to the above deadline of waiver of ISTS charges, and commissioning of the Project is delayed beyond the above date for the reasons attributable to the HPD, the applicable transmission charges shall be borne by the HPD. In case the SCD of the Project is before the date till above ISTS waiver is applicable, and if the Project is granted extension in the SCD on account of Force Majeure, or for delay on the part of the transmission provider in providing the transmission even after having taken the requisite steps in time, or on account of delays on the part of any Government Agency, and the Project is commissioned before the extended SCD; it will get benefit of waiver of interstate transmission charges. However, in case the commissioning of the Project gets delayed beyond the applicable date of ISTS waiver/extended SCD as above, due to reasons attributable to the HPD, the liability of transmission charges would be to the account of the HPD.

3.3 ***Losses***

3.3.1 Buying Entity shall be liable to bear all the transmission losses as determined by Appropriate Commission from time to time in respect of the power evacuated from the Delivery Points to its receiving substation(s).

3.3.2 Not Used.

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ARTICLE 4: METERING, ENERGY ACCONTING AND SCHEDULING

4.1 *Metering*

4.1.1 The metering arrangements for metering the electrical energy supplied at the Delivery Point and Delivery Point shall be as per the provisions identified in the Buyer-HPDPPA respectively. The metering arrangement shall comply with the norms of SERC / CERC/ CEA as applicable.

4.1.2 The energy details obtained from Energy Accounts issued by the RPC of the buying entity, shall be provided to Buying Entity by Buyer along with Monthly Bill validating the total energy for which the Monthly Bill is generated.

4.1.3 Energy Accounts shall be binding on both the Parties for billing and payment purposes.

4.2 *Energy Accounting & Scheduling*

4.2.1 The scheduling and energy accounting of Hybrid Power shall be as per the provisions of the Buyer-HPD PPA and Grid Code.

4.2.2 The HPD shall be responsible for deviations made by it from the dispatch schedule and for any resultant liabilities on account of charges for deviation as per applicable regulations.

4.2.3 HPD shall be responsible for any deviation related to scheduling and actual generation.

4.2.4 No back-down/ curtailment to be ordered without giving formal/ written instruction to the HPD as detailed in Schedule 1. Back-down/ curtailment (if any) including justification of such curtailment/ back-down to be made public by the concerned Load Dispatch Centre.

4.2.5 Energy procured from the Project under the PPA shall be allocated on a pro-rata basis, to all the Buying Entities which have signed their respective Power Sale Agreements with SECI under the referred RfS.

4.2.6 As part of scheduling of power from the Project, the HPD will be required to punch-in their respective schedules and subsequent revisions, by themselves, at the interfaces of all the RLDCs concerned for the corridor of power flow, including the RLDC of the Buying Entity/Discom, as per the Regulations in force, under intimation to SECI. SECI may facilitate in identification of any discrepancy and assist the HPD for its early rectification without any

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liability on SECI. The HPD shall be solely responsible for discrepancy identification and its rectification to avoid any rejection/less payment of invoices.

ARTICLE 5: APPLICABLE TARIFF

5.1.1 From SCD, the Buying Entity shall pay the fixed tariff of Rs 2.41/kWh (Two Rupees and Forty one paise) plus trading margin of Rs. 0.07/ kWh for the entire term of 25 years.

5.1.2 Not used

5.1.3 Not Used.

5.1.4 As per provisions of the PPA, the HPDs are permitted for full commissioning as well as part commissioning of the Project even prior to the SCD. In cases of early commissioning, Buying Entity shall purchase the power at tariff as per article 5.1.1 plus Trading Margin of Rs 0.07/kWh, (Seven Paisa per kWh)].

Such intimation for early commissioning shall be provided to Buying Entity by SECI upon receipt of such intimation by HPD to SECI. In case there is no response provided by Buying Entity to SECI within 15 days from the receipt of such intimation, such early commissioned capacity shall be deemed to have been refused by Buying Entity.

5.1.5 Any excess generation over and above energy specified in Article 6.8.3, may be purchased at 75% of the tariff as mentioned in Article 5.1.1 as applicable provided the Buying Entity consents for purchase of such excess generation with Trading Margin of Rs 0.07/kWh (Seven Paisa per kWh). In case of any excess generation as indicated by the HPD under the PPA, SECI shall intimate the Buying Entity regarding the proposed quantum of excess generation, at least 30 days prior to the scheduled excess generation proposed. The Buying Entity shall be required to grant its consent/refusal for the proposed excess generation within 15 days from the receipt of the above intimation from SECI (through email). In case the consent/refusal as sought by SECI for the same is not issued by the Buying Entity within the above stipulated timelines, it shall be deemed that the Buying Entity has granted its consent for purchase of such excess generation as per the terms of this Agreement.

5.1.6 SECI shall submit the monthly invoice to the Buying Entity based on the Tariff of individual Project commissioned.

5.1.7 Subsequent to grant of connectivity, in case there is a delay in grant/operationalization of LTA by the CTU and/or there is a delay in readiness of the ISTS substation at the Delivery

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Point, including readiness of the power evacuation and transmission infrastructure of the ISTS network until SCD of the Project, and it is established that:

(i) The HPD has complied with the complete application formalities as per RfS,

(ii) The HPD has adhered to the applicable Procedure in this regard as notified by the CERC/CTU, and

(iii) The delay in grant of connectivity/LTA by the CTU and/or delay in readiness of the ISTS substation at the Delivery Point, including readiness of the power evacuation and transmission infrastructure of the ISTS network, is a factor attributable to the CTU/transmission licensee and is beyond the control of the HPD;

The above shall be treated as delays beyond the control of the HPD and SCD for such Projects shall be revised as the date as on 60 days subsequent to the readiness of the Delivery Point and power evacuation infrastructure and/or operationalization of LTA. Decision on requisite extension on account of the above factor shall be taken by SECI.

Further, any delay in adoption of tariff by the Appropriate Commission, beyond 120 (one hundred and twenty) days after Effective Date of the PPA, shall entail a corresponding extension in Scheduled Commissioning Date.

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ARTICLE 6: BILLING AND PAYMENT

6.1 *General*

6.1.1 From UCOD/COD of the Project, Buying Entity shall pay to Buyer the monthly Tariff Payments, on or before the Due Date, in accordance with Tariff as specified in Article 5. All Tariff Payments by Buying Entity shall be in Indian Rupees.

6.2 *Delivery and Content of Monthly Bills*

6.2.1 Buyer shall issue to Buying Entity a signed Monthly Bill on the 1st Business Day of the month.

6.2.2 The Monthly Bill prepared as detailed in Schedule-3 of the PSA, shall include the following;

i) Monthly bill may be raised based on the provisional REA

ii) The final adjustments if any may be done on the basis of the final REA along with the next month bill

iii) Taxes, Duties, Levies etc as applicable.

Final billing may be done based on published REA.

6.3 Payment of Monthly Bills

6.3.1 Buying Entity shall pay the amount payable under the Monthly Bill on the Due Date to such account of Buyer, as shall have been previously notified to Buying Entity in accordance with Article 6.3.2 below.

6.3.2. Buyer shall open a bank account at New Delhi ("Buyer's Designated Account") for all Tariff Payments to be made by Buying Entity to Buyer, and notify Buying Entity of the details of such account at least ninety (90) Days before the dispatch of the first Monthly Bill. Buying Entity shall also designate a bank account at Mumbai (the "Buying Entity's Designated Account") for payments to be made by Buyer to Buying Entity, if any, and notify Buyer of the details of such account ninety (90) Days before the dispatch of the first Monthly Bill. Buyer and Buying Entity shall instruct their respective bankers to make all payments under this Agreement to Buying Entity's Designated Account or Buyer's Designated Account, as the case may be, and shall notify either Party of such instructions on the same day.

6.3.3 Late Payment Surcharge

In the event of delay in payment of a Monthly Bill/Supplementary Bill by Buying Entity beyond thirty (30) days of its Due Date, a Late Payment Surcharge shall be payable by Buying Entity to Buyer at the rate of 1.25% per month on the outstanding amount calculated on a day to day basis. The Late Payment Surcharge shall be claimed by Buyer through the Supplementary Bill.

6.3.4 Rebate

For payment of any Bill including supplementary bill on or before Due Date, the Rebate shall be paid by Buyer to the Buying Entity in the following manner.

a) A Rebate of 1.5 % shall be payable to Buying Entity for the payments made within a period of five (5)working days of the presentation of Bill through e-mail.

b) Any payments made after five (5) working days of the date of presentation of bill through e-mail up to the due date shall be allowed a rebate of 1 %.

c) No Rebate shall be payable on the Bills raised on account of Change in Law relating to taxes, duties, cess etc. and Late Payment Surcharge.

6.4 Payment Security Mechanism

A. Letter of Credit (LC):

6.4.1 Buying Entity shall provide to Buyer, in respect of payment of its Monthly Bills, an unconditional, revolving and irrevocable letter of credit as a backup arrangement which is to be negotiated only on default conditions ("Letter of Credit"), opened and maintained by Buying Entity, which may be drawn upon by Buyer in accordance with this Article. Buying Entity shall provide Buyer draft of the Letter of Credit proposed to be provided to Buyer two (2) months before the Scheduled Commissioning Date.

6.4.2 Not later than one (1) Month before the Start of Supply, Buying Entity shall through a scheduled bank at Mumbai open a Letter of Credit in favour of Buyer, to be made operative at least 15 days prior to the Due Date of its first Monthly Bill under this Agreement. Pursuant to Article 6.4.B the Letter of Credit shall have a term of twelve (12) Months and shall be reviewed every 6 months, in the month of January and July and revised w.e.f. April and Sept. for an amount equal to:

i) for the first Contract Year, equal to 105% of the estimated average monthly billing;

ii) for each subsequent Contract Year, equal to 105% of the average of the monthly Tariff Payments of the previous Contract Year.

6.4.3 Provided that Buyer shall not draw upon such Letter of Credit prior to 30 days beyond the Due Date of the relevant Monthly Bill, and shall not make more than one drawl in a Month.

6.4.4 Provided further that if at any time, such Letter of Credit amount falls short of the amount specified in Article 6.4.2 due to any reason whatsoever, Buying Entity shall restore such shortfall within seven (7) days.

6.4.5 Buying Entity shall cause the scheduled bank issuing the Letter of Credit to intimate Buyer, in writing regarding establishing of such irrevocable Letter of Credit.

6.4.6 Buying Entity shall ensure that the Letter of Credit shall be renewed prior to its expiry.

6.4.7 All costs relating to opening, maintenance of the Letter of Credit shall be borne by Buying Entity.

6.4.8 If Buying Entity fails to pay a Monthly Bill or part thereof within and including 30 days beyond its Due Date, then, subject to Article 6.4.3 and 6.6.2, Buyer may draw upon the Letter of Credit, and accordingly the bank shall pay without any reference or instructions from Buying Entity, an amount equal to such Monthly Bill or part thereof, by presenting to the scheduled bank issuing the Letter of Credit, the following documents:

i) a copy of the Monthly Bill which has remained unpaid by Buying Entity;

ii) a certificate from Buyer to the effect that the bill at item (i) above, or specified part thereof, is in accordance with the Agreement and has remained unpaid after 30 days beyond the Due Date;

B. State Government Guarantee

The Buying Entity shall extend the State Government Guarantee, in a legally enforceable form, such that there is adequate security, both in terms of payment of energy charges and termination compensation if any [for the purpose of this clause, the Tri-Partite Agreement (TPA) signed between Reserve Bank of India, Central Government and State Government shall qualify as State Government Guarantee covering the security for payment of energy charges]. The Buyer shall ensure that upon invoking this guarantee, it shall at once, pass on the same to the HPD(s),

to the extent the payments to the HPD(s) in terms of the PPA are due. Provided that where the Buying Entity is not covered by the Tri-Partite Agreement and is not in a position to provide the State Government Guarantee, the phrase "monthly billing" in Article 6.4.2(i) shall be read as "twice the monthly billing" and the phrase "monthly Tariff Payments" in Article 6.4.2(ii) shall be read as "twice the monthly Tariff Payments".

C. Payment Security Fund

In addition to provisions contained in Article 6.4 (A) and 6.4. (B) Above, the Buying Utility may also choose to provide Payment Security Fund, not later than the commencement of supply of Power to the Buying Utility under this Agreement, which shall be suitable to support Payment of at least 3 (three) months' billing of all the Projects tied up with such fund.

6.5 Third Party Sales by Buyer

6.5.1 Notwithstanding anything to the contrary contained in this Agreement, Buyer shall be entitled to but not obliged to regulate power supply of power of Buying Entity in case of Default in making payment by the 30th day of the Due Date by Buying Entity.

6.5.2 Buyer shall issue the Notice for Regulation of Power Supply on the date above and shall give a notice of 15 days to start the regulation on the 16th day.

6.5.3 Regulation of Power Supply would be on pro rata basis i.e., in the ratio of amount due and unpaid to total amount due against the relevant Monthly Bill.

6.5.4 In order to avoid any doubts, it is illustrated that:

In the event of a bill amounting to Rs. 25 Crore is unpaid to the extent of Rs. 10 Crore, Buyer would have a right to regulate and sell Buying Entity's allocation of the power to third parties to the extent of 40% (i.e. 10/25x100).

6.5.5 Buyer/HPD shall have the right to divert the Solar Power or part thereof and sell it to any third party namely;

i) Any consumer, subject to applicable Law; or

ii) Any licensee under the Act;

Buyer shall request the concerned SLDC/RLDC to divert such power to third party as it may consider appropriate.

6.5.6 Provided that such sale of power to third party shall not absolve Buying Entity from its obligation to pay in full to Buyer for the hybrid power as per Schedule-3 of this Agreement and any other outstanding payment liability of Buying Entity as per this Agreement.

6.5.7 The amount realized from the diversion and sale of power to third party over and above the trading margin, open access charges and costs/RLDC/SLDC etc. shall be adjusted first adjusted against the pending liability of Buying Entity & any other costs and the deficit if any shall be made good by Buying Entity.

6.5.8 Sales to any third party shall cease and regular supply of electricity to Buying Entity shall commence and be restored within seven (7) days from the date of clearing all outstanding dues payable to Buyer for the Solar Power under this Agreement.

6.5.9 Further, the liability of Buying Entity to make the Tariff Payments to Buyer as per Energy Accounts shall start from the day of such restoration of supply of power and shall continue for such periods wherein such power was made available by HPD for usage by Buying Entity.

6.6 Disputed Bill

6.6.1 If Buying Entity does not dispute a Monthly Bill raised by the other Party within thirty (30) days of receiving such Bill shall be taken as conclusive.

6.6.2 If Buying Entity disputes the amount payable under a Monthly Bill it shall pay 50% of the invoice amount and it shall within fifteen (15) days of receiving such Bill, issue a notice (the "Bill Dispute Notice") to the invoicing Party setting out:

i) the details of the disputed amount;

ii) its estimate of what the correct amount should be; and

iii) all written material in support of its claim.

6.6.3 If the Buyer agrees to the claim raised in the Bill Dispute Notice issued pursuant to Article 6.6.2, the Buyer shall make appropriate adjustment in the next Monthly Bill. In such a case excess amount shall be refunded along with interest at the same rate as Late Payment Surcharge, which shall be applied from the date on which such excess payment was made by Buying Entity and up to and including the date on which such payment has been received as refund.

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6.6.4 If the Buyer does not agree to the claim raised in the Bill Dispute Notice issued pursuant to Article 6.6.2, it shall, within fifteen (15) days of receiving the Bill Dispute Notice, furnish a notice (Bill Disagreement Notice) to the disputing Party providing:

i) reasons for its disagreement;

ii) its estimate of what the correct amount should be; and iii)

all written material in support of its counter-claim.

6.6.5 Upon receipt of the Bill Disagreement Notice by Buying Entity under Article 6.6.4, authorized representative(s) or a director of the board of directors/ member of board of Buying Entity and Buyer shall meet and make best endeavours to amicably resolve such dispute within fifteen (15) days of receipt of the Bill Disagreement Notice.

6.6.6 If the Parties do not amicably resolve the Dispute within fifteen (15) days of receipt ofBill Disagreement Notice pursuant to Article 6.6.4, the matter shall be referred to Dispute resolution in accordance with Article 12.

6.6.7 For the avoidance of doubt, it is clarified that despite a Dispute regarding an Invoice, Buying Entity shall, without prejudice to its right to Dispute, be under an obligation to make payment, of 50% of the invoice amount in the Monthly Bill.

6.7 *Quarterly and Annual Reconciliation*

6.7.1 The Parties acknowledge that all payments made against Monthly Bills shall be subject to quarterly reconciliation within 30 days of the end of the quarter of each Contract Year and annual reconciliation at the end of each Contract Year within 30 days thereof to take into account the Energy Accounts, Tariff adjustment payments, Tariff Rebate, Late Payment Surcharge, or any other reasonable circumstance provided under this Agreement.

6.7.2 The Parties, therefore, agree that as soon as all such data in respect of any quarter of a Contract Year or a full Contract Year as the case may be has been finally verified and adjusted, Buying Entity and Buyer shall jointly sign such reconciliation statement. After signing of a reconciliation statement, the Buyer shall make appropriate adjustments in the following Monthly Bill, with Surcharge/Interest, as applicable. Late Payment Surcharge/ interest shall be payable in such a case from the date on which such payment had been

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made to the invoicing Party or the date on which any payment was originally due, as may be applicable. Any Dispute with regard to the above reconciliation shall be dealt with in accordance with the provisions of Article 12.

6.8 Renewable purchase obligation

6.8.1 Buying Entity may identify the energy procured from the Delivery Point to meet its renewable purchase obligations (as mandated by the Appropriate Commission). Provided that the renewable purchase obligation of Buying Entity shall be considered to be met by Buying Entity only if there is no payment default for such energy procured by Buying Entity and a certificate to such effect is provided by Buyer to Buying Entity.

6.8.2 Buyer shall provide such certificate identifying the quantum of hybrid energy supplied by Buyer and being met by Buying Entity for each year within thirty (30) days after the end of such year.

6.8.3 **Criteria for Generation**

6.8.3**a** The HPD will declare the CUF of the Project and will be allowed to revise the same once within three years after COD of the full project capacity. Subsequent to commissioning/part-commissioning of the Project, Buying Entity, in any Contract Year, shall not be obliged to purchase any additional energy from the Buyer/HPD beyond 1644.4902 Million kWh (MU) from the Hybrid Power Project. The above limits shall be considered on pro-rata basis with respect to the individual projects commissioned until commissioning of the entire Project capacity allocated under this Agreement. Further, for the first year of operation, the above limits shall be considered on pro-rata basis.

6.8.3**b** If for any Contract Year subsequent to the commissioning/part-commissioning of allocated Project capacity, it is found that the HPD has not been able to generate minimum energy of 1233.3676 Million kWh (MU) on account of reasons solely attributable to the HPD, the noncompliance by the HPD shall make the HPD liable to pay the compensation and shall duly pay such compensation to the Buyer to enable the Buyer to remit the amount to the Buying Entity. The above limits shall be considered on pro-rata basis with respect to the individual projects commissioned until commissioning of the entire Project capacity allocated under this Agreement. For the first year of operation of the Project, the annual CUF shall be calculated for the complete year after COD of the Project. Subsequently, the

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annual CUF shall be calculated every year from 1st April of the year to 31st March next year. The lower limit will, however be relaxable by Buyer to the extent of grid non-availability for evacuation which is beyond the control of the Solar Power Developer. The amount of such compensation shall be equal to 50% (fifty percent) of the PPA tariff for the shortfall in energy terms, which shall in turn, be remitted to the Buying Entity.

6.8.4 Notwithstanding Article 6.8.3, the Buyer/HPD is free to sell such power to any third party which is in excess of the quantum of power as per Article 6.8.3 of this Agreement from SCD or date of commissioning of the full project capacity, whichever is earlier. Any power which is in excess of the quantum of power agreed to be supplied under this Agreement shall be offered to the Buying Utility at the tariff as per Article 5.1.5, and in case the Buying Utility does not accept the same, SECI shall take appropriate action as per PPA.

6.8.5 The compensation as per Article 6.8.3 shall be applied to the amount of shortfall in generation during the year. However, this compensation shall not be applicable in events of Force Majeure identified under this Agreement affecting supply of Hybrid Power by Buyer/HPD.

6.9 ***Payment of Supplementary Bill***

6.9.1 Buyer/Buying Entity may raise a "Supplementary Bill" for payment on account of:

i) Change in Law as provided in Article 8, or

ii) pertaining to open access and scheduling related charges if any, for transmission of the power, as determined by CERC from time to time or

iii) payment under Article 6.10 and other charges, if any.

and such Supplementary Bill shall be paid by the other Party.

6.9.2 Buyer/Buying Entity shall remit all amounts due under a Supplementary Bill raised by the Buyer/Buying Entity to the Buyer's/Buying Entity's Designated Account by the Due Date.

6.9.3 In the event of delay in payment of a Supplementary Bill by either Party within thirty (30) days beyond its Due Date, a Late Payment Surcharge shall be payable at the same terms applicable to the Monthly Bill in Article 6.3.3.

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6.10. **Offtake constraints due to Grid Unavailability & Backdown**

6.10.1 Not Used.

6.10.2 Offtake constraints due to Backdown: The HPD and the Buying Entity shall follow the forecasting and scheduling process as per the regulations in this regard by the Appropriate Commission. The Government of India, as per Clause 5.2(u) of the Indian Electricity Grid Code (IEGC), provides for status of "must-run" to wind and solar power projects. Accordingly, no wind-solar hybrid power plant, duly commissioned, should be directed to back down by a Discom/ Load Dispatch Centre (LDC). In case such eventuality of Backdown arises, including non-dispatch of power due to non-compliance with "Order No. 23/22/2019-R&R dated 28.06.2019 of Ministry of Power regarding Opening and maintaining of adequate Letter of Credit (LC) as Payment Security Mechanism under Power Purchase Agreements by Distribution Licensees" and any clarifications or amendment thereto, except for the cases where the Backdown is on account of events like consideration of grid security or safety of any equipment or personnel or other such conditions, the Buying Entity shall pay to the HPD, a Minimum Generation Compensation, from the Procurer, in the manner detailed below:

Duration of Backdown	Provision for Generation Compensation
Hours of Backdown during a monthly billing cycle.	***Minimum Generation Compensation = 100% of [(Average Generation per hour during the month) (number of backdown hours during the month) X PPA tariff*** Where, Average Generation per hour during the month (kWh) = Total generation in the month (kWh)÷ Total hours of generation in the month

The Generation Compensation as calculated above will be limited to the extent of shortfall in annual generation corresponding to the maximum CUF permitted as per Article 6.8.3 and the same will be settled on annual basis. No trading margin shall be applicable on the Generation Compensation provided as per Article 6.10.2. The Generation Compensation is to be paid as part of the energy bill for the successive month after receipt of Regional Energy Accounts (REA).

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No compensation shall be payable, however, if the backdown/ curtailment is on account of considerations of grid security/ safety. Such a backdown will be recorded and reported to RLDC/ NLDC. RLDC/ NLDC will examine the issue of grid safety/ security and give a finding that the issue of grid safety existed.

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ARTICLE 7: FORCE MAJEURE

7.1 *Definition of Force Majeure*

A 'Force Majeure' (FM) would mean one or more of the following acts, events or circumstances or a combination of acts, events or circumstances or the consequence(s) thereof, that wholly or partly prevents or unavoidably delays the performance by the Party (the Affected Party) of its obligations under the relevant Power Purchase Agreement, but only if and to the extent that such events or circumstances are not within the reasonable control, directly or indirectly, of the Affected Party and could not have been avoided if the Affected Party had taken reasonable care or complied with Prudent Utility Practices.

An affected Party means SECI or the Buying Entity whose performance has been adversely affected by an event of Force Majeure.

Provisions of Force Majeure provided in SECI-HPD PPA shall mutatis-mutandis apply to this Agreement and all associated obligations and liabilities shall be implemented on back to back basis. Further, in case Force Majeure provisions detailed hereunder are in conflict with SECI-HPD PPA provisions, the provisions detailed in the SECI-HPD PPA shall prevail.

7.2 Categorization of Force Majeure Events:

7.2.1 **Natural Force Majeure Event**

a) Act of God, including, but not limited to lightning, drought, fire and explosion (to the extent originating from a source external to the site), earthquake, volcanic eruption, landslide, flood, cyclone, typhoon or tornado if it is declared / notified by the competent state / central authority / agency (as applicable), or verified to the satisfaction of Procurer;

b) radioactive contamination or ionising radiation originating from a source in India or resulting from another Force Majeure Event mentioned above excluding circumstances where the source or cause of contamination or radiation is brought or has been brought into or near the Project by the Affected Party or those employed or engaged by the Affected Party;

c) the discovery of geological conditions, toxic contamination or archaeological remains on the Project land that could not reasonably have been expected to be discovered through an inspection of the Project land; or

d) any event or circumstances of a nature analogous to any of the events as specified under Article 7.2.1 (a), 7.2.1 (b) and 7.2.1 (c).

7.2.2 Non-Natural Force Majeure Event

a) any act of war (whether declared or undeclared), invasion, armed conflict or act of foreign enemy, blockade, embargo, revolution, riot, insurrection, terrorist or military action;

b) nation/state-wide strike, lockout, boycotts or other industrial disputes which are not directly and solely attributable to the actions of the Affected Party, but does not include strike or labour unrest limited to the Affected Party or its contractors;

c) nationalisation or any compulsory acquisition by any Indian Governmental Instrumentality/ State Government in national interest or expropriation of any material Project assets or rights of the HPD, as a result of which the HPD or its shareholders are deprived (wholly or partly) of their rights or entitlements under the Power Purchase Agreement. Provided that such action does not constitute remedies or sanctions lawfully exercised by the Procurer or any other Government Authority as a result of any breach of any of the Applicable Laws or the Applicable Permits by the HPD or the HPD related parties;

d) action of a Government Authority having Material Adverse Effect including but not limited to Change in Law, only if consequences thereof cannot be dealt with under and in accordance with the provisions of Article 8of this Agreement; any unlawful or unauthorised or without jurisdiction revocation of, or delay in, or refusal, or failure to renew or grant without valid cause, any Permits of the HPD/SECI or any of the clearance, licence, authorization to be obtained by the contractors to perform their respective obligations under the relevant PPA/PSA and/or the Project Documents; provided that such delay, modification, denial, refusal or revocation did not result from the SECI's/HPD's or any contractor's inability or failure to comply with any condition relating to grant, maintenance or renewal of such Permits or clearance, licence, authorization, as the case may be.

7.2.3 Other Force Majeure Event

a) An event of force majeure identified under Buyer-HPD PPA thereby affecting supply of power by HPD.

b) An event of force majeure affecting the concerned STU/ CTU, as the case may be, thereby affecting the evacuation of power from the Delivery Points by Buying Entity;

7.3 Force Majeure Exclusions

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7.3.1 Force Majeure shall not include (i) any event or circumstance which is within the reasonable control of the Parties and (ii) the following conditions, except to the extent that they are consequences of an event of Force Majeure:

a. Unavailability, late delivery, or changes in cost of the plant, machinery, equipment, materials, spare parts or consumables for the Power Project;

b. Delay in the performance of any contractor, sub-contractor or their agents;

c. Non-performance resulting from normal wear and tear typically experienced in power generation materials and equipment;

d. Strikes at the facilities of the Affected Party;

e. Insufficiency of finances or funds or the agreement becoming onerous to perform; and

f. Non-performance caused by, or connected with, the Affected Party's:

i. Negligent or intentional acts, errors or omissions;

ii. Failure to comply with an Indian Law; or

iii. Breach of, or default under this Agreement.

g. Exclusions as identified under SECI-HPD PPA

7.4 Notification of Force Majeure Event

7.4.1 The Affected Party shall give notice to the other Party of any event of Force Majeure as soon as reasonably practicable, but not later than fifteen (15) days after the date on which such Party knew or should reasonably have known of the commencement of the event of Force Majeure and the Procurer shall take a decision on the Affected Party's claim within 15 days of the receipt of the intimation. If an event of Force Majeure results in a breakdown of communications rendering it unreasonable to give notice within the applicable time limit specified herein, then the Party claiming Force Majeure shall give such notices soon as reasonably practicable after reinstatement of communications, but not later than one (1) day after such reinstatement.

7.4.2 provided that such notice shall be a pre-condition to the Affected Party's entitlement to claim relief under the PPA. Such notice shall include full particulars of the event of Force Majeure, its effects on the Party claiming relief and the remedial measures proposed. The Affected Party shall give the other Party regular (and not less than weekly) reports on the progress of those remedial measures and such other information as the other Party may reasonably request about the Force Majeure Event.

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7.4.3 The Affected Party shall give notice to the other Party of (i) the cessation of the relevant event of Force Majeure; and (ii) the cessation of the effects of such event of Force Majeure on the performance of its rights or obligations under the PPA, as soon as practicable after becoming aware of each of these cessations.

7.5 Performance Excused

7.5.1 The Affected Party, to the extent rendered unable to perform its obligations or part of the obligation thereof under the PSA as a consequence of the Force Majeure Event, shall be excused from performance of the obligations, provided that the period shall not exceed 180 (one hundred and eighty) Days from the date of issuance of the FM Notice. The Parties may mutually agree to extend the period for which performance is excused due to a Force Majeure Event.

7.5.2 For the time period, as mutually agreed by the Parties, during which the performance shall be excused, the generator shall be entitled for a day to day extension of the period provided for Financial Closure or Scheduled Commissioning Period or the PSA period, as the case may be.

7.5.3 Provided always that a Party shall be excused from performance only to the extent reasonably warranted by the Force Majeure Event.

7.5.4 Provided further that, nothing shall absolve the Affected Party from any payment obligations accrued prior to the occurrence of the underlying Force Majeure Event.

7.6 No Liability for Other Losses

Save as otherwise provided in this Agreement, no Party shall be liable in any manner, whatsoever, to the other Parties in respect of any loss relating to or arising out of the occurrence or existence of any Force Majeure Event.

7.7 Resumption of Performance

During the period that a Force Majeure Event is subsisting, the Affected Party shall, in consultation with the other Parties, make all reasonable efforts to limit or mitigate the effects of such Force Majeure Event on the performance of its obligations under the PSA. The Affected Party shall also make efforts to resume performance of its obligations under this

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Agreement as soon as possible and upon resumption, shall notify other Parties of the same in writing. The other Parties shall afford all reasonable assistance to the Affected Party in this regard.

7.8 Duty to Perform and Duty to Mitigate

To the extent not prevented by a Force Majeure Event pursuant to Article 7.2, the Affected Party shall continue to perform its obligations pursuant to this Agreement, in line with provisions of Article 7.5. The Affected Party shall use its reasonable efforts to mitigate the effect of any Force Majeure Event as soon as practicable.

7.9 Available Relief for a Force Majeure Event

Subject to this Article 7:

a) no Party shall be in breach of its obligations pursuant to this Agreement except to the extent that the performance of its obligations was prevented, hindered or delayed due to a Force Majeure Event;

b) every Party shall be entitled to claim relief in relation to a Force Majeure Event in regard to its obligations, including but not limited to those specified under Article 4.5;

c) For avoidance of doubt, neither Party's obligation to make payments of money due and payable prior to occurrence of Force Majeure events under this Agreement shall be suspended or excused due to the occurrence of a Force Majeure Event in respect of such Party.

d) Provided that no payments shall be made by either Party affected by a Force Majeure Event for the period of such event on account of its inability to perform its obligations due to such Force Majeure Event.

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ARTICLE 8: CHANGE IN LAW

8.1 *Definitions*

In this Article 8, the following terms shall have the following meanings:

8.1.1 In this Article 8, the term Change in Law shall refer to the occurrence of any of the following events pertaining to this project only after 26.11.2020 including (i) the enactment of any new law; or (ii) an amendment, modification or repeal of an existing law; or (iii) the requirement to obtain a new consent, permit or license; or (iv) any modification to the prevailing conditions prescribed for obtaining an consent, permit or license, not owing to any default of the Hybrid Power Developer; or (v) any change in the rates of any Taxes including any duties and cess or introduction of any new tax/cess/duty made applicable for setting up the hybrid power project and supply of power from the Project by the HPD which have a direct effect on the Project. It is further clarified that, in case the applicability of Safeguard Duty on "Solar Cells whether or not assembled in modules or panels", which is currently applicable until 29.07.2021, gets extended and has a direct effect on the Project, resulting in change in Project Cost, such extension will also qualify under "Change in Law" as per timeline and procedure indicated under this Article.

However, Change in Law shall not include (i) any change in taxes on corporate income or (ii) any change in any withholding tax on income or dividends distributed to the shareholders of the HPD.

8.1.2 In the event of occurrence of any of events as provided under Article 8.1.1 which results in any increase/ decrease in the Project Cost (i.e. cost incurred by the HPD towards supply and services only for the Project concerned, upto Actual Commissioning Date of the last part capacity, or Scheduled Commissioning Date/extended Scheduled Commissioning Date, whichever is earlier),the HPD/ SECI / Buying Utility(ies) shall be entitled for compensation by the other party, as the case may be, subject to the condition that the such 'Change in Law' is recognized by the Appropriate Commission. Compensation payment on account of such 'Change in Law' shall be determined and shall be effective from such date as

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may be decided by the Appropriate Commission. For eg., in case the Actual Commissioning Date of the last part capacity is 15.04.2022, Scheduled Commissioning Date is 15.03.2022 and extended Scheduled Commissioning Date is 01.04.2022, the Project Cost shall be determined as the cost incurred by the HPD upto 01.04.2022.

8.1.3 However, in case of change in rates of safeguard duty, GST and basic customs duty after 26.11.2020 and resulting in change in Project Cost, then such change will be treated as 'Change in Law' and the quantum of compensation payment on account of change in rates of such duties and shall be provided to the affected party by the other party as per Article 8.2.3, subject to the provision that Appropriate Commission recognizes such provisions at the time of adoption of tariff by the Appropriate Commission and any decision in this regard shall be governing on HPD and Buying Entity.

8.2 *Relief for Change in Law*

8.2.1 Save and except as provided under Article 8.1.3, the aggrieved Party shall be required to approach the Hon'ble CERC for seeking approval of Change in Law.

8.2.2 The decision of the Hon'ble CERC to acknowledge a Change in Law and the date from which it will become effective, provide relief for the same, shall be final and governing on HPD and Buying Entity.

8.2.3 In case of Change in Law as approved by the Appropriate Commission pursuant to Article 8.2.1 or as provided under Article 8.1.3, the HPD/ SECI/ Buying Entities (as the case may be) shall be entitled for relief as follows:

Every net increase/decrease of Rs.1 lakh per MW in the Project Cost, for reasons other than those wherein such extension is on account of payment of liquidated damages, penalty or any other charges, as the case may be, shall be liable for corresponding increase/decrease of an amount equal to Rs 0.0049 /kWh.

Any such change, shall be considered upto three digits after the decimal point, and remaining digits, if any, shall be ignored.

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For e.g. in case the change in tariff payable is calculated as Rs. 0.14678 kWh, it shall be modified as Rs. 0.146 kWh

8.2.4 In case Change in Law results in delay in commissioning or supply of power, where cause and effect between these two can be clearly established, the SECI under intimation to the Buying Entities may provide suitable time-extension in Scheduled Commissioning Date or Scheduled Date of Commencement of Supply of Power, as the case may be.

8.2.5 It the event of any decrease in the project cost by the HPD or any income to the HPD on account of any of the events as indicated above, HPD shall pass on the benefit of such reduction at a rate as provided in Article 8.2.3 to SECI which shall be further passed on to the Buying Entity. In the event of the HPD failing to comply with the above requirement, SECI shall make such deductions in the monthly tariff payments on immediate basis. Further, at the time of raising of 1st Monthly Tariff Payment Bill, HPD shall be required to provide a statutory auditor certificate supported by Board Resolution in regard to implications (loss/ gain) arising out of Article 8.

8.3 Notification of Change in Law

8.3.1 If the HPD is affected by Change in Law in accordance with Article 8 and wishes to claim a Change in Law under this Article, it shall give notice to the SECI and Buying Utility (s) of such Change in Law as soon as reasonably practicable (but no later than 60 days from the date of occurrence of such Change in Law).

8.3.2 Any notice service pursuant to this Article 8.3.1 and 8.1.3, shall provide, amongst other things, precise details of the Change in Law and its effect on the Project Cost, supported by documentary evidences including Statutory Auditor Certificate to this effect so as to establish one to one correlation and its impact on the Project Cost.

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ARTICLE 9: EVENTS OF DEFAULT AND TERMINATION

9.1 *Buying Entity Event of Default*

9.1.1 The occurrence and continuation of any of the following events, unless any such event occurs as a result of a Force Majeure Event shall constitute a Buying Entity Event of Default:

(i) Any amount, subject to Article 6.6 remains outstanding beyond a period of ninety (90) days after the Due Date and Buyer is unable to recover the amount outstanding from Buying Entity through the Letter of Credit; or

(ii) Buying Entity fails to off-take power from the Delivery Point for a continuous period of one year.

(iii) if (a) Buying Entity becomes voluntarily or involuntarily the subject of any bankruptcy or insolvency or winding up proceedings and such proceedings remain uncontested for a period of thirty (30) days, or (b) any winding up or bankruptcy or insolvency order is passed against the Buying Entity, or (c) the Buying Entity goes into liquidation or dissolution or has a receiver or any similar officer appointed over all or substantially all of its assets or official liquidator is appointed to manage its affairs, pursuant to Law,

Provided that a dissolution or liquidation of Buying Entity will not be a Buying Entity Event of Default if such dissolution or liquidation is for the purpose of a merger, consolidation or reorganization and where the resulting company retains creditworthiness similar to the Buying Entity and expressly assumes all obligations of the Buying Entity under this Agreement and is in a position to perform them; or

(iv) Buying Entity repudiates this Agreement and does not rectify such breach within a period of thirty (30) days from a notice from Buyer in this regard; or

(v) except where due to any Buyer's failure to comply with its material obligations, Buying Entity is in breach of any of its material obligations pursuant to this Agreement, and such material breach is not rectified by Buying Entity within thirty (30) days of receipt of first notice in this regard given by Buyer.

(vi) Occurrence of any other event which is specified in this Agreement to be a material breach/ default of Buying Entity.

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9.2 SECI Event of Default

9.2.1 The occurrence and continuation of any of the following events, unless any such event occurs as a result of a Force Majeure Event, shall constitute a SECI's Event of Default:

(i) SECI fails to supply power to the Delivery Points for a continuous period of one year.

(ii) if (a) the SECI becomes voluntarily or involuntarily the subject of any bankruptcy or insolvency or winding up proceedings and such proceedings remain uncontested for a period of thirty (30) days, or (b) any winding up or bankruptcy or insolvency order is passed against the SECI, or (c) the SECI goes into liquidation or dissolution or has a receiver or any similar officer appointed over all or substantially all of its assets or official liquidator is appointed to manage its affairs, pursuant to Law,

Provided that a dissolution or liquidation of the SECI will not be a SECI's Event of Default if such dissolution or liquidation is for the purpose of a merger, consolidation or reorganization and where the resulting company retains creditworthiness similar to the SECI and expressly assumes all obligations of the SECI under this Agreement and is in a position to perform them; or

(iii) SECI repudiates this Agreement and does not rectify such breach within a period of thirty (30) days from a notice from SECI in this regard; or

(iv) except where due to any SECI's failure to comply with its material obligations, the SECI is in breach of any of its material obligations pursuant to this Agreement, and such material breach is not rectified by the SECI within thirty (30) days of receipt of first notice in this regard given by the Buying Utility.

(v) occurrence of any other event which is specified in this Agreement to be a material breach/ default of the SECI.

9.3 *Procedure for Event of Default*

9.3.1 Upon the occurrence and continuation of any Event of Default under Article 9.1 & 9.2, the Party affected by such occurrence shall have the right to deliver the notice to the other Party, stating its intention to terminate this Agreement (Preliminary Default Notice), which shall specify in reasonable detail, the circumstances giving rise to the issue of such notice.

9.3.2 Following the issue of Preliminary Default Notice, the Consultation Period of sixty (60) days or such longer period as the Parties may agree, shall apply and it shall be the responsibility of the Parties to discuss as to what steps shall have to be taken with a view

to mitigate the consequences of the relevant Event of Default having regard to all the circumstances.

9.3.3 During the Consultation Period, the Parties shall, save as otherwise provided in this Agreement, continue to perform their respective obligations under this Agreement.

9.3.4 Within a period of seven (7) days following the expiry of the Consultation Period unless the Parties shall have otherwise agreed to the contrary or the Event of Default giving rise to the Consultation Period shall have ceased to exist or shall have been remedied, the Party may terminate this Agreement by giving a written Termination Notice of thirty (30) days to the other Party.

9.3.5 Subject to the occurrence and continuation of default by as contained under Article9.1.1 or Article 9.2.1 and expiry of time period as per Article 9.3.4,

9.3.5.1 Subject to the prior consent of the SECI, the Buying Utility shall novate its part of the PSA to any third party, including its Affiliates within the period of 210 days beyond the period as per Article 9.3.4,

9.3.5.2 In the event the aforesaid novation is not acceptable to SECI, or if no offer of novation is made by the defaulting Buying Utility within the stipulated period as per Article 9.3.5.1, then SECI may terminate the PSA and at its discretion require the defaulting Buying Utility to either (i) takeover the Project assets by making a payment of the termination compensation equivalent to the amount of the Debt Due and the 110% (one hundred and ten per cent) of the Adjusted Equity, less Insurance Cover, if any, or, (ii) pay to the HPD/SECI(as applicable), damages, equivalent to 6 (six) months, or balance PPA period whichever is less, of charges for its contracted capacity, with the Project assets being retained by the HPD.

9.3.6 In the event of occurrence of an HPD Event of Default under the SECI-HPD PPA, the lenders in concurrence with the Buying Entity and SECI, may exercise their rights, if any, under Financing Agreements, to seek substitution of the HPD by a selectee for the residual period of the Agreement, for the purpose of securing the payments of the total debt amount from the HPD and performing the obligations of the HPD. However, in the event the lenders are unable to substitute the defaulting HPD within the stipulated period, SECI may terminate the PPA and the Buying Entity may acquire the Project assets for an amount equivalent to 90% of the debt due or less as mutually agreed, failing which, the lenders may exercise their mortgage rights and liquidate the Project assets. Provided that any

substitution under this Agreement can only be made with the prior consent of SECI including the condition that the selectee meets the eligibility requirements of Request for Selection (RfS) issued by SECI and accepts the terms and conditions of this Agreement.

9.4 ***Termination due to Force Majeure***

9.4.1 If the Force Majeure Event or its effects continue to be present beyond a period of twelve (12) months, either Party shall have the right to cause termination of the Agreement. In such an event this Agreement shall terminate on the date of such Termination Notice without any further liability to either Party from the date of such termination.

9.5 ***Termination of back to back agreements***

In case of termination of Buyer-HPD PPA, this Agreement shall automatically terminate but only to the extent of that particular Buyer-HPD PPA. Provided that in case of such termination, any pending monetary liabilities of either Party shall survive the termination of this Agreement.

9.6 ***Specific Performance of the Agreement***

9.6.1 The Parties acknowledge that a breach of the obligations contained herein would result in injuries. The parties hereby also agree that this Agreement is specifically enforceable at the instance of either Party.

9.6.2 Subject to Applicable Law and as granted by the court of appropriate jurisdiction, Parties acknowledge that either party shall be entitled to seek specific performance of this Agreement in the event of a breach of the obligations or the terms and conditions contained herein.

9.6.3 Further, Parties hereby agree that nothing mentioned herein under this Agreement shall be taken to mean or construe that any penalty or damages shall be adequate compensation for the breach of the obligations or the terms & conditions contained herein.

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ARTICLE 10: LIABILITY AND INDEMNIFICATION

10.1 *Indemnity*

10.1.1 Buying Entity shall indemnify, defend and hold Buyer/HPD harmless against:

a) any and all third party claims against Buyer/HPD for any loss of or damage to property of such third party, or death or injury to such third party, arising out of a breach by the Buyer/HPD of any of its obligations under this Agreement; and

b) any and all losses, damages, costs and expenses including legal costs, fines, penalties and interest actually suffered or incurred by Buyer/HPD from third party claims arising by reason of a breach by the Buyer/HPD of any of its obligations under this Agreement, (provided that this Article 10 shall not apply to such breaches by the Buyer/HPD, for which specific remedies have been provided for under this Agreement).

10.1.2 Buyer shall cause the HPD to indemnify, defend and hold Buying Entity harmless against:

a) any and all third party claims against Buying Entity, for any loss of or damage to property of such third party, or death or injury to such third party, arising out of a breach by HPD of any of their obligations under this Agreement; and

b) any and all losses, damages, costs and expenses including legal costs, fines, penalties and interest ('Indemnifiable Losses') actually suffered or incurred by Buying Entity from third party claims arising by reason of a breach by HPD of any of its obligations. Buyer shall incorporate appropriate covenants in the PPA for the above obligations of HPD. In so far as indemnity to Buying Entity is concerned, HPD shall be the indemnifying party and not Buyer.

10.2 Procedure for claiming Indemnity

10.2.1 Third party claims

a. Where the Indemnified Party is entitled to indemnification from the Indemnifying Party pursuant to Article 10.1.1(a) or 10.1.2 (a), the Indemnified Party shall promptly notify the Indemnifying Party of such claim referred to in Article 10.1.1(a) or 10.1.2(a) in respect of which it is entitled to be indemnified. Such notice shall be given as soon as reasonably practicable after the Indemnified Party becomes aware of such claim. The Indemnifying

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Party shall be liable to settle the indemnification claim within thirty (30) days of receipt of the above notice. Provided however that, if:

i) the Parties choose to refer the dispute in accordance withArticle 12.3; and
ii) the claim amount is not required to be paid/ deposited to such third party pending the resolution of the Dispute,

the Indemnifying Party shall become liable to pay the claim amount to the Indemnified Party or to the third party, as the case may be, promptly following the resolution of the Dispute, if such Dispute is not settled in favour of the Indemnified Party.

b. The Indemnified Party may contest the claim for which it is entitled to be Indemnified under Article 10.1.1(a) or 10.1.2(a) and the Indemnifying Party shall reimburse to the Indemnified Party all reasonable costs and expenses incurred by the Indemnified party. However, such Indemnified Party shall not settle or compromise such claim without first getting the consent of the Indemnifying Party, which consent shall not be unreasonably withheld or delayed.

An Indemnifying Party may, at its own expense, assume control of the defence of any proceedings brought against the Indemnified Party if it acknowledges its obligation to indemnify such Indemnified Party, gives such Indemnified Party prompt notice of its intention to assume control of the defence, and employs an independent legal counsel at its own cost that is reasonably satisfactory to the Indemnified Party.

10.3 ***Indemnifiable Losses***

10.3.1 Where an Indemnified Party is entitled to Indemnifiable Losses from the Indemnifying Party pursuant to Article 10.1.1(b) or 10.1.2 (b), the Indemnified Party shall promptly notify the Indemnifying Party of the Indemnifiable Losses actually incurred by the Indemnified Party. The Indemnifiable Losses shall be reimbursed by the Indemnifying Party within thirty (30) days of receipt of the notice seeking Indemnifiable Losses by the Indemnified Party. In case of non-payment of such losses after a valid notice under this Article 10.3, such event shall constitute a payment default under Article 9.

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10.4 *Limitation on Liability*

10.4.1 Except as expressly provided in this Agreement, neither Buying Entity nor Buyer/HPD nor its/ their respective officers, directors, agents, employees or affiliates (or their officers, directors, agents or employees), shall be liable or responsible to the other Party or its affiliates, officers, directors, agents, employees, successors or permitted assigns or their respective insurers for incidental, indirect or consequential damages, connected with or resulting from performance or non-performance of this Agreement, or anything done in connection herewith, including claims in the nature of lost revenues, income or profits (other than payments expressly required and properly due under this Agreement), any increased expense of, reduction in or loss of power generation or equipment used therefore, irrespective of whether such claims are based upon breach of warranty, tort (including negligence, whether of Buying Entity(ies), the HPD or others), strict liability, contract, breach of statutory duty, operation of law or otherwise.

10.4.2 Buyer/HPD shall have no recourse against any officer, director or shareholder of Buying Entity or any Affiliate of Buying Entity or any of its officers, directors or shareholders for such claims excluded under this Article. Buying Entity shall have no recourse against any officer, director or shareholder of Buyer or HPD, or any affiliate of Buyer or any of its officers, directors or shareholders for such claims excluded under this Article.

10.5 ***Duty to Mitigate***

10.5.1 The Parties shall endeavour to take all reasonable steps so as mitigate any loss or damage which has occurred under this Article 10.

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ARTICLE 11: ASSIGNMENTS AND CHARGES

11.1 *Assignments*

This Agreement shall be binding upon, and inure to the benefit of the Parties and their respective successors and permitted assigns. This Agreement shall not be assigned by any Party other than by mutual consent between the Parties to be evidenced in writing. Provided that, such consent shall not be withheld if Buyer seeks to transfer to any affiliate all of its rights and obligations under this Agreement.

Provided further that any successor(s) or permitted assign(s) identified after mutual agreement between the Parties may be required to execute a new agreement on the same terms and conditions as are included in this Agreement.

11.2 *Permitted Charges*

11.2.1 Neither Party shall create or permit to subsist any encumbrance over all or any of its rights and benefits under this Agreement.

ARTICLE 12: GOVERNING LAW AND DISPUTE RESOLUTION

12.1 *Governing Law*

12.1.1 This Agreement shall be governed by and construed in accordance with the Laws of India. Any legal proceedings in respect of any matters, claims or disputes arising out of or in connection with this Agreement shall be under the jurisdiction of appropriate courts in Delhi.

12.2 *Amicable Settlement and Dispute Resolution*

12.2.1 *Amicable Settlement*

i. Either Party is entitled to raise any claim, dispute or difference of whatever nature arising under, out of or in connection with this Agreement ("Dispute") by giving a written notice (Dispute Notice) to the other Party, which shall contain:

(i) a description of the Dispute;

(ii) the grounds for such Dispute; and

(iii) all written material in support of its claim.

ii. The other Party shall, within thirty (30) days of issue of Dispute Notice issued under Article 12.2.1 (i), furnish:

(i) counter-claim and defences, if any, regarding the Dispute; and

(ii) all written material in support of its defences and counter-claim.

iii. Within thirty (30) days of issue of Dispute Notice by any Party pursuant to Article12.2.1(i) if the other Party does not furnish any counter claim or defence under Article 12.2.1(ii) or thirty (30) days from the date of furnishing counter claims or defence by the other Party, both the Parties to the Dispute shall meet to settle such Dispute amicably. If the Parties fail to resolve the Dispute amicably within thirty (30) days from the later of the dates mentioned in this Article 12.2.1(iii), the Dispute shall be referred for dispute resolution in accordance with Article 12.3.

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12.3 *Dispute Resolution*

12.3.1 Dispute Resolution by the Appropriate Commission

i. Where any Dispute (i) arises from a claim made by any Party for any change in or determination of the Tariff or any matter related to Tariff or claims made by any Party which partly or wholly relate to any change in the Tariff or determination of any of such claims could result in change in the Tariff, or (ii) relates to any matter agreed to bereferred to the Appropriate Commission, such Dispute shall be submitted to adjudication by the Appropriate Commission. Appeal against the decisions of the Appropriate Commission shall be made only as per the provisions of the Electricity Act, 2003, as amended from time to time.

ii. The obligations of Buying Entity under this Agreement towards Buyer shall not be affected in any manner by reason of inter-se disputes amongst Buying Entity.

iii. Buyer shall be entitled to co-opt the HPD as a supporting party in such proceedings before the Appropriate Commission.

12.3.2 Not Used

12.4 ***Parties to Perform Obligations***

12.4.1 Notwithstanding the existence of any Dispute and difference referred to the Appropriate Commission as provided in Article 12.3 and save as the Appropriate Commission may otherwise direct by a final or interim order, the Parties hereto shall continue to perform their respective obligations (which are not in dispute) under this Agreement.





ARTICLE 13: MISCELLANEOUS PROVISIONS

13.1 *Amendment*

13.1.1 This Agreement may only be amended or supplemented by a written agreement between the Parties.

13.2 *Third Party Beneficiaries*

13.2.1 This Agreement is solely for the benefit of the Parties and their respective successors and permitted assigns and shall not be construed as creating any duty, standard of care or any liability to, any person not a party to this Agreement.

13.3 *Waiver*

13.3.1 No waiver by either Party of any default or breach by the other Party in the performance of any of the provisions of this Agreement shall be effective unless in writing duly executed by an authorised representative of such Party:

13.3.2 Neither the failure by either Party to insist on any occasion upon the performance of the terms, conditions and provisions of this Agreement nor time or other indulgence granted by one Party to the other Parties shall act as a waiver of such breach or acceptance of any variation or the relinquishment of any such right or any other right under this Agreement, which shall remain in full force and effect.

13.4 *Confidentiality*

13.4.1 The Parties undertake to hold in confidence this Agreement and not to disclose the terms and conditions of the transaction contemplated hereby to third parties, except:

a) to their professional advisors;

b) to their officers, contractors, employees, agents or representatives, financiers, who need to have access to such information for the proper performance of their activities; or

c) disclosures required under Law

without the prior written consent of the other Parties.

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13.5 *Severability*

13.5.1 The invalidity or unenforceability, for any reason, of any part of this Agreement shall not prejudice or affect the validity or enforceability of the remainder of this Agreement, unless the part held invalid or unenforceable is fundamental to this Agreement.

13.6 *Notices*

13.6.1 All notices or other communications which are required to be given under this Agreement shall be in writing and in the English language.

13.6.2 If to Buying Entity, all notices or other communications which are required must be delivered personally or by registered post or facsimile or any other method duly acknowledged to the addresses below:

Address : BEST Undertaking, Multi storied Annex Building, 1st Floor, BEST Marg, Colaba, Mumbai – 400001

Attention : Chief Engineer (Regulatory)

Email : dere@bestundertaking.com

Telephone No. : 022-22799567

13.6.3 If to Buyer, all notices or communications must be delivered personally or by registered post or facsimile or any other mode duly acknowledged to the address(es) below:

Address: 6th Floor, Plate-B, NBCC Office Block Tower-2, East Kidwai Nagar, New Delhi-110023

Attention: General Manager (Power Trading)

Email: aknaik@seci.co.in

Telephone No.:011-24666215

13.6.4 All notices or communications given by facsimile shall be confirmed by sending a copy of the same via post office in an envelope properly addressed to the appropriate Party for delivery by registered mail. All notices shall be deemed validly delivered upon receipt evidenced by an acknowledgement of the recipient, unless the Party delivering the notice

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can prove in case of delivery through the registered post that the recipient refused to acknowledge the receipt of the notice despite efforts of the postal authorities.

13.6.5 Any Party may by notice of at least fifteen (15) days to the other Party change the address and/or addresses to which such notices and communications to it are to be delivered or mailed.

13.7 *Language*

13.7.1 All agreements, correspondence and communications between the Parties relating to this Agreement and all other documentation to be prepared and supplied under the Agreement shall be written in English, and the Agreement shall be construed and interpreted in accordance with English language.

13.7.2 If any of the agreements, correspondence, communications or documents are prepared in any language other than English, the English translation of such agreements, correspondence, communications or documents shall prevail in matters of interpretation.

13.8 *Restriction of Shareholders / Owners' Liability*

13.8.1 Parties expressly agree and acknowledge that none of the shareholders of the Parties hereto shall be liable to the other Parties for any of the contractual obligations of the concerned Party under this Agreement. Further, the financial liabilities of the shareholder/s of each Party to this Agreement, shall be restricted to the extent provided in the Indian Companies Act, 1956/2013.

13.9 *Taxes and Duties*

13.9.1 Buying Entity shall bear and promptly pay all statutory taxes, duties, levies and cess, assessed/ levied on Buying Entity, contractors or their employees, that are required to be paid by Buying Entity as per the Law in relation to the execution of the Agreement.

13.9.2 Buyer shall be indemnified and held harmless by Buying Entity against any claims that may be made against Buyer in relation to the matters set out in Article 13.9.1.

13.9.3 Buyer shall not be liable for any payment of, taxes, duties, levies, cess whatsoever for discharging any obligation of Buying Entity by Buyer on behalf of Buying Entity or its personnel.

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13.10 *No Consequential or Indirect Losses*

13.10.1 The liability of Buying Entity and Buyer shall be limited to that explicitly provided in this Agreement.

Provided that notwithstanding anything contained in this Agreement, under no event shall Buyer or Buying Entity claim from one another any indirect or consequential losses or damages.

13.11 *Order of priority in application*

In case of inconsistencies between the agreement(s) executed between the Parties, applicable Law including rules and regulations framed thereunder, the order of priority as between them shall be the order in which they are placed below:

i. applicable Law, rules and regulations framed thereunder;
ii. the Grid Code; and
iii. the terms and conditions of this Agreement;

13.12 *Independent Entity*

13.12.1 Buying Entity/Buyer shall be an independent entity performing its obligations pursuant to the Agreement.

13.12.2 Subject to the provisions of the Agreement, Buying Entity/Buyer shall be solely responsible for the manner in which its obligations under this Agreement are to be performed. All employees and representatives of Buying Entity in connection with the performance of the Agreement shall be under the complete control of Buying Entity and shall not be deemed to be employees, representatives, of Buyer and nothing contained in the Agreement or in any agreement or contract awarded by Buying Entity shall be construed to create any contractual relationship between any such employees, representatives or contractors and Buyer.

13.13 *Compliance with Law*

Despite anything contained in this Agreement but without prejudice to this Article, if any provision of this Agreement shall be in deviation or inconsistent with or repugnant to the provisions contained in the Electricity Act, 2003, or any rules and regulations made there under, such provision of this Agreement shall be deemed to be amended to the extent

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required to bring it into compliance with the aforesaid relevant provisions as amended from time to time.

IN WITNESS WHEREOF the Parties have caused the Agreement to be executed through their duly authorized representatives as of the date and place set forth above.

For and on behalf of
[SECI]

अतुल्य कुमार नायक/Atulya Kumar Naik
महाप्रबंधक/ General Manager
विद्युत व्यापार और वाणिज्यिक विभाग
Power Trading & Commercial Department
सोलर एनर्जी कॉर्पोरेशन ऑफ इंडिया लि. / Solar Energy Corp. of India Ltd.
(भारत सरकार का उद्यम) / (A Govt. of India Enterprise)
छठी मंजिल, प्लॉट-बी, एनबीसीसी कार्यालय ब्लॉक टावर-2, पूर्वी किदवई नगर, नई दिल्ली-23
6th Floor, Plot-B, NBCC Office Block Tower-2, East Kidwai Nagar, New Delhi-23

Signature with seal

Witness:

1. Shibasish Das
Sr. Manager (PS)

2. Mudit Jain
Sr. Engineer

For and on behalf of
[BEST]

Lokesh Chandra IAS
General Manager
BEST.

Signature with seal

Witness:

1. Mr. Mahendra B. Urunkar.
AGM (ES), BEST.

2. Mr. Netaji Namdeo Chougule
CER (Regulatory),
BEST.

SCHEDULE 1: LIST OF LOAs ISSUED TO HPDs

Sl. No.	HPD Name	Project Capacity (MW)	Applicable Tariff as per SECI-HPD PPA(Rs/kWh)
1.	ABC Renewable Energy Private Limited	380	2.41
2.	Adani Renewable Energy Holding Eight Limited	600	2.41
3.	AMP Energy Green Private Limited	130	2.41
Total (MW)		1110	

2 *SCHEDULE 2: BUYER-HPD PPA*

[Shall be provided to Buying Entity within 30 Days of signing of PPA with HPD]

3 *SCHEDUE 3: AMOUNT REALISATION FOR SALE OF HYBRID POWER*

(i) The billing to Buying Entity shall be done by Buyer for realisation of amount for Hybrid Power.
(ii) The payments to be made by Buying Entity to Buyer for the Hybrid Power in a Monthly Invoice shall comprise of amounts to be realized for Hybrid Power.
(iii) The Bills shall be raised by Buyer on Buying Entity as mentioned in Article 6.2

4 SCHEDUE 4: NO OBJECTION CERTIFICATE" FROM CORRESPONDING STU

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5 *SCHEDULE 5: FORMAT of certificate from DISCOM(s) to generation projects based on solar and wind resources regarding waiver of transmission charges*

[to be signed on official letterhead of the concerned Entity(ies) / DISCOM(s)]

This is to certify that M/s .....(Name of generating company/trader such as SECI/PTC etc..) has entered into PPA/PSA dated.....with.....(name of entity purchasing power/DISCOM) for sale of .....MW power generated from wind/solar/hybrid generation power plant of M/s .....(Name of generating company) situated at.....(location)for compliance of Solar and/or Non-Solar Renewable Purchase Obligations (RPO).

(Signature & Stamp)
Name of the Authorized Signatory :
Designation :
Name of the entity / DISCOM :

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Power Sale Agreement (PSA)

For procurement of 234 MW Solar Power

on Long Term Basis

Between

Solar Energy Corporation of India Limited

(SECI Ltd)

And

Brihanmumbai Electric Supply & Transport

Undertaking (BEST Undertaking)

December 2022

Solar Energy Corporation of India Ltd. New Delhi

9/12/22

BUYER-BUYING ENTITY PSA

भारतीय गैर न्यायिक

एक सौ रुपये

Rs. 100

रु. 100

ONE HUNDRED RUPEES

सत्यमेव जयते

भारत INDIA

INDIA NON JUDICIAL

महाराष्ट्र MAHARASHTRA ◑ 2022 ◑ 29AA 726623

प्रधान मुद्रांक कार्यालय, मुंबई
प.म.वि.क. ८०००९०
24 NOV 2022
सक्षम अधिकारी
श्री. दिलीप गवड़

This Power Sale Agreement is made on the 9th day of December of 2022 at Colaba, Mumbai.

Between

Solar Energy Corporation of India Limited, a company incorporated under the Companies Act 1956, having its registered office at 6th Floor, Plate-B, NBCC Office Block Tower-2, East Kidwai Nagar, New Delhi-110023(hereinafter referred to as "Buyer", which expression shall, unless repugnant to the context or meaning thereof, be deemed to include its successors and permitted assigns) as a Party of the first part.

And

Brihanmumbai Electric Supply & Transport Undertaking (BEST Undertaking), statutory Undertaking of the Municipal Corporation of Greater Mumbai and is also encompassed by the definition of a "Local Authority" under Section 2(41) of the Electricity Act, 2003 (hereinafter referred to as "Buying Entity or BEST"), which expression shall, unless repugnant to the context

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परिशिष्ट-५ Annexure I
फक्त प्रतिज्ञापत्रासाठी

मुद्रांक विकत घेणाऱ्याचे नाव Netaji Chaugule,
मुद्रांक विकत घेणाऱ्याचे रहिवाशी पत्ता BEST, mf
मुद्रांक विक्रिबाबतची नोंद वही अनु. क्रमांक _____ दिनांक _____

मुद्रांक विकत घेणाऱ्याची सही परवानाधारक मुद्रांक विक्रेत्याची सही

परवाना क्रमांक : ८०००९०
मुद्रांक विक्रीचे नाव/पत्ता : श्री. कल्पेश प्रेमजी गाला
शॉप नं.४, गाग्यादरा बिल्डींग, ७९ नगिनदास मास्टर रोड,फोर्ट, मुंबई-४०० ००१.

- 5 DEC 2022

शासकीय कार्यालयासमोर/न्यायालयासमोर प्रतिज्ञापत्र सादर करण्यासाठी मुद्रांक कागदाची आवश्यकता नाही. (शासन अधिसूचना क्र. मुद्रां-१०७/२००४) कुमार

5 DEC 2022

ज्या कारणासाठी ज्यांनी मुद्रांक खरेदी केला त्यांनी त्याच कारणासाठी मुद्रांक खरेदी केल्यापासून ६ महिन्यात वापरणे बंधनकारक आहे.

or meaning thereof, be deemed to include its successors and permitted assigns) as a Party of the second part.

Buyer and Buying Entity are individually referred to as 'Party' and collectively referred to as 'Parties'.

Whereas:

A. Solar Energy Corporation of India Limited (SECI) has been identified by the Govt. of India as the nodal agency for implementation of MNRE Scheme for Setting up of ISTS connected Solar Power Projects linked with Manufacturing and shall act as the Intermediary Procurer under the Guidelines for Tariff Based Competitive Bidding Process for Procurement of Power from Grid Connected Solar Power Projects.

B. SECI will sign Power Purchase Agreements (PPAs) with the selected Solar Power Developers (hereinafter referred to as "SPDs") for procurement of 3000 MW Solar Power or the total capacity of projects selected under the provisions of Request for Selection (RfS) issued by RfS No. SECI/C&P/RfS/2GWMANUFACTURING/P-3/R1/062019 dated 25.06.2019, if it is less than 3000 MW, on a long term basis, as indicated at Schedule-1 and Schedule-2 respectively

C. Buying Entity has agreed to purchase Solar Power from the Buyer under the Scheme and accordingly, Buyer has agreed to sign Power Purchase Agreements (PPAs) with Solar Power developers (hereinafter referred to as "SPDs") for procurement of 3000 MW Solar Power on a long term basis, as indicated at Schedule-1 & 2. This allocated capacity shall be used for solar RPO requirement of Buying Utility. SECI shall intimate the same to CTU (PGCIL) for open access. Based on input from PGCIL and corridor availability, quantity (MW) may be revised.

D. Copy of the PPA(s) shall be submitted to Buying Entity within **30** days of the signing of the PPA(s) and such PPA(s) shall become integral part of this Agreement (Buyer-Buying Entity PSA).

E. Pursuant to the aforesaid objective, the Parties are desirous of entering into a Power Sale Agreement ("**PSA**") i.e. a definitive agreement, regarding purchase of power from the Project. Pending execution of the necessary agreements and other relevant documents in relation to the transaction contemplated herein, the Parties wish to execute this PSA

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setting out the respective obligations of the Parties and the steps necessary to complete the transactions contemplated herein.

F. To establish the commitment of Buying Entity to purchase and Buyer to sale power from the Project, the Parties have entered into this Agreement.

G. A bidder which has been selected as successful Bidder based on this RfS can also execute the Project through a Special Purpose Vehicle (SPV) i.e. a Project Company especially incorporated to execute the project. SECI shall enter into PPA with Project Company as per the terms and condition of RfS.

H. Discom(s) acknowledge(s) and accept(s) that SECI is only an Intermediary Company and is facilitating the purchase of sale of electricity generated from the Solar Power Projects and, therefore, cannot assume independently, any obligation, financial or otherwise, either to the SPD or to Discom(s), (unless otherwise specifically provided otherwise in the PPA), except on a back to back basis, namely, that whatever obligation is enforced by the SPD under the PPA against SECI, Discom(s) shall be bound to fulfil the obligation on a back to back basis towards SECI and similarly, whatever rights that Discom(s) may claim under this Agreement against SECI, shall be subject to due enforcement of the corresponding rights on a back to back basis by SECI against SPD, without an independent obligation on the part of SECI.

Now therefore, in consideration of the premises and mutual agreements, covenants and conditions set forth herein, it is hereby agreed by and between the Parties as follows:

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ARTICLE 1: DEFINITIONS AND INTERPRETATION

1.1 Definitions

The terms used in this Agreement, unless as defined below or repugnant to the context, shall have the same meaning as defined in the Buyer SPD PPA and as assigned to them by the Electricity Act, 2003 and the rules or regulations framed there under, including those issued/ framed by the Appropriate Commission (as defined hereunder), as amended or re-enacted from time to time.

"Act" or "Electricity Act, 2003"	Electricity Act, 2003 and include any modifications, amendments and substitution from time to time;
"Agreement" or "Power Sale Agreement" or "PSA"	shall mean this Power Sale Agreement including its recitals and Schedules, amended or modified from time to time in accordance with the terms hereof;
"Appropriate Commission"	Unless otherwise stated, Appropriate Commission shall be Hon'ble Central Electricity Regulatory Commission;
"Adjusted Equity"	Shall have the same meaning as contained in the SECI-SPD PPA
"Bill Dispute Notice"	shall mean the notice issued by a Party raising a Dispute regarding aMonthly Bill or a Supplementary Bill issued by the other Party;
"Business Day"	shall mean with respect to Buyer and Buying Entity, a day other than Saturday, Sunday or a statutory holiday, on which the banks remain open for business in the State of **Maharashtra** and Delhi.
"Buying Entity"	means an Entity that requires Solar Power to fulfil its solar RPO under respective RPO regulations and intend to buy at least 234 MW of Solar Power under this RfS.
"Buyer-SPD PPA"	Shall mean the power purchase agreement(s) signed between Buyer and SPD(s) for procurement of 3000 MW Solar Power by Buyer from SPD and annexed hereto as Schedule 2 of this Agreement;
"Capacity Utilisation Factor" or "CUF"	shall have the same meaning as provided in CERC (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2009 as amended from time to time; However, for avoidance of any doubt, it is clarified that the CUF shall be calculated on the Contracted Capacity; In any Contract Year, if 'X' MWh of energy hasbeen metered out at the Delivery Point for 'Y'MW Project capacity, CUF= (X MWh/(YMW*8766)) X100%;

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"CERC"	shall mean the Central Electricity Regulatory Commission of India, constituted under sub – section (1) of Section 76 of the Electricity Act, 2003, or its successors;
"Central Transmission Utility" or "CTU"	Shall mean the utility notified by the Central Government underSection-38 of the Electricity Act 2003;
"Change in Law"	shall have the meaning ascribed thereto in Article 8 of thisAgreement;
"Commercial Operation Date"	shall mean the actual date of commissioning of the project as declared by the Commissioning Committee constituted by the State Nodal Agency (SNA). In case of part commissioning, COD will be declared only for that part of project capacity;
"Commissioning" or "Project Commissioning"	The Project will be considered as commissioned if all equipment as per rated Project Capacity has been installed and energy has flown into grid, in line with the Commissioning procedures defined in the Guidelines/PPA;
"Competent Court of Law"	shall mean any court or tribunal or any similar judicial or quasi- judicial body in India that has jurisdiction to adjudicate upon issues relating to this Agreement;
"Consultation Period"	shall mean the period of sixty (60) days or such other longer period as the Parties may agree, commencing from the date of issuance of a Buyer Preliminary Default Notice or Buying Entity Preliminary Default Notice as provided in Article 9 of this Agreement, for consultation between the Parties to mitigate the consequence of the relevant event having regard to all the circumstances;
"Contract Year"	Shall mean the period beginning from the Effective Date and ending on the immediately succeeding March 31 and thereafter each period of 12 months beginning on April 1 and ending on March 31 provided that: (i) in the financial year in which the Scheduled Commissioning Date would occur, the Contract Year shall end on the date immediately before the Scheduled Commissioning Date and a new Contract Year shall commence once again from the Scheduled Commissioning Date and end on the immediately succeeding March 31, and thereafter each period of twelve (12) months commencing on April 1 and ending on March 31, and (ii) provided further that the last Contract Year of this Agreement shall end on the last day of the Term of this Agreement;
"Contracted Capacity"	shall mean 234 MW of Solar Power contracted with Buying Entity for sale of such power by Buyer to Buying Entity at theDelivery Point from the Solar Power Project;
"Debt Due"	shall have the same meaning as contained in the SECI-SPD PPA

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"Delivery Point"	shall mean the point at 220 kV or above where the power from the Solar Power project(s) will be injected into the ISTS as per SECI-SPD PPA. Metering shall be done at this interconnection point where the power will be injected into the ISTS i.e. the Delivery point. For interconnection with grid and metering, the SPD shall abide by the relevant CERC Regulations, Grid Code, and Central Electricity AuthorityRegulations as amended from time to time.;
"Dispute"	shall mean any dispute or difference of any kind between Buyer and the Buying Entity in connection with or arising out of this Agreement including but not limited to any issue on the interpretation and scope of the terms of this Agreement as provided in Article 12 of thisAgreement;
"Due Date"	shall mean the thirtieth (30th) day after a Monthly Bill or a Supplementary Bill is received and duly acknowledged by Buying Entity or, if such day is not a Business Day, the immediately succeeding Business Day, by which date such Monthly Bill or a Supplementary Bill is payable by Buying Entity;
"Effective Date"	Shall have the meaning ascribed thereto in Article 2.1 of thisAgreement;
"Electricity Laws"	shall mean the Electricity Act, 2003 and the rules and regulations made thereunder from time to time along with amendments thereto and replacements thereof and any other Law pertaining to electricity including regulations framed by the Appropriate Commission;
"Energy Accounts"	shall mean the regional energy accounts/state energy accounts as specified in the Grid Code issued by the appropriate agency for each Month (as per their prescribed methodology), including the revisions and amendments thereof;
"Event of Default"	shall mean the events as defined in Article 9 of this Agreement;
"Expiry Date"	shall mean the date as on the expiry of 25 years from the SCD or from the date of full commissioning of the projects, whichever is earlier.
"Force Majeure" or "Force Majeure Event"	shall have the meaning ascribed thereto in Article 7 of thisAgreement;
"Guidelines: or "Scheme"	shall mean the Guidelines for Tariff Based Competitive Bidding Process for Procurement of Power from Grid Connected Solar PVPower Projects issued by the Ministry of Power on 3rd August 2017 including its amendment(s), corrigendum(s) and clarification(s) (if any) issued by GOI
"Grid Code"/ "IEGC" or "State Grid Code"	shall mean the Grid Code specified by the Central Commission under Clause (h) of Sub-section (1) of Section 79 of the Electricity Act and/or the State Grid Code as specified by the concerned StateCommission, referred under Clause (h) of Sub- section (1) of Section 86 of the Electricity Act 2003, as applicable;

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"Incremental Receivables"	Shall mean the amount of receivables, in excess of the amounts which have already been charged or agreed to be charged in favour of the parties by way of a legally binding agreement, executed prior to the Effective Date;
"Indian Governmental Instrumentality"	shall mean the Government of India, Governments of state(s), where the Power Projects, Buyer and Buying Entity are located and any ministry, department, board, authority, agency, corporation, commission under the direct or indirect control of Government of India or any of the above state Government(s) or both, any political sub-division of any of them including any court or Appropriate Commission(s) or tribunal or judicial or quasi-judicial body in India;
"Interconnection Facilities"	shall mean the facilities on SPD's side of the Delivery Point for sending and metering the electrical output in accordance with this Agreement and, subject to Article 4, the Metering System required for supply of power;
"Invoice" or "Bill"	shall mean either a Monthly Invoice, Monthly Bill or a Supplementary Invoice/Supplementary Bill by any of the Parties;
"Late Payment Surcharge"	shall have the meaning ascribed thereto in Article 6.3.3 of thisAgreement;
"Law"	Shall mean in relation to this Agreement, all laws including Electricity Laws in force in India and any statute, ordinance, regulation, notification or code, rule, or any interpretation of any of them by an Indian Governmental Instrumentality and having force of law and shall further include without limitation all applicable rules, regulations, orders, notifications by an Indian Governmental Instrumentality pursuant to or under any of them and shall include without limitation all rules, regulations, decisions and orders of the Appropriate Commission;
"Letter of Credit" or "L/C"	shall have the meaning ascribed thereto in Article 6.4 of thisAgreement;
"Month"	shall mean a period of thirty (30) days from (and excluding) the date of the event, where applicable, else a calendar month;
"Open Access"	shall have the same meaning as provided in the Electricity Act 2003 as amended from time to time;
"Party" and "Parties"	shall have the meaning ascribed thereto in the recital to this Agreement;
"Payment Security Mechanism"	shall have the meaning ascribed thereto in Article 6.4 of thisAgreement;

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"Pooling Substation/ Pooling Point"	Means a point where more than one Solar Power projects may connect to a common transmission system. Multiple projects can be connected to a pooling substation from where common transmission system shall be constructed and maintained by the developer(s) to get connected to the ISTS substation. The voltage level for such common line shall be 220 kV and above. Further, the metering of the pooled power shall be done at the injection point, i.e. the ISTS substation. However, the voltage level of transmission system of individual projects up to the pooling substation may be at 33 kV and above. Sub-meters shall be installed at the pooling substation for metering and forecasting and scheduling of individual projects. The losses in the common transmission system up to the injection point shall be apportioned to the individual projects for the purpose of billing.
"Preliminary Default Notice"	shall have the meaning ascribed thereto in Article 9 of this Agreement;
"Project" or "Power Project"	shall mean the Solar Power generation facility as per Schedule-I having separate points of injection into the grid at interconnection/metering point at ISTS substation or in case of sharing of transmission lines, by separateinjection at pooling point. Each project must also have separate control systems and metering.
"Project Capacity"	Shall mean the maximum AC capacity of the Project at the point of injection on which the Power Sale Agreement has been signed.
"RBI"	shall mean the Reserve Bank of India;
"Rebate"	shall have the same meaning as ascribed thereto in Article 6.3.4 of this Agreement;
"RLDC"	shall mean the relevant Regional Load Dispatch Centre established under Sub-section (1) of Section 27 of the Electricity Act, 2003;
"RPC"	shall mean the relevant Regional Power Committee established by the Government of India for a specific region in accordance with the Electricity Act, 2003 for facilitating integrated operation of the power system in that region;
"Rupees","Rs.", "₹ "	shall mean Indian rupees, the lawful currency of India;
"Scheduled Commissioning Date" or "SCD"	Shall mean the Date that is mentioned in the SECI-SPD PPA;
"SERC"	shall mean the Electricity Regulatory Commission of any State in India constituted under Section-82 of the Electricity Act, 2003 or its successors, and includes a Joint Commission constituted under Subsection (1) of Section 83 of the Electricity Act 2003;
"SLDC Charges"	shall mean the charges levied by any of the relevant SLDCs on Buying Entity;

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"SECI"	shall mean Solar Energy Corporation of India Limited;
"State Transmission Utility" or "STU"	shall mean the Board or the Government company notified by the respective State Government under Sub-section (1) of Section 39 of the Act;
"Tariff"	Shall have the same meaning as provided for in Article 5 of thisAgreement;
"Tariff Payments"	shall mean the payments to be made under Monthly Bills as referred to in Article 6 and the relevant Supplementary Bills;
"Termination Notice"	shall mean the notice given by either Parties for termination of thisAgreement in accordance with Article 9 of this Agreement;
"Term of Agreement"	shall have the meaning ascribed thereto in Article 2 of this Agreement;
"Trading Margin"	shall mean margin payable towards the services provided by SECI for re-sale of power to Buying Utilities under this Agreement, which shall be Rs 0.07/kWh fixed for the entire term of the Agreement
Unit Commercial Operation Date (UCOD)	shall mean the date of issuance of commissioning certificate for the respective part(s) of the Power Project subsequent to the demonstration of the compliance of commissioning and also start of injection and scheduling power from the Power Project to the Delivery Point and availability/ installation of all necessary arrangements/ equipment including RTU for scheduling of power generated from the Project and transmission of data to the concerned authority as per applicable regulation;
"Week"	shall mean a calendar week commencing from 00:00 hours ofMonday, and ending at 24:00 hours of the following Sunday;
"Solar Power Project"	shall mean the solar photovoltaic project that uses sunlight for direct conversion into electricity and that is being set up by the SPD to provide Solar Power to SECI;
"Solar Power"	Shall mean power generated from the Solar Power Project;

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1.2 *Interpretation*

Save where the contrary is indicated, any reference in this Agreement to:

1.2.1 "Agreement" shall be construed as including a reference to its Schedules and/or Appendices and/or Annexures;

1.2.2 An "Article", a "Recital", a "Schedule" and a "paragraph / clause" shall be construed as a reference to an Article, a Recital, a Schedule and a paragraph/clause respectively of this Agreement;

1.2.3 A "crore" means a reference to ten million (10,000,000) and a "lakh" means a reference to one tenth of a million (1,00,000);

1.2.4 An "encumbrance" shall be construed as a reference to a mortgage, charge, pledge, lien or other encumbrance securing any obligation of any person or any other type of preferential arrangement (including, without limitation, title transfer and retention arrangements) having a similar effect;

1.2.5 "Indebtedness" shall be construed so as to include any obligation (whether incurred as surety) for the payment or repayment of money, whether present or future, actual or contingent;

1.2.6 A "person" shall be construed as a reference to any person, firm, company, corporation, society, trust, government, state or agency of a state or any association or partnership (whether or not having separate legal personality) of two or more of the above and a person shall be construed as including a reference to its successors, permitted transferees and permitted assigns in accordance with their respective interests;

1.2.7 "Rupee", "Rupees" "Rs." or new rupee symbol "₹"shall denote Indian Rupees, the lawful currency of India;

1.2.8 The "winding-up", "dissolution", "insolvency", or "reorganization" of a company or corporation shall be construed so as to include any equivalent or analogous proceedings under the Law of the jurisdiction in which such company or corporation is incorporated or any jurisdiction in which such company or corporation carries on business including the seeking of liquidation, winding-up, reorganization, dissolution, arrangement, protection or relief of debtors;

1.2.9 Words importing the singular shall include the plural and vice versa;

1.2.10 This Agreement itself or any other agreement or document shall be construed as a reference to this or to such other agreement or document as it may have been, or may

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from time to time be, amended, varied, novated, replaced or supplemented only if agreed to between the parties;

1.2.11 A Law shall be construed as a reference to such Law including its amendments or re-enactments from time to time;

1.2.12 A time of day shall, save as otherwise provided in any agreement or document be construed as a reference to Indian Standard Time;

1.2.13 Different parts of this Agreement are to be taken as mutually explanatory and supplementary to each other and if there is any inconsistency between or among the parts of this Agreement, they shall be interpreted in a harmonious manner so as to give effect to each part;

1.2.14 The tables of contents and any headings or sub-headings in this Agreement have been inserted for ease of reference only and shall not affect the interpretation of this Agreement;

1.2.15 All interest, if applicable and payable under this Agreement, shall accrue from day to day and be calculated on the basis of a year of three hundred and sixty five (365) days;

1.2.16 The words "hereof" or "herein", if and when used in this Agreement shall mean a reference to this Agreement;

1.2.17 The terms "including" or "including without limitation" shall mean that any list of examples following such term shall in no way restrict or limit the generality of the word or provision in respect of which such examples are provided;

1.2.18 All the terms and expressions in capitalized form not defined herein in this Agreement shall have meaning as provided therein in the RfS documents and PPA

1.2.18 This Agreement and other documents like Request for Selection Documents, Guidelinesincluding subsequent clarifications, amendments and further clarifications in regard to the Scheme for PPA linked Manufacturing and Power Purchase Agreement entered by SECI with SPDs shall be read in conjunction with each other and interpreted in harmonious manner.

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ARTICLE 2:TERM OF AGREEMENT

2.1 *Effective Date& Conditions Precedent*

2.1.1 This Agreement shall come into effect from the date of signing of this Agreement and such date shall be referred to as the Effective Date.

2.1.2 Notwithstanding the Effective Date, the condition precedent for the enforcement of the obligations of either party against the other under SECI-SPD PPA shall be that within 60 days from the date of submission to the Appropriate Commission, the Buying Entity (ies) shall obtain all requisite approvals including approval of PSA (including adoption of tariff and trading margin) from its State Electricity Regulatory Commission and/ or CERC (as applicable), on the terms and conditions contained in this Agreement read with the terms and conditions contained in the Power Sale Agreement entered into between SECI and the Buying Entity(ies). The Parties agree that in the event, the order of adoption of tariff, trading margin and the approval of PPA & PSA, as mentioned above is not issued by the SERC and/ or CERC (as applicable) within the time specified above, the provisions of Article 2.1.3 of SECI SPD PPA shall apply.

2.1.3 SECI/Buying Entity as the case may be, shall obtain the order of the Appropriate Commission adopting the tariff and approving the procurement of the contracted capacity on the terms and conditions contained in this agreement entered into between SECI and Buying Entity read with the terms and conditions contained in the PPA to be entered into between SECI and the SPD. The Trading Margin shall be applicable as per Article 5 of the PSA.

2.1.4 Both Parties agree that under SECI- SPD PPA, SECI may be required to grant an extension in time as per provisions of the PPA under intimation to Buying Entity

2.2 *Term of Agreement*

2.2.1 This Agreement subject to Article 2.3 and 2.4 shall be valid for a term from the Effective Date until the Expiry Date. This Agreement may be extended for a further period on mutually agreed terms and conditions at least one hundred eighty (180) days prior to the Expiry Date.

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2.3 *Early Termination*

2.3.1 This Agreement shall terminate before the Expiry Date:

I. if either SECI or Buying Entity terminates this Agreement, pursuant to Article 9 of this Agreement. or

II. if any SECI-SPD PPA gets terminated, the capacity under this agreement shall automatically be reduced but only to the extent of that particular SECI-SPD PPA capacity without any liability on SECI.

2.4 Survival

2.4.1 The expiry or termination of this Agreement shall not affect any accrued rights, obligations and liabilities of the Parties under this Agreement, including the right to receive liquidated damages as per the terms of this Agreement, nor shall it affect the survival of any continuing obligations for which this Agreement provides, either expressly or by necessary implication, which are to survive after the Expiry Date or termination including those under, Article 7 (Force Majeure), Article 9 (Events of Default and Termination), Article 10 (Liability and Indemnification), Article 12 (Governing Law and Dispute Resolution), Article 13 (Miscellaneous Provisions), and other Articles and Schedules of this Agreement which expressly or by their nature survive the Term or termination of this Agreement shall continue and survive any expiry or termination of this Agreement.

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ARTICLE 3: SUPPLY OF POWER TO BUYING ENTITY

3.1 *Obligations of Buying Entity:*

3.1.1 Buying Entity undertakes that it shall: -

(a) Ensure off take of the available capacity from the Scheduled Commissioning Date/ Commercial Operation Dateof the Project, subject to grant of NOC from Maharashtra STU.
In case Maharashtra STU issues conditional NOC for LTA due to transmission constraint and if the SCD is prior to completion of transmission lines, under these circumstances BEST will give its consent to SECI/SPD to sell the power generated to any other third parties/Utilities/Buyers.
In such matters and any other related circumstances, SECI/SPD shall not claim any compensation or damages from BEST Undertaking.

(b) Ensure availability of the interconnection facility and evacuation of power from the CTU/STU interface of Buying Entity's state periphery from the Scheduled Commissioning Date / Commercial Operation Date of the Project.
In case Maharashtra STU issues conditional NOC for LTA due to transmission constraint and if the SCD is prior to completion of transmission lines, under these circumstances BEST will give its consent to SECI/SPD to sell the power generated to any other third parties/Utilities/Buyers.
In such matters and any other related circumstances, SECI/SPD shall not claim any compensation or damages from BEST Undertaking.

(c) be responsible for payment of the applicable intra state transmission charges, RLDC/SLDC Charges, limited to the charges applicable to the Contracted Capacity of Buying Entity under this Agreement, as determined by CERC from time to time.

(d) Make payment of the Monthly Bill/Supplementary Bill by the Due Date.

(e) Open and maintain Payment Security Mechanism as per Article 6.4 for the entire Term of the Agreement.

(f) Arrange for required consent/NOC from STU/SLDC/concerned agenciesin the State of **Maharashtra** for availing open access/scheduling of the power.

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(g) Obtain necessary approval/adoption of PSA along with tariff, trading margin and contracted capacity

(h) Fulfil all the obligations undertaken by Buying Entity under this Agreement.

3.2 *Charges*

3.2.1 As per applicable regulation(s) of the Appropriate Commission(s), all charges as determined by Appropriate Commission from time to time pertaining to open access, CTU charges,scheduling charges (if any) and any other charges from injection/delivery point to the receiving substation(s) of Buying Entity if any, shall be directly paid or reimbursed by Buying Entity.

3.2.2 Buyer shall neither be liable for obtaining the open access nor for any payments to be made for such open access to the concerned STU/CTU by Buying Entity.

3.2.3 Government of India from time to time issues order for waiver of interstate transmission system (ISTS) charges and losses on transmission of wind/solar power till a certain date. Further, in case SCD of the Project is prior to the above deadline of waiver of ISTS charges and losses, and commissioning of the Project is delayed beyond the above date for the reasons attributable to the SPD, the applicable transmission charges and losses shall be borne by the SPD. In case the SCD of the Project is before the date till above ISTS waiver is applicable, and if the Project is granted extension in the SCD on account of Force Majeure, or for delay on the part of the transmission provider in providing the transmission even after having taken the requisite steps in time, or on account of delays on the part of any Government Agency, and the Project is commissioned before the extended SCD; it will get benefit of waiver of interstate transmission charges and losses . However, in case the commissioning of the project gets delayed beyond the applicable date of ISTS waiver/extended SCD as above, due to reasons attributable to the SPD, the liability of transmission charges and losses would be to the account of the SPD.

3.3 *Losses*

3.3.1 Buying Entity shall be liable to bear all the transmission lossesas determined by Appropriate Commission from time to timein respect of the power evacuated from the Delivery Points to its receiving substation(s).

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ARTICLE 4: METERING, ENERGY ACCONTING AND SCHEDULING

4.1 *Metering*

4.1.1 The metering arrangements for metering the electrical energy supplied at the Delivery Point and Delivery Point shall be as per the provisions identified in the Buyer-SPD PPA respectively. The metering arrangement shall comply with the norms of SERC / CERC/ CEA as applicable.

4.1.2 The energy details obtained from Energy Accountsissued by the RPC of the buying entity,shall be provided to Buying Entity by Buyer along with Monthly Bill validating the total energy for which the Monthly Bill is generated.

4.1.3 Energy Accounts shall be binding on both the Parties for billing and payment purposes.

4.2 *Energy Accounting & Scheduling*

4.2.1 The scheduling and energy accounting of Solar Power shall be as per the provisions of the Buyer-SPD PPA and Grid Code.

4.2.2 The SPD shall be responsible for deviations made by it from the dispatch schedule and for any resultant liabilities on account of charges for deviation as per applicable regulations.

4.2.3 SPD shall be responsible for any deviation related to scheduling and actual generation.

4.2.4 No back-down/ curtailment to be ordered without giving formal/ written instruction to the SPD as detailed in Schedule 1. Back-down/ curtailment (if any) including justification of such curtailment/ back-down to be made public by the concerned Load Dispatch Centre.

4.2.5 As part of scheduling of power from the Project, the SPD will be required to punch-in their respective schedules and subsequent revisions, by themselves, at the interfaces of all the RLDCs concerned for the corridor of power flow, including the RLDC of the Buying Entity/Discom, as per the Regulations in force, under intimation to SECI. SECI may facilitate in identification of any discrepancy and assist the SPD for its early rectification without any liability on SECI. The SPD shall be solely responsible for discrepancy identification and its rectification to avoid any rejection/less payment of invoices.

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ARTICLE 5: APPLICABLE TARIFF

5.1.1 From SCD and subject to the provision of the Article 6.7, the Buying Entity shall pay the fixed tariff of Rs. 2.54/kWh plus trading margin of Rs. 0.07/ kWh for the entire term of this agreement.

5.1.2 Not used

5.1.3 Benefits on account of any reduction in tariff as per provisions of SECI-SPD PPA, shall be passed on to the Buying Utility.

5.1.4 As per provisions of the PPA, the SPDs are permitted for full commissioning as well as part commissioning of the Project even prior to the SCD. In cases of early part-commissioning, till the achievement of full commissioning or SCD, whichever is earlier, the Buying Entityshall purchase the generation till SCD, at 75% (seventy-five per cent) of the tariff as mentioned in the Article 5.1.1 plus Trading Margin of Rs 0.07/kWh, (Seven Paisa per kWh). In case of full commissioning of the Project(s) prior to SCD, Buying Entityshall purchase the power at tariff as per article 5.1.1 plus Trading Margin of Rs 0.07/kWh, (Seven Paisa per kWh)].

5.1.5 Any excess generation over and above energy specified in Article 6.8.3, may be purchased at a tariff of 75% of the tariff as mentioned in Article 5.1.1 provided the Buying Entity consents for purchase of such excess generation with Trading Margin of Rs 0.07/kWh (Seven Paisa per kWh). In case of any excess generation as indicated by the SPD under the PPA, SECI shall intimate the Buying Entity regarding the proposed quantum of excess generation, at least 1 month prior to the scheduled excess generation proposed. The Buying Entity shall be required to grant its consent/refusal for the proposed excess generation within 15 days from the receipt of the above intimation from SECI (through email). In case the consent/refusal as sought by SECI for the same is not issued by the Buying Entity within the above stipulated timelines, it shall be deemed that the Buying Entity has granted its consent for purchase of such excess generation as per the terms of this Agreement.

5.1.6 Not used

5.1.7 Subsequent to grant of connectivity, in case there is a delay in grant/operationalization of LTA by the CTU and/or there is a delay in readiness of the ISTS substation at the

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Delivery Point, including readiness of the power evacuation and transmission infrastructure of the ISTS network until SCD of the Project, and it is established that:

(i) The SPD has complied with the complete application formalities as per RfS,

(ii) The SPD has adhered to the applicable Procedure in this regard as notified by the CERC/CTU, and

(iii) The delay in grant of connectivity/LTA by the CTU and/or delay in readiness of the ISTS substation at the Delivery Point, including readiness of the power evacuation and transmission infrastructure of the ISTS network, is a factor attributable to the CTU/transmission licensee and is beyond the control of the SPD;

The above shall be treated as delays beyond the control of the SPD and SCD shall be extended for such Projects upto 15 days subsequent to the readiness of the Delivery Point and power evacuation infrastructure and/or operationalization of LTA. Decision on requisite extension on account of the above factor shall be taken by SECI.

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ARTICLE 6: BILLING AND PAYMENT

6.1 *General*

6.1.1 From UCOD/COD of the Project, Buying Entity shall pay to Buyer the monthly Tariff Payments, on or before the Due Date, in accordance with Tariff as specified in Article 5. All Tariff Payments by Buying Entity shall be in Indian Rupees.

6.2 *Delivery and Content of Monthly Bills*

6.2.1 Buyer shall issue to Buying Entity a signed Monthly Bill on the 1st Business Day of the month.

6.2.2 The Monthly Bill prepared as detailed in Schedule-3 of the PSA, shall include the following;

i) Monthly bill may be raised based on the provisional REA

ii) The final adjustments if any may be done on the basis of the final REA along with the next month bill

iii) Taxes, Duties, Levies etc. as applicable.

Final billing may be done based on published REA.

6.3 Payment of Monthly Bills

6.3.1 Buying Entity shall pay the amount payable under the Monthly Bill on the Due Date to such account of Buyer, as shall have been previously notified to Buying Entity in accordance with Article 6.3.2 below.

6.3.2. Buyer shall open a bank account at New Delhi ("Buyer's Designated Account") for all Tariff Payments to be made by Buying Entity to Buyer, and notify Buying Entity of the details of such account at least ninety (90) Days before the dispatch of the first Monthly Bill. Buying Entity shall also designate a bank account at **Mumbai** (the "Buying Entity's Designated Account") for payments to be made by Buyer to Buying Entity, if any, and notify Buyer of the details of such account ninety (90) Days before the dispatch of the first Monthly Bill. Buyer and Buying Entity shall instruct their respective bankers to make all payments under this Agreement to Buying Entity' Designated Account or Buyer's Designated Account,as the case may be, and shall notify either Party of such instructions on the same day.

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6.3.3 Late Payment Surcharge

In the event of payment of a Monthly Bill by the Buying Entity beyond 30 days of its due date, a Late Payment Surcharge (LPS) shall be payable by the Buying Entity to SECI on the outstanding payment, at the base rate of Late Payment Surcharge applicable for the period for the first month of default. "Base rate of Late Payment Surcharge" means the marginal cost of funds based lending rate for one year of the State Bank of India, as applicable on the 1st April of the financial year in which the period lies, plus five percent (500 bps) and in the absence of marginal cost of funds based lending rate, any other arrangement that substitutes it, which the Central Government may, by notification, in the Official Gazette, specify: The Late Payment Surcharge shall be claimed by SECI through the Supplementary Bill. Late Payment Surcharge shall be payable on the outstanding Payment beyond 30 days of its due date at the base rate of Late Payment Surcharge applicable for the period for the first month of default. The rate of Late Payment Surcharge for the successive months of default shall increase by 0.5 percent (50 bps) for every month of delay provided that the Late Payment Surcharge shall not be more than 3 percent higher than the base rate at any time:

(a) Provided that the rate at which Late Payment Surcharge shall be payable shall not be higher than 1.25% per month at any time for purchase of power.

(b) Provided further that, if a distribution licensee has any payment including Late Payment Surcharge outstanding against a bill after the expiry of seven months from the 30 days beyond Due Date of the bill, it shall be debarred from procuring power from a power exchange or grant of short-term open access till such bill is paid.

(c) All payments by Buying Entityto Buyer for power procured from it shall be first adjusted towards Late Payment Surcharge and thereafter, towards monthly charges, starting from the longest overdue bill.

(d) If the period of default lies in two or more financial years, the base rate of Late Payment Surcharge shall be calculated separately for the periods falling in different years. The Late Payment Surcharge shall be claimed by Procurer through the Supplementary Bill.

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6.3.4 Rebate

For payment of any Billincluding supplementary bill on or before Due Date, the Rebate shall be paid by Buyer to the Buying Entity in the following manner.

a) A Rebate of 2% shall be payable to Buying Entity for the payments made within a period of 5 (five)working days of the presentation of Bill through e-mail.

b) Any payments made after 5(five)working days of the presentation of Bill through e-mail up to the due date shall be allowed a rebate of 1 %.

c) No Rebate shall be payable on the Bills raised on account of Change in Law relating to taxes, duties, cess etc. and Late Payment Surcharge.

6.4 Payment Security Mechanism

A. Letter of Credit (LC):

6.4.1 Buying Entity shall provide to Buyer, in respect of payment of its Monthly Bills, an unconditional, revolving and irrevocable letter of creditas a backup arrangement which is to be negotiated only on default conditions ("Letter of Credit"), opened and maintained by Buying Entity, which may be drawn upon by Buyer in accordance with this Article. Buying Entity shall provide Buyer draft of the Letter of Credit proposed to be provided to Buyer two (2) months before the Scheduled Commissioning Date.

6.4.2 Not later than one (1) Month before the Start of Supply, Buying Entity shall through a scheduled bank at **Mumbai** open a Letter of Credit in favour of Buyer, to be made operative at least 15 days prior to the Due Date of its first Monthly Bill under this Agreement. The Letter of Credit shall have a term of twelve (12) Months and shall be reviewed every 6 months, in the month of January and July and revised w.e.f. April and Sept. for an amount equal to:

i) for the first Contract Year, equal to 110% of the estimated average monthly billing;

ii) for each subsequent Contract Year, equal to 110% of the average of the monthly TariffPayments of the previous Contract Year.

6.4.3 Provided that Buyer shall not draw upon such Letter of Credit prior to the 30 days beyond itsDue Date of the relevant Monthly Bill, and shall not make more than one drawal in a Month.

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6.4.4 Provided further that if at any time, such Letter of Credit amount falls short of the amount specified in Article 6.4.2 due to any reason whatsoever, Buying Entity shall restore such shortfall within seven (7) days.

6.4.5 Buying Entity shall cause the scheduled bank issuing the Letter of Credit to intimateBuyer, in writing regarding establishing of such irrevocable Letter of Credit.

6.4.6 Buying Entity shall ensure that the Letter of Credit shall be renewed prior to its expiry.

6.4.7 All costs relating to opening, maintenance of the Letter of Credit shall be borne by Buying Entity.

6.4.8 If Buying Entity fails to pay a Monthly Bill or part thereof within and including30 days beyond its Due Date, then, subject to Article 6.4.3 and 6.6.2, Buyer may draw upon the Letter of Credit, and accordingly the bank shall pay without any reference or instructions from Buying Entity, an amount equal to such Monthly Bill or part thereof, by presenting to the scheduled bank issuing the Letter of Credit, the following documents:

i) a copy of the Monthly Bill which has remained unpaid by Buying Entity;

ii) a certificate from Buyer to the effect that the bill at item (i) above, or specified part thereof, is in accordance with the Agreement and has remained unpaid after 30 days beyondthe Due Date;

B. State Government Guarantee

The Buying Entity shall extend the State Government Guarantee, in a legally enforceable form, such that there is adequate security, both in terms of payment of energy charges and termination compensation if any [for the purpose of this clause, the Tri-Partite Agreement (TPA) signed between Reserve Bank of India, Central Government and State Government shall qualify as State Government Guarantee covering the security for payment of energy charges]. The Buyer shall ensure that upon invoking this guarantee, it shall at once, pass on the same to the SPD(s), to the extent the payments to the SPD(s) in terms of the PPA are due. Provided that in cases where the Buying Entity is neither covered by Tri-Partite Agreement (TPA) nor is able to provide the State Government Guarantee, the Buying Entity shall pay to SECI an additional risk premium of Rs 0.10/kWh, which shall be credited to the payment security fund maintained by the SECI.

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C. Payment Security Fund

In addition to provisions contained in Article 6.4 (A) and 6.4. (B) Above, the Buying Utility may also choose to provide Payment Security Fund, not later than the commencement of supply of Power to the Buying Utility under this Agreement, which shall be suitable to support Payment of at least 3 (three) months' billing of all the Projects tied up with such fund.

6.5 Third Party Sales by Buyer

6.5.1 Notwithstanding anything to the contrary contained in this Agreement, Buyer shall be entitled to but not obliged to regulate power supply of Solar Power of BuyingEntity in case of Default in making payment by the 30th day of the Due Date by Buying Entity.

6.5.2 Buyer shall issue the Notice for Regulation of Power Supply on the date above and shallgive a notice of 15 days to start the regulation on the 16th day.

6.5.3 Regulation of Power Supply would be on pro rata basis i.e., in the ratio of amount due and unpaid to total amount due against the relevant Monthly Bill.

6.5.4 In order to avoid any doubts, it is illustrated that:

In the event of a bill amounting to Rs. 25 Crore is unpaid to the extent of Rs. 10 Crore, Buyer would have a right to regulate and sell Buying Entity's allocation of the power to third parties to the extent of 40% (i.e. 10/25x100).

6.5.5 Buyer/SPD shall have the right to divert the Solar Power or part thereof and sell it to any third party namely;

i) Any consumer, subject to applicable Law; or

ii) Any licensee under the Act;

Buyer shall request the concerned SLDC/RLDC to divert such power to third party as it may consider appropriate.

6.5.6 Provided that such sale of power to third party shall not absolve Buying Entity from its obligation to pay in full to Buyer for the Solar Power as per Schedule-3 of this Agreement and any other outstanding payment liability of Buying Entity as per this Agreement.

6.5.7 The amount realized from the diversion and sale of power to third party over and above the trading margin, open access charges and costs/RLDC/SLDC etc. shall be adjusted first

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adjusted against the pending liability of Buying Entity & any other costs and the deficit if any shall be made good by Buying Entity.

6.5.8 Sales to any third party shall cease and regular supply of electricity to Buying Entity shall commence and be restored within seven (7) days from the date of clearing all outstanding dues payable to Buyer for the Solar Power under this Agreement.

6.5.9 Further, the liability of Buying Entity to make the Tariff Payments to Buyer as per Energy Accounts shall start from the day of such restoration of supply of power and shall continue for such periods wherein such power was made available by SPD for usage by Buying Entity.

6.6 Disputed Bill

6.6.1 If Buying Entity does not dispute a Monthly Bill raised by the other Party within Thirty (30) days of receiving such Bill shall be taken as conclusive.

6.6.2 If Buying Entity disputes the amount payable under a Monthly Bill it shall pay 50% of the invoice amount and it shall within fifteen (15) days of receiving such Bill, issue a notice (the "Bill Dispute Notice") to the invoicing Party setting out:

i) the details of the disputed amount;

ii) its estimate of what the correct amount should be; and

iii) all written material in support of its claim.

6.6.3 If the Buyer agrees to the claim raised in the Bill Dispute Notice issued pursuant to Article 6.6.2, the Buyer shall make appropriate adjustment in the next Monthly Bill. Insuch a case excess amount shall be refunded along with interest at the same rate as Late Payment Surcharge, which shall be applied from the date on which such excess payment was made by Buying Entity and up to and including the date on which such payment has been received as refund.

6.6.4 If the Buyer does not agree to the claim raised in the Bill Dispute Notice issued pursuant to Article 6.6.2, it shall, within fifteen (15) days of receiving the Bill Dispute Notice, furnish a notice (Bill Disagreement Notice) to the disputing Party providing:

i) reasons for its disagreement;

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ii) its estimate of what the correct amount should be; and

iii) all written material in support of its counter-claim.

6.6.5 Upon receipt of the Bill Disagreement Notice by Buying Entity under Article 6.6.4, authorized representative(s) or a director of the board of directors/ member of board of Buying Entity and Buyer shall meet and make best endeavours to amicably resolve such dispute within fifteen (15) days of receipt of the Bill Disagreement Notice.

6.6.6 If the Parties do not amicably resolve the Dispute within fifteen (15) days of receipt ofBill Disagreement Notice pursuant to Article 6.6.4, the matter shall be referred to Dispute resolution in accordance with Article 12.

6.6.7 For the avoidance of doubt, it is clarified that despite a Dispute regarding an Invoice, Buying Entity shall, without prejudice to its right to Dispute, be under an obligation to make payment, of 50% of the invoice amount in the Monthly Bill.

6.7 *Quarterly and Annual Reconciliation*

6.7.1 The Parties acknowledge that all payments made against Monthly Bills shall be subject to quarterly reconciliation within 30 days of the end of the quarter of each Contract Year and annual reconciliation at the end of each Contract Year within 30 days thereof to take into account the Energy Accounts, Tariff adjustment payments, Tariff Rebate, Late Payment Surcharge, or any other reasonable circumstance provided under this Agreement.

6.7.2 The Parties, therefore, agree that as soon as all such data in respect of any quarter of a Contract Year or a full Contract Year as the case may be has been finally verified and adjusted, Buying Entity and Buyer shall jointly sign such reconciliation statement. Aftersigning of a reconciliation statement, the Buyer shall make appropriate adjustments in the following Monthly Bill, with Surcharge/Interest, as applicable. Late Payment Surcharge/ interest shall be payable in such a case from the date on which such payment had been made to the invoicing Party or the date on which any payment was originally due, as may be applicable. Any Dispute with regard to the above reconciliation shall be dealt with in accordance with the provisions of Article 12.

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6.8 Renewable purchase obligation

6.8.1 Buying Entity may identify the energy procured from the Delivery Point to meet its renewable purchase obligations (as mandated by the Appropriate Commission). Provided that the renewable purchase obligation of Buying Entity shall be considered to be met by Buying Entity only if there is no payment default for such energy procured by Buying Entity and a certificate to such effect is provided by Buyer to Buying Entity.

6.8.2 Buyer shall provide such certificate identifying the quantum of solar energy supplied by Buyer and being met by Buying Entity for each year within thirty (30) days after the end of such year.

6.8.3 **Criteria for Generation**

6.8.3**a** The SPD will declare the CUF of the Project and will be allowed to revise the same once within first year after COD of the full project capacity. Subsequent to commissioning of the Project, Buying Entity, in any Contract Year, shall not be obliged to purchase any additional energy from the Buyer/SPD beyond **631.78 Million kWh (MU)** corresponding to maximum CUF of **30.8 %** from the Solar Power Project. The above limits shall be considered on pro-rata basis with respect to the individual projects commissioned until commissioning of the entire Project capacity allocated under this Agreement. Further, for the first year of operation, the above limits shall be considered on pro-rata basis.

6.8.3**b** If for any Contract Year subsequent to the commissioning of allocated Project capacity, it is found that the SPD has not been able to generate minimum energy of **488.20 Million kWh (MU)** corresponding to minimum CUF of **23.8 %** till the end of 10 years from the SCD and **459.48 Million kWh (MU)** corresponding to minimum CUF of **22.4 %** for the rest of the Term of the Agreement on account of reasons solely attributable to the SPD, the noncompliance by the SPD shall make the SPD liable to pay the compensation and shall duly pay such compensation to the Buyer to enable the Buyer to remit the amount to the Buying Entity. The above limits shall be considered on pro-rata basis with respect to the individual projects commissioned until commissioning of the entire Project capacity allocated under this Agreement. For the first year of operation of the Project, the annual CUF shall be calculated for the complete year after COD of the Project.

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Subsequently, the annual CUF shall be calculated every year from 1st April of the year to 31st March next year. The lower limit will, however be relaxable by Buyer to the extent of grid non-availability for evacuation which is beyond the control of the Solar Power Developer. The amount of such compensation shall be as determined by the Appropriate Commission/Authority, and such compensation shall ensure the Buying Entity is offset for all potential costs associated with low generation and supply of power under the PSA. However, the minimum compensation payable to the Buyer by the SPD shall be 25% (twenty-five percent) of the cost of this shortfall in energy terms, calculated at the PPA tariff, which shall in turn, be remitted to the Buying Entity.

6.8.4 Notwithstanding Article 6.8.3, the Buyer/SPD is free to sell such power to any third party which is in excess of the quantum of power as per Article 6.8.3 of this Agreement from SCD or date of commissioning of the full project capacity, whichever is earlier. Any power which is in excess of the quantum of power agreed to be supplied under this Agreement shall be offered to the Buying Utility at the tariff as per Article 5.1.5, and in case the Buying Utility does not accept the same, SECI shall take appropriate action as per PPA.

6.8.5 The compensation as per Article 6.8.3 shall be applied to the amount of shortfall in generation during the year. However, this compensation shall not be applicable in events of Force Majeure identified under this Agreement affecting supply of Solar Power by Buyer/SPD.

6.9 ***Payment of Supplementary Bill***

6.9.1 Buyer/Buying Entity may raise a "Supplementary Bill" for payment on account of:

i) Change in Law as provided in Article 8, or

ii) pertaining to open access and scheduling related charges if any,for transmissionof the power, as determined by CERC from time to time or

iii)payment under Article 6.10 and other charges, if any.

and such Supplementary Bill shall be paid by the other Party.

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6.9.2 Buyer/Buying Entity shall remit all amounts due under a Supplementary Bill raised by the Buyer/Buying Entity to the Buyer's/Buying Entity's Designated Account by the Due Date.

6.9.3 In the event of delay in payment of a Supplementary Bill by either Partywithin thirty (30) days beyond its Due Date, a Late Payment Surcharge shall be payable at the same terms applicable to the Monthly Bill in Article 6.3.3.

6.10. **Offtake constraints due to Transmission Infrastructure /Grid Unavailability & Generation compensation for Off-take constraints**

6.10. Generation Compensation in offtake constraint due to Transmission Infrastructurenot complete/ ready (Transmission constraint): After the Scheduled Commissioning Date, subject to the submission of documentary evidences from the Competent Authority, if the plant is ready in all respects including the dedicated transmission line to be established by the SPD to connect to the grid but the necessary power evacuation/ transmission infrastructure is not ready, for reasons not attributable to the SPD, leading to offtake constraint, the generation compensation shall be restricted to the following and there shall be no other claim, directly or indirectly against SECI:

Transmission Constraint	**Provision for Generation Compensation**
If the Project is ready but the necessary power evacuation/transmission infrastructure is not ready, leading to offtake constraint	a.The normative CUF of 19% (nineteen per cent) or committed CUF, whichever is lower, for the period of grid unavailability, shall be taken for the purpose of calculation of generation loss. Corresponding to this generation loss, the excess generation by the SPD in the succeeding 3 (three) Contract Years, shall be procured by SECI at the PPA tariff so as to offset this loss. b.If the transmission delay is directly attributable to the organization building the transmission network and

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	some penalty is imposed on him, then a part of that penalty may be utilized by SECI for compensating the generation loss.

However, it is clarified that if the project is ready for commissioning prior to the Scheduled Commissioning Date, but the offtake is constrained because of inadequate/incomplete power evacuation infrastructure, no compensation shall be permissible.

Backdown

6.10.1 Generation Compensation in offtake constraints due to Grid Unavailability: During the operation of the Project, there can be some periods where the Project can generate power but due to temporary transmission unavailability the power is not evacuated, for reasons not attributable to the SPD. In such cases the generation compensation shall be addressed in following manner:

Duration of Grid unavailability	**Provision for Generati Compensation**
Grid unavailability in a contract year as defined in the PPA: (only period from 8 am to 6 pm to be counted):	***Generation Loss = [(Average Generation per hour during the Contract Year) × (number of hours of grid unavailability during the Contract Year)]*** Where, Average Generation per hour during the Contract Year (kWh) = Total generation in the Contract Year (kWh) ÷ Total hours of generation in the Contract Year.

The excess generation by the SPD equal to this generation loss shall be procured by the Buying Entity at the PSA tariff so as to offset this loss in the succeeding 3 (three) Contract Years. (Contract Year, shall be as defined in the PPA.)

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6.10.2 Offtake constraints due to Backdown: The SPD and the Buying Entity shall follow the forecasting and scheduling process as per the regulations in this regard by the Appropriate Commission. The Government of India, as per Clause 5.2(u) of the Indian Electricity Grid Code (IEGC), provides for status of "must-run" to solar power projects. Accordingly, no solar power plant, duly commissioned, should be directed to back down by a Discom/ Load Dispatch Centre (LDC). In case such eventuality of Backdown arises, including non-dispatch of power due to non-compliance with "Order No. 23/22/2019-R&R dated 28.06.2019 of Ministry of Power regarding Opening and maintaining of adequate Letter of Credit (LC) as Payment Security Mechanism under Power Purchase Agreements by Distribution Licensees" and any clarifications or amendment thereto, except for the cases where the Backdown is on account of events like consideration of grid security or safety of any equipment or personnel or other such conditions, the Buying Entity shall pay to the SPD, a Minimum Generation Compensation, from the Procurer, in the manner detailed below.

Duration of Backdown	**Provision for Generation Compensation**
Hours of Backdown during a monthly billing cycle.	***Generation Compensation = 100% of [(Average Generation per hour during the month) X (number of backdown hours during the month)] X PPA tariff*** Where, Average Generation per hour during the month (kWh) = Total generation in the month (kWh) ÷ Total hours of generation in the month

The Generation Compensation shall be claimed as part of the energy bill for the successive month after receipt of Regional Energy Accounts (REA)/ SEA/ JMR. No Trading Margin shall be applicable on the Generation Compensation as provided in Article 6.10.2 only.

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ARTICLE 7: FORCE MAJEURE

7.1 *Definitions*

7.1.1 Provisions of Force Majeure provided in SECI-SPD PPA shall mutatis-mutandis apply to this Agreement and all associated obligations and liabilities shall be implemented on back to back basis. Further, in case Force Majeure provisions detailed hereunder are in conflict with SECI-SPD PPA provisions, the provisions detailed in the SECI-SPD PPA shall prevail:

7.2 *Affected Party*

7.2.1 An affected Party means Buyer or the Buying Entity whose performance has been adversely affected by an event of Force Majeure.

7.3 *Force Majeure*

7.3.1 A 'Force Majeure' (FM) would mean one or more of the following acts, events or circumstances or a combination of acts, events or circumstances or the consequence(s) thereof as specified below, that wholly or partly prevents or unavoidably delays the performance by the Party (the Affected Party) of its obligations under the relevant this Agreement, but only if and to the extent that such events or circumstances are not within the reasonable control, directly or indirectly, of the Affected Party and could not have been avoided if the Affected Party had taken reasonable care or complied with Prudent Utility Practices:

7.3.1.1 Categorization of Force Majeure Events

7.3.1.1.1 Natural Force Majeure Event

a) Act of God, including, but not limited to lightning, drought, fire and explosion (to the extent originating from a source external to the site), earthquake, volcanic eruption, landslide, flood, cyclone, typhoon or tornado if it is declared/ notified by the competent state/ central authority/ agency (as applicable), or verified to the satisfaction of Procurer;

b) radioactive contamination or ionising radiation originating from a source in India or resulting from another Force Majeure Event mentioned above excluding

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circumstances where the source or cause of contamination or radiation is brought or has been brought into or near the Power Project by the Affected Party or those employed or engaged by the Affected Party;

c) the discovery of geological conditions, toxic contamination or archaeological remains on the Project land that could not reasonably have been expected to be discovered through an inspection of the Project land; or

d) any event or circumstances of a nature analogous to any of the events as specified under Article 7.3.1.1.1 (a), 7.3.1.1.1 (b) and 7.3.1.1.1 (c).

7.3.1.1.2 Non-Natural Force Majeure Event

a) any act of war (whether declared or undeclared), invasion, armed conflict or act of foreign enemy, blockade, embargo, revolution, riot, insurrection, terrorist or military action

b) nation/state-wide strike, lockout, boycotts or other industrial disputes which are not directly and solely attributable to the actions of the Affected Party, but does not include strike or labour unrest limited to the Affected Party or its contractors;

c) nationalisation or any compulsory acquisition by any Indian Governmental Instrumentality/ State Government in national interest or expropriation of any material Project assets or rights of the Generator, as a result of which the Generator or its shareholders are deprived (wholly or partly) of their rights or entitlements under the Power Purchase Agreement. Provided that such action does not constitute remedies or sanctions lawfully excised by the Procurer or any other Government Authority as a result of any breach of any of the Applicable Laws or the Applicable Permits by the Generator or the Generator related parties.

d) action of a Government Authority having Material Adverse Effect including but not limited to change in law, only if consequences thereof cannot be dealt with under and

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in accordance with the provisions of Article 12 of this Agreement; any unlawful or unauthorised or without jurisdiction revocation of, or refusal, or failure to renew or grant without valid cause, any Permits of the Generator or any of the clearance, licence, authorization to be obtained by the Contractors to perform their respective obligations under the relevant PPA; provided that such delay, modification, denial, refusal or revocation did not result from the Generator's or any Contractors inability or failure to comply with any condition relating to grant, maintenance or renewal of such Permits or clearance, licence, authorization, as the case may be

7.3.1.1.3 Other Force Majeure Event

a) An event of force majeure identified under Buyer-SPD PPA thereby affecting supply of power by SPD.

b) An event of force majeure affecting the concerned STU/CTU, as the case may be, thereby affecting the evacuation of power from the Delivery Points by Buying Entity;

7.4 *Force Majeure Exclusions*

7.4.1 Force Majeure shall not include (i) any event or circumstance which is within the reasonable control of the Parties and (ii) the following conditions, except to the extent that they are consequences of an event of Force Majeure:

a. Non-performance resulting from normal wear and tear typically experienced in power generation materials and equipment;
b. Strikes at the facilities of the Affected Party;
c. Insufficiency of finances or funds or the agreement becoming onerous to perform; and
d. Non-performance caused by, or connected with, the Affected Part y's:
   i. Negligent or intentional acts, errors or omissions;
   ii. Failure to comply with an Indian Law; or
   iii. Breach of, or default under this Agreement.
e. Exclusions as identified under SECI-SPD PPA

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7.5 *Notification of Force Majeure Event*

7.5.1 The Affected Party shall give notice to the other Party of any event of Force Majeure as soon as reasonably practicable, but not later than seven (7) days after the date on which such Party knew or should reasonably have known of the commencement of the event of Force Majeure. If an event of Force Majeure results in a breakdown of communications rendering it unreasonable to give notice within the applicable time limit specified herein, then the Party claiming Force Majeure shall give such notice as soon as reasonably practicable after reinstatement of communications, but not later than one (1) day after such reinstatement.

Provided that such notice shall be a pre-condition to the Affected Party's entitlement to claim relief under this Agreement. Such notice shall include full particulars of the event of Force Majeure, its effects on the Party claiming relief and the remedial measures proposed. The Affected Party shall give the other Party regular (and not less than monthly) reports on the progress of those remedial measures and such other information as the other Party may reasonably request about the Force Majeure Event.

7.5.2 The Affected Party shall give notice to the other Party of (i) the cessation of the relevant event of Force Majeure; and (ii) the cessation of the effects of such event of Force Majeure on the performance of its rights or obligations under this Agreement, as soon as practicable after becoming aware of each of these cessations.

7.6 *Duty to Perform and Duty to Mitigate*

7.6.1 To the extent not prevented by a Force Majeure Event pursuant to Article 7.3, the Affected Party shall continue to perform its obligations pursuant to this Agreement. The Affected Party shall use its reasonable efforts to mitigate the effect of any Force Majeure Event as soon as practicable.

7.7 *Available Relief for a Force Majeure Event*

7.7.1 Subject to this Article 7:

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(a) No Party shall be in breach of its obligations pursuant to this Agreement except to the extent that the performance of its obligations was prevented, hindered or delayed due to a Force Majeure Event;

(b) Every Party shall be entitled to claim relief in relation to a Force Majeure Event in regard to its obligations as specified under this Agreement;

(c) For avoidance of doubt, neither Part y's obligation to make payments of money due and payable prior to occurrence of Force Majeure events under this Agreement shall be suspended or excused due to the occurrence of a Force Majeure Event in respect of such Party.

(d) Provided that no payments shall be made by either Party affected by a Force Majeure Event for the period of such event on account of its inability to perform its obligations due to such Force Majeure Event;

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ARTICLE 8: CHANGE IN LAW

8.1 *Definitions*

In this Article 8, the following terms shall have the following meanings:

8.1.1 "Change in Law" means the occurrence of any of the following events after the date, which is the Bid Submission Date resulting into any additional recurring/ nonrecurring expenditure by SPD or any income to SPD:

- the enactment, coming into effect, adoption, promulgation, amendment, modification or repeal (without re-enactment or consolidation) in India, of any Law, including rules and regulations framed pursuant to such Law;
- a change in the interpretation or application of any Law by any Indian Governmental Instrumentality having the legal power to interpret or apply such Law, or any Competent Court of Law;
- the imposition of a requirement for obtaining any Consents, Clearances and Permits which was not required earlier;
- a change in the terms and conditions prescribed for obtaining any Consents, Clearances and Permits or the inclusion of any new terms or conditions for obtaining such Consents, Clearances and Permits; except due to any default of the SPD;
- any change in tax or introduction of any tax made applicable for sale of power by Buyer to Buying Entity as per the terms of this Agreement.

but shall not include (i) any change in tax on corporate income on account of regulatory measures by the Appropriate Commission including calculation of Capacity Utilization factor.

8.2 *Relief for Change in Law*

8.2.1 The aggrieved Party shall be required to approach the Appropriate Commission for seeking approval of Change in Law.

8.2.2 The decision of the Appropriate Commission to acknowledge a Change in Law and the date from which it will become effective, provide relief for the same, shall be final and governing on both the Parties.

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8.2.3 The following proposal of MNRE to impose BCD on solar cells and modules (without grandfathering of bid out projects) has been notified through MNRE OM dated 09.03.2021

Items	CTH	Upto 31.03.2022	w.e.f. 01.04.2022
Solar Module	85414012	0 %	40%
Solar Cell	85414011	0 %	25 %

As per commitment from SPD, there will not be any revision in their final offered tariff i.e. INR 2.54/ kWh in case of imposition of BCD (of up to 40% on Modules and up to 25% on Cells). Further, No Change in Law on account of BCD will be claimed by either party, as per the MNRE OM dated 09.03.2021.

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ARTICLE 9: EVENTS OF DEFAULT AND TERMINATION

9.1 *Buying Entity Event of Default*

9.1.1 The occurrence and continuation of any of the following events, unless any such event occurs as a result of a Force Majeure Event shall constitute a Buying Entity Event of Default:

(i) Any amount, subject to Article 6.6 remains outstanding beyond a period of ninety (90) days after the Due Date and Buyer is unable to recover the amount outstanding from Buying Entity through the Letter of Credit; or

(ii) Buying Entity fails to off-take power from the Delivery Point for a continuous period of 72 hours with a maximum cumulative period of60 (sixty) days in a Contract Year.

(iii) if (a) Buying Entity becomes voluntarily or involuntarily the subject of any bankruptcy or insolvency or winding up proceedings and such proceedings remain uncontested for a period of thirty (30) days, or (b) any winding up or bankruptcy or insolvency order is passed against the Buying Entity, or (c) the Buying Entity goes into liquidation or dissolution or has a receiver or any similar officer appointed over all or substantially all of its assets or official liquidator is appointed to manage its affairs, pursuant to Law,

Provided that a dissolution or liquidation of Buying Entity will not be a Buying Entity Event of Default if such dissolution or liquidation is for the purpose of a merger, consolidation or reorganization and where the resulting company retains creditworthiness similar to the Buying Entity and expressly assumes all obligations of the Buying Entity under this Agreement and is in a position to perform them; or

(iv) Buying Entity repudiates this Agreement and does not rectify such breach within a period of thirty (30) days from a notice from Buyer in this regard; or

(v) except where due to any Buyer's failure to comply with its material obligations, Buying Entity is in breach of any of its material obligations pursuant to this Agreement, and such material breach is not rectified by Buying Entity within thirty (30) days of receipt of first notice in this regard given by Buyer.

(vi) occurrence of any other event which is specified in this Agreement to be a material breach/ default of Buying Entity.

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9.2 *SECI Event of Default*

9.2.1 The occurrence and continuation of any of the following events, unless any such event occurs as a result of a Force Majeure Event, shall constitute a SECI's Event of Default:

(i) SECI fails to supply power to the Delivery Points for a continuous period of one year.

(ii) if (a) the SECI becomes voluntarily or involuntarily the subject of any bankruptcy or insolvency or winding up proceedings and such proceedings remain uncontested for a period of thirty (30) days, or (b) any winding up or bankruptcy or insolvency order is passed against the SECI, or (c) the SECI goes into liquidation or dissolution or has a receiver or any similar officer appointed over all or substantially all of its assets or official liquidator is appointed to manage its affairs, pursuant to Law,
Provided that a dissolution or liquidation of the SECI will not be a SECI's Event of Default if such dissolution or liquidation is for the purpose of a merger, consolidation or reorganization and where the resulting company retains creditworthiness similar to the SECI and expressly assumes all obligations of the SECI under this Agreement and is in a position to perform them; or

(iii) SECI repudiates this Agreement and does not rectify such breach within a period of thirty (30) days from a notice from SECI in this regard; or

(iv) except where due to any SECI's failure to comply with its material obligations, the SECI is in breach of any of its material obligations pursuant to this Agreement, and such material breach is not rectified by the SECI within thirty (30) days of receipt of first notice in this regard given by the Buying Utility.

(v) occurrence of any other event which is specified in this Agreement to be a material breach/ default of the SECI.

9.3 *Procedure for Event of Default*

9.3.1 Upon the occurrence and continuation of any Event of Default under Article 9.1 & 9.2, the Party affected by such occurrence shall have the right to deliver the notice to the other Party, stating its intention to terminate this Agreement (Preliminary Default Notice), which shall specify in reasonable detail, the circumstances giving rise to the issue of such notice.

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9.3.2 Following the issue of Preliminary Default Notice, the Consultation Period of sixty (60) days or such longer period as the Parties may agree, shall apply and it shall be the responsibility of the Parties to discuss as to what steps shall have to be taken with a view to mitigate the consequences of the relevant Event of Default having regard to all the circumstances.

9.3.3 During the Consultation Period, the Parties shall, save as otherwise provided in this Agreement, continue to perform their respective obligations under this Agreement.

9.3.4 Within a period of seven (7) days following the expiry of the Consultation Period unless the Parties shall have otherwise agreed to the contrary or the Event of Default giving rise to the Consultation Period shall have ceased to exist or shall have been remedied, the Party may terminate this Agreement by giving a written Termination Notice of thirty (30) days to the other Party.

9.3.5 Subject to the occurrence and continuation of default by as contained under Article9.1.1 or Article 9.2.1 and expiry of time period as per Article 9.3.4,

9.3.5.1 Subject to the prior consent of the SECI, the Buying Utility shall novate its part of the PSA to any third party, including its Affiliates within the period of 210 days beyond the period as per Article 9.3.4,

9.3.5.2 In the event the aforesaid novation is not acceptable to SECI, or if no offer of novation is made by the defaulting Buying Utility within the stipulated period as per Article 9.3.5.1, then SECI may terminate the PSA and at its discretion require the defaulting Buying Utility to either (i) takeover the Project assets by making a payment of the termination compensation equivalent to the amount of the debt due and the 110% (one hundred and ten per cent) of the Adjusted Equity less Insurance Cover, if any as detailed in the Buyer-SPD PPA or, (ii) pay to the SPD/SECI(as applicable), damages, equivalent to 6 (six) months, or balance PPA period whichever is less, of charges for its contracted capacity, with the Project assets being retained by the SPD. In such event, any damages/ charges payable to the STU/ CTU for the connectivity of the Project shall be borne by the Buying Utility.

9.4 *Termination due to Force Majeure*

9.4.1 If the Force Majeure Event or its effects continue to be present beyond a period of twelve (12) months, either Party shall have the right to cause termination of the Agreement. In such an event this Agreement shall terminate on the date of such Termination Notice without any further liability to either Party from the date of such termination.

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9.5 ***Termination of back to back agreements***

In case of termination of Buyer-SPD PPA, this Agreement shall automatically terminate but only to the extent of that particular Buyer-SPD PPA. Provided that in case of such termination, any pending monetary liabilities of either Party shall survive the termination of this Agreement.

9.6 ***Specific Performance of the Agreement***

9.6.1 The Parties acknowledge that a breach of the obligations contained herein would result in injuries. The parties hereby also agree that this Agreement is specifically enforceable at the instance of either Party.

9.6.2 Subject to Applicable Law and as granted by the court of appropriate jurisdiction, Parties acknowledge that either party shall be entitled to seek specific performance of this Agreement in the event of a breach of the obligations or the terms and conditions contained herein.

9.6.3 Further, Parties hereby agree that nothing mentioned herein under this Agreement shall be taken to mean or construe that any penalty or damages shall be adequate compensation for the breach of the obligations or the terms & conditions contained herein.

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ARTICLE 10: LIABILITY AND INDEMNIFICATION

10.1 *Indemnity*

10.1.1 Buying Entity shall indemnify, defend and hold Buyer/SPD harmless against:

a) any and all third party claims against Buyer/SPD for any loss of or damage to property of such third party, or death or injury to such third party, arising out of a breach by the Buying Entityof any of its obligations under this Agreement; and

b) any and all losses, damages, costs and expenses including legal costs, fines, penalties and interest actually suffered or incurred by Buyer/SPD from third party claims arising by reason of a breach by the Buying Entityof any of its obligations under this Agreement, (provided that this Article 10 shall not apply to such breaches by the Buying Entity, for which specific remedies have been provided for under this Agreement).

10.1.2 Buyer shall cause the SPD to indemnify, defend and hold Buying Entity harmless against:

a) any and all third party claims against Buying Entity, for any loss of or damage to property of such third party, or death or injury to such third party, arising out of a breach by SPD of any of their obligations under this Agreement; and

b) any and all losses, damages, costs and expenses including legal costs, fines, penalties and interest ('Indemnifiable Losses') actually suffered or incurred by Buying Entity from third party claims arising by reason of a breach by SPD of any of its obligations. Buyer shall incorporate appropriate covenants in the PPA for the above obligations of SPD. In so far as indemnity to Buying Entity is concerned, SPD shall be the indemnifying party and not Buyer.

10.2 Procedure for claiming Indemnity

10.2.1 Third party claims

a. Where the Indemnified Party is entitled to indemnification from the Indemnifying Party pursuant to Article 10.1.1(a) or 10.1.2 (a), the Indemnified Party shall promptly notify the Indemnifying Party of such claim referred to in Article 10.1.1(a) or 10.1.2(a) in respect of which it is entitled to be indemnified. Such notice shall be given as soon as

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reasonably practicable after the Indemnified Party becomes aware of such claim. The Indemnifying Party shall be liable to settle the indemnification claim within thirty (30) days of receipt of the above notice. Provided however that, if:

i) the Parties choose to refer the dispute in accordance withArticle 12.3; and
ii) the claim amount is not required to be paid/ deposited to such third party pending the resolution of the Dispute,

the Indemnifying Party shall become liable to pay the claim amount to the Indemnified Party or to the third party, as the case may be, promptly following the resolution of the Dispute, if such Dispute is not settled in favour of the Indemnified Party.

b. The Indemnified Party may contest the claim for which it is entitled to be Indemnified under Article 10.1.1(a) or 10.1.2(a) and the Indemnifying Party shall reimburse to the Indemnified Party all reasonable costs and expenses incurred by the Indemnified party. However, such Indemnified Party shall not settle or compromise such claim without first getting the consent of the Indemnifying Party, which consent shall not be unreasonably withheld or delayed.

An Indemnifying Party may, at its own expense, assume control of the defence of any proceedings brought against the Indemnified Party if it acknowledges its obligation to indemnify such Indemnified Party, gives such Indemnified Party prompt notice of its intention to assume control of the defence, and employs an independent legal counsel at its own cost that is reasonably satisfactory to the Indemnified Party.

10.3 *Indemnifiable Losses*

10.3.1 Where an Indemnified Party is entitled to Indemnifiable Losses from the Indemnifying Party pursuant to Article 10.1.1(b) or 10.1.2 (b), the Indemnified Party shall promptly notify the Indemnifying Party of the Indemnifiable Losses actually incurred by the Indemnified Party. The Indemnifiable Losses shall be reimbursed by the Indemnifying Party within thirty (30) days of receipt of the notice seeking Indemnifiable Losses by the

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Indemnified Party. In case of non-payment of such losses after a valid notice under this Article 10.3, such event shall constitute a payment default under Article 9.

10.4 ***Limitation on Liability***

10.4.1 Except as expressly provided in this Agreement, neither Buying Entity nor Buyer/SPD nor its/ their respective officers, directors, agents, employees or affiliates (or their officers, directors, agents or employees), shall be liable or responsible to the other Party or its affiliates, officers, directors, agents, employees, successors or permitted assigns or their respective insurers for incidental, indirect or consequential damages, connected with or resulting from performance or non-performance of this Agreement, or anything done in connection herewith, including claims in the nature of lost revenues, income or profits (other than payments expressly required and properly due under this Agreement), any increased expense of, reduction in or loss of power generation or equipment used therefore, irrespective of whether such claims are based upon breach of warranty, tort (including negligence, whether of Buying Entity(ies), the SPD or others), strict liability, contract, breach of statutory duty, operation of law or otherwise. The Parties acknowledge and accept that the SECI is an Intermediary Company to purchase and resell the electricity to the Buying Entity (ies) to enable Buying Entity (ies) to fulfill the Renewable Purchase Obligations (RPO) as per provisions of this Agreement and, therefore, the performance of the obligations of the SECI under this Agreement shall be subject to the ability of the SECI to enforce the corresponding obligations under PPA on back to back basis. Further, any liability arising out of PPA shall be passed on to the Buying Entity under this Agreement on back to back basis.

10.4.2 Buyer/SPD shall have no recourse against any officer, director or shareholder of Buying Entity or any Affiliate of Buying Entity or any of its officers, directors or shareholders for such claims excluded under this Article. Buying Entity shall have no recourse against any officer, director or shareholder of Buyer or SPD, or any affiliate of Buyer or any of its officers, directors or shareholders for such claims excluded under this Article.

10.5 ***Duty to Mitigate***

10.5.1 The Parties shall endeavour to take all reasonable steps so as mitigate any loss or damage which has occurred under this Article 10.

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ARTICLE 11: ASSIGNMENTS AND CHARGES

11.1 *Assignments*

This Agreement shall be binding upon, and inure to the benefit of the Parties and their respective successors and permitted assigns. This Agreement shall not be assigned by any Party other than by mutual consent between the Parties to be evidenced in writing.

Provided that, such consent shall not be withheld if Buyer seeks to transfer to any affiliate all of its rights and obligations under this Agreement.

Provided further that any successor(s) or permitted assign(s) identified after mutual agreement between the Parties may be required to execute a new agreement on the same terms and conditions as are included in this Agreement.

11.2 *Permitted Charges*

11.2.1 Neither Party shall create or permit to subsist any encumbrance over all or any of its rights and benefits under this Agreement.

Solar Energy Corporation of India Ltd. New Delhi

9/12/22

ARTICLE 12: GOVERNING LAW AND DISPUTE RESOLUTION

12.1 *Governing Law*

12.1.1 This Agreement shall be governed by and construed in accordance with the Laws of India. Any legal proceedings in respect of any matters, claims or disputes arising out of or in connection with this Agreement shall be under the jurisdiction of appropriate courts in Delhi.

12.2 *Amicable Settlement and Dispute Resolution*

12.2.1 *Amicable Settlement*

i. Either Party is entitled to raise any claim, dispute or difference of whatever nature arising under, out of or in connection with this Agreement ("Dispute") by giving a written notice (Dispute Notice) to the other Party, which shall contain:

(i) a description of the Dispute;

(ii) the grounds for such Dispute; and

(iii) all written material in support of its claim.

ii. The other Party shall, within thirty (30) days of issue of Dispute Notice issued under Article 12.2.1 (i), furnish:

(i) counter-claim and defences, if any, regarding the Dispute; and

(ii) all written material in support of its defences and counter-claim.

iii. Within thirty (30) days of issue of Dispute Notice by any Party pursuant to Article12.2.1(i) if the other Party does not furnish any counter claim or defence under Article 12.2.1(ii) or thirty (30) days from the date of furnishing counter claims or defence by the other Party, both the Parties to the Dispute shall meet to settle such Dispute amicably. If the Parties fail to resolve the Dispute amicably within thirty (30) days from the later of the dates mentioned in this Article 12.2.1(iii), the Dispute shall be referred for dispute resolution in accordance with Article 12.3.

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9/12/22

12.3 *Dispute Resolution*

12.3.1 Dispute Resolution by the Appropriate Commission

i. Where any Dispute (i) arises from a claim made by any Party for any change in or determination of the Tariff or any matter related to Tariff or claims made by any Party which partly or wholly relate to any change in the Tariff or determination of any of such claims could result in change in the Tariff, or (ii) relates to any matter agreed to bereferred to the Appropriate Commission, such Dispute shall be submitted to adjudication by the Appropriate Commission. Appeal against the decisions of the Appropriate Commission shall be made only as per the provisions of the Electricity Act, 2003, as amended from time to time.

ii. The obligations of Buying Entity under this Agreement towards Buyer shall not be affected in any manner by reason of inter-se disputes amongst Buying Entity.

iii. Buyer shall be entitled to co-opt the SPDas a supporting party in such proceedings before the Appropriate Commission.

12.3.2 Not Used

12.4 *Parties to Perform Obligations*

12.4.1 Notwithstanding the existence of any Dispute and difference referred to the Appropriate Commission as provided in Article 12.3 and save as the Appropriate Commission may otherwise direct by a final or interim order, the Parties hereto shall continue to perform their respective obligations (which are not in dispute) under this Agreement.

Solar Energy Corporation of India Ltd. New Delhi

9/12/22

ARTICLE 13: MISCELLANEOUS PROVISIONS

13.1 *Amendment*

13.1.1 This Agreement may only be amended or supplemented by a written agreement between the Parties.

13.2 *Third Party Beneficiaries*

13.2.1 This Agreement is solely for the benefit of the Parties and their respective successors and permitted assigns and shall not be construed as creating any duty, standard of care or any liability to, any person not a party to this Agreement.

13.3 *Waiver*

13.3.1 No waiver by either Party of any default or breach by the other Party in the performance of any of the provisions of this Agreement shall be effective unless in writing duly executed by an authorised representative of such Party:

13.3.2 Neither the failure by either Party to insist on any occasion upon the performance of the terms, conditions and provisions of this Agreement nor time or other indulgence granted by one Party to the other Parties shall act as a waiver of such breach or acceptance of any variation or the relinquishment of any such right or any other right under this Agreement, which shall remain in full force and effect.

13.4 *Confidentiality*

13.4.1 The Parties undertake to hold in confidence this Agreement and not to disclose the terms and conditions of the transaction contemplated hereby to third parties, except:

a) to their professional advisors;
b) to their officers, contractors, employees, agents or representatives, financiers, who need to have access to such information for the proper performance of their activities; or
c) disclosures required under Law

without the prior written consent of the other Parties.

Solar Energy Corporation of India Ltd. New Delhi

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13.5 *Severability*

13.5.1 The invalidity or unenforceability, for any reason, of any part of this Agreement shall not prejudice or affect the validity or enforceability of the remainder of this Agreement, unless the part held invalid or unenforceable is fundamental to this Agreement.

13.6 *Notices*

13.6.1 All notices or other communications which are required to be given under this Agreement shall be in writing and in the English language.

13.6.2 If to Buying Entity, all notices or other communications which are required must be delivered personally or by registered post or facsimile or any other method duly acknowledged to the addresses below:

Address : BEST Undertaking, Multi storied Annex Building, 1st Floor,
BEST Marg, Colaba, Mumbai- 400001
Attention: Chief Engineer(Regulatory)
Email : derc@bestundertaking.com
Telephone No. : 022-22799567

13.6.3 If to Buyer, all notices or communications must be delivered personally or by registered post or facsimile or any other mode duly acknowledged to the address(es) below:

Address : 6th Floor, Plate-B, NBCC Office Block Tower-2,
East KidwaiNagar, New Delhi-110023

Attention : General Manager (Power Trading)
Email : aknaik@seci.co.in
Telephone No. : 011-24666-215

13.6.4 All notices or communications given by facsimile shall be confirmed by sending a copy of the same via post office in an envelope properly addressed to the appropriate Party for

Solar Energy Corporation of India Ltd. New Delhi

delivery by registered mail. All notices shall be deemed validly delivered upon receipt evidenced by an acknowledgement of the recipient, unless the Party delivering the notice can prove in case of delivery through the registered post that the recipient refused to acknowledge the receipt of the notice despite efforts of the postal authorities.

13.6.5 Any Party may by notice of at least fifteen (15) days to the other Party change the address and/or addresses to which such notices and communications to it are to be delivered or mailed.

13.7 *Language*

13.7.1 All agreements, correspondence and communications between the Parties relating this Agreement and all other documentation to be prepared and supplied under the Agreement shall be written in English, and the Agreement shall be construed and interpreted in accordance with English language.

13.7.2 If any of the agreements,correspondence, communications or documents are prepared in any language other than English, the English translation of such agreements, correspondence, communications or documents shall prevail in matters of interpretation.

13.8 *Restriction of Shareholders / Owners' Liability*

13.8.1 Parties expressly agree and acknowledge that none of the shareholders of the Parties hereto shall be liable to the other Parties for any of the contractual obligations of the concerned Party under this Agreement. Further, the financial liabilities of the shareholder/s of each Party to this Agreement shall be restricted to the extent provided in the Indian Companies Act, 1956/2013.

13.9 *Taxes and Duties*

13.9.1 Buying Entity shall bear and promptly pay all statutory taxes, duties, levies and cess, assessed/ levied on Buying Entity, contractors or their employees, that are required to be paid by Buying Entity as per the Law in relation to the execution of the Agreement.

13.9.2 Buyer shall be indemnified and held harmless by Buying Entity against any claims that may be made against Buyer in relation to the matters set out in Article 13.9.1.

Solar Energy Corporation of India Ltd. New Delhi

13.9.3 Buyer shall not be liable for any payment of, taxes, duties, levies, cess whatsoever for discharging any obligation of Buying Entity by Buyer on behalf of Buying Entity or its personnel.

13.10 ***No Consequential or Indirect Losses***

13.10.1The liability of Buying Entity and Buyer shall be limited to that explicitly provided in this Agreement.

Provided that notwithstanding anything contained in this Agreement, under no event shall Buyer or Buying Entity claim from one another any indirect or consequential losses or damages.

13.11 ***Order of priority in application***

In case of inconsistencies between the agreement(s) executed between the Parties, applicableLaw including rules and regulations framed thereunder, the order of priority as between them shall be the order in which they are placed below:

i. applicable Law, rules and regulations framed thereunder;
ii. the Grid Code; and
iii.the terms and conditions of this Agreement read along with SECI-SPD PPA;

13.12 ***Independent Entity***

13.12.1 Buying Entity/Buyer shall be an independent entity performing its obligations pursuant to the Agreement.

13.12.2 Subject to the provisions of the Agreement, Buying Entity/Buyer shall be solely responsible for the manner in which its obligations under this Agreement are to be performed. All employees and representatives of Buying Entity in connection with the performance of the Agreement shall be under the complete control of Buying Entity and shall not be deemed to be employees, representatives, of Buyer and nothing contained in the Agreement or in any agreement or contract awarded by Buying Entity shall be construed to create any contractual relationship between any such employees, representatives or contractors and Buyer.

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9/12/22

13.13 ***Compliance with Law***

Despite anything contained in this Agreement but without prejudice to this Article, if any provision of this Agreement shall be in deviation or inconsistent with or repugnant to the provisions contained in the Electricity Act, 2003, or any rules and regulations made there under, such provision of this Agreement shall be deemed to be amended to the extent required to bring it into compliance with the aforesaid relevant provisions as amended from time to time.

IN WITNESS WHEREOF the Parties have caused the Agreement to be executed through their duly authorized representatives as of the date and place set forth above.

For and on behalf of
[**SECI**]

अतुल्य कुमार नायक / Atulya Kumar Naik
महाप्रबंधक / General Manager
विद्युत व्यापार और वाणिज्यिक विभाग
Power Trading & Commercial Department
सोलर एनर्जी कॉर्पोरेशन ऑफ इंडिया लि. / Solar Energy Cop. of India Ltd
(भारत सरकार का उद्यम) / (A Govt. of India Enterprise)
6वी मंजिल, प्लेट-बी, एनबीसीसी कार्यालय ब्लॉक टावर.२,
6th Floor, Plate-B, NBCC Office Block Tower-2,
पूर्वी किदवई नगर, नई दिल्ली-110023/East Kidwai Nagar, New Delhi-110023

Signature with seal

Witness:

1. Shibasish Das
Sr. manager (PT)

2.

For and on behalf of
[**BEST**]

N. M. Herlekar
Asst. General Manager (ESupply)

Signature with seal

Witness:

1. N. N. Chavgule
CER.

2. Sanjay S. Bansode
DEPP.

SCHEDULE 1: LIST OF LOAs ISSUED TO SPDs

Sl. No.	SPD Name	Project Capacity (MW)	Applicable Tariff as per SECI-SPD PPA(Rs/kWh)
1.	Adani Green Energy Four Limited *	2000	2.54
2.	Azure Power India Private Limited	1000	2.54
Weighted Average Tariff(kWh)			2.54

* - BEST Undertaking will receive the solar energy from the project of Adani Green Energy Four Limited.

2 *SCHEDULE 2: BUYER-SPD PPA*

[Shall be provided to Buying Entity within 30 Days of signing of PPA with SPD]

3 *SCHEDULE 3: AMOUNT REALISATION FOR SALE OF SOLAR POWER*

(i) The billing to Buying Entity shall be done by Buyer for realisation of amount for Solar Power.

(ii) The payments to be made by Buying Entity to Buyer for the Solar Power in a Monthly Invoice shall comprise of amounts to be realized for Solar Power.

(iii) The Bills shall be raised by Buyer on Buying Entity as mentioned in clause 6.2

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9/12/22

Monthly project progress reports of under-construction RE projects - reg. (BEST)

11/22/24 5:55 PM

ANNEXURE-28

From: <powertradingseci@gmail.com>

To: <agmes@bestundertaking.com>, <cerc@bestundertaking.com>, <dcemerc@bestundertaking.com>, <depower@bestundertaking.com>, <derc@bestundertaking.com>, <SEREG@mahatransco.in>, <CESTU@mahatransco.in>

Cc: "'Sanjeev Singh'" <sanjeev@seci.co.in>, "'Tarun Mukhija'" <tarun.mukhija@seci.co.in>, "'Peram Aditya'" <peram.aditya@seci.co.in>, "'Ravindra Parihar'" <ravindra.parihar@seci.co.in>, "'Zeba Malik'" <zeba.malik@seci.co.in>

Sir,
Please find attached link to access the monthly project progress reports
as mentioned in the letter dated 18.07.2023.

https://docs.google.com/spreadsheets/d/1Pnvsdpym1T1ptr04PJV-aYcHisqcMCTi/edit?usp=sharing
<https://docs.google.com/spreadsheets/d/1Pnvsdpym1T1ptr04PJV-aYcHisqcMCTi/edit?usp=sharing&ouid=104189269432542938825&rtpof=true&sd=true>
&ouid=104189269432542938825&rtpof=true&sd=true

With Regards
Akash Shivhare
(Engineer)
(Solar Energy Corporation of India Ltd.)

Attachments:

RE PROJECT PROGRESS STATUS FOR THE MONTH OF OCTOBER, 2024

S. No.	Scheme	Project Name	PSA Date	PSA Quantum (MW)	RE Type	Project Location	Project Capacity (MW)	PSA Tariff (Rs./kWh)	Discom Share (MW)	Financial Closure	Land Acquisition	LTA & Connectivity Details	Original SCD as per PPA	SCD/Revised SCD	Project Progress	Monthly progress w.r.t. last month	Expected date of Commissioning
1	ISTS Hybrid Tranche-III	ABC Renewable (RJ-03) Private Ltd	02-Jul-21	400	Hybrid	Chodiya Village, Jaisalmer, Rajasthan	380	2.48	137	Original FC: 27.07.2022 Revised FC: Till CTU's SPV transfer date. Actual FC: 22.08.2023	Total area required for the Project to be mentioned in acres. Solar-1800 Acres Wind-380 Acres. Solar: Preliminary land survey completed wind: 21 WTG Locations agreement to lease has been entered in that 10 WTG Location registrations were completed including pathways.	Delivery Point: 220 kV side of 400/220 kV Fategarh IV S/S Start date of connectivity-19.03.2025 Present-As per 30th JCC 26th June'2024-Connectivity is likely to be operationalized upon ommissioning of required Transmission system. i.e. 20.09.2025	27-Jan-23	Actual LTA Operationalization date	Application submitted to Supreme court appointed GIB committee on 15.03.2023 and Recieved the approval for laying the O/H Transmission line from supreme court appointed committee on 29.05.2023 Commercial discussions with OEMs are in progress. HPD vide Letter dated 16 Apr'24 requested for termination of PPA to SECI. HPD's termination notice was shared with buying entities for necessary inputs. SECI rejected HPD's notice. Subsequently, HPD approached Dispute Resolution Committee (DRC) which was intimated to buying entities.	HPD approached Dispute Resolution Committee (DRC) which was intimated to buying entities.	NA
2		Adani Hybrid Energy Jaisalmer Five Limited			Hybrid	Khavada, Gujarat (location changed as per SECI letter to HPD dated 03.08.2023)	600	2.48	216	Original: 27-07-2022 Revised: Till CTU's SPV transfer date. Actual FC: 02-08-2022	Land Required- Solar - ~2000 Acres Wind - ~150 Acres Land allocated to Park developer and lease deed signed. Sub lease dead signed on 22-Jul-2024..	Delivery Point: KPS-1, Khavada pooling substation 765/400kV (1000 MW) Start date of Connectivity: 31-03-2025 (interim) Present-44th JCC Meeting 27th June'2024-Likely Operationalization date: 21.03.2025	27-Jan-23	31.03.2025 or actual LTOA date,which ever is later	MoD clearance: To be applied Civil works: Civil foundation completed Solar pile - work in progress Wind foundation - Yet to start - GIS building, soil improvement works and civil works for GIS building is in progress. - Switchgear room staging and shuttering work for slab work in progress. - Power transformer civil works in progress. - Fire wall civil works construction in progress. 1/3 completed Supply Status of Major Project Equipment: MMS - Order issued (MMS supply is in progress - 47% Supplied) Modules - Orders issued (Module supply yet to start) Inverter - Orders issued (Inverter supply is in progress- 65% Supplied) IDT - Order issued (supply yet to start) Transmission line -Order issued (Supply Completed) Tower stubs - Order issued (Supply Completed) Structure - Order issued (Supply Completed) Power Transformer - Orders issued (supply is in progress) WTG - Supply yet to start T/L tower - 28/31 Erection completed 100% civil foundation completed	Solar pile - work in progress MMS - Order issued (MMS supply is in progress - 47% Supplied)	
3		Amp Energy Green Eighteen Pvt Ltd			Hybrid	Neemba village, fatehgarh, Jaisalmer Rajasthan	130	2.48	47	Original FC: 19.07.2022 Revised FC: Till CTU's SPV transfer date Actual FC: 21.03.2023	Total land required-805 Acres Tentatively Solar: 639.46 Acres Completed Wind: 112 acres Completed 752 acres in possesion of AEGEPL	Delivery Point: 220 kV side of 400/220 kV Fategarh IV S/S Start date of Connectivity - 19.01.2023 or system whichever is later. Present-30th JCC 26th June'2024-Connectivity likely to be operationalized upon **commissioning of** required Transmission system. i.e. 19.03.2025	19-Jan-23	Actual start date of connectivity + 60 days or date of commisioning whichever is earlier	MoD application;MoD approval received for 6 location.Balance 8 locations applications submitted for MoD approval Civil Works: Solar- pile works status-MCR raft WIP, Piling and area development started Wind-Foundation work status-Foundation casting works under progress. Excavation-12/14, PCC-10/14, Steel 9/14, Fdn 8/14, LT assembly- 3/14 (4th wip), Main crane reached and shifting to loc in progress Substation-foundation work status -Vendor finalized and mobilized Supply Status of Major Material Status: PO status of MMS-PO issued. Delivery under progress. PO status of Modules-PO issued. Delivery to start from Nov'24 onwards. PO status of Inverter-PO issued. Delivery to start from Dec'24 onwards PO status of WTGs-PO issued. Delivery started 8/14 No's WTGs received at site Transmission line from Plant to PSS 17.7 Km, 220 KV SC Transmission line Foundation work status-PO issued. Excavation work started and RoW resolution in progress GIB Status: Application submitted on 10.01.2023 and GIB approval received. Vendors finalized.Section 68 approval obtained	Solar- pile works status-MCR raft WIP, Piling and area development started Wind-Foundation work status-Foundation casting works under progress. Excavation-12/14, PCC-10/14, Steel 9/14, Fdn 8/14, LT assembly- 3/14 (4th wip), Main crane reached and shifting to loc in progress PO status of MMS-PO issued. Delivery under progress. PO status of Modules-PO issued. Delivery to start from Nov'24 onwards. PO status of Inverter-PO issued. Delivery to start from Dec'24 onwards PO status of WTGs-PO issued. Delivery started 8/14 No's **WTGs received at site**	
4	Manufacturing linked ISTS Connected Solar	Adani Green Energy Twenty Six A Limited	09-Dec-22	234	Solar	Khavda GJ	234	2.61	234	Discussions with lenders are ongoing. Schedule Financial Closure Date: 09-12-2023	Location allocated under Khavda RE Park and Sub lease executed.	LTA Applied:12-01-2023, Granted :30-04-2025 Effective: Jan 26	09-Dec-24	15-Feb-25	1. Procurement Status:-Order Placed for Module/WTG, Inverter, Power Transformer: Discussion with suppliers is in an advanced stage. 2. Installation Status: Detailed Engineering is in the advanced stage and ordering of critical items is in progress. Site infrastructure ready for projects at Khavda location.Execution work to be matched with SCD timelines. 3. GSS& Transmission Line Status:Foundations work and Tower erection is under progress 4. Expected Commissioning Date:Project execution shall be matched with PPA timelines.		Within PPA Timelines

Status of Project Detail

12/5/24 1:03 PM

From: Peram Aditya <peram.aditya@seci.co.in>

To: "agmes" <agmes@bestundertaking.com>, "cerc" <cerc@bestundertaking.com>, "derc" <derc@bestundertaking.com>

Cc: "Sanjeev Singh" <sanjeev@seci.co.in>, "Tarun Mukhija" <tarun.mukhija@seci.co.in>

Dear Sir,

This with reference to monthly review meeting corresponding to under implementation ISTS Solar Projects held on 06.11.2024 wherein SPDs, SECI (EMD department member and Solar department members) along with few buying entities had also participated, please find the status of 234 MW Project for which PPA was signed with SPV of M/s Adani Renewable Energy Holding Four Limited under Package – I of Manufacturing linked tender for your reference. The latest JCC minutes of meeting is also attached herewith wherein status of Connectivity has been marked in yellow colour for your reference. The brief status of Project (as submitted by SPD) is mentioned at below table -

S. No.	SPD Name	Project Capacity (MW)	Scheduled Financial Closure Date	Status of Financial Closure	Scheduled Commissioning Date	Status of Land	Supply Status
1	Adani Green Energy Twenty Six A Limited	234	15.02.2024	FC Achieved	15.02.2025	Location allocated under Khavda RE Park and Sub lease executed by SPD.	i. Discussion with suppliers is in advance stage..Project activities are alig with evacuation readiness.

Further, the detailed status of under Implementation Projects has already been shared with Energy Management Division.

Best Regards,
Aditya P

Attachments:

- 173199138625Letter and Minutes of 45th JCC meeting of WR.pdf

ANNEXURE-29

Resource Adequacy Plan for BEST including Demand Forecast, Medium-Term Distribution Resource Adequacy Plan, Short-Term Distribution Resource Adequacy Plan and Power Procurement Plan

Brihanmumbai Electric Supply and Transport Undertaking (BEST),
BEST Bhavan, BEST Marg,
Colaba, Mumbai – 400001

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1 Background

1.1 About BEST

1. The Municipal Corporation of Greater Mumbai is a Municipal Corporation, duly constituted under the Mumbai Municipal Corporation Act, 1888. The Municipal Corporation of Greater Mumbai is also a local authority under Part IX A of the constitution of India. The Municipal Corporation of Greater Mumbai, under the provisions of the Mumbai Municipal Corporation Act, 1888, has an Undertaking known as the Brihanmumbai Electric Supply and Transport Undertaking (of the Municipal Corporation of Greater Mumbai) [hereinafter referred to; for sake of brevity, as "BEST"]. BEST, as such, is a statutory Undertaking of a local authority.
2. BEST is a Municipal/public utility, which has been and is providing two essential services in the City of Mumbai, namely, (i) mass public transportation in the City of Mumbai as well as its extended suburbs, and (ii) distribution or supply of electricity in the Island City of Mumbai (i.e., the area from Colaba up to Mahim and Sion).
3. BEST is a "distribution licensee" under the present Electricity Act, 2003. BEST, under the Maharashtra Electricity Regulatory Commission (Specific Conditions of Distribution License applicable to Brihanmumbai Electric Supply & Transport authorized and required to distribute or supply the electricity in the area of supply specified therein, in accordance with the provisions of the Electricity Act, 2003.
4. BEST, being a statutory Undertaking of the Municipal Corporation of Greater Mumbai is also encompassed by the definition of a "Local Authority" under Section 2(41) of the Electricity Act, 2003
5. Brihanmumbai Electric Supply & Transport Undertaking, (hereinafter referred to as the “BEST”), a Distribution Licensee (DL) supplying electricity in the island city of Mumbai consumers, is hereby submitting this Resource Adequacy (RA) Plan under Regulation 5.4, 14.2, 15.5, 16.3, 17.4 and 21.3 of the MERC Resource Adequacy Regulations, 2024 in the matter of approval of demand forecasts along with Medium-Term Distribution Resource Adequacy Plan (MT-DRAP), Short-Term Distribution Resource Adequacy Plan (ST-DRAP) and power procurement plan

1.2 Historical Background of Regulatory Proceedings

6. Hon’ble Commission has notified MERC (Framework for Resource Adequacy) Regulations, 2024 to enable the implementation of Resource Adequacy framework by Guidelines issued by Central Electricity Authority (CEA) outlining a mechanism for planning of generation and transmission resources for reliably meeting the projected demand while maintaining reliability standards and optimum generation mix. It specifies mechanism for demand assessment and forecasting, generation resource planning, procurement planning, and monitoring & compliance.

7. As per second proviso to Regulation 1.3 of MERC Resource Adequacy Regulations, Hon'ble Commission has notified timelines to be followed for FY 2024-25, vide its notification dated 03rd July 2024. In the timeline Hon'ble Commission has considered that Central Electricity Authority (CEA) has not yet notified/approved National level RA plan with specification of reliability indices for Planning Reserve Margin (PRM), Loss of Load Probability (LOLP), Normalized Energy Not Served (NENS) for national/state level, it is envisaged that there could be some delays in development of RA plans by the utilities/stakeholders at state level. The detailed timelines for submission of MT-DRAP/ST-DRAP along with associated activities for implementation of the Resource Adequacy Framework as approved by Hon'ble Commission is tabulated below:

Timeline for actions and submissions by stakeholders as per MERC notification dt 03 July

Description of Activities	Timeline for Submission
DLs to submit the category wise consumption data of pervious FYs to State Transmission Utility (STU)/ Maharashtra State Load Dispatch Center (MSLDC)	14 August 2024
DLs to submit ST and MT demand forecasts to MSLDC	
MSLDC to submit State-level forecasts to CEA/ RLDC/NLDC	As per CEA/NLDC
DLs to submit ST-DRAP and MT-DRAP to the Commission	30 September 2024
STU/MSLDC to communicate aggregated State-shortfall to the Commission	15 October 2024
The Commission to approve ST-DRAP and MT-DRAP	31 October 2024
DLs to contract capacities for shortfall/surplus management	31 December 2024
DLs to submit updated Annual Rolling Plan to STU/MSLDC	31 January 2025
STU/MSLDC to submit Aggregate State level Annual Rolling Plan to NLDC	As per NLDC

8. Regulation 6.1 of the MERC Resource Adequacy Regulations, 2024 provides a list of information to be provided by DL as part of short-term, medium-term and long-term demand assessment. Further as per Regulation 6.4, DL has also to determine the load forecast for each consumer category for which Hon'ble Commission has determined separate retail tariff. BEST has already submitted the required data as per **Annexure-I** of the Regulations on 14th August 2024 and 18th September 2024 as per the above timeline to MSLDC.

9. Further as per Regulation 12.4 of MERC Resource Adequacy Regulations, 2024, DLs are required to develop and submit MT-DRAP and ST-DRAP to Hon'ble Commission with a copy of the same to SLDC. Accordingly, BEST is submitting MT- DRAP and ST-DRAP for due approval of Hon'ble Commission. BEST also requests Hon'ble Commission to approve the same before 31st October 2024 as per its timeline notified on 03rd July 2024.

10. It is also submitted that Central Electricity Authority (CEA) till date of submission of this plan, hasn't publish the Long- term National Resource Adequacy Plan (LT-NRAP) and NLDC has also not published a one-year look-ahead Short-term National Resource Adequacy Plan (ST- NRAP). Hence, BEST for the purpose of RA plan has considered value of relevant parameters and trajectory of variables, based on its own analysis. Once CEA/NLDC prepares the relevant NRAP, STU/MSLDC will allocate share of BEST in the state peak as per Regulation 12.8 of MERC Resource Adequacy Regulations, 2024. BEST may revise its present Resource plan as per the NRAP developed by CEA.

11. BEST is also submitting its power procurement plan as per Regulations 15.5 of MERC Resource Adequacy Regulations, 2024 to Hon'ble Commission for seeking approval for generation resource mix and also procurement strategy in long-term, medium-term, and short-term horizon. It would demonstrate meeting its Resource Adequacy Requirement (RAR) with a mix of long-term, medium-term, and short-term contracts through the submitted MT-DRAP.

2 Demand Forecast for FY 2024-25 to FY 2034-35

12. As per Regulation 6.2 of MERC Resource Adequacy Regulations, 2024 Distribution licensee are responsible for the assessment and forecasting of demand (MW) and energy (MWh) for short- and medium-term and peak/off-peak demand (MW) for long-term within its own control area including partial open access consumers. Further, as per Regulation 6.3 and 6.4 of the aforementioned Regulations, the distribution licensee should also provide category wise consumption data and assessed consumption data of class of consumers such as agricultural, domestic etc. to various agencies such as MSLDC and/or STU for purpose of state level demand forecasts. BEST would like to submit that in line with the said Regulations it submitted the information to MSLDC on 14th August and 18th September.

13. BEST analyzed its historic values of category-wise consumption. The historic consumption data was properly cleaned, which includes handling missing values, inconsistencies, outliers, etc. Specifically, BEST hasn't considered consumption data of FY 2021 and FY 2022 as they were impacted by COVID lockdown. Different machine learning models were trained and tested on the dataset. Mean Absolute Percentage Error (MAPE) methodology was used to check the performance of the tested models. Multi Linear Regression (MLR) model outperformed all other forecast models in accuracy and hence was used to forecast category wise consumption.

14. As per MLR model annual energy requirement is predicted using several independent variables (inputs). These include meteorological factors like temperature and precipitation and economic factors like State Gross Domestic Product. Additionally, lagged variables, representing past values of the variables, are utilized to incorporate the seasonality and cyclical patterns in the data. The future value of independent variables like temperature and humidity was predicted using time series-based Auto-regressive integrated moving average (ARIMA).

15. Further, as per Regulation 6.9 of MERC Resource Adequacy Regulations, 2024 BEST has additionally considered impact of policy interventions including promotion of Electric Vehicles (EVs) as well as Roof Top Solar (RTS) on demand forecasted for future years as per statistical model.

16. Electric Vehicles. Based on historic growth in automobiles in Maharashtra, BEST has estimated the state's automobile industry trajectory till 2035. Further trajectory of EV sales penetration till 2035 has been made based on India's EV sales growth. The product of both these parameters has been used to determine total number of EVs (belonging to different categories such as E-buses, passenger vehicle, commercial vehicles etc.) on road in state for each year (till 2035). Further BEST has also calculated estimated trajectory of drive range (in kms) of each vehicle category based on increase in battery capacity till 2035. The total drive range thus calculated has been divided by assumed average daily run of each EV category to calculate daily charging demand for each vehicle category for each year till FY

2035. This value has been further multiplied by projected number of EVs on road for respective year to arrive at total annual energy demand attributable to EV charging.

17. BEST has also determined the demand profile of energy consumed by EV chargers pertaining to different EV categories. Initially it has been assumed that 80% of charging for all EVs across categories would happen during nighttime. As daytime most of the vehicles are operating and also due to lack of charging infra. However, as time of day tariff becomes popular due to increase in solar power ingress, more and more EV would opt for charging during daytime when tariff would be cheaper due to abundance of solar. The transition in charging pattern between FY 25 to FY 30 is tabulated below:

Table 1 Transition in EV charging profile

EV Category	FY 25		FY 30	
	Night Charging	**Day Charging**	**Night Charging**	**Day Charging**
Passenger Vehicles	80%	20%	30%	70%
Commercial Vehicles	80%	20%	60%	40%
Buses	50%	50%	50%	50%
3 Wheelers	80%	20%	40%	60%
2 Wheelers	80%	20%	30%	70%

18. **Solar Rooftop:** The RTS installation is expected to grow at the same CAGR (0.9%) as the model forecast for demand from FY26. BEST has assumed RTS Capacity Utilization Factor (CUF) as 18% to estimate power generated by RTS. Further the generation profile has been considered as per solar generation profile of Mumbai.

19. **Demand Forecast:** The hourly demand profile of FY 24 serves as the base profile for projecting slot-wise demand. Using the base profile and annual demand/peak demand derived from the model, hourly load profiles from FY25 to FY35 are created using suitable scaling techniques. Further, the impact of EV and RTS have been considered separately. As per Regulation 6.15 of MERC Resource Adequacy Regulations, 2024 BEST has developed three scenarios (most probable, business as usual, and aggressive scenarios). Accordingly, category-wise energy consumption is provided in **Annexure-I** of this report and demand Assessment till FY 2034-35 (Hourly and Monthly peak load) is attached as **Annexure-II**.

3 Power procurement sources and Computation of Capacity Credit

20. As per Regulation 9.1 of MERC Resource Adequacy Regulations, 2024 BEST has carried following steps as part of generation resource planning: (a) capacity crediting of generation resources, (b) assessment of planning reserve margin, and (c) ascertaining resource adequacy requirement. In accordance with the Regulations, BEST has conducted a comprehensive study for resource assessment to support effective generation resource planning. This assessment involves a detailed inventory of existing and contracted future generation resources, considering key characteristics such resource type, installed capacity, availability factor, capacity utilization factor (CUF), outage rates, generation characteristics (like Station Heat rate, auxiliary consumption, start time and ramp-up and ramp-down rate) and commissioning and retirement schedules. The study has provided crucial inputs for understanding the operational efficiency and reliability of each resource. BEST is also submitting its contracted existing resources, upcoming resources, and retiring resources along with all the details as required in Regulation 9.2, 9.3 and 9.4, to the extent available with BEST or publicly available. The same is attached at **Annexure-III**.

21. Further, BEST has also calculated Capacity Credit (CC) factors for contracted generation resources have been calculated using a net load-based approach. Provided in Regulation 10.2 of MERC Resource Adequacy Regulations, 2024. The contribution of the renewable energy source to meeting peak 250 demand hours is determined and expressed as a percentage of its installed capacity. This percentage represents the Capacity Credit factor. For comprehensive and accurate resource planning, this factor is calculated annually over a five-year period, with the average of these calculations utilized to account for inter-annual variability in renewable generation. For the upcoming RE resources, since the historical generation is not available, the capacity credits are calculated using the expected generation in the future and the respective demand forecast. For thermal and hydro resources, the Capacity Credit is determined based on the availability and historical outage data as per the methodology provided in Regulation 10.4 of MERC Resource Adequacy Regulations, 2024.

22. In accordance with Regulation 10.6 of MERC Resource Adequacy Regulations, 2024, BEST is hereby submitting CC factors for its contracted resources in **Annexure-IV**.

23. As per Regulation 11.2 of MERC Resource Adequacy Regulations, 2024, Planning Reserve Margin (PRM) is to be specified by CEA or Hon'ble Commission keeping in view reliability indices in terms of Loss of Load Probability (LOLP), and Normalized Energy Not Served (NENS). CEA has specified target of LOLP as 0.2% and NENS at 0.05%. However, till the date of submission of this report, neither CEA nor Hon'ble Commission hasn't specified PRM value. Accordingly, BEST has calculated PRM with an objective to reach target value of LOLP and NENS as specified by CEA. BEST with the assistance of its consultants, M/s Deloitte Touche Tohmatsu India LLP has conducted extensive stochastic simulations of

future generation scenarios and demand patterns. 100 different future scenarios were generated using stochastic simulations to account for future uncertainties in generation as well as demand. The model performs detailed dispatch simulations to calculate the Loss of Load Probability (LOLP) and the Number of Expected Non-Supply (NENS) for different values of PRM. BEST has considered the base value of PRM at 7% and incrementally increasing the same, it has observed that target NENS of 0.05% is being met for all the PRMs but the target LoLP of 0.2% is being met for PRM values of 15% and above. The same calculation is tabulated below:

Table 2 Calculation of PRM

PRM	Average LOLH (in hours)	LoLP	Average EENS (in GWh)	Normalized EENS
7%	84	0.95%	3.32	0.006%
9%	62	0.71%	2.35	0.004%
11%	40	0.45%	1.42	0.003%
13%	25	0.28%	0.83	0.002%
15%	15	0.17%	0.48	0.001%
17%	8	0.10%	0.27	0.001%

24. Accordingly, BEST has considered PRM at 15% of the peak load. The same would be subject to modification as per the value issued by CEA or Hon'ble Commission at a later date.

4 Calculation of Resource Adequacy Requirement, MT-DRAP and ST-DRAP

25. BEST has calculated resource gap for each year as per Regulation 12.2 and 12.3 of MERC Resource Adequacy Regulations, 2024. BEST has applied respective CC factors on contracted generation resources and subtracted it from demand forecast for all three scenarios (Most Probable, Business-As-Usual and Aggressive) as per Regulation 12.3 of MERC Resource Adequacy Regulations, 2024 to arrive at resource gap. The detailed calculation has been attached at **Annexure-V**.

26. BEST would like to submit that till the time of submission of this report, CEA has not published Long-term National Resource Adequacy Plan (LT-NRAP) as specified in Regulation 12.6 and National Load Dispatch Center (NLDC) has not published Short-term National Resource Adequacy Plan (ST-NRAP) as specified in Regulation 12.7. Accordingly, MSLDC hasn't been able to allocate each distribution licensee's share in the state peak as specified in Regulation 12.8. Accordingly, it would not be possible for BEST to calculate its Resource Adequacy Requirement (RAR) as mandated in Regulation 12.9 of MERC Resource Adequacy Regulations, 2024.

27. Due to absence of data, BEST has analyzed national load profile and on the basis of the same, has tried to find out coincident peak demand in its own distribution area with national coincident peak for the forecast years as per Regulation 12.12 of MERC Resource Adequacy Regulations, 2024. BEST has then applied calculated PRM of 15% on the coincident demand to arrive at provisional RAR. The calculation is tabulated below:

Table 3 Calculation of Provisional RAR (MW)

Particular	2025	2026	2027	2028	2029	2030
Peak Demand (MW)	947	954	961	969	977	986
Expected Coincident Demand (MW)	864	870	877	884	892	900
Provisional RAR (MW)	994	1001	1009	1017	1026	1035

28. As per Regulation 15.6 of MERC Resource Adequacy Regulations, 2024 distribution licensees have to demonstrate 100% tie-up for the first year of forecast to the Hon'ble Commission. The list of current Power Purchase Agreements (PPAs) signed by BEST has been tabulated below:

Table 4 List of Current PPA

Name of Generator	Generating Plant	Capacity (MW)	Status
M/s Manikaran Power Ltd	Sai Wardha Power Generation Limited-Unit-1 to Unit-4	100.00	Commissioned
Tata Power Company	Trombay Thermal Power Station-Unit-5	255.85	Commissioned
	Trombay Thermal Power Station-Unit-7	92.11	Commissioned
	Trombay Thermal Power Station-Unit-8,	100.00	Commissioned
	Bhira Hydro Station	153.51	Commissioned
	Bhivpuri Hydro Station,	38.38	Commissioned
	Khopoli Hydro Station	36.84	Commissioned
Walwhan Solar MH Ltd. (Welspun)	Solar Plant at Mangalwedha, Solapur	20.00	Commissioned
Adani Green Energy Twenty Six A Limited (PSA signed with SECI)	Solar Plant at Khavda RE park, Gujarat	234.00	Contracted; Expected to be commissioned in FY 2025-26
ABC Renewable Energy Private Limited (PSA signed with SECI)	Hybrid (Solar and Wind)	136.94	
Adani Renewable Holding Eight Limited (PSA signed with SECI)	Hybrid (Solar and Wind) at Khavda RE park, Gujarat	216.22	
AMP Energy Green Private Limited (PSA signed with SECI)	Hybrid (Solar and Wind)	46.85	

29. As per the current plan 100 MW thermal power (signed with Manikaran Ltd.) would be retiring by FY 2024-25 but the same would be compensated by 125 MW thermal planned to be added in FY 2025-26. Further BEST has also planned to add 234 MW solar plant and 400 MW solar-wind hybrid. The results of the Short-Term Distribution Resource Adequacy Plan (ST-DRAP) are provided in the following table.

Table 5: Contracted capacity for BEST in FY 25-26 as per ST-DRAP in MW

Resource/ Year	Thermal	Solar	Hydro	Hybrid	Power Exchange (PX)
2025-26	547	254	229	400	46

30. With the current capacity contracts in place, BEST is positioned to demonstrate full compliance by achieving a 100% tie-up for the first year, as stipulated by the regulatory

framework. The comparison of firm capacity (installed capacity multiplied by capacity credit) with calculated RAR in Table 3 is provided in the following table.

Table 6: Firm capacity and RAR in MW

Resource/ Year	Thermal	Solar	Hydro	Hybrid	Total Firm Capacity	Expected RAR
2025-26	428	144	163	317	1051	1001

31. As per Regulation 15.7 of MERC Resource Adequacy Regulations, 2024 Distribution licensees also need to furnish a plan to meet estimated requirement of their contribution to meet state peak. However, since MSLDC hasn't done the needful, BEST is not in a position to furnish the same.

32. Building on the ST-DRAP, the Medium-Term Distribution Resource Adequacy Plan (MT-DRAP) extends the planning horizon to provide a strategic outlook on resource adequacy over the next five years. As per Regulation 15.9 of MERC Resource Adequacy Regulations, 2024 distribution licensee through MT-DRAP, need to submit their plan to meet their RAR with a mix of Long-term, Medium-term, and Short-term contracts as per Regulation 12,10 (70% through long-term contracts, minimum 20% through medium–term contracts, and remaining through Short-term contracts).

33. As of now, out of total 797 MW capacity contracted by BEST 678 MW are medium term and their contract would be expiring after FY 2028-29. It would not be possible for BEST to replace the medium-term contract before their expiration as it would be in contravention of contracting conditions which have also been duly approved by the Hon'ble Commission. Hence BEST requests Hon'ble Commission to provide BEST a waiver the condition of meeting 70% of RAR through long-term sources (to the extent upto which the same is not being met) till FY 2028-29 as a special case.

34. The MT-DRAP analysis has been conducted to ensure that distribution licensees can meet its RAR which is sum of projected demand and PRM. For FY 2025-26 and FY 2026-27, existing and planned power sources contracted by BEST would be sufficient to meet its RAR. However, BEST will continue to utilize power exchanges to meet its own peak demand, manage fluctuations in demand and supply, optimizing its procurement strategy in alignment with reliability standards.

35. In FY 2027-28, BEST would need to expand its resource portfolio to address higher power demand. Towards the same, BEST would need to contract 23 MW of Firm and Dispatchable Renewable Energy (FDRE) comprising of solar, wind and energy storage. Further in FY 2028-29, it would require contracting additional FDRE capacity for 49 MW.

36. In FY 2029-30, medium term contracts with Tata Power Company (TPC) totaling 448 MW thermal sources and 229 MW hydro sources would be retiring. BEST would have the option

to further extend the contract or contract new sources. As per optimal power procurement plan it would be cost optimal for BEST to extend only 200 MW thermal power and contract other sources such as wind (57 MW), FDRE with 430 MW capacity, comprising of wind, solar and energy sources and Battery Energy Storage System (BESS) of 330 MWh comprising of 66 MW with 4 hours discharge and 33 MW with 2 hours discharge period. Under short-term sources BEST can contract 59 MW from Short Term Open Access (STOA) and 54 MW from power Exchange (PX). The MT-DRAP thus developed is tabulated below:

Table 7: Year-on- year installed capacity plan for BEST as per MT-DRAP in MW

Year	Thermal	Solar	Wind	Hydro	FDRE	Hybrid	BESS (4Hr)	BESS (2Hr)	STOA	PX
2025-26	547	254	0	229	0	400	0	0	0	46
2026-27	547	254	0	229	0	400	0	0	0	56
2027-28	547	254	0	229	23	400	0	0	0	53
2028-29	547	254	0	229	72	400	0	0	0	84
2029-30	325	254	57	0	502	400	66	33	59	54

37. Table attached at **Annexure-VI** illustrates firm capacity contracted by BEST would meet its peak demand along with PRM.

38. BEST would further like to submit that it also avails standby support from MSEDCL for any reduction in availability from contracted generation. This also enables BEST to supply power to its consumers in case of any contingency.

5 Power Procurement Plan

39. As per Regulation 14.1 and 14.2 of MERC Resource Adequacy Regulations, 2024 Distribution licensee need to identify an optimal procurement generation resource mix that shall enable smooth RE integration in its portfolio of power procurement resource options while meeting reliability standards. BEST would like to ensure Hon'ble Commission that it has performed meticulous planning of power procurement sources using optimization techniques and least-cost modelling. The assumptions relating to different sources considered by BEST for least cost modelling is provided in table below:

Table 8 Assumption for cost optimization for different sources

Power Generation Source	Assumptions
Coal Based Thermal Power Plant	Annual Fixed Cost (AFC) – Rs 1.71 crore/MW constant Variable Costs – Rs 3.2 /kWh for FY24, CAGR -3.5% Minimum lead-time/ Year from which new addition will be considered – 7 Years
Solar Power Plant	Levelized Cost of Energy – Rs. 2.3/kWh Capacity Utilization Factor (CUF)- 28%
Wind Power Plant	Levelized Cost of Energy – Rs. 3.29/kWh CUF- 35%
Hydro Power Plant	Levelized Cost of Energy – Rs. 3.62/kWh CUF- 40%
Pumped hydro Storage plant	Capex: Rs. 7.88 crore/MW; AFC: Rs. 1 crore/MW Round trip efficiency: 75%
Battery Energy Storage System (BESS) with 2 hours discharge	Capex: Rs. 3.55 crore/MW; AFC: Rs. 0.57 crore/MW Round trip efficiency: 85%
BESS with 4 hours discharge	Capex: Rs. 6.03 crore/MW; AFC: Rs. 1.03 crore/MW Round trip efficiency: 85%
Fixed and Dispatchable Renewable Energy (FDRE)	Levelized Cost of Energy – Rs. 5.79/kWh
Short Term Open Access (STOA)	Variable Costs – Rs 10 /kWh for FY24, CAGR -3.5%
Medium Term Open Access (MTOA)	Variable Costs - Rs. 3/kWh for FY24, CAGR -3.5; AFC – Rs. 5/kWh
Power Exchange	Projected future market prices

40. The results of ST-DRAP and MT-DRAP have been submitted as above. Additional power procurement to be performed by BEST to meet MT-DRAP has been provided in **Annexure-VII**. Further, BEST would have to rely on Power Exchange to meet its own peak demand. The plan would be checked for consistency with national framework once it is published by CEA.

41. Further, as per Regulation 14.4 of MERC Resource Adequacy Regulations, 2024 BEST has considered MERC (Renewable Purchase Obligation, its Compliance and Implementation of

Renewable Energy Certificate Framework), Regulations, 2019 and its amendments to plan renewable energy addition.

42. In accordance with Regulation 15.4 of MERC Resource Adequacy Regulations, 2024 BEST would forward a copy of its power procurement plan to the STU so that it may verify its consistency with the transmission system plan for the intra-State Transmission System.

43. Long-Term Power Procurement strategy of BEST would be to source least cost power from available source which should be able to meet its demand reliably at all instants. Further, it would consider RPO trajectory as specified by Hon'ble Commission and Government of India's commitment at Conference of Parties (CoP). It would also strive to increase Energy Storage capacity to better integrate infirm renewable sources such as solar and wind. To this end it will try using storage as a service or directly contracting energy storage techniques such as BESS or pumped hydro.

44. BEST is also submitting a list of all existing PPAs executed with different conventional power plants as well as RE Generators at **Annexure-VIII** in compliance with Regulation 17.4 of MERC Resource Adequacy Regulations, 2024.

Annexure I

Category-wise annual energy consumption till FY 2034-35

Table 9: Category-wise annual energy consumption FY26-FY30 in Mus (Most Probable Scenario)

Category	FY26	FY27	FY28	FY29	FY30
LT-1 A (BPL)	0.038	0.038	0.038	0.039	0.039
LT-1 B	2191.671	2208.128	2224.585	2241.043	2257.500
LT2 (a)Comm <20	886.277	892.932	899.587	906.242	912.897
LT2 (b) 20-50 Comm.	187.074	188.478	189.883	191.288	192.693
LT2 (c) >50 Comm.	399.629	402.630	405.631	408.632	411.633
LT3A Industrial <20 kW	108.280	109.093	109.906	110.719	111.532
LT 3B >20 Industrial	79.978	80.578	81.179	81.779	82.380
LT-4A Schools & Hosp	65.351	65.842	66.333	66.823	67.314
LT-4B Public Service	181.406	182.768	184.130	185.492	186.854
LT-4B Public Ltg	16.868	16.994	17.121	17.248	17.374
LT 5B Agri. Others	0.164	0.165	0.166	0.167	0.169
LT-6 Vehicle Chg	38.005	46.930	58.777	75.775	98.310
HT-1 Industrial	178.065	178.253	178.441	178.629	178.816
HT-2 Commercial	221.715	221.949	222.183	222.416	222.650
HT-3 Group Hsg	36.441	36.480	36.518	36.556	36.595
HT-4 Railway Metro	2.698	2.701	2.704	2.707	2.710
HT 5A Govt Sch & Hosp.	31.337	31.370	31.403	31.436	31.470
HT 5B Public Ser. Oths	208.750	208.970	209.190	209.410	209.630
HT 6 EV chg.	4.023	4.968	6.222	8.021	10.407
Total	4837.768	4879.266	4923.996	4974.422	5030.972

Table 10 Category-wise annual energy consumption FY31-FY35 in Mus (Most Probable Scenario)

Category	FY31	FY32	FY33	FY34	FY35
LT-1 A (BPL)	0.039	0.039	0.040	0.040	0.040
LT-1 B	2273.957	2290.415	2306.872	2323.329	2339.787
LT2 (a)Comm <20	919.552	926.207	932.862	939.517	946.172
LT2 (b) 20-50 Comm.	194.097	195.502	196.907	198.311	199.716
LT2 (c) >50 Comm.	414.634	417.634	420.635	423.636	426.637
LT3A Industrial <20 kW	112.345	113.158	113.971	114.784	115.597
LT 3B >20 Industrial	82.980	83.581	84.181	84.782	85.383
LT-4A Schools & Hosp	67.805	68.296	68.786	69.277	69.768
LT-4B Public Service	188.216	189.579	190.941	192.303	193.665
LT-4B Public Ltg	17.501	17.628	17.754	17.881	18.008
LT 5B Agri. Others	0.170	0.171	0.172	0.173	0.175
LT-6 Vehicle Chg	121.241	144.618	168.520	193.027	218.246
HT-1 Industrial	179.004	179.192	179.380	179.567	179.755
HT-2 Commercial	222.884	223.118	223.352	223.585	223.819
HT-3 Group Hsg	36.633	36.672	36.710	36.749	36.787

Category	FY31	FY32	FY33	FY34	FY35
HT-4 Railway Metro	2.713	2.715	2.718	2.721	2.724
HT 5A Govt Sch & Hosp.	31.503	31.536	31.569	31.602	31.635
HT 5B Public Ser. Oths	209.850	210.070	210.291	210.511	210.731
HT 6 EV chg.	12.835	15.309	17.840	20.434	23.104
Total	5087.959	5145.440	5203.501	5262.230	5321.748

Table 11: Category-wise annual energy consumption FY26-FY30 in Mus (Business-As-Usual Scenario)

Category	FY26	FY27	FY28	FY29	FY30
LT-1 A (BPL)	0.038	0.038	0.039	0.039	0.039
LT-1 B	2201.146	2222.448	2242.527	2260.250	2275.451
LT2 (a)Comm <20	890.108	898.722	906.842	914.009	920.156
LT2 (b) 20-50 Comm.	187.882	189.701	191.414	192.927	194.225
LT2 (c) >50 Comm.	401.357	405.241	408.903	412.134	414.906
LT3A Industrial <20 kW	108.748	109.800	110.792	111.668	112.419
LT 3B >20 Industrial	80.323	81.101	81.833	82.480	83.035
LT-4A Schools & Hosp	65.634	66.269	66.868	67.396	67.849
LT-4B Public Service	182.190	183.953	185.615	187.082	188.340
LT-4B Public Ltg	16.941	17.105	17.259	17.395	17.512
LT 5B Agri. Others	0.164	0.166	0.167	0.169	0.170
LT-6 Vehicle Chg	38.169	47.234	59.251	76.424	99.091
HT-1 Industrial	178.835	179.409	179.880	180.160	180.238
HT-2 Commercial	222.673	223.388	223.974	224.323	224.421
HT-3 Group Hsg	36.599	36.716	36.813	36.870	36.886
HT-4 Railway Metro	2.710	2.719	2.726	2.730	2.731
HT 5A Govt Sch & Hosp.	31.473	31.574	31.657	31.706	31.720
HT 5B Public Ser. Oths	209.652	210.325	210.877	211.205	211.297
HT 6 EV chg.	4.041	5.000	6.272	8.090	10.490
Total	**4854.806**	**4906.732**	**4959.213**	**5012.255**	**5065.865**

Table 12 Category-wise annual energy consumption FY31-FY35 in Mus (Business-As-Usual Scenario)

Category	FY31	FY32	FY33	FY34	FY35
LT-1 A (BPL)	0.039	0.040	0.040	0.040	0.041
LT-1 B	2290.721	2306.039	2321.372	2336.679	2351.911
LT2 (a)Comm <20	926.331	932.525	938.726	944.916	951.075
LT2 (b) 20-50 Comm.	195.528	196.836	198.144	199.451	200.751
LT2 (c) >50 Comm.	417.690	420.483	423.279	426.070	428.848
LT3A Industrial <20 kW	113.173	113.930	114.687	115.444	116.196
LT 3B >20 Industrial	83.592	84.151	84.711	85.269	85.825
LT-4A Schools & Hosp	68.305	68.761	69.219	69.675	70.129
LT-4B Public Service	189.604	190.872	192.141	193.408	194.669
LT-4B Public Ltg	17.630	17.748	17.866	17.984	18.101
LT 5B Agri. Others	0.171	0.172	0.173	0.174	0.176
LT-6 Vehicle Chg	122.135	145.605	169.580	194.136	219.377

Category	FY31	FY32	FY33	FY34	FY35
HT-1 Industrial	180.324	180.414	180.507	180.599	180.687
HT-2 Commercial	224.527	224.640	224.755	224.870	224.979
HT-3 Group Hsg	36.903	36.922	36.941	36.960	36.978
HT-4 Railway Metro	2.733	2.734	2.735	2.737	2.738
HT 5A Govt Sch & Hosp.	31.735	31.751	31.767	31.783	31.799
HT 5B Public Ser. Oths	211.397	211.503	211.612	211.720	211.823
HT 6 EV chg.	12.929	15.414	17.952	20.551	23.223
Total	**5125.468**	**5180.540**	**5236.207**	**5292.467**	**5349.324**

Table 13: Category-wise annual energy consumption FY26-FY30 in Mus (Aggressive Scenario)

Category	FY26	FY27	FY28	FY29	FY30
LT-1 A (BPL)	0.038	0.039	0.041	0.042	0.044
LT-1 B	2214.031	2237.637	2256.247	2274.734	2284.419
LT2 (a)Comm <20	901.214	906.204	909.152	918.428	923.202
LT2 (b) 20-50 Comm.	189.990	190.740	192.377	194.531	195.823
LT2 (c) >50 Comm.	403.546	407.482	411.355	414.316	415.838
LT3A Industrial <20 kW	109.599	110.059	111.259	112.235	113.146
LT 3B >20 Industrial	80.743	81.663	82.522	82.849	83.453
LT-4A Schools & Hosp	66.032	66.645	67.242	67.932	68.410
LT-4B Public Service	184.052	185.982	186.130	187.274	189.224
LT-4B Public Ltg	17.138	17.222	17.403	17.476	17.532
LT 5B Agri. Others	0.166	0.167	0.169	0.177	0.183
LT-6 Vehicle Chg	38.610	47.416	59.485	76.948	99.560
HT-1 Industrial	189.327	196.029	206.979	213.962	219.292
HT-2 Commercial	229.946	237.539	251.679	265.448	271.192
HT-3 Group Hsg	37.791	39.909	42.200	43.354	45.946
HT-4 Railway Metro	2.745	2.811	2.940	3.000	3.119
HT 5A Govt Sch & Hosp.	31.832	33.330	35.113	36.349	37.498
HT 5B Public Ser. Oths	210.921	211.684	211.866	222.083	234.404
HT 6 EV chg.	4.104	5.067	6.347	8.182	10.615
Total	**4911.824**	**4977.626**	**5050.506**	**5139.322**	**5212.900**

Table 14 Category-wise annual energy consumption FY31-FY35 in Mus (Aggressive Scenario)

Category	FY31	FY32	FY33	FY34	FY35
LT-1 A (BPL)	0.045	0.047	0.050	0.053	0.054
LT-1 B	2313.016	2320.268	2346.580	2357.472	2375.019
LT2 (a)Comm <20	930.870	938.679	947.429	955.286	982.833
LT2 (b) 20-50 Comm.	196.972	197.388	199.379	201.018	202.327
LT2 (c) >50 Comm.	420.032	421.651	427.230	429.559	431.323
LT3A Industrial <20 kW	113.770	114.817	115.372	116.006	117.367
LT 3B >20 Industrial	83.959	84.941	84.999	85.879	86.492
LT-4A Schools & Hosp	68.934	69.375	69.647	70.148	70.938
LT-4B Public Service	190.981	191.425	193.665	194.555	195.513

Category	FY31	FY32	FY33	FY34	FY35
LT-4B Public Ltg	17.756	17.817	17.958	18.137	18.255
LT 5B Agri. Others	0.190	0.198	0.208	0.213	0.218
LT-6 Vehicle Chg	122.396	146.032	170.696	195.667	220.391
HT-1 Industrial	228.082	239.810	252.872	265.329	277.345
HT-2 Commercial	282.883	299.188	308.259	315.923	330.778
HT-3 Group Hsg	47.468	49.479	50.935	53.712	56.334
HT-4 Railway Metro	3.277	3.419	3.598	3.753	3.899
HT 5A Govt Sch & Hosp.	39.033	40.033	42.282	44.173	45.973
HT 5B Public Ser. Oths	247.464	259.933	270.915	282.277	289.954
HT 6 EV chg.	13.091	15.615	18.196	20.842	23.566
Total	**5320.221**	**5410.114**	**5520.271**	**5609.999**	**5728.579**

Annexure II

Demand Assessment till FY 2034-35 (Hourly and Monthly peak load)

Table 15: Annual Demand after considering losses and solar rooftops impact FY26 to FY30 (Most Probable)

Annual demand (MUs)	FY26	FY27	FY28	FY29	FY30
	5030	5072	5118	5169	5227

Table 16: Annual Demand after considering losses and solar rooftops impact FY31 to FY35 (Most Probable)

Annual demand (MUs)	FY31	FY32	FY33	FY34	FY35
	5285	5343	5402	5462	5522

Table 17: Annual Hourly Peak (MW) FY26 to FY 30 (Most Probable)

Hourly peak demand (MW)	FY26	FY27	FY28	FY29	FY30
	954	961	969	977	986

Table 18: Annual Hourly Peak (MW) FY31 to FY 35 (Most Probable)

Hourly peak demand (MW)	FY31	FY32	FY33	FY34	FY35
	995	1004	1013	1022	1032

Table 19: Annual Demand after considering losses and solar rooftops impact FY26 to FY30 (Business as Usual)

Annual demand (MUs)	FY26	FY27	FY28	FY29	FY30
	5029	5083	5137	5192	5248

Table 20: Annual Demand after considering losses and solar rooftops impact FY31 to FY35 (Business as Usual)

Annual demand (MUs)	FY31	FY32	FY33	FY34	FY35
	5304	5361	5418	5476	5534

Table 21: Annual Hourly Peak (MW) FY26 to FY 30 (Business as Usual)

Hourly peak demand (MW)	FY26	FY27	FY28	FY29	FY30
	955	966	976	986	997

Table 22: Annual Hourly Peak (MW) FY31 to FY 35 (Business as Usual)

Hourly peak demand (MW)	FY31	FY32	FY33	FY34	FY35
	1008	1018	1029	1040	1051

Table 23: Annual Demand after considering losses and solar rooftops impact FY26 to FY30 (Aggressive Scenario)

Annual demand (MUs)	FY26	FY27	FY28	FY29	FY30
	5030	5072	5118	5169	5227

Table 24: Annual Demand after considering losses and solar rooftops impact FY31 to FY35 (Aggressive Scenario)

Annual demand (MUs)	FY31	FY32	FY33	FY34	FY35
	5526	5618	5731	5823	5945

Table 25: Annual Hourly Peak (MW) FY26 to FY 30 (Aggressive Scenario)

Hourly peak demand (MW)	FY26	FY27	FY28	FY29	FY30
	970	983	997	1015	1029

Table 26: Annual Hourly Peak (MW) FY31 to FY 35 (Aggressive Scenario)

Hourly peak demand (MW)	FY31	FY32	FY33	FY34	FY35
	1050	1067	1089	1106	1129

Table 27: Monthly Hourly Peak (MW) from FY26 to FY 30 (Most Probable Scenario)

Month	FY26	FY27	FY28	FY29	FY30
April	875	882	889	897	906
May	916	923	930	939	948
June	954	961	969	977	986
July	792	798	804	811	819
August	785	791	797	804	812
September	805	811	817	824	832
October	890	897	904	912	921
November	819	825	832	839	848
December	744	750	756	762	770
January	721	727	732	739	746
February	700	706	711	718	725
March	788	793	799	806	814

Table 28: Monthly Hourly Peak (MW) from FY31 to FY 35 (Most Probable Scenario)

Month	FY31	FY32	FY33	FY34	FY35
April	914	923	931	940	948
May	956	965	974	983	991
June	995	1004	1013	1022	1032
July	826	834	841	849	857
August	819	827	834	842	849
September	840	847	855	863	870
October	930	938	947	955	964
November	856	864	872	880	888
December	777	784	791	799	806
January	753	760	767	774	781
February	732	738	745	752	759
March	821	829	837	845	853

Annexure III

Details of contracted power sources

Table 29: Contracted power sources

Sr. No.	Generating Stations	Resource Type	Installed Capacity (MW)	Allocated Capacity (MW)	Commissioning Year	Expected Retirement Year	Fixed Cost (Rs/kWh)	Heat Rate (at full load)	Variable Cost (Rs/kWh)	Start Up Cost (Rs.)	Start Up time (h)	Forced Outage	PLF/CUF (%)	Date of signing of PPA	Date of expiry of PPA	Planned maintenance	Ramp Rate (MW/min)	Auxiliary Consumption	Technical Minimum
I	**Central Generating Stations**																		
II	**State Generating Stations**																		
1	Trombay Thermal Power Station-Unit-5, Trombay, Mumbai.	Thermal	500	255.85	1984		1.05	2549	5.833		4	6.00%	68.89%	06.03.2024	1.04.2029	2%	2.890	6%	55%
2	Trombay Thermal Power Station-Unit-7, Trombay, Mumbai	Thermal	180	92.11	1994		1.3	2035	5.077		4	1.00%	97.37%	06.03.2024	1.04.2029	2%	1.070	2.75%	55%
3	Trombay Thermal Power Station-Unit-8, Trombay, Mumbai	Thermal	250	100.00	2009	2034	1.24	2430	5.643		4	1.00%	70.57%	06.03.2024	1.04.2029	3%	1.100	8.5%	55%
4	M/s Sai Wardha Power Generation Private Limited, B-2 ,	Thermal	540	125	2025-26				5.56										55%

Sr. No.	Generating Stations	Resource Type	Installed Capacity (MW)	Allocated Capacity (MW)	Commissioning Year	Expected Retirement Year	Fixed Cost (Rs/kWh)	Heat Rate (at full load)	Variable Cost (Rs/kWh)	Start Up Cost (Rs.)	Start Up time (h)	Forced Outage	PLF/CUF (%)	Date of signing of PPA	Date of expiry of PPA	Planned maintenance	Ramp Rate (MW/min)	Auxiliary Consumption	Technical Minimum
	Warora Growth centre, MIDC, Warora, Chandrapur, Maharashtra - 442907																		
III	**Hydro**																		
1	Bhira Hydro Station, Bhira Complex, Mulshi, Pune.	Hydro	300	153.51	Unit 2 to 6- 1974 to 1977 Unit 7 -1997		0.77	NA	0.939		0.16		NA	06.03.2024	1.04.2029		3.330	1%	
2	Bhivpuri Hydro Station, Raigad, Maharashtra.	Hydro	75	38.38	1999		1.46	NA	2.210		0.16		NA	06.03.2024	1.04.2029		1.200	1.2%	
3	Khopoli Hydro Station, Raigad, Maharashtra	Hydro	72	36.84	2000-2003		2.35	NA	3.786		0.16		NA	06.03.2024	1.04.2029		0.600	1.2%	
IV	**Renewable**																		
1	Walwhan Solar MH Ltd. Mangalwedha , Solapur Maharashtra	Solar	20	20.00			8.56						17.8%						
2	Adani Green Energy Twenty Six A Limited, Khavda RE park, Gujarat	Solar	234	234	2025-26								28%						

Sr. No.	Generating Stations	Resource Type	Installed Capacity (MW)	Allocated Capacity (MW)	Commissioning Year	Expected Retirement Year	Fixed Cost (Rs/kWh)	Heat Rate (at full load)	Variable Cost (Rs/kWh)	Start Up Cost (Rs.)	Start Up time (h)	Forced Outage	PLF/CUF (%)	Date of signing of PPA	Date of expiry of PPA	Planned maintenance	Ramp Rate (MW/min)	Auxiliary Consumption	Technical Minimum
3	ABC Renewable Energy Private Limited, 71.043452°E, 26.099246° N	Hybrid	380	136.94	2025-26								41.71%						
4	Adani Renewable Energy Holding Eight Limited, Khavda RE park, Gujarat	Hybrid	600	216.22	2025-26								36.66%						
5	AMP Energy Green Private Limited, 71°14'8.44"E, 26°14'45.54" N	Hybrid	130	46.85	2025-26								42.5%						
IV	**IPP**																		
1	**Manikaran Power Limited** Sai Wardha Power Generation Limited-Unit-1 to Unit-4	Thermal	540	100.00	2011	2036	2.09		2.269		4	1%	85.00%	25.05.2019	1.03.2025	2%	1.330		

Table 30:Emission norms for TPPs

Emission Parameter	TPPs (units) installed before 31st December, 2003	TPPs (units) installed after 31st December 2003 and up to 31st December 2016	TPPs (units) to be installed from 1st January 2017
Particulate Matter	100 mg/Nm3	50 mg/Nm3	30 mg/Nm3
Sulphur Dioxide (SO2)	600 mg/Nm3 (for units less than 500MW capacity) and 200 mg/Nm3 for units 500MW and above capacity	600 mg/Nm3 (for units less than 500MW capacity) and 200 mg/Nm3 for units 500MW and above capacity	100 mg/Nm3
Oxides of Nitrogen (NOx)	600 mg/Nm3	450 mg/Nm3	100 mg/Nm3

Annexure IV

Computation of Capacity Credit (CC) factors for contracted and upcoming generation resource

Table 31:Capacity Credits

Financial Year	Old/Existing Solar	New Solar	Wind	FDRE	Hybrid	Hydro	Thermal
2026	57%	68%	53%	38%	79%	71%	78%
2027	59%	68%	53%	38%	79%	68%	78%
2028	61%	68%	53%	38%	79%	67%	78%
2029	52%	68%	53%	38%	79%	60%	78%
2030	51%	68%	53%	38%	79%	60%	80%

Annexure V

Calculation of MT-DRAP, ST-DRAP and resource gap

Table 32:Calculation of Resource gap with contracted capacities (in MW) – Most Probable Scenario

Financial Year	Thermal	Solar	Wind	Hydro	FDRE	Hybrid	BESS (4Hr)	BESS (2Hr)	STOA	PX	Total Firm Capacity	PEAK	Resource Gap
2026	428	144	0	163	0	317	0	0	0	0	1051	954	-97
2027	428	149	0	156	0	317	0	0	0	0	1050	961	-89
2028	428	155	0	153	0	317	0	0	0	0	1052	969	-83
2029	428	132	0	136	0	317	0	0	0	0	1012	977	-35
2030	98	129	0	0	0	317	0	0	0	0	543	986	443

Table 33:Calculation of Resource gap with contracted capacities (in MW) – Business-As-Usual

Financial Year	Thermal	Solar	Wind	Hydro	FDRE	Hybrid	BESS (4Hr)	BESS (2Hr)	STOA	PX	Total Firm Capacity	PEAK	Resource Gap
2026	428	144	0	163	0	317	0	0	0	0	1051	955	-96
2027	428	149	0	156	0	317	0	0	0	0	1050	966	-84
2028	428	155	0	153	0	317	0	0	0	0	1052	976	-76
2029	428	132	0	136	0	317	0	0	0	0	1012	986	-26
2030	98	129	0	0	0	317	0	0	0	0	543	997	454

Table 34:Calculation of Resource gap with contracted capacities (in MW) – Aggressive Scenario

Financial Year	Thermal	Solar	Wind	Hydro	FDRE	Hybrid	BESS (4Hr)	BESS (2Hr)	STOA	PX	Total Firm Capacity	PEAK	Resource Gap
2026	428	144	0	163	0	317	0	0	0	0	1051	970	-81
2027	428	149	0	156	0	317	0	0	0	0	1050	983	-67
2028	428	155	0	153	0	317	0	0	0	0	1052	997	-55
2029	428	132	0	136	0	317	0	0	0	0	1012	1015	3
2030	98	129	0	0	0	317	0	0	0	0	543	1029	486

Table 35: ST-DRAP (in MW) Most Probable Scenario

Resource	Thermal	Solar	Hydro	Hybrid	PX
2025-26	547	254	229	400	46

Table 36:MT-DRAP (in MW) Most Probable Scenario

Resource	Thermal	Solar	Wind	Hydro	FDRE	Hybrid	BESS (4Hr)	BESS (2Hr)	STOA	PX
2025-26	547	254	0	229	0	400	0	0	0	46
2026-27	547	254	0	229	0	400	0	0	0	56
2027-28	547	254	0	229	23	400	0	0	0	53
2028-29	547	254	0	229	72	400	0	0	0	84
2029-30	325	254	57	0	502	400	66	33	59	54

Table 37:Y-O-Y estimated Generation from RE sources and RPO Target (in Mus)

	Wind	Hydro	Hybrid	Solar	FDRE	Total RE	RPO Target
2025-26	0	802	1369	605	0	2777	1660
2026-27	0	802	1369	605	0	2777	1823
2027-28	0	802	1369	605	36	2813	1986
2028-29	0	802	1369	605	111	2888	2138
2029-30	175	0	1369	605	766	2915	2265

Annexure VI

Meeting of peak demand and PRM through firm capacity

Table 38:Firm capacities and calculation of PRM as per MT-DRAP results (in MW)

Financial Year	Thermal	Solar	Wind	Hydro	FDRE	Hybrid	BESS (4Hr)	BESS (2Hr)	STOA	PX	Total Firm Capacity	PEAK	PRM
2026	428	144	0	163	0	317	0	0	0	46	1097	954	15%
2027	428	149	0	156	0	317	0	0	0	56	1106	961	15%
2028	428	155	0	153	9	317	0	0	0	53	1114	969	15%
2029	428	132	0	136	28	317	0	0	0	84	1124	977	15%
2030	263	129	30	0	193	317	59	30	59	54	1134	986	15%

Annexure VII

Optimal power procurement plan

Table 39:Y-O-Y power procurement as per MT-DRAP (in MW)

Financial Year	Thermal	Wind	FDRE	BESS (4-Hr)	BESS (2-Hr)	STOA
2025-26	-	-	-	-	-	-
2026-27	-	-	-	-	-	-
2027-28	-	-	23	-	-	-
2028-29	-	-	49	-	-	-
2029-30	200	57	430	66	33	59

Annexure VIII

Power Purchase Agreement of BEST



The Brihanmumbai Electric Supply and Transport Undertaking (BEST)

DETAILED PROJECT REPORT
FY2022-23, FY2023-24, FY2024-25and FY2025-26
IN-PRINCIPLE CLEARANCEFOR CAPITAL INVESTMENT SCHEMES

BEST Scheme No: BEST/FY23/06

IMPLEMENTATION OF PREPAID SMART METERING PROJECT

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Abbreviation

AMI	Advanced Metering Infrastructure
AMI-SP	Advanced Metering Infrastructure-Service Provider
ABT	Availability Based Tariff
CT /PT	Current Transformer / Potential Transformer
DER	Distributed Energy Resource
DMS	Distribution Management System
DR	Demand Response
DSM	Demand Side Management
DT	Distribution Transformer
DBFOOT	Design, Built, Finance, Own, Operate & Transfer
EA	Energy Audit
GIS	Geographical Information System
HES	Head End System
HT	High Tension
LT	Low Tension
IT	Information Technology
MIS	Management Information System
NIC	Network Integration Card or Node
NTP	National Tariff Policy
NW	Network
O&M	Operation and Maintenance
PQ	Power Quality
BEST	Brihan Mumbai Electric Supply & Transport undertaking
RF	Radio Frequency
RTU	Remote Terminal Unit
SCADA	Supervisory Control and Data Acquisition
T&D	Transmission and Distribution
ToD	Time of Day
VAR	Volt Ampere Reactive
GoI	Govern of India
RDSS	Revamped Distribution Sector Scheme
AT&C	Aggregate Technical & Commercial
DISCOMs	Distribution Companies
ACS-ARR	Average cost of Supply –Aggregate Revenue Realised
TOTEX	Capital Expenditure + Operational Expenditure
CAPEX / OPEX	Capital Expenditure /Operational Expenditure
PPP	Public Private Partnership
DPR	Detail Project Report
LVCTO	Low Voltage Current Transformer Operated
MDMS	Meter Data Management System
NOMC	Network Operation Monitoring Centre
DCU /DACU	Data Concentrator Unit
ERP	Enterprise Resource Planning
OMS	Outage Management System
WPC	Wireless Planning & Co-ordination
WAN / NAN	Wide Area Network / Neighbourhood Area Network

1. INTRODUCTION:

1.1 The Government of India's initiatives like 'Make in India' and 'Smart Cities' need the efficient, reliable and continuous power supply. India's power sector in the present day is facing a lot of problems like AT & C losses, inefficient distribution and transmission system because of age old infrastructure and power theft. The advanced energy management and increased use of renewable energy resources are the foremost areas to concentrate by governments for the development of country. The government cannot take initiatives for complete change of electrical equipment across the country but there is a need for changing the way of operation and control of the electrical equipment.

1.1.1 Accordingly, Government of India (GoI) has launched the Revamped Distribution Sector Scheme (RDSS) to help DISCOMs to improve their operational efficiencies and financial sustainability by providing result-linked financial assistance to DISCOMs to strengthen supply infrastructure based on meeting pre-qualifying criteria and achieving basic minimum benchmarks. Main objective of the scheme is Reduction of AT&C losses to pan-India levels of 12-15% by 2024-25 and Reduction of ACS-ARR gap to zero by 2024-25. Also, improvement in the quality, reliability and affordability of power supply to consumers through a financially sustainable and operationally efficient distribution sector.***For details a copy of MoP letter dated 20 July, 2021 is attached (hard and soft copy) herewith as Annexure-A.***

1.2 Main components of RDSS Schemes are as follows:

1.2.1 Part A – Financial support for up gradation of the Distribution Infrastructure and Prepaid Smart Metering & System Metering.

Part B – Training & Capacity Building and other Enabling & Supporting Activities.

1.2.2 The current DPR is for "Implementation of Prepaid Smart Metering & System Metering" through AMI-SP on Design, Built, Finance, Own, Operate & Transfer (DBFOOT) basis. The DPR preparation for "Upgradation of the Distribution Infrastructure" is in progress and same will be submitted to MERC separately for obtaining in principleapproval of the Hon'ble Commission

1.2.3 Vide MoP notification dated 17th August 2021, GoI prioritised for all DISCOMS including BEST that "all the consumers (other than agricultural consumers) in areas with communication network, shall be supplied electricity with smart meters working in Prepayment Mode conforming to relevant IS, within the time".Pre-paid smartmetering and system metering are proposed to be implemented through Public Private Partnership (PPP)on OPEX basis.

1.2.4 For availing a grant of Rs. 900 or 15% of the cost per consumer (whichever is lower) under RDSS, for "Implementation of prepaid Smart Metering & System Metering" BEST have to meet pre-qualifying criteria and to achieve basic minimum benchmarks.Further to this, fast-track installation of prepaid Smart Meters by December 2023, an additional incentive of 7.5% of the cost per consumer meter or Rs. 450 (whichever is lower) shall be available to qualified states.

1.3 Introduction of BEST's Revamped Distribution Sector Scheme (RDSS) for AMI-SP:

BEST was submitted a copy of Action Plan & DPRs vide Letter Ref. No. GM/AGMES/18668/2022 dated 22.08.2022 for Loss Reduction works for Rs.2321 Crs, Modernisation & System Augmentation works for Rs. 430.63 Crs and Metering works for

Rs.708.54 Crs and Capacity building & training for Rs. 0.81 Crs, totalling Rs. 3460.98 for availing benefits of the RDSS to improve the services of the consumers. Subsequently, vide Letter No. 02:10:RDSS:2021:I:BEST dated 21.11.2022, Executive Director, for Power Finance Corporation (PFC)has informed that Monitoring Committee for RDSS constituted under Chairmanship of Secretary (power), Govt. of India, in its 13th meeting held on 28.10.2022 has approved the Action Plan and Detailed Project Report (DPRs) for Loss Reduction works and prepaid smart metering works of BEST under RDSS Scheme. For prepaid Smart Metering, out of Rs.708.54 Crs Monitoring Committee has approved only Rs. 659.17 Crs for metering infrastructure and total GBS including incentive for phase –I Rs.146.69 Crs. ***A copy of BEST's Letter and approval from PFC is enclosed as Annexure – B and for detail guidelines of RDSS Schemes kindly refer Annexure-C (only soft copy submitted).***

1.4 Brief information about the tendering process takes place in BEST for awarding turnkey contract to appoint AMI-SP for Implementation of Prepaid Smart Metering under RDSS:

1.4.1 A material is procured as per CAPEX Regulation, 2022, APENDIX-3.

Brief information about the Tender: A tender was opened on 21.07.2022 for appointment of AMI-SP for "Implementation of Prepaid Smart Metering" through open biddingprocesson Maha e-tender Portal. BEST undertaking advertised the tender in the local as well as all over Indiamedia.Initially, Notice of Inviting Tender was advertised for "appointment of full turnkey contractor (AMI-SP) to execute the project under RDSS". Due to the poor response from the bidders, multiple extensions were given. Finally, tender was opened on 21stJuly, 2022. Afteropening of the tender, it is observed that six bidders have taken part in the bidding processand it has been observed that the rates quoted by the firms, particularly towards the execution ofPrepaid smart metering project.

1.4.2 Details of offers received for appointment of AMISP:

In tender document it has been clearly mentioned that the tender evaluation shall be done on the basis of Reverse Auction Process (RAP) between the Eligible and Qualified Tenderers to appoint AMI-SP for implementation of Smart metering Pre-payment system Project. In the said tender, six bidders have taken part. Accordingly, out of Six Tenderers, Pricebid of the three eligible Tenderers has been opened and same is given in the following table.

Bidder No.	Tenderers	Gross Rate Including GST tax. (in Rs.)	Rank
1	M/s. Fluent Grid Pvt Ltd	1559,99,75,299.00	3
2	M/s. Adani Transmission Ltd (ATL)	1528,26,00,331.34	2
3	M/S. Ashoka Buildcon Ltd.	1313,16,31,180.00	1 (LAO)

As per above, offer of the Bidder No. 3 was Lowest (LAO), however, in the reverse option method, bidder 2 has matched their rates with the LAO and further reducing the Cost by 10 Crore at price of Rs. 1303.16 Crore M/s. ATL succeed to get Order. This type of contract is being awarded for the first time in the BEST Undertaking.

Accordingly, for cost estimation purpose, the cost arrived through this tender is considered.

Sr. No.	Bidder No.	Basic Cost in Rs.	Total Tax 18%	Gross Cost in Rs.
1	2	11,04,37,55,237.00	1,98,78,75,942.89	13,03,16,31,179.89

A Letter of Award (LoA) has issued to ATL and soft copy of the same is enclosed as Annexure-D.

2. Challenges in the BEST Undertaking:

2.1 Performance of any Electric distribution utility is measured over following crucialParameters.

- Cost of supply including T&D loss
- Customer services
- Management of demand curve – supply reliability
- Electricity supply quality

2.2 In the current dynamic scenario where consumers are installing roof top solar systems,updated their vision and have added following vision statements:

- Active participation of consumers in managing load curve
- Integration of distributed generation, batteries etc.
- Faster information to consumers
- Self-healing system
- Optimum utilization of asset and resources

2.3 BEST distributes electricity in the island city of Mumbai. Its area of distribution lies fromSouth Mumbai to Sion in the East and to Mahim in the West. BEST distributes power to an area spread over about 69 sq.km and provides electric supply to more than10 Lakhs consumers connected to its distribution network, comprising residential, commercialand industrial consumers, depending on the purpose of use of electricity.

2.4 Presently, BEST is not having such type of AMI infrastructure. So, the BEST is facing issues like wrong manual reading, delay in detection of defective meters, amendmentsand related disputes.

2.5 The mission of BEST undertaking is to provide economical, reliable and quality electricitysupply to all consumers connected to its network. Though BEST's present network hasstatic and few electro-mechanical meters in the system. The key challenges are to ensure that:

- Data/ information are communicated back at desired frequency in desired formats
- All desired information/ data/ events are generated
- All data/ information is processed
- All data/ information is analyzed to meet company objectives and for routineoperations
- Smart actions are taken based on data/ information analytics
- Customer Inclusion is achieved
- Asset optimization and operational efficiency
- There is improvement in Power Quality

3 Objective of the Scheme

3.1 **Objective**: To adopt technological advancements in energy metering to achieve Reduction in loss, for accurate measurement of energy, to provide improved service to consumers, to release new supply and to replace electromechanical and static metersby smart meters.

The AMI-SP will make 100% upfront capital investment and will recover its investments on long term from the gains of the projects on **OPEX basis**.

3.2 Introduction to the smart meters:

(i) After replacement of electro-mechanical meters with static meters, transition from static meters to smart meters is one of the most important steps towards improving consumer metering. Smart meters are a key component of a power supply system and play a significant role in revenue protection, quality control, compliance with regulatory requirements, consumer satisfaction and image building. The present billing system has chances of error and it is also time consuming. In the existing meter system, consumers are presented with usage information only once a month with their bill.

(ii) The smart meter is very essential to collect precise and appropriate data in a timely manner which includes gathering of data, its communication and storage. The smart meter allows the bi-directional flow of information from consumer to utility and vice versa. The data communication in real time basis allows the utilities with advantages like real time pricing, outage detection, identification of power theft, avoids meter data tampering and provides better service. With the data received in timely manner utilities shall have a better opportunity to work better with increased stability.Efficient metering practices help to maintain the financial health of a utility. These include accurate billing and prevention of power theft, which have been the focus areas for utilities. These practices also help in lowering aggregate technical and commercial losses of the utilities.

(iii) Advance metering infrastructure (AMI), automated meter reading (AMR), pre-paid meters and net meters are the key technologies of smart metering being adopted. This will help in improving metering efficiency, billing accuracy, revenue management and consumer satisfaction.

In light of the above-mentioned possibilities, BEST has reviewed its present metering system and data collection system for implementation AMI / Smart Metering. The key equipment and infrastructure required for this purpose include:

- Smart meters for data generation
- Communication infrastructure RF mesh network/ cellular network or both
- HES (Head End System) for data acquisition and Network ManagementSystem(NMS)
- Other Accessories required to integrate AMI System
- Fieldoperationsapp
- Networkoperationsmonitoringcentre

3.3 Scope of the work:

PART-A

1. Supply, installation, integration, testing and commissioning of **Single phase** whole current Smart Meter with inbuilt NIC module – (Consumer Meter, inclusive of 10 Net meters) along with Communication Solution, HES hosted on cloud, procuring all the necessary licenses, setting up NOMC with suitable backend communication and infrastructure, integration of HES with Meter Data Management system of BEST and its O&M includingdata availability (Single Phase, Qty – 901212 Nos.).

2. Supply, installation, integration, testing and commissioning of **Three phase** LT-CT operated Smart Meter with inbuilt NIC module (with Net-Metering) – DT Meter along with Communication Solution, HES hosted on cloud, procuring all the necessary licenses, setting up NOMC with suitable backend communication and infrastructure, integration of HES with Meter Data Management system of BEST and its O&M including data availability(Three Phase, Qty – 168419 Nos.).

3. Supply, installation, integration, testing and commissioning of Three Phase HT current Smart Meter with inbuilt NIC module (Inclusive of 12 nos. Existing Solar/Net Meter Consumers) – Consumer Meter along with Communication Solution, HES hosted on cloud, procuring all the necessary licenses, setting up NOMC with suitable backend communication and infrastructure, integration of HES with Meter Data Management system of BEST and its O&M including data availability (Three Phase, Qty – 206 Nos.).

4. Supply, installation, integration, testing and commissioning of three phase LT-CT operatedSmart Meter with inbuilt NIC module (Inclusive of 97 nos. Existing Solar/Net Meter Consumers) – Consumer Meter along with Communication Solution, HES hosted on cloud, procuring all the necessary licenses, setting up NOMC with suitable backend communication and infrastructure, integration of HES with Meter Data Management system of BEST and its O&M including data availability (Three Phase, Qty – 6053 Nos.).

5. Supply, installation, integration, testing and commissioning of Three phase LT-CT operated Smart Meter with inbuilt NIC module (with Net-Metering) – DT Meter along with Communication Solution, HES hosted on cloud, procuring all the necessary licenses, setting up NOMC with suitable backend communication and infrastructure, integration of HES with Meter Data Management system of BEST and its O&M including data availability (Three Phase, Qty – 3398 Nos.).

6. Supply, installation, integration, testing and commissioning of Three phase CT/PT operated Smart Meter with inbuilt NIC module – Feeder Meter (with suitable box & TTB arrangement for individual meters) along with Communication Solution, HES hosted on cloud, procuring all the necessary licenses, setting up NOMC with suitable backend communication and infrastructure, integration of HES with Meter Data Management system of BEST and its O&M including data availability (Three Phase, Qty – 1255 Nos.).

7. Supply, installation, integration, testing and commissioning of Three phase CT/PT operated Smart Meter with inbuilt NIC module (ABT Meters) (With Suitable box & TTB arrangement for individual meters) along with Communication Solution, HES hosted on cloud, procuring all the necessary licenses, setting up NOMC with suitable backend communication and infrastructure, integration of HES with Meter Data Management system of BEST and its O&M including data availability(Three Phase, Qty – 133 Nos.).

PART-B:

8. Supply and installation of Meter Boxes for DT check meters (Qty – 3398 Nos.).
9. Supply and installation of LTCTs of LT CT Meters (Set of 3 CTs) (Qty- 6053Nos.).
10. Supply and installation of LT CTs for DT metering (Ring Type) (Qty – 5610 Nos.).

PART-C-New requirement for software

11. Architecture, Security and Integration Specialists
12. Data Base Developer- Sr., Web/ Mobile Application Developer- Sr. andCore Application Developer- Sr.
13. Data Base Developer- Jr., Web/ Mobile Application Developer- Jr. and Core Application Developer- Jr.

A copy of detail scope of work is enclosed as Annexure-E.

3.4 Indicative list of meters to be replaced with Smart Meters

Sr. No.	Meter Type	Quantity(in Nos.)
1	Single Phase Meter-WC	901212
2	Three Phase Meter-WC	168419
3 #	Three Phase Meter-LTCT	6053
4	Three Phase Meter-LTCT DT Meter	3398
5	Three Phase Meter-HTMeters	206
6	Three Phase Meter –HT Feeder Meter	1255
7	Three Phase Meter-CT/PT Operated ABT Meter	133
	GRAND TOTAL	**10,80,676**

#- LTCT meters includes 97 Nos. existing Net Meters

3.5 Technical Feasibility of the Scheme:

3.5.1 **Statutory Requirement**:

As per Section 55(1) of Electricity Act 2003, it is mandatory to the Distribution Licensee to supply Electricity to the consumers after installation of Energy Meter for measurement of correct metering of the electricity supplied to the consumers. The Clause is reproduced as below:

> *"No Licensee shall supply electricity, after the expiry of two years from the appointed date, except through installation of a correct meter in accordance with the regulation to be made in this behalf by the authority."*

3.5.2 As per MYT Regulation 75.7 *"A Distribution Licensee may undertake Opex schemes for system automation, new technology and IT implementation, etc., and, such expenses may be allowed over and above normative O&M Expenses, subject to prudence check by the Commission: Provided that the Distribution Licensee shall submit detailed justification, cost benefit analysis of such schemes as against capex schemes, and savings in O&M expenses, if any"*

3.5.3 Justification of the Capital Investment Scheme (Need of Investment):

Technical Justification:

(i) Every new connection is required to be released after installing a meter as per the Electricity Act, 2003. BEST has proposed installation of smart meters in this DPR during FY 2023-24, FY 2024-25& FY 2025-26.

(ii) As per MERC (Electricity Supply Code and Standards of Performance of Distribution Licensees including Power Quality) Regulation. 2021 and Electricity (Rights of Consumers) Rules, 2020, all the new connections shall be released with the Smart Meter or Meter having at least the facility of remote reading: further to that all the existing meters whenever replaced shall be replaced only by Smart Meter or Meter having at least the facility of remote reading.

(iii) The characteristics ofmeters to be procured for new connections will conform to the CEA(InstallationandOperationofMeters)Regulations,2006.

(iv) As per MoP, Notification dated 17th August, 2021 "all the consumers (other than agricultural consumers) in areas with communication network, shall be supplied electricity with smart meters working in Prepayment Mode conforming to relevant IS, within the time" Accordingly, BEST have decided to replace all existing Energy Meters with Smart Meters working with Prepayment Mode under RDSS Project. ***A copy of SoP Regulation, 2021 &MoP2021 Notification is enclosed as Annexure- 'F'.***

(v) In line with the above technical requirements, BEST has prepared this Detailed Project Report (DPR) to replace static meters with smart meters for all consumers, along with setting up the backbone communications infrastructure and related IT systems. The communication backbone facilitates the acquisition of data from smart meters and brings it to central server. The IT/OT software installed in the server takes care of the huge data collected from the field. This data is then shared with other applications like billing, GIS, SCADA etc. and generated reports. Looking at the consumer base of more than 10 lakhs, BEST has planned to replace existing meters with smart meters.

4. Brief Description of the Pre-paid Smart Metering Project

4.1 Solution Architecture

Implementation of Smart metering technologies will enable two-way communication between the meter and the central system. Such an advanced metering infrastructure (AMI) differs from automatic meter reading (AMR) in that it enables two-way communication between the meter and the utility.

TheAMI/SmartMeteringsystemis explained below:

4.2 AdvancedMeteringInfrastructure(AMI):

This Advanced Metering Infrastructure (AMI) refers to technologies and communications systems necessary to acquire customer meter data and events on regular intervals (hourly or "n" hour basis) and allow for daily or more frequent retrieval of the data. Advanced metering can enhance a customer's ability to reduce demand in response to a higher price and the utility's ability to meter and monitor the customer electricity usage. Such metering system can also allow an electric utility to provide a variety of innovative services to benefit customers and to reduce the utility's costs of operations.AMI communicates between utility control centre and consumer

smart meters. BEST has initiated significant efforts to improve performance and energy efficiency in terms of AMI implementation initiative.

AMI or Smart Metering System establishes a mechanism for the residential, commercial and industrial customers, enabling energy audit to detect high loss, remote service disconnection /reconnection capability and consumer interactive interface.

It is a pivotal information source, which, when used effectively, can drive enterprise efficiencies and benefits throughout the distribution business, including:

Immediate Objectives	Long Term Objectives
• T&D Loss reduction o Theft detection	• Enabling value-added services
• Improved Collection o Pre-Paid and Post- Paid Options o Disconnection in case of non-payment	• Reduced capacity requirements &improved asset utilization • Increased service reliability
• Energy Audit o Online energy audit o Technical Loss analysis o Feeder Health report	• Enabling Demand Response (DR) & Smart Grid technologies
• Customer Satisfaction o Interactive Display o Auto power failure feed back o Consumption monitoring	• Improved load forecasting and modeling, system planning & engineering. • Improved transformer load management • Smart home control • DER Integration (a)

4.3 Overall System Architecture:

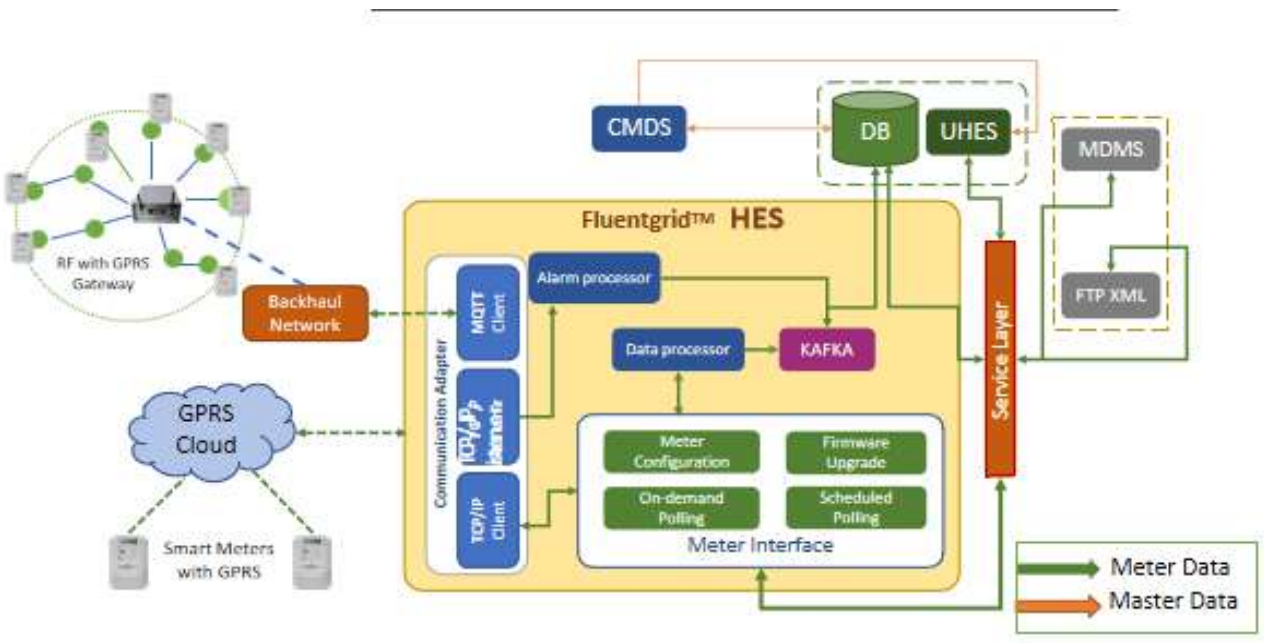


Fig-Solution Architecture (proposed and will be finalised during design phase)

4.4 BEST'sAMIProject:

- Supply, installation, integration, testing and commissioning of Smart pre-paid metering
- Communication Infrastructure to ensure the performance levels
- Head End System (HES) and deployment on Cloud
- AMI Systemintegration
- Network Operation cum Monitoring Centre with suitable backend communication infrastructure, hardware and power supply
- All the necessary software along with valid licenses relevant to the Project
- Consumer indexing on de-novo basis for contiguous electrical locations in the selected AMI area and regular updates during the contract period
- Comprehensive Consumer engagement plan in consultation with utility and implement its part of its activities as per the developed plan
- Operation, maintenance, and support services after the successful completion of the Operational Go-Live of the system

4.4.1 Proposed SmartMeteringSystemto be implemented by AMI-SP in BEST shall consist of followingkeycomponents:

I Smart Meters
II Communication Network
III Systems & Applications: Head End System (HES) and deployment on Cloud
IV AMI Integration (Para 4.2)

I. SMART METERS

Smart Meter is a composite unit consisting of metrology elements, two-way communication module(s) and control elements. It will have functions such as measurement, computation, event capturing, storing, communication and control. Smart Meter communication, it is envisaged that plug and play type communicationmodules shall be deployed in the smart meter, for any given communication technology. These modules shall be field-deployable, with corresponding communication interface modules being used in theDCU/Gateway or BTS of wide area network. The Network Interface Card (NIC) / Communication Module should be integrated with at least 3 (three) makes of meters in India to enable the respective meters to seamlessly integrate with proposed HES and/or MDM thus enabling interoperability of the system. At BEST, procurement of Smart Meters shall be as per the StandardIS16444, issued by BIS (Bureau of Indian Standards).

II. COMMUNICATION NETWORK

AMI-SP may use RF mesh network/ cellular network or a combination of both for collecting the date for smart meters. This Communication networkcomprises of a number of gateways. Network gateways shall be deployed across BESTs distribution area to provide RF coverage for end devices incorporating the communication nodes. This mesh network shall operate in

unlicensed frequency band (865-867MHz). Communication network shall also provide reliable medium for two-way communication between various nodes (Smart Meter, Gateway/Router/Access Point/DCU (wherever applicable)) & HES. RF based network should use unlicensed frequency band as permitted by WPC. Meter data shall be routed /collected by field devices like Gateway /Router/Access Point, Data Concentrator Units (DCUs) wherever applicable given the communication technology used and transported to HES through WAN back haul connectivity.

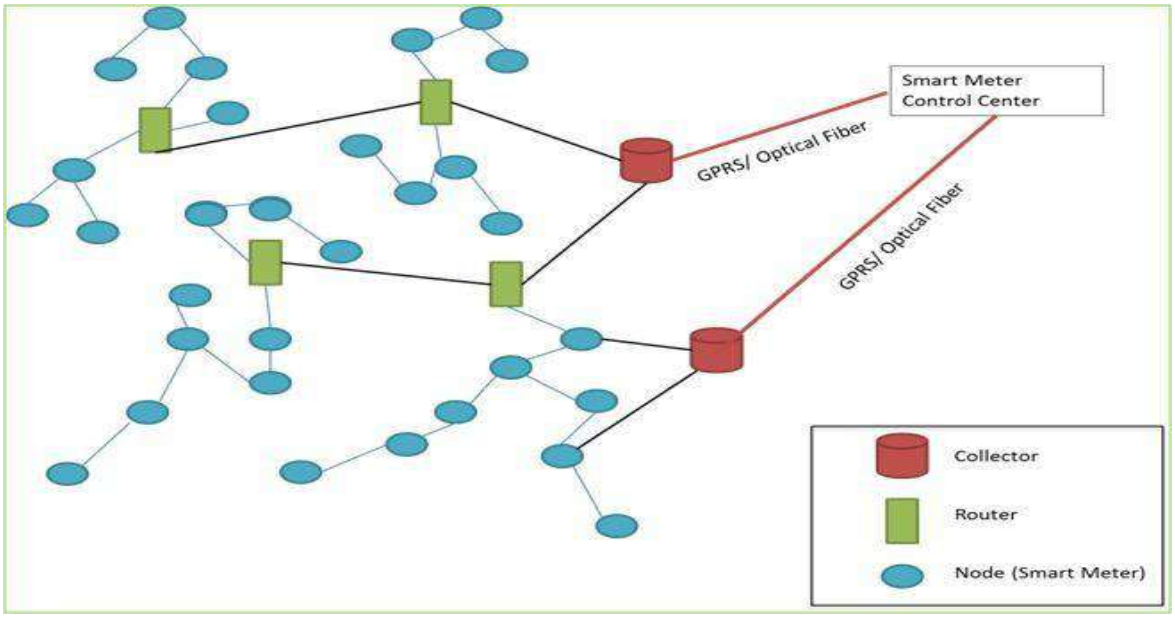


Fig. AMIMeshNetwork

The entire supplied communication infrastructure (Cellular based NIC or RF based devices (DCU /Router/access points wherever applicable) must have 4G with fallback to 2G connectivity. It should be upgradable to future communication technologies like 5G. AMI-SP shall confirm that the communication infra supplied should comply with as on date government, WPC, industry rules, standards, regulations and norms.

III. SystemsandApplications

a. HEAD ENDSYSTEM(HES) and DEPLOYMENT OF CLOUD

The main objective of HES is to acquire meter data automatically avoiding any human intervention and monitor parameters acquired from meters. HES shall exchange data with network terminals and field devices. It shall perform communication network management, field device management, device data management and processing of the data before exchanging to other systems (ERP, GIS, SCADA, and OMS etc).

HES should support various generations of cellular technologies and upcoming technologies like 5G and shall be responsible for autodiscovery of all Smart Meters once deployed in the field, the periodic collection of all meter data as well as the processing of all alarms and commands such as connect/disconnect for those meters.

HES should be able to do simultaneous communication with the entire supplied infrastructure (Cellularbased NIC or RF based devices (DCU/Router/access points

wherever applicable) on RF mesh or 4G with fall back to 2G connectivity. It should support to future communication technologies like 5G. Supplied HES along with NMS should comply with the, as on date government, WPC, industry rule, standards, regulations and norms.

DEPLOYMENT CLOUD: -CLOUDSERVICEPROVIDERS(CSP)

For implementation of AMI / Smart Metering project, a cloud-based applications shall be used. The cloud data centre shall have to comply with requirements of tier III category which applies to a concurrently maintainable site infrastructure with redundant capacity components and multiple independent distribution paths serving the critical environment. All IT equipment shallbedual powered.

DATA CENTRE UNIT (DACU)

The Data Concentrator Unit is a gateway for communication of data between the Smart Meters and the HES. The Data Concentrator Unit receives information from the Smart Meter on a scheduled /need basis and passes it on to HES.

The DCU provides the central link between Smart Meters and HES, enabling continuous/periodic meter read and control. DCU shall exchange data from Smart Meters on RF communication and with HES on WAN.

b. NetworkManagementSystem(NMS)

The Network Management System (NMS) function within the HES shall manage, monitor and control the smart meters, RF Nodes, gateways and meshed communication network and its associated devices.This module shall provide real time information about the IP network and its associated NAN/WAN modules in the field device/s.

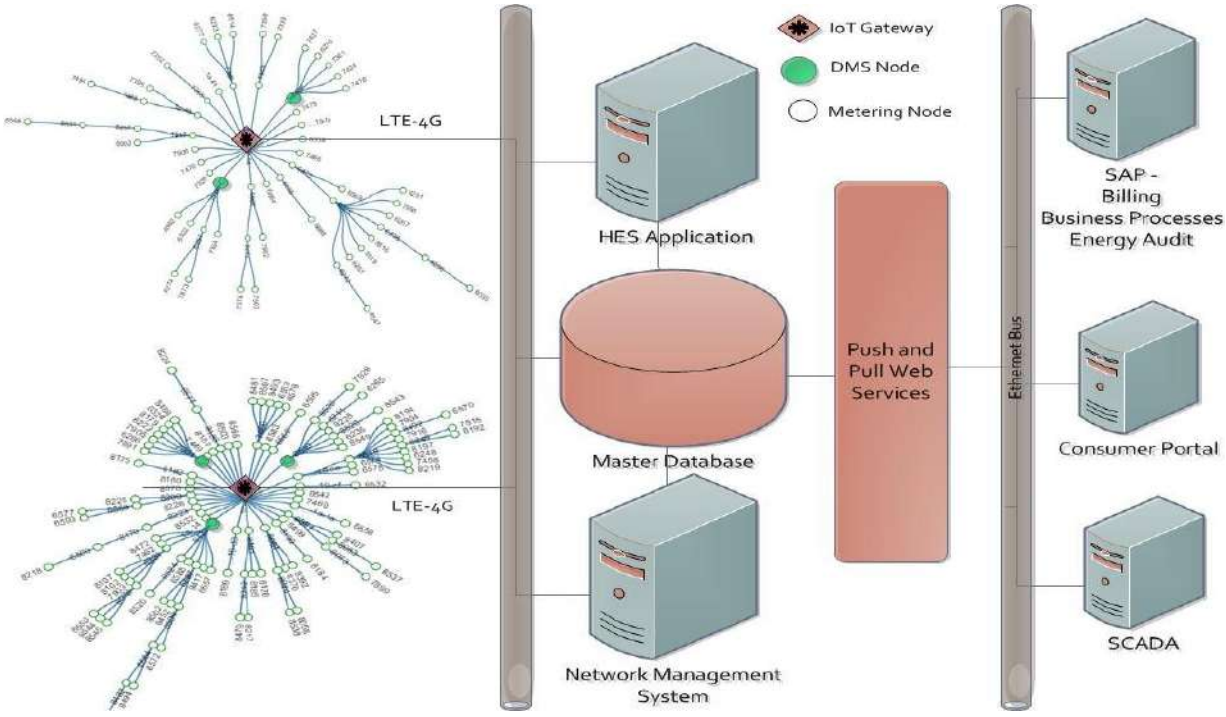


Fig. Thetypicalarchitecture of AMI system is shown above (ProposedArchitecture)

Master database should be HES database. The push and pull, SAP billing business processes Energy audit, SCADA, Consumer portal are shown only for information and are not covered under AMISP DPR

c. NETWORK COMMUNICATION

The network communications software shall use a standard network protocol such as TCP/IP, UDP etc. and shall support IPv6. The software shall link dis-similar hardware nodes such as local and remote work stations and peripheral devices into a common data communication network allowing communications among these devices. The network communication software shall include network security, security management, patch management and network services of the AMI system. Network communication software shall have scalability feature as envisaged.

d. OPERATING SYSTEM

The operating system of all the equipment of AMI application system including network equipment shall be latest version released upto six months prior to FAT. The operating system shall be hardened to provide robust security. The operating system and data file shall be placed in different disk partitions.

In order to facilitate cyber security requirement including patch management, common operating system is preferable to be used by all server nodes within the AMI application including MDM/HES servers. This is also to minimize the maintenance. All licenses for Operating System and other application software shall be supplied by the AMI-SP and shall bevalid throughout the contract period.

4.4.2 SYSTEM FEATUIRES

The following outcomes are expected once the smart metering system is implemented with the necessary software and integration:

- End to end solution for metering, load management, energy audit & MIS report generation
- Ease of maintenance of NW with real-time information
- Scalability to include LT consumers
  - Economical AMR solution (two-way communication)
  - Remote connect/ disconnect feature
  - Split metering to restrict tampering
  - On-line tamper detection and monitoring
- Customer Interface
  - Real time monitoring
  - Online profile
  - Payment and history maintenance
- Ease of monitoring & analysis as critical reports are formulated automatically

- No consumption in past 24 hours
- Energy imbalance for a group of meter
- Disconnected consumers
- Events/ Tamper report

- Automatic Meter Reading
  - Reliable Meter data
  - Prompt billing every month at fixed date
  - No intrusion at consumers premises
  - Can service customer's request for billing data as-on-time
- Remote Connect/Disconnect
  - Can disconnect/reconnect customer have based on defaults
  - Can temporarily disconnect/reconnect based on requests
  - Can use auto-disconnect if load limit exceeds
  - Useful for regulating peak demand usage
  - Facility to switch to Pre-payment
- Online Event/Tamper Detection
  - Detects and reports any meter box opening
  - Detects and reports any bypass of meter
  - Reports zero consumption users daily
- Real Time Energy Audit
  - Check-meters provide real-time periodic consumption report
  - Gives a daily input regarding loss per transformer
  - Can corroborate daily all DT consumption report with energy input in a rea
- Intelligent Load Management
  - Load limiting per connection
  - Monthly consumption limit per connection
  - Intelligent cut-off on occurrence of High voltage than limit
  - Load switch option on to control Geysers / AC & such heavy loads etc
  - Transformer level load can be monitored to avoid over loading.

5. Costing of the project

5.1 The smart metering Project components:

(i) Smart Meters-Single Phase, Three Phase, LVCTO /DT meters, HT& ABT Meters,
(ii) Meter boxes and LT Ring Type CTs for DT metering, LT CT Banks
(iii) AMI Components (iv) O&M Charges (v) Interest on debt capital and (vi) RoE

5.2 Item wise costing

Item wise pert unit cost, Qty and total cost is given in the following table:

Sr. No.	Particulars	Unit Cost Gross (in ₹)	Qty (in Nos.)	Cost(in ₹)
1	Single Phase Smart meters with installation, communication & integration	11011.83	901212	9923993337.96
2	Poly Phase Smart meters with installation, communication & integration	16441.31	168419	2769028988.89
3	Poly Phase HT current Smart Meter Consumer Meter	40499.49	206	8342894.94
4	Three phase LT-CT operated Smart Meter (inclusive of 97 nos. existing Solar/Net Consumer Meters)	20249.63	6053	122571010.4
5	LVCTO Smart Meters installation, communication & integration	20249.63	3398	68808242.74
6	CTPTO Smart Meters installation, communication & integration	40499.49	1255	50826859.95
7	CTPTO Smart DT Meters installation, communication & integration	104141.49	133	13850818.17
	TOTAL PART-A	-		**12957422153.04**
8	Supply and installation of Meter Boxes for DT check meters	2012.37	3398	6838033.26
9	Supply and installation of LT Compact CTs of LT CT Meters (3 CTs)	2515.37	6053	15225534.61
10	Supply and installation of LT CTs for DT metering (Ring Type)	2515.37	5610	14111225.7
	TOTAL PART-B	-		**36174793.57**
11	Architecture Specialists	251552.40	12	3018628.80
12	Security Specialists	226394.46	12	2716733.52
13	Integration Specialists	226394.46	12	2716733.52
14	Data Base Developer- Sr.	176084.32	24	4226023.68
15	Web/ Mobile Application Developer- Sr.	176084.32	24	4226023.68
16	Core Application Developer- Sr.	201239.56	24	4829749.44
17	Data Base Developer- Jr.	150929.08	36	5433446.88
18	Web/ Mobile Application Developer- Jr.	150929.0836	36	5433447.01
19	Core Application Developer- Jr.	150929.08	36	5433446.88
	TOTAL-C	-		**38034233.41**
	GRAND TOTAL (A+B+C)			**13031631180.02**
	GRAND TOTAL			**1303.16 Crore**

Note: 18% GST is included in the unit rate.

5.3 Phasing of the Project

Sr. No.	Item Description	Gross Rate Per Unit	FY 2023-24		FY 2024-25		FY 2025-26		TOTAL	
1	2	3	4	5	6	7	8	9	12	13
PART-A	**Supply, Installation, Integration, testing**		**QTY**	**Amt**	**QTY**	**Amt.**	**Qty**	**Amt.**	**Qty**	**Amt.**
	and commissioning of-		**Nos.**	**In Cr**	**Nos.**	**In Cr**	**Nos.**	**In Cr**	**Nos.**	**In Cr**
1	Single Phase whole current	11011.83	140311	154.51	598751	659.33	162150	178.56	901212	992.40
2	Three Phase whole current	16441.31	168419	276.90	0	0		0	168419	276.90
3	Three Phase HT current	40499.49	206	0.83	0	0		0	206	0.83
4	Three phase LT-CT operated	20249.63	6053	12.26	0	0		0	6053	12.26
5	Three phase LT-CT operated	20249.63	3398	6.88	0	0		0	3398	6.88
6	Three phase CT/PT operated	40499.49	1255	5.08	0	0		0	1255	5.080
7	Three phase CT/PT operated	104141.49	133	1.39	0	0		0	133	1.390
PART-B-Installation of DT Meters & Accessories										
8	Meter Boxes for DT meters	2012.37	3398	0.68	0	0		0	3398	0.680
9	LT Compact CTs of LT CT Meters (Set of 3 CTs)	2515.37	6053	1.53	0	0		0	6053	1.530
10	LT CTs for DT metering (Ring Type)	2515.37	5610	1.41	0	0		0	5610	1.410
PART-C_ Specialist Man Power										
11	Architecture Specialists	251552.40	12	0.30	0	0	0	0	12	0.300
12	Security Specialists	226394.46	12	0.27	0	0	0	0	12	0.270
13	Integration Specialists	226394.46	12	0.27	0	0	0	0	12	0.270
14	Data Base Developer- Sr.	176084.32	12	0.21	12	0.21		0	24	0.420
15	Web/ Mobile Application Developer- Sr.	176084.32	12	0.21	12	0.21		0	24	0.420
16	Core Application Developer- Sr.	201239.56	12	0.245	12	0.245		0	24	0.490
17	Data Base Developer- Jr.	150929.08	12	0.185	12	0.18	12	0.18	36	0.547
18	Web/ Mobile Application Developer- Jr.	150929.08	12	0.180	12	0.18	12	0.18	36	0.543
19	Core Application Developer- Jr.	150929.08	12	0.180	12	0.18	12	0.18	36	0.543
			319775	**463.52**	**598751**	**660.54**	**162150**	**179.10**	**1080676**	**1303.16**
A copy of Cost Sheet is enclosed as Annexure-G										

5.4 Funding Mechanism:

A per Section 460 II of the Mumbai Municipal Act 1888, BEST has to utilise internal funds for executing all its Capex plans. However, BEST has decided to execute the project of "Implementation of Smart Metering& System Metering" under RDSS on Design, Built, Finance, Own, Operate & Transfer (DBFOOT) basis. The detail funding arrangement, how it works is explained in the Business Model.

5.5 TOTEX (CAPEX + OPEX) Business Model

5.5.1 (i) As per Regulation 75.7 *"A Distribution Licensee may undertake Opex schemes for system automation, new technology and IT implementation, etc., and, such expenses may be allowed over and above normative O&M Expenses, subject to prudence check by the Commission: Provided that the Distribution Licensee shall submit detailed justification, cost benefit analysis of such schemes as against capex schemes, and savings in O&M expenses, if any"*

(ii) In the "Office Memorandum" of GoI dated 20th July, 2021, it is clearly mention that*"in order to attain the key objective of loss reduction in electricity distribution, the scheme envisages providing funding through Gross Budgetary support for the installation of pre-paid Smart Meters under TOTEX (CAPEX plus OPEX) pattern".*

(iii) Accordingly, BEST has decided to execute the project of "Implementation of Smart Metering" under RDSS on Design, Built, Finance, Own, Operate & Transfer (DBFOOT) basis. The scheme envisages providing funding through Gross Budgetary support for the installation of pre-paid Smart Meters under TOTEX (CAPEX plus OPEX) pattern". The project cost involves two major components: (i) Capital investment which involves cost of smart meters, meter boxes, Hardware & software, consumer indexing, training, installation, integration & commissioning of AMI solution etc. (ii) OPEX components which involves the cost for maintaining the system.

5.5.2 To execute the scheme under Revamped Distribution Sector Scheme (RDSS), BEST would have to comply (i) pre-qualification criteria set by the monitoring committee & (ii) result evaluation matrix. For availing the benefits under RDSS. BEST had submitted the Action plan &DPR for prepaid Smart Metring along with Loss Reduction works to the GoI costing Rs,708.54 Crs. however, the competent authority (Monitoring Committee) hasapproved the Action Plan & DPRs including prepaid Smart Meteringcosting Rs.659.17 Crs (against Rs.708.54 Crs), total GBS (15% on approved cost) Rs.98.88 Crs, incentive of Rs.47.82 Crs totalling Rs.146.69 Crs in the 13th meeting held on 28.10.2022 (kindly refer Annexure-B, Page No.10).

5.5.2.1 For achieving least cost of the material, BEST has followed up the procedure mentioned in CAPEX Regulation, 2022, APPENDIX-3(Guidelines for procurement of material). For appointing AMI-SP to "Implement Prepaid Smart Metering & System Metering" on BDFOOT basis, BEST advertised the tender in the local as well as all over Indiamedia.Initially, Notice of Inviting Tender was advertised for "appointment of

AMISP" under RDSS, but due to the poor response from bidders, multiple extensions were given to them. Finally, tender was opened for appointment of AMI-SP through open biddingprocesson Maha e-tender Portal on 21st July, 2022. After opening of the tender, it is observed that six bidders have taken part in the tender.However, thePricebid of only three eligible Tenderers has been opened. Tender evaluation is done on the basis of Reverse Auction process between the Eligible and Qualified Tenderers. Accordingly, the tender is awarded to M/s. ATL for Rs.1303.16 Crore.

5.5.3 In the OPEX base cost methodology, AMI-SP (ATL) has agreed to incur CAPEX during the build-up phase of 30 months and OPEX during Build-up and O&M phase i.e., total 120 months (10 years) from the date of execution of the contract. The payment due to the AMISP from AMI-IA shall be paid on monthly basis. Monthly cost is calculated as the total project cost spread over the actual recovery period, post integration of the meter. Accordingly, in this process BEST will pay to ATL on monthly basis for maximum 90 months. The payment to the AMISP shall commence only one after Operational Go-Live.

5.5.4 Considering the approved cost of Rs.659.17 Crs for replacement of 10,80,667 Nos. of meters, Competent Authority has approved GBSof Rs. 98.88 Crs, incentive of Rs.47.82 Crs, totalling Rs.146.69 Crs (as per RDSS Scheme GBS shall be 15% of the approved cost of metering including operational cost. Provided that it is not more than Rs.900 per meter for consumer metering). However, the cost arrived in the tender(i.e., 1303.16 Crs.) is on higher side than approved cost (Rs.659.17 Crs.).Therefore, as per RDSS guide lines BEST is eligible for getting GBS of Rs.98.88 Crs. for metering Scheme. While estimating the benefits, Grant amount of Rs.98.88 Crs. is deducted from the total payable amount of Rs.1303.16 Crs. Therefore, the benefits will be evaluated on balance payable amount of Rs. 1204.28 Crs. (Rs.1303.16 minus 98.88, = Rs.1204.28) is considered.***Please kindly note that incentive amount of Rs.47.82 Crs is not considered while calculating tariff impact and AMI-SP payments etc and same amount will be considered in ARR while filing the Petition for Truing up. BEST has proposed to install 10,80,676 Nos. of meters against approved10,80,667 Nos. of meters.***

5.5.5 While quoting in the tender, Adani Transmission Ltd (ATL) has not given bi-furcation between the costs of Capital items and O&M. ATL has quoted item wise for capital as well as O&M cost lum-sum. Further to this, ATL will transfer the assets at zero cost after completion of life of the meter as agreed by ATL. Thereafter, BEST will bear replacement cost of defective meters on actual basis and O&M cost of AMI system. **Payment to AMISP (M/s. ATL)by BEST shall be considered as Operational Expenditure on BEST's account.BEST has considered AMISP payment as operation expenditure while filing ARR and MTR petition.**The Assets will be in the books of Accounts of the ATL till the transfer of assets at the end of project at zero value.

5.5.6 Detail phasing of meters to be installed along with cost is to be incurred by AMISP during the build-up phase and Grant is given in the following table.

Sr. No.	Particulars	FY2023-24	FY2024-25	FY2025-26	Total
1	A	B	C	D	E=B+C+D
2	Approved cost	195.05	365.21	98.91	659.17
3	Meters to be Installed	3,19775	5,98,751	1,62,150	10,80,676
4	Total Cost (in Crs.)	463.52	660.54	179.10	1303.16
5	Grant	29.26	54.78	14.84	98.88
6	Balance Amount (4-5)	434.26	605.76	164.26	1204.28

Month wise implementation plan:

Month	FY	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15			**TOTAL**	FY-25-26		**TOTAL**
Target	**23-24**	1000	17429	18430	18430	44081	44081	44081	44081	44081	44081			**3.19.775**	M28	54049	**25-26**
Month		M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27		M29	54049	
Target	**24-25**	44081	44081	44081	44081	44084	54059	54059	54059	54059	54059	54059	54059	**5,98,751**	M30	54052	**1,62,150**

Detail calculation of phasing

	FY 23-24	**FY 24-25**	**FY 25-26**	**FY 26-27**	**FY 27-28**	**FY 28-29**	**FY 29-30**	**FY 30-31**	**FY 31-32**	**TOTAL**
Build up phase Expenditure(in Crs.)	**463.52**	**660.54**	**179.10**	-	-	-	-	-	-	**1303.16**
Grant from GoI (PFC)	**29.26**	**54.78**	**14.84**	-						**98.88**
Phasing -AMISP Payment (without Grant)	47.51	136.48	160.57	160.57	160.57	160.57	160.57	113.06	104.38	**1204.28**
Phasing -AMISP Payment (with Grant)	76.77	191.26	175.41	160.57	160.57	160.57	160.57	113.06	104.38	**1303.16**

FINANCIAL YEAR	CAPEX	Grant	Month	CUMALATIVE QTY	RATIO	QTY		Phasing for AMISP disbursement	With Grant
23-24	160.57	29.26	12	319775	0.296	319775		47.51	76.77
24-25	160.57	54.78	12	918526	0.850	598751		136.48	191.26
25-26	160.57	14.84	12	1082676	1.00	162150		160.57	175.41
26-27	**160.57**		12		1.000			**160.57**	160.57
27-28	**160.57**		12		1.000			**160.57**	160.57
28-29	**160.57**		12		1.000			**160.57**	160.57
29-30	**160.57**		12		1.000			**160.57**	160.57
30-31	**80.29**		6		1.000			**113.06**	113.06
31-32	**0.00**				1.000			104.38	104.38
32-33	0.00								
TOTAL	**1204.28**	**98-88**	**90**					**1204.28**	1303.16
	1204.28	**1303.16**		**1080676**		1080676			

5.5.7 Impact on Tariff – 100% CAPEX mode (with Grant)

Scheme Name	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	FY 29-30	FY 30-31	FY 31-32
Phasing of approved DPR	47.51	136.48	160.57	160.57	160.57	160.57	160.57	113.06	104.38
IDC	-	-	-	-	-	-	-	-	-
Total capitalisation (incl. IDC)	47.51	136.48	160.57	160.57	160.57	160.57	160.57	113.06	104.38
GFA statement									
Opening balance	-	47.51	183.99	344.56	505.13	665.70	826.27	986.84	1099.90
Addition	47.51	136.48	160.57	160.57	160.57	160.57	160.57	113.06	104.38
Closing balance	47.51	183.99	344.56	505.13	665.70	826.27	986.84	1099.90	1204.28
Equity statement									
Opening balance	-	14.25	55.20	103.37	151.54	199.71	247.88	296.05	329.97
Addition	14.25	40.94	48.17	48.17	48.17	48.17	48.17	33.92	31.31
Closing balance	14.25	55.20	103.37	151.54	199.71	247.88	296.05	329.97	361.28
Revenue expenses									
Interest on debt	1.68	8.06	17.92	27.81	26.34	25.32	24.30	21.60	20.28
Return on Equity (@17.50%)	1.10	6.08	13.87	22.30	30.73	39.16	47.59	54.78	60.48
Depreciation (Avg. rate of 9%)	2.14	10.42	23.78	38.24	52.69	67.14	81.59	93.90	103.69
Running Expenses (@2.97% of av GFA)	0.71	3.44	7.85	12.62	17.39	22.16	26.92	30.99	34.22
Income Tax (@ 0% on grossed up RoE)	-	-	-	-	-	-	-	-	-
Total (Rs. Cr)	**5.63**	**27.99**	**63.43**	**100.97**	**127.15**	**153.78**	**180.41**	**201.27**	**218.67**
Projected Sales (MU)	4,756.54	4,780.33	4,804.23	4,828.25	4,852.39	4876.65	4901.04	4925.54	4950.17
Imp. per unit of sales (Rs./unit)	0.012	0.059	0.132	0.209	0.262	0.315	0.368	0.409	0.442

The above table indicates the likely impact on tariff over a period of nine years (FY2023-24 up to FY 2031-32) when grant from GoI is considered. It can be observed that the likely impact on tariff is Rs.0.012 per unit in 2023-24 moving to Rs 0.442 per unit in 2031-32.

If the scheme is executed under OPEX, tariff impact with Grant for entire contract period is as shown below.

Total metering Scheme is considered under OPEX Plan, impact on Tariff is as shown below:											
DPR Description / DPR No.	**OPEX without Grant (Rs. Cr)**	**OPEX with Grant (Rs. Cr)**	**Grant (Rs. Crs)**	**FY 23-24**	**FY 24-25**	**FY 25-26**	**FY 26-27**	**FY 27-28**	**FY 28-29**	**FY 29-30**	**FY 30-31**	**FY 31-32**
Smart Metering / AMI (Rs. Crs)	1303.16	1204.28	98.88	47.51	136.48	160.57	160.57	160.57	160.57	160.57	113.06	104.38
Sales Units (in Mus)				4756.54	4780.33	4804.23	4828.25	4852.39	4876.65	4901.04	4925.54	4950.17
Impact on Tariff due to OPEX Scheme (in Rs.)				**0.100**	**0.286**	**0.334**	**0.333**	**0.331**	**0.329**	**0.328**	**0.23**	**0.211**

6. Cost Benefit Analysis (CBA)

The benefits of capital expenditure proposed to be incurred under this Scheme may be divided into two parts; namely- Tangible benefits which can be expressed in monetary terms and Intangible benefits are more qualitative in nature.

The expense heads under this scheme contain both developmental costs i.e., those cost incurred on pre-paid smart metering along with necessary Hardware & Software and non-developmental costs i.e., those cost incurred for maintenance of the system. Both expenses do not directly contribute to increase in the sale units. However, these expenses too are necessary for giving better service to the consumers through accurate energy measurement and billing to the consumers.

The deployment of smart metering with related infrastructure, through its ability of remote communication and data analytics, is expected tolead to many benefits for the end consumers which are listed in Para 6.1.1 under Customer Benefits. The reduction in O&M expenditure will be a step in the direction of meeting thenormative O&M expenditure as allowed from time to time in the respective tariff Orders /Regulations.

6.1 Tangible benefits due to smart metering /AMI Scheme:

The project aims to harness the capability of AMI/Smart Metering System for the benefit of BEST customers. Major benefits expected from this project are-

6.1.1 Customer Benefits

I. Improved billing accuracy

The smart meters are capable of communicating. This facility enables the system toget billing data on predefined intervals over the air. Hence the human interference iscompletely eliminated as far as meter data acquisition is concerned. Automatic data acquisition also eliminates the need to physically visit the premises to inspect the connection.

II Improved service restoration

At present consumers informs about off supply to control room of BEST. BEST deploys the crews depends on single consumer offsupply or area off supply in case of multiple complaints. Once the complete AMI system is in place, it is easier to pinpoint the location wherethe off supply / fault has occurred. Pro-active action canbe taken in cases where meter is not communicating, in such cases utility can take decision and send the maintenance staff to that particular location.

III Higher reliability of the system

The alerts triggered from field conditions such astemperature, high threshold values etc. enables the utility to take proactive actions. This reduces the probability of fault or breakdown occurrence.

IV Availability of information and online services

AMI enables two-way communication system in which lots of data and informationcan be captured from field devices like smart meters, distribution automation points,street light points, etc. The data retrieval frequency can also be set which can varyfrom as low as some minutes to daily. The consumer can view the consumptioncharges corresponding to his consumption,

through consumer portal. BEST hasalready developed the consumer portal and is in the process of integrating it with the mobile App "MI BEST" and the website www.bestundertaking.com. Consumers can view their consumption charges at any time by logging on to thewebsite or by downloading the mobile App. Hence consumers can use and analysetheir consumption pattern and find ways to optimize the same as to reduce their electricity charges.

6.1.2 Utility Benefits

I Elimination of manual meter reading

Timely meter reading and billing is always critical for any utility across the world. Lot of intermediate processes are involved in metering like scheduling the meter reads, maintaining the reading cycle and sequence, uploading the batch files in the CMRI, physical movement, meter downloading, uploading the data into the PC and then to servers, running the logics to identify the billing data abnormalities, bill preparation etc. Many of these intermediate steps will be eliminated by automatic meter data downloading.

II Improved billing and billing accuracy

Less human intervention means reduced possibility of errors. Automatic data retrieval will ensure more accurate bills. The system also enables to get on demandmeter reading. Issues like in accessibility of meter reads like consumer not available, house lock, delayed billing cycle etc. can also be addressed. Thus, the revenue leakage and non-billing issues are arrested.

III Outage management and real time data

As mentioned in the reliability section above, it is easier to identify the faults and locate the mona GIS map. Outages can be located quickly and concerned maintenance staff can reach the location in lesser time. This also helps the utility to optimally manage the distribution network. Predefined threshold values and real time data sensor data enables to take quick and proactive decisions.

IV Work and asset management

Online availability of data enables to monitor the network real-time. Asset conditions and health can be monitored on line and records are easy to maintain and retrieve. Any work created or generated can be transferred to concerned staff on the Tab or smart phone. This reduces time in registering a request and its allocation. Once the job is complete, the feedback and status update can easily be entered from the field itself.

V. Smart meters will enable BEST to remotely connect or disconnect consumers, thereby reducing the field visits required by connection or disconnection personnel. Smart Meters Deployment Strategy.

VI. In the existing billing system, about 3% meters are not read due to various reasons like meters faulty, key not available etc. The revenue can be increased by installing smart meters which can be read remotely.

VII. Billing data is to be made available by AMI-SP during the entire project period. Hence, the cost to be incurred on the meter readers will be eliminated. It will help to reduce the administrative cost.

APPENDIX-1:

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1.1.	**Name of Applicant**: BEST (Brihanmumbai Electric Supply & Transport undertaking)
1.2.	**Name of the Capital Investment Work**: Implementation of Prepaid Smart Metering Project under RDSS.
1.3.	**Nature of Opex Scheme (New):** New DPR Scheme on "Implementation of Prepaid Smart Metering" is submitted as per MERC (Approval of Capital Investment Schemes) Regulations, 2022.
1.4.	**Details of the Location**: Mumbai circle (BEST's Licensee Area)
1.6.	**Date of Approval by Competent Authority designated by the Board of Directors of the Company**: *A copy of management approval for RDSS Scheme including "Implementation of Prepaid Smart Metering" is enclosed as* ***Annexure-H.***
1.7.	**Category of DPR**: This DPR Scheme falls under Regulation 3.9 & 3.11of MERC (Approval of Capital Investment Schemes)Regulations,2022. Category are as follows: 3.9 (a) Infrastructure required for releasing new supply connections. (i) Improvement in quality of supply & reliability of distribution system. (l) Installation or Upgradation of communication and/or control equipments. (n) All metering Schemes (o) Improvement in consumer services. 3.11Implementation of Smart Meters.
1.8.	**Objective of the Capital Investment:** To adopt technological advancements in energy metering to achieve Reduction in loss, for accurate measurement of energy, to provide improved service to consumers, Improved billing and billing accuracy, Higher reliability of the system, availability of information and online services, Outage management and real time data, Work and asset management,to release new supply and to replace existing meters. The project aims to harness the capability of AMI / Smart Metering system for the benefit of BEST customers. Major benefits expected from this project are improved service restoration.
1.9.	**Need of Analysis**: As per CEA Regulations dated 17.03.2006, on Metering systems emphasising on the need to use Smart Meters. ***A Copy of CEA Regulations, dated 17.03.2006 is enclosed as Annexure-'I'.*** As per MERC (Electricity Supply Code and Standards of Performance of Distribution Licensees including Power Quality) Regulations, 2021 (Regulation No. 15), *"all the new connections shall be released with the Smart Meter having at least the facility of remote reading and all the existing meters whenever replaced shall be replaced only by Smart Meters having at least the facility of remote reading".* As per Ministry of Power, Notification dated 17th August, 2021 *"all the consumers (other than agricultural consumers) in areas with communication network, shall be supplied electricity with smart meters working in Pre-payment Mode conforming to relevant IS, within the time".* ***A Copy of MERC (ESC &SoP including Power Quality) Regulations, 2021 and MoP Notification, 2021 is enclosed as Annexure-'F'.***
1.10	**List of Identical schemes previously approved by the Commission and their progress report (5years data):**First timeBEST has planned to replace all existing meters with Smart Meters. Hence, no previous records of Smart meters Implementation Schemes.
1.11.	**State Map showing Location of the Scheme (for Transmission)**- Not Applicable
1.12.	**Brief scope and specification of work**: 1. Single Phase Meter-WC- Consumer Meter (Qty. 9,01,212 Nos.) 2. Three Phase Meter-WC- Consumer Meter (Qty. 1,68,419 Nos.) 3. Three Phase Meter-LTCT- Consumer Meter (Qty. 6,053 Nos.) 4. Three Phase Meter-LTCT-DT Meter(Qty. 3398 Nos.)

5. Three Phase Meter- HT ConsumerMeters(Qty. 206 Nos.)
6. Three Phase Meter –HT Feeder Meter (Qty. 1255 Nos.)
7. Three Phase Meter-CT/PT Operated -ABT Meter (Qty. 133 Nos.)
A copy of relevant Specification of above items is enclosed as Annexure-J

1.13. **Any Reference of Study Report / recommendation of OEM/Expert:** N.A for this DPR.

1.14. **Estimated Cost**:
Rs.1303.16 Crs. (FY 2023-24–463.52 Crs., FY 2024-25–660.54 Crsand FY 2025-26- 179.10 Crs)
IDC is not included in the costing.
A copy of Cost Sheet enclosed as Annexure-G.

1.15. **Time Frame of the expenditure:**
Project completion Period 30 months.

Financial Year	Capex Expenditure (in Rs.)	Capitalisation (in Rs.)
2023-24	463,52,10,928.90	463,52,10,928.90
2024-25	660,54,18,569.61	660,54,18,569.61
2025-26	179,10,01,681.38	179,10,01,681.38
TOTAL	**1303,16,31,179.89**	**1303,16,31,179.89**

1.16. **Funding arrangement: For FY2023-24toFY 2031-32 (for 9 years from the date of contract).**

Sources of Funds	**Amount (in Crs.)**	**Share (%)**
Debt	1204.28	92.41
Equity	-	-
Grant	98.88	7.59
Consumer Contribution/Deposit Works	-	-
Total	**1303.16**	**100**

Please kindly note that the project of Smart Metering is to be executed under RDSS on DBFOOT basis. The payment due to the AMISP from AMI-IA (BEST)shall be paid on monthly basis. Monthly cost is calculated as the total project spread over the actual recovery period, post integration of the meter. Accordingly, BEST will pay AMI-SP on monthly basis for period of maximum 90 months. The payment to the AMISP commence from only one after Operational Go-Live. The Grant is 7.59% of tender cost and 15% of PFC approved cost of Rs.659.17 Crs.

1.17 **Benefits/Impact**:
The decision of new connection and replacement of existing meters with Smart Meters is taken with the following objectives:

- By connecting new meters to release new load will increase revenue of BEST.
- Improved billing Accuracy.
- Improved Service restoration.
- Higher reliability of the system.
- Availability of information and online services.
- Elimination of manual meter reading.
- Improved Billing and Billing Accuracy.
- Outage Management and real time data.
- Work and Asset Management.
- Remotely Connect and Dis-connect the meters

For comparative purpose, impact on tariff by considering 100% CAPEX Scheme and 100% OPEX Scheme is given below:

F Y	23-24	24-25	25-26	26-27	27-28	28-29	29-31	30-31	31-32
#	0.012	0.059	0.132	0.209	0.262	0.315	0.368	0.409	0.442
&	0.100	0.286	0.334	0.333	0.331	0.329	0.328	0.23	0.211

#- 100% CAPEX Scheme -Impact on Tariff Rs. Per Unit $-100% OPEX Scheme -Impact on Tariff Rs. Per Unit

1.18.	**Overall Cost-benefit Analysis**: **For CAPEX Scheme** FY2023-24, tariff impact will be 0.012 against Opex Cost of ₹47.51 Crs. FY2024-25, tariff impact will be 0.059 against Opex Cost of ₹136.48 Crs. FY2025-26, tariff impact will be 0.132 against Opex Cost of ₹160.57 Crs. FY2026-27, tariff impact will be 0.209 against Opex Cost of ₹160.57 Crs. FY2027-28, tariff impact will be 0.262 against Opex Cost of ₹160.57 Crs. FY2028-29, tariff impact will be 0.315 against Opex Cost of ₹160.57 Crs. FY2029-30, tariff impact will be 0.368 against Opex Cost of ₹160.57 Crs. FY2030-31, tariff impact will be 0.409 against Opex Cost of ₹113.06 Crs. FY2031-32, tariff impact will be 0.442 against Opex Cost of ₹104.38 Crs. . **ForOPEX Scheme** FY2023-24, tariff impact will be 0.100 against Opex Cost of ₹47.51 Crs. FY2024-25, tariff impact will be 0.286 against Opex Cost of ₹136.48 Crs. FY2025-26, tariff impact will be 0.334 against Opex Cost of ₹160.57 Crs. FY2026-27, tariff impact will be 0.333 against Opex Cost of ₹160.57 Crs. FY2027-28, tariff impact will be 0.331 against Opex Cost of ₹160.57 Crs. FY2028-29, tariff impact will be 0.329 against Opex Cost of ₹160.57 Crs. FY2029-30, tariff impact will be 0.328 against Opex Cost of ₹160.57 Crs. FY2030-31, tariff impact will be 0.230 against Opex Cost of ₹113.06 Crs. FY2031-32, tariff impact will be 0.211 against Opex Cost of ₹104.38 Crs. Comparison of capital cost & corresponding tariff impact with above benefits, a copy of Cost Benefit Analysis is enclosed as ***Annexure-K***.

2. PART-II:

2.1	**Need of the investment**: The Government of India's initiatives like 'Make in India' and 'Smart Cities' need the efficient, reliable and continuous power supply. India's power sector in the present day is facing a lot of problems like AT & C losses, inefficient distribution and transmission system because of age old infrastructure and power theft. The advanced energy management and increased use of renewable energy resources are the foremost areas to concentrate by governments for the development of country. As per CEA Regulations dated 17.03.2006, on Metering systems emphasising on the need to use Smart meters. ***A Copy of CEA Regulations, dated 17.03.2006 is enclosed as Annexure-'H'.*** ***Vide*** MoP notification dated 17th August, 2021, GoI prioritised for all DISCOMS including BEST that "all the consumers (other than agricultural consumers) in areas with communication network, shall be supplied electricity with smart meters working in Prepayment Mode***. A Copy of MERC (Electric Supply Code & SoP including Power Quality) Regulations, 2021 and MoP Notification, 2021 is enclosed as Annexure-'F'.*** **Demand side requirement**: There is addition of new consumers due to development of Coastal Road, Mill and SRA Schemes, EV Charging, Sewree bridge, Redevelopment of Plots etc. In order to meet the requirement of new Consumers for releasing new Load, Smart Meters are required installed. • Reduction in loss, • for accurate measurement of energy, • to provide improved service to the consumers, • to release new supply, • to replace conventional/Static meters, • to replace defective meters
2.2	**Time lines of the Project:** Project shall be completed within Period 30 months from the date of contract. Adani Transmission Ltd (ATL) has agreed to incur Capital Expenditure (CAPEX) during the build-up phase of 30 months from the date of contract and OPEX during O&M phase for remaining 90 months i.e., total 120 months.The work will be commenced from the date of the contract period . Letter of Award (LoA) is issued to M/s. ATL. For execution of project contract with ATL is being initiated. **On the following basis priority is decided**: As per "MERC (Electricity Supply Code and Standards of Performance of Distribution Licensees including Power Quality) Regulations, 2021 (Regulation No. 15)", all the new connections shall be released with the Smart Meter having at least the facility of remote reading and all the existing meters whenever replaced shall be replaced only by Smart Meters having at least the facility of remote reading. As per Ministry of Power, Notification dated 17th August, 2021 "all the consumers (other than agricultural consumers) in areas with communication network, shall be supplied electricity with smart meters working in Pre-payment Mode conforming to relevant IS, within the time". ***A Copy of MERC (ESC & SoP including Power Quality) Regulations, 2021 and MoP Notification, 2021 is enclosed as Annexure-'F'.*** There is no possibility of deferring the investment. In 1st phase (1st Year) HT, CT-PT operated, LT-CT operated (including feeder meters) meters are taken for replacement and balance meters will be replaced in 2nd phase (2nd year).

2.3	**Scheme for revised approval/scope/cost**: This Scheme is New One and is submitted as per MERC (Approval of Capital Investment Schemes), Regulations 2022.
2.4	**Proposed Capital Investment Scheme**: In this DPR, capital investment is proposed to be executed as per MERC (Approval of Capital Investment Schemes) Regulations 2022, Clause No. 3.11 under TOTEX (Capex +Opex) Model. BEST has proposed to execute the said scheme under OPEX Mode.
2.5	**Technical Justification**: As per Electricity Act 2003, every new connection is required to be released after installing a correct meter for accurate Energy measurement. The Characteristics of the Energy Meters to be procured for new connections will conform relevant IS and Central Electricity Authority Regulations, 2006. ***A Copy of CEA Regulations, dated 17.03.2006 is enclosed as Annexure-'I'.*** (i)Every new connection is required to be released after installing a meter as per the Electricity Act, 2003. BEST has proposed installation of smart meters in this DPR during FY 23-24, FY 2024-25& FY 2025-26. (ii) As per MERC (Electricity Supply Code and Standards of Performance of Distribution Licensees including Power Quality) Regulation. 2021 and Electricity (Rights of Consumers) Rules, 2020, all the new connections shall be released with the Smart Meter or Meter having at least the facility of remote reading: further to that all the existing meters whenever replaced shall be replaced only by Smart Meter or Meter having at least the facility of remote reading. (iii)The characteristics of meters to be procured for new connections will confirm to the Central Electricity Authority (Installation and Operation of Meters)Regulation,2006. (iv) As per MoP, Notification dated 17th August, 2021 "all the consumers (other than agricultural consumers) in areas with communication network, shall be supplied electricity with Smart meters working in Prepayment Mode conforming to relevant IS, within the time" Accordingly, BEST have decided to replace all existing Energy Meters with Smart Meters working with Prepayment Mode. ***A copy of MERC (Electric Supply Code and SoP) Regulation, 2021 &MoP2021 Notification is enclosed as Annexure- 'F'.*** In line with the above technical requirements, BEST has prepared this Detailed Project Report (DPR) to replace existing Static and conventional meters with Smart meters for all consumers, along with setting up the backbone communications infrastructure and related IT systems. The communication backbone facilitates the acquisition of data from smart meters and brings it to central server. The IT/OT software installed in the server takes care of the huge data collected from the field. This data is then shared with other applications like billing, GIS, SCADA etc. and generated reports. Looking at the consumer base of more than 10 lakhs, BEST has planned to replace existing meters with smart meters.
2.6	**Financial Justification:** **TOTEX (CAPEX + OPEX) Business Model**

	(i) The scheme envisages providing funding through Gross Budgetary support for the installation of prepaid Smart Meters under TOTEX (CAPEX plus OPEX) pattern". The project cost involves two major components: (i) Capital investment which involves cost of smart meters, meter boxes, Hardware & software, installation, integration & commissioning of AMI solution, consumer indexing, training etc. (ii) OPEX components which involves the cost for maintaining the system. (ii) The complete scheme is to be executed under OPEX Mode. In the OPEX base cost methodology, Adani Transmission Ltd (ATL) has agreed to incur CAPEX during the build-up phase of 30 months from the date of contract and OPEX during O&M phase for balance period of 90 months i.e., total 120 months. The monthly cost is calculated as the total project cost spread over the actual recovery period, post integration of the meter. Accordingly, in this process BEST will pay to ATL on monthly basis for maximum 90 months. The payment to AMISP will start after the project goes live. (iii) While quoting in the tender, Adani Transmission Ltd (ATL) has not given bifurcation between the costs of Capital items and O&M. The Assets will be in the books of Accounts of the ATL till the transfer of assets at the end of project at zero value. • The new Smart Meters used for releasing new load will increase the revenue. • In accurate metering of energy consumption would lead to loss in revenue. By replacing faulty / conventional meters will reduce revenue losses resulting increase in revenue. • Replacement of all existing meters (Electronic/Conventional) with Smart Meters. Old assets (existing meters) will be scrapped.
2.7	**Consent of M-DNAC**: As per Electricity Act, 2003, Clause, 42(3), BEST undertaking being a local authority, hence exempted from open Access.
2.8	**Plan of other Transmission Licensees / CTU**: DPR is related to Distribution Licensees, hence Not Applicable.
2.9	**Phasing of Investment (The investment is done by ATL on DBFOOT basis)** : **Financial Year** | **Capex Expenditure (in Rs. Crore)** | **Capitalisation (in Rs. Crore)** 2023-24 | 463.52 | 463.52 2024-25 | 660.54 | 660.54 2025-26 | 179.10 | 179.10 **TOTAL** | **1303.16** | **1303.16** This capital expenditure and Capitalisation is shown for information purpose, otherwise the scheme is to be executed in OPEX Mode.
2.10	**Statutory/Safety Requirement: N.A**

2.11 **Cost Assessment /Cost Break-up**:

Item wise costing

Item wise pert unit cost, Qty and total cost is given in the following table

Particulars	Unit Cost Gross (in ₹)	Qty (in Nos.)	Cost (in ₹)
Single Phase Smart meters with installation, communication & integration	11011.83	901212	9923993337.96
Poly Phase Smart meters with installation, communication & integration	16441.31	168419	2769028988.89
Poly Phase HT current Smart Meter Consumer Meter	40499.49	206	8342894.94
Three phase LT-CT operated Smart Meter (inclusive of 97 nos. existing Solar/Net Consumer Meters)	20249.63	6053	122571010.39
LVCTO Smart Meters installation, communication & integration	20249.63	3398	68808242.74
CTPTO Smart Meters installation, communication & integration	40499.49	1255	50826859.95
CTPTO Smart DT Meters installation, communication & integration	104141.49	133	13850818.17
TOTAL PART-A	**-**		**12957422153.04**
Supply and installation of Meter Boxes for DT check meters	2012.37	3398	6838033.26
Supply and installation of LT Compact CTs of LT CT Meters (3 CTs)	2515.37	6053	15225534.61
Supply and installation of LT CTs for DT metering (Ring Type)	2515.37	5610	14111225.70
TOTAL PART-B	**-**		**36174793.57**
Architecture Specialists	251552.40	12	3018628.80
Security Specialists	226394.46	12	2716733.52
Integration Specialists	226394.46	12	2716733.52
Data Base Developer- Sr.	176084.32	24	4226023.68
Web/ Mobile Application Developer- Sr.	176084.32	24	4226023.68
Core Application Developer- Sr.	201239.56	24	4829749.44
Data Base Developer- Jr.	150929.08	36	5433446.88
Web/ Mobile Application Developer- Jr.	150929.08	36	5433446.88
Core Application Developer- Jr.	150929.08	36	5433446.88
TOTAL-C	-		**38034233.28**
GRAND TOTAL (A+B+C)		**13031631179.89**	
GRAND TOTAL	**13031631179.89**		

Note: 18% GST is included in the unit rate.

As per Apendix-3 (Guidelines for Procurement of material) of MERC (Approval of Capital Investment Schemes) Regulations, 2022, BEST was invited and finalised tender to appoint AMI-SP for "Implementation of Prepaid Smart Metering Project" with a transparent, competitive, fair and reasonable procedure. Subsequently, ***a copy of a Letter of Award (LoA) has been issued to M/s ATL which is enclosed as Annexure-D.*** Accordingly, cost sheet is prepared by considering Unit rates for each item from issued LoA. For detail item wise calculation, a separate Excel Sheet is enclosed ***as Annexure-G.***

2.12 **Least Cost analysis /Alternatives**:

Proposal to "Implement Prepaid Smart Metering" ***A Letter of Award (LoA) has been issued to M/s ATL is enclosed as Annexure-A.***

1. As per Apendix-3 (Guidelines for Procurement of material) of MERC (Approval of Capital Investment Schemes) Regulations,2022 BEST was invited and finalised tender to appoint AMI-SP for "Implementation of Prepaid Smart Metering Project" with a transparent, competitive, fair and reasonable procedure.

2. Accordingly, the unit cost is derived from the open tender invited by advertising and following up the procure mentioned in Apendix-3. The order was placed on the technical suitable and LAO.

3. A tender was opened on 21.07.2022 for appointment of AMI-SP for "Implementation of Prepaid Smart Metering" through open bidding process on Maha e-tender Portal. BEST undertaking advertised the tender in the local as well as all over India media. Initially, Notice of Inviting Tender was advertised for "appointment of full turnkey contractor (AMI-SP) to execute the project. Due to the poor response from the bidders, multiple extensions were given. Finally, tender was opened on 21st July, 2022. After opening of the tender, it is observed that six bidders have taken part in the bidding process and it has been observed that the rates quoted by the firms, particularly towards the execution of Prepaid smart metering project.

4. Details of offers received for appointment of AMISP:

In tender document it has been clearly mentioned that the tender awarding shall be done on the basis of Reverse Auction Process (RAP) between the Eligible and

Qualified Tenderers to appoint AMI-SP for implementation of Smart metering Pre-payment system Project. In the said tender, six bidders have taken part. Out of Six Tenderers, Price bid of the three eligible Tenderers has been opened and same is given in the following table.

Bidder No.	Tenderers	Gross Rate Including GST tax. (inRs.)	Rank
1	M/s. Fluentgrid Pvt Ltd.	1559,99,75,299.00	3
2	M/s. Adani Transmission Ltd. (ATL)	1528,26,00,331.34	2
3	M/S. AshokaBuildcon Ltd.	1313,16,31,179.89	1 (LAO)

As per above, offer of the Bidder No. 3 was Lowest, however, in the reverse option, bidder 2 has matched their rates the LAO and further reducing the Cost by 10 Crore at price of Rs. 1303.16 Crore M/s. ATL succeed to won the Tender. This type of Tender/contract is being awarded for the first time in the BEST Undertaking.

Accordingly, for cost estimation purpose, the following cost arrived through this tender is considered.

(In Rs. Crs)

Sr. No.	Bidder No.	Basic Cost	Total Tax 18%	Gross Cost
1	2	11,04.37	1,98.78	13,03.16

A Letter of Award (LoA) has been issued to M/s ATL and copy of the same is enclosed as Annexure-D.

In view of above, least cost is achieved.

2.13	**If not and if Deferred Analysis**: For this case not applicable.
2.14	**Overall Cost-benefit Analysis**: Release of new load, improved billing accuracy, elimination of manual meter reading, consumer satisfaction etc. **For CAPEX Scheme** FY2023-24, tariff impact will be 0.012 against Opex Cost of ₹47.51 Crs. FY2024-25, tariff impact will be 0.059 against Opex Cost of ₹136.48 Crs. FY2025-26, tariff impact will be 0.132 against Opex Cost of ₹160.57 Crs. FY2026-27, tariff impact will be 0.209 against Opex Cost of ₹160.57 Crs. FY2027-28, tariff impact will be 0.262 against Opex Cost of ₹160.57 Crs. FY2028-29, tariff impact will be 0.315 against Opex Cost of ₹160.57 Crs. FY2029-30, tariff impact will be 0.368 against Opex Cost of ₹160.57 Crs. FY2030-31, tariff impact will be 0.409 against Opex Cost of ₹113.06 Crs. FY2031-32, tariff impact will be 0.442 against Opex Cost of ₹104.38 Crs. . **For OPEX Scheme** FY2023-24, tariff impact will be 0.100 against Opex Cost of ₹47.51 Crs. FY2024-25, tariff impact will be 0.286 against Opex Cost of ₹136.48 Crs. FY2025-26, tariff impact will be 0.334 against Opex Cost of ₹160.57 Crs. FY2026-27, tariff impact will be 0.333 against Opex Cost of ₹160.57 Crs. FY2027-28, tariff impact will be 0.331 against Opex Cost of ₹160.57 Crs. FY2028-29, tariff impact will be 0.329 against Opex Cost of ₹160.57 Crs. FY2029-30, tariff impact will be 0.328 against Opex Cost of ₹160.57 Crs. FY2030-31, tariff impact will be 0.230 against Opex Cost of ₹113.06 Crs. FY2031-32, tariff impact will be 0.211 against Opex Cost of ₹104.38 Crs. Comparison of capital cost & corresponding tariff impact with above benefits, a copy of Cost Benefit Analysis is enclosed as ***Annexure-K***.
2.15	**Methodology of Put to use of the asset and computing Percentage utilization of Project**: Following methodology of put to use of the Asset is used. 1. During the Financial Year (April to March), when the capital investment made on procurement of Energy Meters and his accessories is considered as Capital Expenditure made during that year. 2. When the meters are installed on site i.e. put to use, then the asset is capitalised.
2.16	**Constraints:** Performance of any Electric distribution utility is measured over following crucial Parameters. • Cost of supply including T&D loss • Customer services

	• Management of demand curve – supply reliability • Electricity supply quality In the current dynamic scenario where consumers are installing roof top solar systems, updated their vision and have added following vision statements: • Active participation of consumers in managing load curve • Integration of distributed generation, batteries etc. • Faster information to consumers • Self-healing system • Optimum utilization of asset and resources Presently, BEST is not having AMI infrastructure. The mission of BEST undertaking is to provide economical, reliable and quality electricity supply to all consumers connected to its network. Though BEST's present network has static and few Electro-mechanical meters in the system. The key challenges are to ensure that: • Data/ information are communicated back at desired frequency in desired formats • All desired information/ data/ events are generated • All data/ information is processed • All data/ information is analyzed to meet company objectives and for routine operations • Smart actions are taken based on data/ information analytics • Customer Inclusion is achieved • Asset optimization and operational efficiency • There is improvement in Power Quality
2.17	**Inclusion in STU Plan/License for Transmission Projects. Recommendation of the Transmission Planning Committee as provided in the Grid Code:** This is not applicable to this DPR.
2.18	**Works intended for adaptation of latest Technology/Improvement/Up gradation of Existing Infrastructure:** As per MERC (Electricity Supply Code and Standards of Performance of Distribution Licensees including Power Quality) Regulation. 2021, Electricity (Rights of Consumers) Rules, 2020 and MoP Notification, it is made mandatory that all the new connections shall be released with the Smart Meter or Meter having at least the facility of remote reading: further to that all the existing meters shall be replaced only by prepaid Smart Meter or Meter having at least the facility of remote reading. Accordingly, to implement above said regulations, BEST has prepared this Detailed Project Report (DPR) to release new connections with smart meters and also to replace all existing meters with smart meters for all consumers, along with setting up the backbone communications infrastructure and related IT systems. The communication backbone facilitates the acquisition of data from smart meters and brings it to central server. The IT/OT software installed in the server takes care of the huge data collected from the field. This data is then shared with other applications like billing, GIS, SCADA etc. and generated reports. Looking at the consumer base of more than 10 lakhs, BEST has planned to replace existing meters with smart meters.

2.19	**Upstream/Downstream arrangement:** For this DPR such arrangement is not applicable.
2.20	**Statutory Clearances and Project Layout: S**ince, smart meters are to be installed in the meter cabins which are constructed by the developer while constructing the building and in the existing meter cabins. Hence, there is no need of statutory clearances required from any other authority for this project.
2.21	**Detailed Survey**: For this project detail survey is not needed.
2.22	**Past Trend and Future projection**: First time, BEST has planned to replace all existing meters with Smart Meters by appointing AMI-SP,due to this past trend is N.A. **Future projection**: While awarding the tender to M/s ATL for implementation of Smart meter project, care is already taken.
2.23	**Detailed Justification for quantity proposed:** **Indicative list of meters to be replaced with Smart Meters**

Sr. No.	Meter Type	Quantity (in Nos.)
1	Single Phase *Smart Meter-WC	901212
2	Three Phase Smart Meter-WC	168419
3	Three Phase SmartMeter-LTCT	6053
4	Three Phase SmartMeter-LTCT DT Meter	3398
5	Three PhaseSmart Meter- HT Meters	206
6	Three Phase Smart Meter –HT Feeder Meter	1255
7	Three Phase Smart Meter-CT/PT Operated ABT Meter	133
	GRAND TOTAL	**10,80,676**

Please kindly note that smart meter quantity includes net meters.

(a) Justification for quantity proposed:

At present BEST having10,46,617 meters in the system, hence out of 10,80,676 meters 10,46,617 consumers meters, 133 ABT meters, 1255 feeder meters, 3398 DT meters and balance 29,273 meters for new connections are proposed.

2.24	**Check list of the documents appended:** 1. DPR in the MERC Format for FY2023-24 to FY2025-26 (Pg. No.1-24) 2. Pat-I and Part-II Filled Formats of Capital Investment Scheme for MERC Approval (Pg.No.25-36) 3. Annexure-A: - A Letter of MoP dated 20.07.2021 (Pg. No.37-56) 4. Annexure-B: -A copy of BEST's Letter & approval from PFC (Pg. No.57-87) 5. Annexure-C:- Guidelines if RDSS Scheme (Pg. No.88-143) 6. Annexure-D:- A Letter of ward of contract M/s ATL (Pg No. 144-162) 7. Annexure-E: - Detail scope of work. (Pg. No. 163-169) 8. Annexure-F:- MERC (ESC & SoP Regulation, 2021 and Mop Notification, 2021 (Pg. No.170-174) 9. Annexure-G: - Detail cost sheet (Pg. No 175-175) 10. Annexure-H:-A copy of Management Approval for RDSS (BCR) (Pg. No. 176-200) 11. Annexure -I:- A Copy of CEA Regulations, dated 17.03.2006.(Pg.No.201-203) 12. Annexure - J:-Specification of various items. (Pg. No. 204-355) 13. Annexure-K :- Cost benefit Analysis & Calculation Sheet (Pg.No.356-361) 14. Annexure-L:- Guidelines for procurement of materials (Pg. No.362-389) 15. Annexure-M:-Procedure for Scrapping (Pg. No .390-396) 16..Annexure –N: -Depreciation Schedule (Pg. No. 397-400)

Annexure-A

F. No. 20/9/2019-IPDS
Government of India
Ministry of Power
Shram Shakti Bhavan, Rafi Marg, New Delhi-110001

Dated, 20th July, 2021

To

1. Chief Secretary of all States and UTs
2. Additional Chief Secretary Principal Secretary/Secretary (Energy/Power) of all States and UTs
3. CMDs/MDs of State Power Distribution Utilities
4. CMD, REC Ltd.
5. CMD, Power Finance Corporation Ltd.

Subject: Revamped Distribution Sector Scheme: A Reforms-Based and Results-Linked Scheme.

Sir,

I am directed to forward herewith Office Memorandum of the Revamped Distribution Sector Scheme - A Reforms-Based and Results-Linked Scheme.

Enel: As above

Yours faithfully,

(M. Srikanth Reddy)
Deputy Director (UR&SI-II)
Tel:011-23319108
Email: srikanthreddy@nic.in

Copy to:

1. The CEO, NITI Aayog, Sansad Marg, New Delhi.
2. Secretary, Ministry of Finance, Department of Expenditure, North Block, New Delhi.
3. Secretary, Ministry of Home Affairs, North Block, New Delhi.
4. Secretary, Ministry of Electronics and IT, CGO Complex, New Delhi.
5. Secretary, Ministry of New & Renewable Energy, CGO Complex, New Delhi.
6. Prime Minister's Office (Shri Rohit Yadav, Joint Secretary), South Block, New Delhi.
7. Cabinet Secretariat (Shri Ashutosh Jindal, Joint Secretary), Rashtrapati Bhawan, New Delhi.
8. Cabinet Secretariat (Shri S.G.P. Verghese, Director), Rashtrapati Bhawan, New Delhi **with reference to their OM No. CCEA/11/2021(i) dated 02nd July, 2021.**
9. Chairperson, CEA, New Delhi
10. CMD, PGCIL
11. DG, Bureau of Energy Efficiency
12. Director, NPMU, NSGM

—2/-

13. Budget Section/Finance Division, Ministry of Power
14. Controller of Accounts, SevaBhavan, R.K. Puram, New Delhi.
15. Principal Director of Audit, Infrastructure, New Delhi

Copy also to, for information:

(i) PS to Hon'ble Minister of Power
(ii) PS to Hon'ble Minister of State for Power
(iii) Sr. PPS to Secretary (Power).
(iv) PPS to AS(Distribution)/PPS to AS&FA, Ministry of Power
(v) PPS to JS(Distribution/Hydro)/JS(R&R and OM)/JS(Trans./IT), Ministry of Power
(vi) PPS to Director(UR&SI)/ PS to Director(DS), Ministry of Power

F. No. 20/9/2019-IPDS
Government of India
Ministry of Power
Shram Shakti Bhawan, Rafi Marg, New Delhi-110001

Dated, 20th July, 2021

OFFICE MEMORANDUM

Subject: Revamped Distribution Sector Scheme: A Reforms based and Results linked Scheme.

Sanction of the President is conveyed for the implementation of "**Revamped Distribution Sector Scheme - A Reforms based and Results linked Scheme**" with the objective of improving the quality and reliability of power supply to consumers through a financially sustainable and operationally efficient distribution Sector. The Scheme aims to reduce the AT&C losses to pan-India levels of 12-15% and ACS-ARR gap to zero by 2024-25.

2. The Scheme has an outlay of Rs.3,03,758 crore with an estimated gross budgetary support of Rs.97,631 crore from the Government of India.

3. The ongoing approved projects under the Schemes of IPDS, DDUGJY along with PMDP-2015 for the erstwhile State of Jammu & Kashmir would be subsumed in this Scheme and the savings of the associated GBS (Gross Budgetary Support) of approx. Rs. 17000 crore would be part of the total outlay of the Revamped Distribution Sector Scheme under the existing terms and conditions till their sunset on 31" March, 2022. The funds under these Schemes would be available for the approved ongoing projects under Prime Ministers Development Program (PMDP) for the erstwhile state of J&K launched in 2015 (under IPDS and DDUGJY) and of Ayodhya, Uttar Pradesh (under IPDS) till 31 March, 2023.

4. Scope of Scheme :

4.1 The Scheme has two parts: **Part 'A'** – Financial support for upgradation of the Distribution Infrastructure and Prepaid Smart Metering & System Metering and **Part 'B'** – Training & Capacity Building and other Enabling & Supporting Activities. The details are enclosed at **Annexure – I (Page: 9-10).**

PART 'A'

4.2 To avail funding under this part, an eligible DISCOM is required to prepare an Action plan for strengthening their distribution system and improving its performance by way of various reform measures, which would result in improvement in their operational efficiency and financial viability as well as improve the quality and reliability of power supply to the consumers. DISCOMs will have the flexibility to draw up their Action plans keeping in view their own context. However, a DISCOM which is making losses will not be able to access funds under this Scheme unless it draws up a plan to reduce the losses, lists out the steps it will take to reduce such losses and the calendar thereof, get their State Government's approval to it, and file it with the Central Government. There will be a prequalification criteria in terms of compliance with best management practices; such as publication of audited accounts on time, not creating Regulatory Assets, accounting and payment of payable subsidy in accordance with Section 65 of the Electricity Act etc. The funding for the works (other than prepaid Smart Metering, Distribution Transformer Metering and Feeder Metering including integration of existing Metering infrastructure) would be contingent upon DISCOMs clearing the pre-qualifying criteria and taking steps in accordance with the loss reduction plan.

4.3 Each DISCOM will prepare an Action Plan, with subcomponents for strengthening its Distribution system , and to improve their performance . The Action Plan will have two parts. The first part will include an analysis of the reasons/root cause for losses, and list out the steps which are required and proposed for reduction of losses and ACS-ARR gap and the time taken for taking these steps. DISCOM will specify the activities and reforms proposed to improve their performance. These activities and reform measures will be finalized on basis of its operational and financial data and will be worked out to address DISCOM-specific problems. An indicative list of reforms/activities is enclosed at **Annexure – II (Page: 11).**

4.4 There shall be a Results Evaluation Framework which shall be finalized by the Monitoring Committee in respect of each DISCOM after incorporating result parameters and trajectories. It would have two components (i) Pre-qualifying criteria; and (ii) Result Evaluation Matrix. The pre-qualifying criteria need to be mandatorily met with by the DISCOMs before they can be evaluated on the basis of the Result

Evaluation Matrix. Thereafter, performance on the basis of Result Evaluation Matrix shall form the basis for release of funds under the Scheme. Details are enclosed at **Annexure-III (Page : 12-16).**

4.5 The second part of the Action plan will list out the Work plan for loss reduction and further strengthening the Distribution System as per needs assessment. States/DISCOMs will be able to access funds from this Scheme for addressing infrastructure constraints in Distribution System and for its further augmentation/strengthening. Works which are required for AT&C loss reduction will be given priority. Indicative list of works to be covered under the Scheme is enclosed at **Annexure – IV (Page : 17)**. There is a provision of Rs. 20,000 crores in the Scheme for agriculture feeders where these have not been segregated as yet. Thereafter, these feeders will be solarized under KUSUM – leading to cheap/ nominally priced day time power for agriculture irrigation as may be determined by the State Government .

4.6 Prepaid Smart Meters including System metering with communication features are important interventions in reducing Distribution losses in the Utilities and in facilitating automatic measurement of energy flows and energy accounting as well as auditing without any human intervention. This intervention will also facilitate switch over to digital pre-paid system, with recharging facility through mobile phones, and enabling of Time-of-Day tariff.

4.7 In order to attain the key objective of loss reduction in electricity distribution, the Scheme envisages providing funding through Gross Budgetary Support for the installation of prepaid Smart Meters under TOTEX (CAPEX plus OPEX) pattern and in a mission mode in the first phase in (i) all Electricity Divisions of 500 AMRUT cities, with AT&C Losses > 15% (ii) all Union Territories (iii) MSMEs and all other Industrial and Commercial consumers (iv) all Government offices at Block level and above (v) other areas with high losses. Prepaid Smart metering for remaining consumers would be taken up by the respective DISCOMs in a phased manner subsequently. Looking at the scattered nature of agriculture connections and their remoteness from the habitations; as well as their proposed solarization under Kusum; the smart meters need not be installed in Agriculture connections.

4.8 Along with installation of prepaid Smart metering and the associated Advanced Metering Infrastructure (AMI), installation of communicable System meters at Feeder and Distribution Transformer level with communication features will also be through Gross Budgetary Support under TOTEX mode to enable proper energy accounting every month for identification of theft prone pockets and high loss areas.

4.9 Advanced ICT like Artificial Intelligence, Machine Learning and Blockchain Technology would be leveraged to analyse data generated through IT/OT devices including System Meters, prepaid Smart meters to prepare actionable MIS from system generated energy accounting reports every month so as to enable the DISCOMs to take informed decisions on loss reduction, demand forecasting, asset management, Time of Day (ToD) tariff, Renewable Energy (RE) Integration and for other predictive analysis. This would contribute a great deal towards enhancing operational efficiency and financial sustainability of the DISCOMs. Gross Budgetary Support (GBS) under the Scheme would be used for development of applications related to the use of advanced ICT like Artificial Intelligence, Machine Learning and Blockchain Technology in the Distribution Sector and also for promoting development of Start-Ups in the Electricity Distribution Sector across the country.

4.10 GBS under the Scheme would also be available to MoP/Nodal Agency to develop a Software for the Digital systems which can be utilized by the DISCOMs / Power Departments of the country, so that each DISCOM does not have to spend money separately on the Software. This Software will be developed in consultation with the DISCOMs, keeping in view data security and consumer privacy. However, this Software will be optional for the DISCOMs.

PART 'B'

4.11 Part-B contains supporting and enabling components such as up-gradation of Smart Grid Knowledge Centre including AI, Training / Capacity building, awards and incentives, reform support in form of consultancy, Nodal Agency fee, MoP enabling activities (communication plan, consumer awareness and other associated measures such as third party evaluation etc), and PMA charges etc. Details are enclosed at **Annexure – V (Page : 18).**

5. DISCOMs Eligible :

All State-owned Distribution companies and State /UT Power Departments (referred to as DISCOMs collectively) excluding private Sector power companies will be eligible for financial assistance under the Revamped Scheme.

6. Funding Pattern :

6.1 For rolling out prepaid Smart metering in a mission mode under Part A – in "Other than Special Category States", a fixed amount of 15% (22.5% in case of Special Category States) of the cost per meter worked out over the whole project period, subject to a maximum of Rs. 900/- (Rs. 1350/- in case of special category States) per meter in case of consumer meters, will be funded.

6.2 States/UTs would be incentivised for deployment of prepaid Smart meters by December, 2023. An incentive @ 7.5% of the cost per consumer meter worked out for the whole project or Rs. 450 per consumer meter, whichever is lower, would be provided for "Other than Special Category States" for prepaid Smart meters installed within the targeted timeline of first phase mission i.e. by December, 2023. The incentive for Special Category States would be @ 11.25% of the cost per consumer meter worked out for the whole project or Rs. 675 per consumer meter, whichever is lower. The funds for prepaid Smart Metering will be made available to the DISCOMs only after installation, commissioning and demonstration of at least one prepaid billing period in the area specified by the DISCOM in the DPR approved by the Monitoring Committee.

6.3 Development of applications related to the use of advanced ICT like Artificial Intelligence, machine Learning and Blockchain Technology in the Distribution Sector and the unified billing and collection system will be funded 100% through the GBS.

6.4 For Distribution System upgradation works, maximum financial assistance given to DISCOMs of "Other than Special Category States" will be 60% of the approved cost, while for the DISCOMs in "Special Category States", the maximum financial assistance will be 90% of the approved cost.

6.5 For the purpose of execution of this Scheme, all North Eastern States including Sikkim and States of Himachal Pradesh & Uttarakhand and Union Territories of

Jammu & Kashmir, Ladakh, Andaman & Nicobar Islands, and Lakshadweep will be treated as Special Category States/UTs

6.6 Part B of the Scheme will be fully funded by grant through Central/State Governments.

7. Release of Funds :

7.1 The funds for prepaid Smart Metering will be made available to the DISCOMs only after installation, commissioning and demonstration of at least one prepaid billing period in the area specified by the DISCOM in the DPR approved by the Monitoring Committee.

7.2 All DISCOMs that initiate their prepaid Smart metering tenders after 1st January, 2020 will be eligible for funding, if they carry out prepaid Smart metering works in TOTEX mode after obtaining approval of Monitoring Committee in this regard.

7.3 The funding for the works other than prepaid Smart metering, DT Metering and Feeder Metering including integration of existing Metering infrastructure would be contingent upon DISCOMs clearing the pre-qualifying criteria and achieving at least 60% marks on the result evaluation matrix.

7.4 The first instalment will be released as 10% advance on DPR approval and yearly fund release for second and subsequent instalments will be based on annual evaluation (as per agreed Results Evaluation Framework) as under:

- 2nd Instalment - 20% of GBS after 1st evaluation (30% cumulative)
- 3rd Instalment - 30% GBS after 2nd evaluation (60% cumulative)
- 4th Instalment - 40% GBS after 3rd evaluation (100% cumulative)

8. Financing of the Scheme :

8.1 The estimated outlay for the Scheme is Rs 3,03,758 crore with an estimated GBS from Central Government of Rs 97,631 crore. The Government of India will provide Rs. 1,030 Crore for activities under Part B of the Scheme. It is envisaged that about Rs. 200 crores will be spent by the State Governments towards reforms support in the form of consultancy.

8.2 Savings under various components of this Scheme (GBS) will be fungible across all parts of the Scheme with the approval of the Monitoring Committee .

8.3 Counterpart funding will be provided to DISCOMs by PFC/REC and/or Banks/other FIs. Further, counterpart funding from bilateral/multilateral funding agencies can also be leveraged for which Government of India would extend benefits of reduced Government Guarantee fee.

9. The performance of the DISCOMs in the Reforms Based Results Linked Revamped Distribution Scheme would also form integral part of the financing norms of PFC, REC, Banks/FI's for any project in the Distribution Sector even beyond those related to funding under this Scheme.

10. Monitoring Committee:

10.1 An inter-ministerial Monitoring Committee for the Scheme will be constituted under the chairmanship of Secretary, Ministry of Power. The Monitoring Committee will frame and approve all operational guidelines, sanction all Action Plans & DPRs of DISCOMs / States and proposals/DPRs under Part B, and review and monitor implementation of Scheme including review of Third-Party Mid-Term Evaluation of the Scheme carried out by the Nodal Agency.

10.2 The Monitoring Committee will also approve scope of works and take necessary decisions for operationalization of various components of the Scheme and amendments thereof, within the framework approved by Cabinet Committee on Economic Affairs (CCEA). The Monitoring Committee will also be competent to modify the scope of works under various parts of the Scheme in line with the objectives of the Scheme.

10.3 The maximum marks and targets for individual parameters in Result Evaluation framework may differ for each year of evaluation .The result evaluation framework would be different for each DISCOM and would be fixed for each year depending on the cumulative performance as well as the annual performance. The funds for a particular year in respect of Infrastructure Works would be released in respect of a DISCOM for a particular year only after it has been found to have fulfilled the pre-qualifying criteria and its total weighted score is at least 60 marks on the result evaluation matrix after having been evaluated by the Nodal Agency and approved as

such by the Monitoring Committee . Evaluation of parameters relating to financial accounts shall be based on audited quarterly / annual accounts .

11. REC Limited and Power Finance Corporation Limited (PFC) would be the Nodal Agencies for the Scheme and would be responsible for operationalization of Scheme in the entire country.

12. The State Governments and their DISCOMs will sign a Tripartite Agreement with the Central Government before availing benefits under the Scheme.

13. The duration of the Scheme is 5 years (FY 2021-22 to FY 2025-26). The sunset date for the Scheme will be 31.03.2026.

14. The Nodal Agencies will submit monthly progress report indicating both financial and physical progress on the implementation of the Scheme to Ministry of Power and CEA.

15. The detailed guidelines for the implementation of the Scheme will be issued separately.

16. The expenditure under the Scheme would be debited to the budget grant no. 78 of Ministry of Power.

17. This issues with the concurrence of Finance Branch of the Ministry of Power vide their Dy. No. 379/Fin./2021 dated 20.07.2021.

20/7/21

(Tanmay Kumar)
Joint Secretary to the Government of India
Tele-Fax No.: 23714168
E-mail: tanmay.kumar-rj@gov.in

Annexure - I

Details of Part – 'A' and Part – 'B' of Scheme

Part- 'A' of Scheme – Funding for Smart Metering

Item Head	Item Description	Quantity	GBS, % (Max)
A-1	Prepaid Smart metering solution including at consumer, DT, and feeder level including integration of existing infrastructure	25 crore	15% / 22.5% (limited upto Rs.900 or Rs.1350 respectively per meter for Consumer metering)###
A-2	Other costs including encumbrance free standardized billing modules for all States, data management, data analytics, and support to implementation, AI etc.	Lumpsum	100%

Part- 'A' of Scheme – Funding for Infrastructure Creation

Item Head	Item Description	Quantity Estimated
A-3	Segregation of agriculture feeders	10,000 Nos.
A-4	Replacement of existing LT Overhead bare conductor lines with AB Cable / HVDS in theft prone areas	4,00,000 Kms
A-5	Distribution Automation in Urban Areas	
A-5.1	SCADA/DMS in Big cities, having population >2.75 lakh, including opex for 2 years	100 Nos.
A-5.2	SCADA (Real Time Supervision & Controllability of Sub-station) including opex for 2 years	3875 Nos.
A-6	Funding for distribution infrastructure including HVDS, IT and OT in Distribution Sector, Feeders, conductors, Transformers, cables, substations, feeders, capacitors etc. to cater to load growth and increasing demand	As required

Part- 'B' of Scheme

Item Head	Item Description	Quantity	Outlay (Rs. Crore)	GBS % (Max)	GBS(Rs. Crore)
B-1	Augmentation of Smart Grid Knowledge center including AI	-	30	100%	30
B-2	Training / Capacity building/ Awards and incentives	-	200	100%	200
B-3	Reforms support in form of consultancy		200	100%	-200*
B-4	Nodal agency fee, MoP enabling activities and PMA charges**	-	1,000	100%	1000
Sub-Total (Part-B):			**1,430**		**1,030**

*Amount for reform support in form of consultancy may be taken State Governments and utilized for the Scheme.

**Approximately 1% of the estimated GBS for Part A for smart metering and Infra creation.

For Part A – Prepaid Smart metering in "Other than Special Category States", a fixed amount of Rs 900 per consumer meter or 15% of the cost per consumer meter worked out for the whole project, whichever is lower, would be funded. In case of "Special Category States", a fixed amount of Rs 1350 per consumer meter or 22.5% of the cost per consumer meter worked out for the whole project, whichever is lower, would be funded. To incentivize the States/UTs for deployment of prepaid Smart meters by December, 2023. An incentive @ 7.5% of the cost per consumer meter worked out for the whole project or Rs. 450 per consumer meter, whichever is lower, would be provided for "Other than Special Category States" for prepaid Smart meters installed within the targeted timeline of first phase mission i.e. by December, 2023. The incentive for Special Category States would be @ 11.25% of the cost per consumer meter worked out for the whole project or Rs. 675 per consumer meter, whichever is lower. The incentive would be met out of overall provision of GBS for Smart Metering under the Scheme (Rs. 23,300 crore) along with expected cost reduction benefits arising out of economies of scale looking to the large-scale deployment of prepaid Smart meters in first phase, similar to the huge reduction in price experienced in large scale use of LED bulbs and solar power.

Annexure – II

Indicative List of Reforms under PART-'A'

An indicative list of reforms / activities to be covered under the Scheme:

(i) Putting in place a mechanism to ensure that the Government Departments pay for the for electricity consumed, promptly

(ii) Putting in place a mechanism for ensuring that the consumption by the subsidized categories is accounted for properly and released to the DISCOM in advance as mandated by Section 65 of the Electricity Act 2003, which will be credited to the consumer account maintained by the DISCOM. Subsidy delivery must be targeted via Direct Benefit Transfer (DBT) for improvement in accountability

(iii) Annual Tariff Fixation, Tariff to reflect prudent costs; costs not reflected in Tariff shown separately, to be funded by the DISCOM/State Govt.; no Regulatory assets to be created, Multi Year Tariff (MYT).

(iv) Preparation of and adherence to a roadmap for funding accumulated and current financial losses, if any, through clearance of part or whole of regulatory assets and state funding.

(v) Energy Accounting with 100% feeder and transformer metering on OPEX model.

(vi) Corporate Governance reforms, Operation of part or whole area of supply of DISCOM through private participation or through CPSUs/JVs of CPSUs

(vii) Distribution Franchisee arrangements in some areas of DISCOM

(viii) Setting up electricity police stations in line with the provisions of the Electricity Act, 2003

(ix) Training and Capacity Building of existing manpower, Creation of IT cadre for management of IT/OT services or engaging knowledge partners / consultants for the same.

(x) Compliance of RPO trajectories

(xi) Publication of quarterly audited/unaudited reports in a standardized format circulated by PFC. Quarterly and Annual Accounts of DISCOMs need to explicitly include details of subsidy and Govt. Department dues. The annual accounts of the previous year would be published by DISCOMs latest by September 30th of the current year.

(xii) Initiation of performance linked transfer policy for DISCOM staff

(xiii) Any other activity which serves to achieve the objective of the Scheme.

Annexure – III

Results Evaluation Framework

The Results evaluation framework would have two components (i) Prequalifying criteria; and, (ii) Result evaluation matrix.

Pre-Qualification Conditions:

I. DISCOMs would publish quarterly un-audited accounts within 60 days of the end of each quarter during first two years of operation of the Scheme (i.e. for FY 2021-22 and FY 2022-23) and thereafter audited quarterly accounts within 45 days from 3rd year onwards.

II. Further, DISCOMs would publish audited annual accounts by end of December of the following year during first two years of operation of the Scheme (i.e. for FY 2021-22 and FY 2022-23) and thereafter audited annual accounts by end of September of the following year from 3rd year onwards.

III. DISCOMs will have ensured that no new Regulatory Assets have been created in latest tariff determination cycle.

IV. State Government to ensure 100% payment of subsidy for the previous year and advance payment of subsidy up to current period in line with section 65 of EA2003 and wipe out the remaining subsidy amount by the end of the project period.

V. All Government Department/ Attached Offices/ Local Bodies have made100% payment of current electricity dues for the year under evaluation.

VI. Progress commensurate to commitment in putting Govt. Offices on prepaid meters.

VII. No. of days Payables to Creditors / suppliers for the year under evaluation is equal to or less than the projected trajectory as per results evaluation framework.

VIII. Tariff order for the current year in which evaluation is being done and true up of penultimate year has been issued and implemented w.e.f. 1st April of current FY.

Utilities clearing the pre-qualifying criteria would be eligible for evaluation against the result evaluation matrix, which would determine their eligibility for release of funds for a particular year. The result evaluation framework would be different for each DISCOM and would be fixed for each year depending on the cumulative performance as well as the annual performance.

Four basic categories of Results Parameters have been identified and weightage has been assigned to each of the category as under:

Sr. No.	Category	Weightage for Evaluation
1.	Financial Sustainability	60
2.	Outcome of infrastructure Works	20
3.	Infrastructure Works	10
4.	Policy & Structural Reforms, Capacity Building and IT/OT Enablement	10
	Total	100

While the weightage of Financial sustainability would remain static at 60%, Monitoring Committee of the Scheme may make variations specific to the needs of the States/DISCOMs for other weightages

Under each of the categories above, there would be result parameters in the matrix, which will be assigned maximum marks on the basis of agreed priority/ significance towards achieving the objectives of the Scheme. The maximum marks and targets for individual parameters may differ for each of the evaluation years.

The funds for a particular year will be released only if the Utility clears the pre-qualifying criteria and the total weighted score is more than 60 marks on the evaluation matrix. Evaluation of parameters relating to financial accounts shall be based on audited quarterly/annual accounts.

Recognising that the year-wise emphasis on desired outcomes could be different, the Monitoring committee will reserve the right to allocate the maximum marks to individual result parameters for every year of evaluation. Result Evaluation Framework may be modified, if required, to include a smaller number of parameters and to exclude those included in the pre-qualifying criteria to avoid duplication and to make the Result Evaluation Framework simplistic.

RESULTS EVALUATION MATRIX (ILLUSTRATIVE)

Name of DISCOM:

SN	Result Parameters	Weightage	Unit of Measurement	Base Year [2020-21]	Evaluation of Cumulative Improvement from Base Year up to Year under evaluation			
				(Values)	Max. Marks	Target	Achievement	Score
A.	**Financial Sustainability**							
1	ACS-ARR gap		Rs./kWh		25			
2	AT&C Loss - Increase in Billing and Collection Efficiency - Reduction in theft / line losses		%		25			
3	Outstanding/ Overdue Subsidy Payment by State Government		Rs. Crore		15			
4	Outstanding/ Overdue Government Dues	**60**	No. of Days Receivable		10			
5	Progress in putting Govt. Offices on prepaid meters		%		10			
6	No. of Creditor Days (including payment to Gencos for supply of power)		No. of days payable		5			
7	No. of Debtor Days		No. of days receivables		5			
8	Unliquidated Regulatory Assets		Rs. Crore		5			
	Sub Total (A)				Σ Max. Marks			Σ Score
	Weighted Score (A) = (Weightage x ΣScore)/ ΣMaximum Marks							
B	**Outcomes of Infrastructure works**							
1	Hours of supply (Rural)		Avg. Hours/ Day		20			
2	Hours of supply (Urban)		Avg. Hours/ Day		20			
3	Accurate Energy Accounts	**20**	%		20			
4	Reliability of power supply - SAIFI (System Average Interruption Frequency Index)		Nos. / year		20			
5	Reliability of power supply - SAIDI (System Average Interruption Duration Index		Hours or minutes/ year		20			

SN	Result Parameters	Weightage	Unit of Measurement	Base Year [2020-21]	Evaluation of Cumulative Improvement from Base Year up to Year under evaluation			
				(Values)	Max. Marks	Target	Achievement	Score
	Sub Total (B)				Σ Max. Marks			Σ Score
	Weighted Score (B) = (Weightage x ΣScore)/ ΣMaximum Marks							
C.	**Infrastructure Works**							
1	**Metering**							
I	Consumer Metering		Nos.		10			
Ii	DT Metering		Nos.		20			
Iii	Feeder Metering		Nos.		20			
2	**Feeder Separation - % of total Agriculture feeders separated (Feeders with Agricultural load of >= 30% of total load of feeder)**	**10**	%		10			
3	Replacement of existing LT overhead bare conductor lines with AB/UG cable		Ckm		10			
4	% of Consumers with Prepaid Smart Meters (other than Govt. Deptt.)		%		15			
5	% of Govt Departments with Prepaid Smart Meters		%		15			
	Sub Total (C)				Σ Max. Marks			Σ Score
	Weighted Score (C) = (Weightage x ΣScore)/ ΣMaximum Marks							
D	**Policy & Structural Reforms, Capacity building and IT/OT enablement**							
1	SCADA		No. of Towns		15			
2	ERP Implementation	**10**	Yes/No		10			
3	Training of DISCOM Officials		Man-days		5			
4	Corporate Governance (Recommendations complied)		%		10			
5	Tariff Reforms (MYT / ToD / Cross Subsidy)				15			
6	Subsidy Delivery Mechanism/ DBT				15			

SN	Result Parameters	Weightage	Unit of Measurement	Base Year [2020-21]	Evaluation of Cumulative Improvement from Base Year up to Year under evaluation			
				(Values)	Max. Marks	Target	Achievement	Score
7	Consumer rights and grievance redressal				15			
8	Adoption of PPP mode				15			
	Sub Total (D)				Σ Max. Marks			Σ Score
	Weighted Score (D) = (Weightage x ΣScore)/ Σ Maximum Marks							
	Sum of Weighted Score (A+B+C+D)							

Note : In order to qualify for receipt of grant under the Scheme , the total weighted score should be 60 or more .

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Annexure – IV

Indicative List of Works under Part – 'A'

An indicative list of works to be covered under the Scheme:

(i) Replacement of conductors, which are old/frayed
(ii) Additional HT lines to improve quality of supply
(iii) Segregation of agricultural feeders
(iv) Provision of Aerial bunched Cables (ABC) in high loss areas
(v) High Voltage Distribution System (HVDS) in high loss areas
(vi) Supervisory Control and Data Acquisition (SCADA) in all urban areas; and DMS in 100 urban centres above the population of 2.75 lakhs as per urban census 2011
(vii) Prepaid/Smart metering systems
(viii) Works like new feeders, capacitors, etc for loss reduction
(ix) IT/OT enablement works
(x) Prepaid metering for all Government Departments
(xi) Distribution Works for system strengthening
(xii) Transformer / Feeder Metering – on OPEX Model

Segregation of feeders dedicated only for supply of power for agricultural purpose, which are proposed to be solarized under Kisan Urja Suraksha Evam Utthan Mahabhiyan (KUSUM) Scheme will be sanctioned on priority under the Scheme. Further, feeders once segregated will not be used for serving other than agricultural loads.

Part B: Training & Capacity Building and Other Enabling & Supporting Activities

The major components covered under the Part B of the Scheme are:

I. Augmentation of Smart Grid Knowledge Centre including AI

Smart Grid Knowledge Center (SGKC) at PGCIL, Manesar is a facility developed under assistance from the Integrated Power Development Scheme (IPDS). The center has been established to act as resource center for smart grid activities in the country with various smart grid technologies on display on a lab scale. It also has state of the art Smart grid training facilities. SGKC will be upscaled as an incubation center for evaluating and disseminating new technologies, and also as an innovation park. An amount of Rs 30 Crores is earmarked for expansion of centers' activities with 100% gross budgetary support. These funds would also be used for creation of Center for development of applications related to use of Artificial Intelligence in Distribution Sector.

II. Training / Capacity building/ Awards and incentives

Training and capacity building of professionals in the Distribution Sector is a much-felt need. Training in good corporate governance practices, technical matters, advance technology intervention areas, new business processes, etc. both in India and abroad are envisaged under this head. The details of the training programs will be finalized by the Monitoring Committee.

Ministry of Power will institute various awards and incentives for DISCOM personnel and management for showing exemplary performance in areas both within and beyond the realm of the Scheme. These will be instituted with the approval of Monitoring Committee.

III. Reforms support in form of consultancy

The Scheme also envisages consultancy support for reform implementation. Ministry of Power, through the Nodal Agency, will appoint consultants both at national and state/regional levels based on the action plans finalized by the Monitoring Committee who will advise and assist MoP and States/DISCOMs in Scheme implementation, especially the reforms in DISCOMs

The consultancy support provided by the MoP to Union Territories for privatization of Power Departments/ Utilities under AatmaNirbhar Bharat Abhiyan will also be funded out of this component. The details of the consultancies shall be finalized by the Monitoring Committee. The costs towards this consultancy for the Scheme period will be borne by the Ministry of Power out of allocation under Part-B of the Scheme.

IV. Nodal agency fee, MoP enabling activities and PMA charges

This head will cover various enabling activities viz. communication plan, consumer awareness and other associated measures such as third-party evaluation, nodal agency fee and PMA charges etc.

Fwd: Submission of Action Plan & DPR under RDSS

11/30/22 10:55 AM

From: "cepl@bestundertaking.com" <cepl@bestundertaking.com>

To: "cerc@bestundertaking.com" <cerc@bestundertaking.com>, "dcemerc@bestundertaking.com" <dcemerc@bestundertaking.com>

PFA

From: "cepl@bestundertaking.com" <cepl@bestundertaking.com>
Sent: 8/22/22 6:59 PM
To: "sk_shah@pfcindia.com" <sk_shah@pfcindia.com>, "ak.rathore@pfcindia.com" <ak.rathore@pfcindia.com>, "tk_gupta@pfcindia.com" <tk_gupta@pfcindia.com>
Cc: "agmes@bestundertaking.com" <agmes@bestundertaking.com>, "ssgmbest@bestundertaking.com" <ssgmbest@bestundertaking.com>
Subject: Submission of Action Plan & DPR under RDSS

Dear Sir,

Please find enclosed herewith letter of submission of Action Plan & DPR under RDSS for the BEST Discom, Maharashtra.

For your information and further necessary action, please.

Regards

S.P.Makwana
Chief Engineer (Planning),BEST
Nodal Officer, RDSS

Attachments:

- Letter to PFC regarding submission of Action Plan & DPR.pdf

Lokesh Chandra I.A.S.
General Manager

BRIHAN - MUMBAI ELECTRIC SUPPLY & TRANSPORT UNDERTAKING
BEST Bhavan, BEST Marg, Colaba,
Mumbai - 400 001.
Tel. : 022-22873961, 022-22873962
Fax : 022-2285 1244
E-mail :gm@bestundertaking.com

Ref.No. GM/ AGMES/18668 /2022 Date: 22nd August 2022

Executive Director (IPDS)
Power Finance Corporation Limited
Urja Nidhi, 1, Barakhamba Lane,
Connaught Place,
New Delhi –110001

Sub:- Submission of Action Plan & DPRs under RDSS covering Loss Reductions works for Rs. 2321 Cr, Modernization & System Augmentation works for Rs. 430.63 Cr, Metering works for Rs. 708.54 Cr and Capacity building & training for Rs. 0.81 Cr, totalling Rs. 3460.98 Cr for the BEST Discom, Maharashtra state.

Sir,

Please find attached herewith signed copy of Action Plan & DPRs for Loss Reductions works for Rs. 2321 Cr, Modernization & System Augmentation works for Rs. 430.63 Cr and Metering works for Rs. 708.54 Cr and Capacity building & training for Rs. 0.81 Cr, totalling Rs. 3460.98 Cr for the BEST Discom, Maharashtra state under Revamped Distribution Sector Scheme (RDSS). The same will be updated on RDSS portal.

In this regards, it is confirmed that:-

1. Action Plan & DPRs have been prepared in accordance with RDSS Guidelines/ MoP Directives.
2. There is no overlapping of proposed works with any other Scheme.
3. Action Plan & DPRs have been prepared in accordance with approved Action Plan/ Result evaluation frameworks by State Cabinet on 27.07.2022 (Copy attached Annexure-1)
4. DPRs have been duly recommended by DRC. (Recommendations of DRC enclosed as Annexure-2).
5. Rates under Loss Reduction and Modernization & System Augmentation DPRs have been taken from latest available Schedule of Rates (SoR) and

the rates derived in turnkey project under IPDS scheme executed by BEST. For the items which are not covered in SoR/ Turnkey Project under IPDS the approved market rates have been taken. Rates for Smart Metering works have been taken as Benchmark Lifecycle cost as provided in Standard DPRs of Smart Metering works. Rates for SCADA DPRs are as per Benchmark Cost provided in Model SCADA DPR Template.

6. Any non-eligible items in accordance with clause 4.1 of RDSS guidelines have been excluded.
7. Smart metering works have been proposed in Totex mode and all consumers Meters are in Pre-paid mode while System Meters are communicable AMI/AMR meters.
8. For Smart Metering works 1080667 nos. meters in Totex mode and pre-paid mode are proposed to be installed under RDSS scheme in accordance with RDSS guidelines.
9. Capex proposed for loss reduction are commensurate with loss level, root causes and corresponding corrective measures.
10. Capex proposed under Modernization & System Augmentation DPRs are in accordance with Action Plan and are for strengthening & augmentation of distribution network and enhancement of power supply reliability.
11. The works for Loss Reduction/ Modernisation are proposed to be executed by Turnkey mode while for Smart Metering as Totex Mode.
12. Authorized signatory details for RDSS is attached. (Annexure 3).

It is requested to kindly put up these Action Plan & DPRs to Monitoring committee of RDSS for approval.

Yours faithfully,

(**Lokesh Chandra**)
General Manager

22/8/22

02:10: RDSS: 2021: I: BEST 21.11.2022

The Principal Secretary
Department of Energy, Govt. of Maharashtra,
3rd Floor, Main imarat, Madamkama Road,
Huttama Rajguru Chowk Mantralaya,
Mumbai Maharashtra - 400032

Sub: Financial assistance to BEST for implementation of Projects under Revamped Distribution Sector Scheme (RDSS) of Govt. of India in the State of Maharashtra.
Grant No. 21981001 (RDSS Metering Works)
Grant No. 21982001 (RDSS Loss Reduction Works)
Grant No. 21984S01 (RDSS PMA for Smart Metering Works) and
Grant No. 21984L01 (RDSS PMA for Loss Reduction Works)

Sir,

1. With reference to BEST letter dated 22.08.2022 regarding financial assistance under Revamped Distribution Sector Scheme (RDSS), we are pleased to convey that Monitoring Committee for RDSS constituted under the Chairmanship of Secretary (Power), Govt. of India, in its 13th meeting held on 28.10.2022 has approved the Action plan and Detailed Project Report (DPRs) for Loss Reduction works and Prepaid Smart Metering works of Brihanmumbai Electricity Supply and Transport Undertaking (BEST) under RDSS scheme as per below mentioned details:

   a) Results Evaluation Matrix for BEST as enclosed at **Annexure A** along with pre-qualifying criteria.
   b) DPR for Prepaid Smart metering works with total Project Cost of Rs. 659.17 Cr with Government Budgetary Support (GBS) of Rs. 146.69 Cr including incentive for Phase-I as per details in **Annexure B**.
   c) DPR for Infrastructure– Loss reduction works with total Project Cost of Rs. 972.88 Cr with GBS of Rs. 583.73 Cr as per details in **Annexure C**.
   d) Project Management Agency (PMA) charges of Rs. 17.07 Cr for Prepaid Smart Metering works and Infrastructure- Loss reduction works with GBS of Rs. 10.24 Cr as per details in **Annexure D**.
   Summary of approved projects cost and GBS for Projects and PMA is attached at **Appendix-I**.

2. **Funding Pattern:**

   a. The funding Pattern for BEST in the State of Maharashtra is given below:

Item Description	GBS % (Max)
Prepaid Smart metering solution at consumer, DT, and feeder level including integration of existing infrastructure	15% of the approved cost of metering including the operational cost, provided that it is not more

	than Rs. 900 per meter for consumer metering only.
Distribution Infrastructure works	60% of the approved cost of Distribution infrastructure works
PMA Charges for Metering and Infrastructure works	60% of the approved cost of PMA

b. The project cost approved by the Monitoring Committee or actual cost incurred whichever is less, shall be the eligible cost for determining the grant under the scheme for Infrastructure works and PMA Components. Any cost overrun after approval of the project by Monitoring Committee due to any reason whatsoever shall not be eligible for any grant and shall be borne by the BEST/respective State Government.

c. The release of GBS by Government of India will be subject to prescribed scheme guidelines and would be contingent to award of prepaid smart metering works & its satisfactory progress.

3. The terms and conditions of the sanction are as given below:

a) BEST to ensure implementation of the scheme in accordance with all the prescribed scheme guidelines (including SBDs).

b) <u>Prepaid Smart Metering works:</u>

i. DISCOM to submit the timelines for completing ongoing Smart Metering works. Further nodal Agency to ensure that timelines for completing Smart Metering (both Consumer and System metering) are adhered to and all consumers in the State/ DISCOM area are covered under Smart Metering within these timelines as per scheme guidelines.

ii. Funding under Metering component will be available only to Prepaid smart meters operating in prepayment mode for consumers, and in accordance with the uniform approach indicated by the Central Government, with implementation in OPEX/TOTEX mode.

iii. The Grant for smart metering works would be released in three equal yearly instalments subject to fulfilment of performance criteria including prescribed SLAs. Further, the grant per meter would also be rationalized considering exclusion of MDM from the scope of AMISP.

iv. A feeder and DT level automated online energy accounting system shall be put in place.

v. All feeders are to be metered with communicable & AMI/AMR meters by 31st December 2022, and shall be integrated with the National Feeder Monitoring System (NFMS) proposed to be put in place shortly.

vi. BEST to complete 100% DT Metering in Phase - I areas by March 2023 and in remaining areas by December 2023 to facilitate energy accounting.

vii. BEST while implementing the prepaid smart metering projects, shall ensure that the remotely readable metering at DT level; Consumer indexing; integration of feeder level data; and the consumer billing database under the AMI contracts are prioritised to be completed latest by March 2023.

viii. Prepaid Smart Meters may be installed outside the consumer premises, may be pole mounted, ground mounted panels, incoming service cables that may be armoured etc.

c) **Infrastructure works & PMA Charges:**

i. All feeders segregated for Agriculture should be solarized under the PM- KUSUM scheme of MNRE or any other similar scheme of State Government.
ii. BEST to carry out feeder level analysis to identify high loss feeders for reduction of losses through appropriate measures proposed in the DPR. The details of such feeders to be included in the DPR and submitted to Nodal Agency to verify the same. Feeder level analysis should be completed as early as possible but within 90 days of sanction.
iii. PMA charges over and above the permitted amount shall be borne by the BEST/ State Government.
iv. Also, services of PMA shall be retained up to completion of the project, without any financial implications beyond that already provided.
v. The Monitoring committee has advised nodal agency to review the tender documents already floated by the BEST in accordance with the respective SBD's. The fund release under RDSS shall be subject to compliance of RDSS guidelines and provisions of SBD's. Some minor deviations may be allowed subject to approval of Nodal Agency and Monitoring Committee.

The detailed terms & conditions of sanction letter is enclosed as **Annexure E**.

4. Result Evaluation Matrix and pre-qualifying criteria:

a) The AT&C losses and ACS-ARR Gap trajectories approved by Monitoring Committee are as given below:

Parameter	Units	Max marks	Base Year	Baseline values	Targets			
					FY 2022	FY 2023	FY 2024	FY 2025
ACS-ARR Gap								
(i) On Cash Basis	Rs./ kWh	30	2021	0.94	0.30	0.20	0.10	0
(ii) On subsidy received basis,				0.705	0.15	0.15	0.09	0
AT&C loss	%	30	2021	8.18%	8.00%	7.80%	7.60%	7.50%

b) BEST to mandatorily meet the pre-qualifying criteria and achieve the specified marks in the Evaluation Matrix based on which DPR for Modernisation & System Augmentation shall be sanctioned and grant for both loss reduction works (other than the advance for DPR for Loss Reduction) and for the Modernisation & System Augmentation works will be released.
c) BEST to ensure timely adoption of all suitable measures to meet the prequalifying criteria and to score at least 60% marks on the agreed Result Evaluation Matrix.
d) If by the end of year 2025-26, the BEST is not eligible for release of any grant, the initial advance of 10% of the grant component of the cost of DPR for Loss Reduction will have to be refunded by the DISCOM.

e) Approval of the Competent Authority shall be taken for changes in Action Plan made after approval of the Cabinet in accordance with direction of RDSS Monitoring Committee/ MOP/ Nodal Agency.

5. Fund Management:

a. BEST shall ensure that funds released under the scheme are utilized for the purpose for which it is released and will not be diverted for any other purposes whatsoever. The grant release from Nodal Agencies to the BEST shall be done through PFMS and the BEST shall use PFMS for fund flows to the lowest level as specified by the Government of India's instructions on the subject under the scheme.
b. BEST shall submit utilization certificates (UC) for the funds released during the financial year in prescribed format latest by 30th April of succeeding year in addition to the UC along with every claim.
c. For release of funds under the Scheme, BEST has to ensure updation of baseline data, physical & financial progress, Quality Monitoring, Fund Management, Asset identification through Geo-tagging, outcomes and achievements for evaluation under Result Evaluation Framework, closure, etc. on the digital platform to be developed by the Nodal Agencies.
d. For works other than metering works under Part A, counterpart funding will be provided by the BEST/ State Government. If BEST takes loan for counterpart funding, such loan will be taken from REC and PFC only. Further, counterpart funding from bilateral/multilateral funding agencies can also be leveraged for which the Government of India would extend benefits of reduced Government Guarantee fee.
e. In case loan component of the project cost is funded by the NBFCs under MoP, then in order to secure the loan, the existing TPA (Tri-partite Agreement) arrangement among Government of India, the State Government and the RBI shall be suitably amended to provide that the loan servicing payments in case of default can be recovered through RBI.

6. A Scheme Implementation Agreement will be signed between the Government of Maharashtra, BEST and Nodal Agency on behalf of MoP within 30 days of issuance of sanction letter. Copy of approved agreement format is attached at **Appendix-II**.

7. The Monitoring Committee is empowered to recall the grant released to the BEST at any stage of the scheme, in case the sanctioned works are left incomplete, or the assets could not be put to use, or funds are utilized for purposes other than those prescribed in the scheme/ as approved by the Monitoring Committee in accordance with the prescribed guidelines.

8. BEST to undertakes to seek full authorization by way of its Resolution passed in subsequent meeting of its Board / State Govt. in order to implement the RDSS Scheme on the said terms and conditions to the satisfaction of the Government of India / Nodal Agency.

9. Any unrecovered/ outstanding dues amounts of earlier Schemes of Ministry of Power, GOI shall also be allowed to be adjusted against releases in the current scheme.

10. It is requested to kindly acknowledge and accept the sanction letter within 15 days from the date of issue of this sanction letter as per the acceptance letter enclosed as **Annexure- F**.

11. The appointment of PMA and/or PIA, if any, should be in line with the RDSS Guideline and MoP letter dated 18th May 2022 & subsequent amendment thereof.

12. District wise and Project area wise bifurcation of work and project cost approved for Infrastructure – Loss reduction works etc. is to be submitted by BEST within 15 days of the issuance of the 13th MCM minutes as per the requirement of MOP/ Nodal Agency.

13. The sanction is subject to undertaking / commitment and implementation by BEST of the SOP issued by Ministry of Power as mentioned in para (o) of the decisions mentioned in minutes of 13th meeting of Monitoring Committee for RDSS.

Yours sincerely,

Encl: As Above

Saurav Kumar Shah
Executive Director
for **Power Finance Corporation**

Copy to:

1. Chairman & Managing Director, Brihanmumbai Electricity Supply and Transport Undertaking, BEST Bhawan, BEST Marg , Colaba, Mumbai, Maharashtra - 400001.
2. Joint Secretary (Distribution), MoP, Shram Shakti Bhawan, Rafi Marg, New Delhi-110001

Result Evaluation Framework for BEST (Maharashtra) **Annexure A**

S No.	Result Parameter	Units	Maximum Marks	Base Year and Baseline values (FY2021)	Targets			
					FY2022	FY2023	FY2024	FY2025
A	**Financial Stability (60% weightage; 65% in 1st year)**							
1	ACS-ARR Gap – Cash basis	Rs./ kWh	30	0.94	0.30	0.20	0.10	0.00
	ACS-ARR Gap – Subsidy received basis			0.705	0.15	0.15	0.09	0.00
2	AT&C loss	%	30	8.18	8.00	7.80	7.60	7.50
3	Outstanding/ Overdue Government Dues	Rs. Crore	15	41.43	30	20	10	0
4	Progress in putting Govt. Offices on prepaid meters (Total: 7634 Nos.)	%	15	0%	0%	5%	100%	100%
5	No. of creditor days (including payment to Gencos for supply of power)	Days Payable	5	9.5	Less than 45 days			
6	No. of debtor days	Days Receivable	5	53.5	Less than 45 days			
			100					
B	**Outcomes of Infra works (20% weightage)**							
1	Hours of supply (Urban)	Avg. Hours/ Day	20	23:53	23:54	23:55	23:56	23:57
2	%age of Feeder Level Energy accounting being published - BEE	%	20	0	0%	100%	100%	100%
3	%age of DT Level Energy accounting being published	%	20	0	0%	100%	100%	100%
4	Reliability of power supply - SAIFI (System Average Interruption Frequency Index)	Nos/ Year	20	2.63	2.50	2.25	2.0	1.50
5	Data availability in the National Feeder Monitoring System / NPP	%	20	0	0%	100%	100%	100%
			100					
C	**Infrastructure Works (10% weightage)**							
	Metering							
1	Consumer Metering [Target : 10,44,000]	%	20	0%	0%	25%	99%	100%

2	DT Metering [Target : 3356]	%	20	0	0%	100%	100%	100%
3	Feeder Metering [Target : 1239]	%	20	0	0%	100%	100%	100%
4	% of Consumers with Prepaid Smart Meters (other than Govt. Dept.)	%	15	-	-	15%	55%	100%
5	Augmentation of substations (add/ replace of DT's) – (Target : 666 Nos)	Nos	15	-	-	35	400	666
6	Replacement of weak/Old UG cables (33, 11KV & 22KV) to improve the quality of supply (Target : 373 Km)	Kms	10	-	-	35	180	373
			100					
D	**Policy and Structural Reforms (10% weightage)**							
1	SCADA	No. of Towns/ %	25	-	0	0%	100%	100%
3	ERP Implementation & Billing Module (Target: 6 Modules)	Yes/ No	25	0	0	0	3	6
4	Training of Discom Officials	Mandays	20	0	0	800	800	800
5	DT Failure rate	%	15	0.54	0.54	0.50	0.45	0.45
6	Digital Payments : as a % of total revenue collected	%	15	64%	65%	67%	70%	75%
			100					

Smart Metering DPR (BEST- Maharashtra) Annexure – B

Sl No.	Major Component	Item Particulars	Expected Life cycle unit cost (Rs. per meter)	Quantity (Phase I)	Quantity (Phase II)	Total Quantity	Estimated cost in Rs. Crores
				No.	No	Nos.	
(1)	(2)	(3)	(4)	(5)	(6)	(7) = (5)+(6)	(8) = (4)x(7)
1	**Consumer Metering**						
1.1		1 Phase Whole Current Smart Consumer Meter	6,000	8,90,071	11,131	9,01,202	**540.72**
1.2		3 Phase Whole Current Smart Consumer Meter	6,000	1,66,339	2,080	1,68,419	**101.05**
1.3		3 Phase LT-CT Operated Smart Consumer Meter	6,000	5,978	75	6,053	**3.63**
1.4		3 Phase CT-PT Operated HT Smart Consumer Meter	6,000	204	3	207	**0.12**
	Sub-Total			**10,62,592**	**13,289**	**10,75,881**	**645.53**
2	**DT Metering***	3 Ph LT-CT Operated DT Meter	23,000	3,356	42	3,398	**7.82**
3	**Feeder Metering**	3 Ph CT-PT Operated feeder Meter	42,000	1,239	16	1,255	**5.27**
4	**Boundary Metering**	3- phase CT/PT operated Boundary meter	42,000	131	2	133	**0.56**
	Total			**10,67,318**	**13,349**	**10,80,667**	**659.17**
	Total GBS excluding incentive for Phase – I						**98.88**
	Incentive for Phase – I						**47.82**
	Total GBS including Incentive of Phase - I						**146.69**

***100% DT metering to be completed by December 2023**

Infrastructure works under Loss Reduction (BEST-Maharashtra) **Annexture C**

S.No.		Description	Unit	Unit Cost (in Rs Lakhs)	Qty.	Total Cost (in Rs. Crore)
A	**ERP, Billing Software and IT/OT enablement works**					
	1	New MBC solution (SaaS mode)	LS	2259.00	1	22.59
	2	ERP Solutions incl. License cost & Implementation cost etc. (MM, FICO, HCM, AM, DMS, BI/BW)	LS	3219.00	1	32.19
	3	Infrastructure Hardware (IaaS) Cost for ERP deployment	LS	870.00	1	8.70
	4	Network connectivity across all sites, head office and central cloud infrastructure	LS	667.00	1	6.67
	5	Complete setup of centralized Customer Call Centre	LS	221.00	1	2.21
	6	Contingency Charges@5% of Project Cost	LS	362.00	1	3.62
		Sub Total (A)				**75.98**
B	**Implementation of SCADA & DMS**					
	1	**Implementation of SCADA & DMS**	LS	14372.00	1	143.72
		Sub Total (B)				**143.72**
C	**Replacement of old Switchgear**					
	1	Replacement of 33 KV, 1500MVA Switchgears with relays	Nos.	17.32	19	3.29
	2	Replacement of 11 kV, 350MVA Switchgears with relays at RSS (10 switchgear per panel)	Panels	63.06	32	20.18
	3	Replacement of 11 kV OCB Switchgears by VCB Switchgears at DSS (No. given of DSS)	Nos.	21.40	396	84.74
	4	Replacement of Oil Ring Main Unit by SF6 Ring Main Unit	Nos.	8.23	95	7.82
		Sub Total (C)				**116.03**

D	**Renovation /Augmentation of Infrastructure at Power/Receiving Substations**					
	1	Additional / Replacement of Transformer (Power Transformer) - 16/ 20 MVA ONAN/ONAF	Nos.	251.16	20.00	50.23
		Sub Total (D)				**50.23**
E	**Renovation /Augmentation of Infrastructure at Distribution Substations**					
	1	Augmentation of substations (additional / replacement of Distribution transformer (995 KVA) along with Breakers/Cable)	Nos.	28.95	666	192.80
	2	No of New RMUs	Nos.	8.23	104	8.56
		Sub Total (E)				**201.36**
F	**Renovation /Augmentation of HV and LV lines**					
	1	Replacement / Additional of 33KV, with 3cx 300 sq.mm Cu. XLPE Cables	Kms	132.68	120	159.22
	2	Replacement / Additional of HV weak/Old cable with 3C X 240 SQ. MM XLPE AL. cables	Kms	63.24	203	128.38
	3	Replacement / Additional of LV weak/Old cable with LV 4C X 300 SQ. MM XLPE AL. cables	Kms	50.86	50	25.43
		Sub Total (F)				**313.03**
G	**Auxiliary component cost for Consumer metering**					
	1	Auxiliary component cost for Consumer metering (Single pole MCB, Copper service cable etc)	NOS	0.01	523357	**72.53**
		Sub Total (G)				
	Total Cost of Loss Reduction in Crs. (A+B+C+D+E+F+G)					**972.88**
	Total GBS @ 60%					**583.73**

Details of PMA Charges (BEST Maharashtra) **Annexure – D**

Sl. No.	Particulars	Total Project Cost	GBS*	PMA Charges**	GBS for PMA Charges***
1	**Smart Metering Works**	659.17	98.88	2.47	1.48
2	**Infrastructure Works – Loss Reduction**	972.88	583.73	14.59	8.76
	Total	**1632.05**	**682.60**	**17.07**	**10.24**

* **Excluding incentives in case of Smart Metering works of Phase-I.**
** **2.5% of GBS for Smart Metering (excluding incentive) and 1.5% of total project cost for Infrastructure works.**
*** **60% of PMA Charges.**

Appendix-I

Approved DPR Cost and Government of India (GoI) Grant for BEST, Maharashtra

All amount in Rs. Cr.

Sl. No.	Grant No.	Name of the Project	Approved Project Cost	GoI Grant* Sanctioned	Additional Incentive** for Phase-I Smart Metering (GoI Grant)
1	21981001	RDSS Smart Metering Works	659.17	98.88	47.82
2	21984S01	RDSS PMA Grant for Smart Metering works	2.47	1.48	NA
Total			**661.64**	**100.36**	
3	21982001	RDSS Loss Reduction Works	972.88	583.73	NA
4	21984L01	RDSS PMA Grant for Loss Reduction Works	14.59	8.76	NA
Total			**987.47**	**592.49**	
Grand Total			**1649.11**	**692.85**	**47.82**

** 15% of the approved cost of the metering including the operational cost, provided that it is not more than Rs. 900 per meter for consumer metering only.*

*** Maximum incentive GBS for deployment of prepaid Smart meters by December, 2023- 7.50% of the cost per consumer meter including operational cost or Rs. 450 per consumer meter, whichever is lower*

General Terms and Conditions Applicable for Availing Financial Assistance under Revamped Distribution Sector Scheme

The terms and conditions of financial assistance as set out here under shall be binding on the DISCOM and State Government in accordance with the Scheme Implementation Agreement to be executed amongst PFC (on behalf of MoP), State Government & State Discom.

A. Project Financing & Fund Management:

1. The funding pattern under the scheme is as given below:

Part	Item Description	GBS % (Max)
Part A	Component I: Prepaid Smart consumer metering solution including Communicable/Smart System Metering at DT, feeder and boundary level including integration of existing infrastructure.	15% / 22.5% of meter lifecycle cost as the case may be (limited up to Rs.900 or Rs.1350 respectively per meter for Consumer metering only)
	Component II: Distribution Infrastructure works including SCADA, DMS, AB cables, feeder segregation etc.	60% or 90% of project cost as the case may be

2. The project cost approved by the Monitoring Committee or actual cost incurred whichever is less, shall be the eligible cost for determining the grant under the scheme for Component II and III of Part A. Any cost overrun after approval of the project (by Monitoring Committee) due to any reason whatsoever shall not be eligible for any grant and shall be borne by the DISCOM/respective State Government.

3. Part A: Component I- Metering:

   3.1. The operation and maintenance cost of the meter over the life of the meter as per the SBD shall be included in the project cost.

   3.2. Prepaid Smart metering for consumers, and System metering at Feeder and Distribution Transformer level with communicating feature along with associated Advanced Metering Infrastructure (AMI) will be done in TOTEX mode through PPP, to facilitate reduction of Distribution losses and enable automatic measurement of energy flows and energy accounting as well as auditing in line with the BEE regulations which will help in identifying high loss packets.

   3.3. Funding under Metering component of Part A will be available only if the DISCOM agrees to the operation of smart meters in prepayment mode for consumers, and in accordance with the uniform approach indicated by the Central Government, with implementation in TOTEX mode. Pre-paid smart metering works carried out after 1st January, 2020 will be eligible for funding, if they were carried out in TOTEX mode, after obtaining approval from Monitoring Committee in this regard

   3.4. In areas which do not have communication network, installation of prepayment meters, may be taken up.

   3.5. The financial support for Metering Component under Part A of the scheme shall be as under:

3.5.1. *Other than Special Category States:* 15% of the project cost of the metering works including the operational cost, limited upto Rs. 900 per meter for consumer metering only would be provided as grant by Government of India. Further, an incentive @ 7.5% of the cost per consumer meter worked out for the whole project or Rs. 450 per consumer meter, whichever is lower, would be for prepaid Smart meters installed within the targeted timeline of first phase mission i.e. by December, 2023.

3.5.2. *Special Category States (All North Eastern States including Sikkim, Himachal Pradesh & Uttarakhand and union Territories of Jammu & Kashmir, Ladakh, Andaman & Nicobar Islands & Lakshadweep)*: 22.5% of the project cost of the metering works including the operational cost, limited upto Rs. 1350 per meter for consumer metering only would be provided as grant by Government of India. Further, an incentive @ 11.25% of the cost per consumer meter worked out for the whole project or Rs. 675 per consumer meter, whichever is lower, would be for prepaid Smart meters installed within the targeted timeline of first phase mission i.e. by December, 2023.

4. Part A: Component II- Distribution Infrastructure works:

4.1. The eligible project cost shall include Central taxes and all fees like forest clearance, highway and railway crossing fee etc. The project cost shall however not include the cost of land, cost of buildings other than sub stations and anti-theft police stations, service lines to new consumers, compensation towards ROW (except forest clearance, highway and railway crossing fee), office equipment & fixtures, spares (other than mandatory spares prescribed by manufacturer), T&P, road cutting charges, vehicles and salaries and establishment expenditure. Further, the project cost shall be reduced to the extent of any Liquidated Damages actually levied, but the encashment of performance security or bid security (EMD) shall not reduce the project cost.

4.2. Feeders having significant agricultural load (30% or more) may be considered for separation under the loss reduction part of DPR and the same should also be proposed for solarization under the PM- KUSUM scheme of MNRE or any other scheme of Government.

4.3. Discom to submit feeder wise analysis of high loss feeders being taken up on priority under loss reduction works, within the 3 months of sanction to Nodal Agency.

4.4. The financial support for Part A: Component II under the scheme shall be as under:

4.4.1. Other than Special Category States:

a) 60% of project cost of works other than metering works under Part A and approved cost of PMA would be provided as grant by Government of India.

b) 40% of project cost of works and approved cost of PMA shall be arranged through own sources of State Government/ Utility or may avail loan from PFC & REC. Funding from bilateral/multilateral funding agencies can also be leveraged for which the Government of India would extend benefits of reduced Government Guarantee fee.

4.4.2. Special Category States (All North Eastern States including Sikkim, Himachal Pradesh & Uttarakhand and union Territories of Jammu & Kashmir, Ladakh, Andaman & Nicobar Islands & Lakshadweep)

a) 90% of project cost of works and approved cost of PMA would be provided as grant by Government of India.

b) 10% of project cost of works and PMA works shall be arranged through own sources of State Government/ Utility or may avail loan from PFC & REC. Funding from bilateral/multilateral funding agencies can also be leveraged for which the Government of India would extend benefits of reduced Government Guarantee fee.

5. Part A: Component III- Project Management:

5.1. 2.5% of the GBS of metering component and 1.5% of project cost of Distribution infrastructure works component, shall be allowed as PMA charges under the Scheme. PMA charges, over and above the permitted amount shall be borne by the respective DISCOM / State government.

5.2. 60% of the PMA charges allowed under the scheme for metering and Distribution infrastructure work components would be provided as grant by Government of India for other than Special Category States. For Special Category States, Government of India grant would be 90% of the allowed PMA charges.

5.3. Services of PMA shall be retained up to physical completion of the project, without any financial implications beyond that already provided

6. Release of grant to Discom by PFC:

6.1. Release of grant for Metering:

a) Grant for metering works, will be due when a meter is successfully installed and commissioned, and essential services and data related to it are provided for a period of one month to the DISCOM. It will be essential that a consumer meter is recharged at least once, for the release of grant pertaining to it to become due.

b) The DISCOM may submit claim for release of grant in a phased manner when grant becomes due against 5% of the total meters planned to be installed, or such number of meters or such period that the Nodal Agencies deem practical and convenient. After the first release, subsequent releases shall be subject to submission of utilization certificate of the previous releases.

6.2. Release of grant for Distribution Infrastructure works:

6.2.1. **Phase I- 10% of the grant for Loss reduction part of Project** (5% on sanction and further 5% on award of works)

a) Approval of the project by the Monitoring Committee
b) Execution of Scheme Implementation agreement

6.2.2. **Phase II**
30% of the grant for Loss reduction part of project in FY 2022-23 (including the advance 10%):

a) Qualification as per the Results Evaluation Framework of the Action Plan for FY 2021-22.
b) Submission of a certificate regarding utilization of grant already released in the Format prescribed by Ministry of Finance;

c) Submission of a certificate regarding receipts and expenditure on the project certified by a Chartered Accountant ;
d) Submission of physical and financial (grant and counterpart funding) progress report;
e) Sanction letter for counter-part funding / DISCOM's own resources / State Government funding for Distribution Infrastructure Works.
f) Award of prepaid Smart Metering works to be covered in the first phase to be completed by December 2023, as per the clause 3.2.2.2 of scheme guidelines.

30% of the grant for Modernization & System Augmentation part of project in FY 2022-23 (10 % on sanction and 20% on award of works.)

a) Approval of the project by the Monitoring Committee
b) Execution of Scheme Implementation agreement
c) Award of prepaid Smart Metering works to be covered in the first phase to be completed by December 2023, as per the clause 3.2.2.2 of scheme guidelines.

6.2.3. **Phase III: Cumulative release of 60% of grant component of the project cost of DPRs in FY 2023-24:**

a) Qualification as per the Results Evaluation Framework of the Action Plan for FY 2022-23.
b) Submission of a certificate regarding utilization of grant already released in the Format prescribed by Ministry of Finance;
c) Submission of a certificate regarding receipts and expenditure on the project certified by a Chartered Accountant;
d) Submission of physical and financial (grant and counterpart funding) progress report;
e) Sanction letter for counter-part funding / DISCOM's own resources / State Government funding for Distribution Infrastructure Works.

6.2.4. **Phase IV: Cumulative release of 95% of grant component of the project cost of DPRs in FY 2024-25:**

a) Qualification as per the Results Evaluation Framework of the Action Plan for FY 2023-24.
b) Submission of a certificate regarding utilization of grant already released;
c) Submission of a certificate regarding receipts and expenditure on the project certified by a Chartered Accountant;
d) Submission of physical and financial (grant and counterpart funding) progress report;
e) Sanction letter for counter-part funding / DISCOM's own resources / State Government funding for Distribution Infrastructure Works.

6.2.5. **Cumulative release of 100% of grant component of the project cost of DPRs in FY 2024-25:**

a) Submission of project completion report as per clause 4.9.1 of scheme guidelines.

6.2.6. Release of grant for PMA

Grant for PMA component shall be released, subject to the following conditions:
(i) Grant shall be released on the basis of the sanctioned cost or award cost, whichever is lower;

(ii) Grant will be released in the month of March, every year;
(iii) 10% shall be released as advance in the year of sanction;
(iv) 30% shall be released each year subsequent to the sanction year;
(v) Subsequent releases shall be subject to submission of utilization certificate of the previous releases and achievement against deliverables as specified in the SBD referred to in Clause

Discoms shall comply the amendments/supplemental to conditionalities prescribed for release of particular installment, if any, issued by MoP/PFC in future.

7. If DISCOM achieves the targets as per Action Plan of any previous FY in a subsequent year, then it shall be eligible for release of grant pertaining to that FY.

8. DISCOM (Implementing Agency) shall open an Assignment Account with NDRO, Reserve Bank of India (RBI) as Sub Agency for implementation of the RDSS through PFC (Central Nodal Agency) or as per the latest policy/ guidelines/ directives issued by Ministry of Power from time to time. All project related payments to the contractors/ agencies by DISCOM shall be done directly from the Assignment Account with RBI.

9. Regarding counterpart funding, DISCOM shall open a dedicated scheme account in a nationalized bank having E-banking facility or as per directions issued by MoP/ Nodal Agency. MoP/ Nodal Agency shall have the view right of the said Bank Account.

10. Any interest earned on grant shall be remitted to Ministry of Power's bank account on regular basis and at least once in a quarter.

11. Since grant under the scheme is Central Government money and DISCOMs are only the custodian of this money, income tax is not payable on interest earned on this money. DISCOMs shall take necessary steps to seek exemption from Income Tax Department regarding deduction of Tax at Source by the bank on interest accrued on un-utilized fund under the scheme. However, in case of deduction of TDS by bank, the Utilities shall claim refund of the deducted amount from Income Tax Department directly while filing annual tax return and remit it to Ministry of Power's account.

12. The Discom shall ensure that funds released under the scheme are utilized for the purpose for which it is released and will not be diverted for any other purposes whatsoever. In case of any breach or deviation further release of funds shall be stopped.

13. The grant release from Nodal Agencies to the DISCOMs shall be done through PFMS and the DISCOMs shall use PFMS for fund flows under the scheme. DISCOMs receiving funds under the scheme are to be registered / mapped in PFMS. The DISCOMs shall mandatorily enter details like receipts, expenditures, etc in Public Fund Management System (PFMS) portal. In case of non-entering desired details in PFMS portal, banks may not consider release of funds to Contractors.

14. DISCOM shall submit utilization certificates (UC) for the funds released during the financial year in prescribed format latest by 30th April of succeeding year in addition to the UC along with every claim.

15. DISCOMs shall maintain books of accounts both for receipt of funds from Nodal Agency and release to contractors for each of the project. The DISCOM shall ensure that fund shall not be invested in any other bank/branch, whether for short term or medium term, including fixed deposits.

16. The DISCOM will ensure audit of the scheme accounts relating to receipts of funds from GoI / Nodal agency and expenditure incurred by the DISCOM against such receipts during the financial year by an independent Chartered Accountant and furnish a report to the Nodal agency latest by 30th June of the succeeding year.

17. The works and finances would be open to audit by the office of the Comptroller & Auditor General of India (C&AG) as well as Internal Audit Wing, Office of Controller of Accounts, MoP

18. **Recall of Grant:**

18.1. If by the end of year 2025-26, a DISCOM is not eligible for release of any grant, the initial advance of 10% of the grant component of the cost of DPR for Loss Reduction will have to be refunded by the DISCOM.

18.2. The Monitoring Committee is empowered to recall the grant released to the DISCOMs at any stage of the scheme, in case the sanctioned works are left incomplete, or the assets could not be put to use, or funds are utilized for purposes other than those prescribed in the scheme/ as approved by the Monitoring Committee in accordance with the prescribed guidelines.

18.3. Any unrecovered/ outstanding dues amount from earlier Schemes of Ministry of Power, GoI shall also be allowed to be adjusted against releases in the current Scheme.

19. In case loan component of the project cost is funded by the NBFCs under MoP, then in order to secure the loan, the existing TPA (Tri-partite Agreement) arrangement among Government of India, the State Government and the RBI shall be suitably amended to provide that the loan servicing payments in case of default can be recovered through RBI.

B. Project Implementation by Discom:

20. Mode of Implementation:

20.1. **Metering**: These projects shall be implemented in TOTEX mode (Total expenditure includes both capital and operational expenditure) with the following options:

a) Installation and commissioning of meters and cost recoveries in equated monthly instalments by PPP or implementation partner (or service provider) with no upfront payment by DISCOM

b) Some initial payment shall be made to the service provider upon installation and commissioning of the meters, with the rest of the payments made on equated monthly / quarterly instalments over the operational period.

20.2. **Distribution infrastructure works:** The projects shall be implemented normally on turnkey basis. However, certain works may be taken up on partial turnkey basis or departmentally with the approval of DRC and consent of Nodal Agency, subject to, overall guidance of the Monitoring Committee.

21. The scheme shall be implemented in accordance with the Ministry of Power's Office Memorandum No. 20/9/2019-IPDS dated 20th July, 2021, Scheme Implementation Agreement and operational guidelines issued including amendments/supplemental if any.

22. Discom to follow Standard bidding Document (SBD) as issued by Nodal Agencies for selection of AMI service provider, for Distribution infrastructure works, SCADA and PMA.

23. The DISCOMs may make minor changes in the SBD, while retaining its basic structure and essence, provided that the approval of the Nodal Agency is taken for the changes, subject to, overall guidance the Monitoring Committee

24. Prepaid smart Metering projects taken up by DISCOMs through MOU route with CPSUs or their JVs and Subsidiaries shall also be permitted subject to their being implemented in TOTEX mode as per proposed model circulated by Ministry of Power vide letter No. 14/07/2021- UR&S-II-(E-260509) dated 19.01.2022.

25. Keeping in view the aims and objectives of Atma Nirbhar Bharat Abhiyan, Ministry of Power has issued Public Procurement (Preference to Make in India) for Purchase Preference (linked with local content) Order in respect of Power Sector on 28.7.2020. This order is in line with the DPIIT Notification No. P-45021/2/2017-PP(BE-II) dated 4th June,2020. This order along-with amendments, if any, from time to time, shall be followed by the DISCOMs in the implementation of the scheme. However, in case a DISCOM is availing funds through multi-lateral financial institutions, applicable DEA directives may be followed.

26. Discom may appoint one or more PMA for project management. Existing PMA of DDUGJY or Saubhagya or IPDS or PMDP or any other Central/State Govt scheme of power sector may be used for preparation of DPR and Action Plan, and the expenses incurred will be eligible under the scheme. For all other works including bid process, monitoring of implementation, project completion, result evaluation and related works, a new PMA will have to be appointed as per the SBD as circulated by the Nodal agency. DISCOMs desirous of appointing CPSUs or their JVs and subsidiaries as PMA on nomination shall be required to obtain a specific approval from the Ministry of Power through concerned Nodal Agency. Any such proposal would be sent by the DISCOM along with the imperative need along with a detailed justification.

27. The sunset date for the scheme will be 31.03.2026, the works executed beyond which will not be eligible for release of Central Government grant.

28. Discom to ensure updation of MIS web portal to be developed by the Nodal Agencies for submission of Action Plan & DPRs, capturing baseline data, physical & financial progress, quality reports, outcomes and achievements for evaluation under Result Evaluation Framework, closure, etc.

C. Result Evaluation Framework:

29. Discom to meet the pre-qualifying criteria and achieve the specified marks in the Evaluation Matrix based on which DPR for Modernisation & System Augmentation shall be sanctioned and grant for both loss reduction works (other than the advance for DPR for Loss Reduction) and for the Modernisation & System Augmentation works will be released.

30. For qualifying in the Evaluation Matrix, a DISCOM needs to score a minimum of 60 marks.

D. Monitoring & Evaluation

31. This scheme would be reviewed by the District Electricity Committees, to be notified by the State Government in compliance to the notification of Government of India dated 16th Sept, 2021.

32. The DISCOM shall be responsible & accountable for assuring quality in the scheme works. Accordingly, DISCOM shall formulate a comprehensive Quality Assurance (QA) and Inspection Plan with an objective to build quality infrastructure under the project. The QA and Inspection Plan shall be an integral Part of the contract agreement with turnkey contractor or equipment supplier/vendor and erection agency as the case may be in case of partial turnkey and departmental execution of works. Documentation with regard to Quality Assurance & Inspection Plan shall be maintained by DISCOM and kept in proper order for scrutiny during the course of project execution and for future reference. The DISCOM has to ensure that the quality of

material/equipment supplied at site and field execution of works under the project is in accordance with Quality Assurance & Inspection Plan. DISCOM may use the MQP (Manufacturing Quality Plan) and FQP (Field Quality Plan) used in DDUGJY and IPDS schemes by suitably modifying as per requirement of this scheme.

33. In addition to the in-house quality checks and processes followed by the DISCOM, the nodal agency (PFC/ REC) shall carry out concurrent inspection of works through Third Party Quality Monitoring Agency (TPQMA).

E. Interpretation

Any dispute arising out of this Agreement/ interpretation of any clause may be referred to Secretary (Power), Govt. of India whose decision shall be final and binding on all parties. In case of any inconsistency between the Terms and Conditions of this sanction letter and the provisions of RDSS Guidelines, the latter shall prevail.

Appendix-II

[This MoA is to be executed on Non-Judicial Stamp Paper of Rs 200/-]

IMPLEMENTATION AGREEMENT AMONGST

_____ Limited, the Nodal Agency onbehalf of Ministry of Power, Government of India

AND

State Government,

AND

Power Utility

For Implementation of Revamped Distribution Sector Scheme

This TRIPARTITE MEMORANDUM OF AGREEMENT (hereinafter referred to as the **"Implementation Agreement")** is made this ..... day of .....20....

BY AND AMONGST

_____ Limited, A Government of India Undertaking, having its Registered Office at _____ (hereinafter referred to as "**Nodal Agency**" or "_____") part on behalf of Ministry of Power, Government of India, which expression shall unless it be repugnant to the subject or context thereof, include its successors and assigns, of the **FIRST PART;**

AND

State Government of..... (hereinafter referred to as "**State Government**") which expression shall unless it be repugnant to the subject or context thereof, include its successors and assigns, of the **SECOND PART**

AND

..... *[Distribution Company]* having its Head/Registered Office at ..... (hereinafter referred to as **"DISCOM"** which expression shall unless repugnant to the context or meaning thereof includes its successors and assigns) of the **THIRD PART**.

The Nodal Agency, the State Government, and the Utility are hereinafter also referred to collectively as the **"Parties"** and individually as the **"Party"**.

WHEREAS the Government of India has launched **Revamped Distribution Sector Scheme** (hereinafter referred to as "**RDSS**") as a Central Sector Scheme to improve the operational efficiencies and financial sustainability, by providing financial assistance to DISCOMs for strengthening of supply infrastructure. The DISCOM can take up projects relating to installation of prepaid smart meters for all consumers along with associated AMI, communicable meters for DTs & Feeders to enable automated Energy Audit and Accounting, SCADA, DMS & RT-DAS, Enterprise Resource planning (ERP) and other ICT initiatives, and Distribution infrastructure works as required

for strengthening and modernizing the system as well as measures for loss reduction with the end objective of reducing losses and ensuring 24 x 7 power supply , Public Charging Infrastructure for Electric Vehicles (EVs), Disaster Resilient Infrastructure works (hereinafter referred to as the "**Project**") on the terms & conditions contained in the **Order No. F. No. 20/9/2019-IPDS dated 20.07.2021 issued by Ministry of Power and RDSS guidelines and any amendments thereto issued by the nodal agency.**

NOW IT IS HEREBY AGREED BY AND BETWEEN THE PARTIES HERETO as follows:

1. This Agreement signed between (a) _____ Limited, the Nodal Agency on behalf of Ministry of Power, Government of India;(b) State Government and (c) Discom for implementation of Revamped Distribution Sector Scheme shall be implemented by the Discom in letter and spirit. Government of India will monitor implementation of the precedent conditions agreed to upon in this Agreement before releasing funds through Nodal Agency.

2. This Agreement shall be read in accordance with the provisions of **Order No. F. No. 20/9/2019-IPDS dated 20.07.2021 issued by Ministry of Power and RDSS guidelines and any amendments thereto issued by the nodal agency**. The said RDSS Guidelines shall form an integral part of this agreement as Annexure – 'A' as if fully set forth hereunder and all the terms and conditions set out in the said Revamped Distribution Sector Scheme Guidelines shall be binding on the Parties hereto.

3. The parties have agreed that the individual project(s), as proposed by DISCOM and sanctioned by the Monitoring Committee (MC) /nodal agency, under Revamped Distribution Sector Scheme (RDSS), commencing from the financial year 2021-22 shall be deemed to have been covered under this agreement. The terms and conditions of sanction by the MC/nodal agency for a particular project, as contained in the sanction letter (including the supplementals, modifications if any) issued by the nodal agency, shall also form part and parcel of this agreement.

4. DISCOM has to formulate, plan, design, develop and implement the projects in accordance with the Standard Bidding Documents for various components as circulated by Nodal agencies and in line with the Central Vigilance Commission (CVC) guidelines. Also, guidelines, SBDs, specifications and construction standards shall be adopted wherever applicable.

5. State Government and DISCOM agree that in the event the projects are not implemented satisfactorily in line with the sanction terms and conditions, left incomplete or the assets could not be put to use, or funds are utilized for purposes other than those prescribed in the scheme/ as approved by the Monitoring Committee in accordance with the prescribed guidelines then Monitoring Committee is empowered to recall the grant released to the DISCOMs at any stage of the scheme.

6. State Government and DISCOM agree that performance in the Reforms Based Results Linked Revamped Distribution scheme would also form integral part of the financing norms of PFC, REC, Banks/FIs and MDBs for any project in the Distribution Sector even beyond those related to funding under this scheme.

7. State Government and DISCOM agree that if due to adverse performance in the Reforms Based Results Linked Revamped Distribution scheme, funds does not get released then any advance amount released shall be refunded to the Government of India.

8. PROJECT FINANCING

i) For Smart Metering works:

The financial support under the scheme shall be as under:

a) 15% of sanction cost limited up to Rs.900 per meter for Consumer metering would be provided as grant by Government of India (22.5% for special category limited to Rs.1350)

b) The implementation of the metering scheme is proposed through PPP on TOTEX mode. State Government/DISCOM may also provide budgetary support in TOTEX mode.

c) An incentive of 7.5% (11.25% for special category) of the cost per consumer meter worked out for the whole project or Rs. 450 per consumer meter (Rs.675 for special category), whichever is lower, would be provided for prepaid Smart meters installed within the targeted timeline of first phase mission i.e. by December, 2023. The decision of Monitoring Committee shall be final while calculating Additional grant applicable to any project under the Scheme.

d) The consumer meters shall mandatorily be prepaid meters to be eligible for availing grant under the scheme.

e) Discoms shall ensure Feeder/DT metering in accordance with the requirements of the scheme/ directions of MOP

ii) **For Distribution Infrastructure works:**

a) The sanction of DPR for Modernisation & System Augmentation and release of grant for both loss reduction works (other than the advance) and for the Modernisation & System Augmentation works will be based on the DISCOM meeting the pre-qualifying criteria and achieving the specified marks in the Evaluation Matrix. Also, Monitoring Committee will issue sanctions of loss reduction works contingent to sanctions of metering works being already in place; or, Smart metering works being already implemented by the DISCOMs in line with the SBD for Smart prepaid metering in TOTEX mode; or together, as the case may be.

b) The financial support under the scheme shall be as under:

- The grant shall be restricted to 60% (90% for special category) of sanction cost or award cost or executed cost (excluding State & local taxes) whichever is lower *(this lowered cost herein after shall be referred to as 'Sanction cost')*. The state & local taxes are not admissible under RDSS and to be borne by the State Government/Discom
- 40% (10% for special category) of sanction cost shall be either loan from Financial Institutions (REC/PFC or MDBs) or own funds of State Government. REC/PFC shall consider offering loans at competitive interest rates for the RDSS scheme.

iii) Cost overruns beyond sanction cost, if any, and PMA charges beyond allowed GOI grant shall be borne by the State Government/Discom.

iv) To be eligible for grant, State Government/Discom has to follow the SBD circulated by the nodal agency or obtain specific approval of Nodal agency for deviations.

v) State Government to arrange for DISCOM contribution in case DISCOM fails to arrange the same;

vi) State Government to furnish guarantee for the loan component under the scheme in case the DISCOM is not able to provide any other mode of security.

vii) Directives of Ministry of Power in this regard if any, would be followed.

9. Funds

i) The release of the fund shall be as per the clause 5.2 of the operational guidelines of RDSS. The terms & conditions of release of funds for a particular project as contained in operational guidelines issued, shall also form part of the present agreement. The guidelines shall include supplementals and modifications issued, if any. The releases will be subject to the deductions as agreed amongst Nodal Agencies, State Government and Discom, as per RDSS guidelines or statutory requirements.

ii) State Government/ Discom commits to refund grant component released to Utility in case of non-compliance of RDSS guidelines/ this agreement or poor progress resulting to short-closure/ cancellation.

iii) MoP/ Monitoring Committee is empowered to recall the grant released to the DISCOMs at any stage of the scheme, in case the sanctioned works are left incomplete or the assets could not be put to use or funds are utilized for purposes other than those prescribed in the scheme/ as approved by the Monitoring Committee in accordance with the prescribed guidelines. Further, if by the end of year 2025-26, a DISCOM is unable to get any fund released due to non-fulfillment of performance criteria of the scheme,, the initial advance of 10% will have to be refunded by the DISCOM. Any unrecovered/due amounts from earlier schemes of Ministry of Power, GOI shall also be allowed to be adjusted against releases in the current scheme till 2025-26.

iv) In order to secure the loan of NBFCs under MoP, the existing TPA (Tri-partite Agreement) arrangement among Government of India, the State Government and the RBI shall be suitably amended to provide that the loan servicing payments in case of default can be recovered through RBI.

v) DISCOMs shall maintain books of accounts both for receipt of funds from Nodal Agency and release to contractors for each of the project.

vi) DISCOM shall ensure that fund shall not be invested in any other bank/branch, whether for short term or medium term, including fixed deposits.

10. Opening of Bank Account

i) DISCOM (Implementing Agency) shall open an Assignment Account with NDRO, Reserve Bank of India (RBI) as Sub Agency for implementation of the RDSS through PFC (Central Nodal Agency) or as per the latest policy/ guidelines/ directives issued by Ministry of Power from time to time. All project related payments to the contractors/ agencies by DISCOM shall be done directly from the Assignment Account with RBI. Regarding counterpart funding, DISCOM shall open a dedicated scheme account in a nationalized bank having E-banking facility or as per directions issued by MoP/ Nodal Agency. MoP/ Nodal Agency shall have the view right of the said Bank Account.

ii) State Government/Discom shall enter details like receipts, expenditures, etc in Public Fund Management System (PFMS) portal. In case of non-entering desired details in PFMS portal, banks may not consider release of funds to Contractors.

11. Distribution Reforms Committee

i) State Government shall setup a Distribution Reforms Committee (DRC), headed by the Chief Secretary, Secretary in charge of the Energy/Power Department of the State as the convener and consisting of Secretary (Finance), Secretary (Land Revenue) and Secretary (Forest and Environment) as its members. The roles and responsibilities of Distribution Reforms Committee (DRC) are mentioned in clause 7.4 of the operational guidelines of RDSS.

12. DISTRICT ELECTRICITY COMMITTEE (DEC):

i) State Government shall also setup a District Electricity Committee (DEC) as per the Ministry of Power letter no. 42/17/2011-RE [206787] dated 26.09.2021. The Committee shall meet periodically at District headquarters at least once in 3 months to review and coordinate overall development of power supply infrastructure in the district in accordance with the schemes of Government.

ii) State Government shall also facilitate participation of Public Representatives in the inauguration events etc.

13. PROJECT MANAGEMENT

i) Project Management Agency (PMA) shall be appointed by Discom/Power Department to assist them in project management to ensure timely implementation of the project. PMA charges, restricted to 2.5% of the GBS of component I - metering and 1.5% of project cost of component II - Distribution infrastructure works, shall be sanctioned as a separate component of the scheme. PMA charges, over and above the permitted amount shall be borne by the respective DISCOM/ Government.

ii) State Government shall ensure Reforms support in the form of consultancy for Discoms and payments thereof.

iii) State Government/Discom shall ensure establishment of a dedicated project implementation cell at district level and a centralized cell at Head office level.

14. CONSTRUCTION / IMPLEMENTATION

i) State Government/Discom shall make all possible efforts to complete the project(s) within the approved time frame starting from the date of award of project. State Government to provide required land for substations and facilitate in obtaining other statutory clearances (ROW, forest etc.);

ii) State Government/Discom to ensure following Public Procurement (Preference to Make in India) for Purchase Preference (linked with local content) Order in respect of Power Sector dated 28.7.2020 or its latest amendments thereof. DEA directives to be followed in case funds are availed through multi-lateral financial institutions.

iii) State Government/Discom shall suitably incorporate the provisions towards levy of Liquidated Damages in their agreements with contractors for delay in completion of the project(s) and also other relevant contractual provisions pertaining to the procurement of

goods and works. Out of the amount recovered towards Liquidated Damages, if any, by State Government/Discom under this provision, the amount proportionate to subsidy shall be remitted to MoP account.

iv) During implementation of projects, State Government/Discom shall be solely responsible & accountable for assuring quality in RDSS works. State Government/Discom shall formulate a comprehensive Quality Assurance (QA) and Inspection Plan with an objective to build Quality Infrastructure under RDSS works. The QA and Inspection Plan shall be an integral Part of the contract agreement with turnkey contractor or equipment supplier/vendor and erection agency as the case may be in case of partial turnkey and departmental execution of works.

v) State Government/Discom shall also ensure that the quality of material/equipment supplied at site and field execution of works under the project is in accordance with Quality Assurance & Inspection Plan.

vi) State Government/Discom to ensure submission of updated monthly physical and financial progress of the project to the Nodal Agency including its updation on the web portal.

vii) State Government/Discom shall ensure submission of geotagged photographs of the assets created under the scheme and same shall be uploaded in the portal while submitting the progress and claims. The detailed methodology shall be provided by the Nodal agency.

viii) State Government/Discom shall ensure that there is no duplication / overlapping of works with any other Government of India and State scheme.

ix) Appropriate third party/parties will be appointed by MOP / Nodal Agencies to assess / verify the achievements of DISCOMs with respect to the action plan finalized on periodical basis using the Result Evaluation Framework.

x) The projects shall be awarded and implemented within the time frame as per guidelines on turn-key basis through e-tendering in accordance with the prescribed Procurement Policy, Standard Bidding Document and Technical Specifications / amendments thereof.

xi) For metering, Standardization Testing and Quality Certification (STQC) & Cyber security aspects have to be mandatorily included in the contract, while following Government of India's stipulations related to source of procurement.

15. UTILISATION CERTIFICATE

i) State Government/Discom shall submit Utilization Certificate (UC) for the funds released during the Financial year and utilization thereof in prescribed format, latest by 30th April of succeeding year. The UC shall provide the physical progress/achievements also apart from financial utilization. Utilization Certificate is also mandatory to be submitted for every disbursement. The prescribed format of UC shall be furnished by the Nodal agency.

16. ARBITRATION

i) Any differences or dispute among the parties arising out of or in connection with this project shall be discussed and settled amicably amongst the parties. In the event of non-settlement of the difference or dispute within sixty (60) days, the same shall be referred to the Secretary to the Government of India in the Ministry of Power, as the sole arbitrator whose decision shall be final and binding on the parties to this Agreement.

17. FORCE MAJEURE

i) The parties shall ensure due compliance with the terms of this Agreement. However, no party shall be liable for any claim for any loss or damage whatsoever arising out of failure to carry out the terms of the Agreement to the extent that such a failure is due to force majeure events such as fire, rebellion, mutiny, civil commotion, riot, strike, lock-out, forces of nature, accident, act of God and any other reason beyond the control of concerned party. But any party claiming the benefit of this clause shall satisfy the other party of the existence of such an event and give written notice of 30 days to the other party to this effect. The services covered under this Agreement shall be started as soon as practicable by the parties concerned after such eventuality has come to an end or ceased to exist.

18. IMPLEMENTATION OF THE AGREEMENT

i) All discretions to be exercised and directions, approvals, consents and notices to be given and actions to be taken under these presents, unless otherwise expressly provided herein, shall be exercised and given by the signatories to this Agreement or by the Authorized representative(s) that each party may nominate in this behalf and notify in writing to the other party by Registered Post. Any other nomination of Authorized representative(s) and/or changes in designation shall be informed likewise in writing to/by State Government/Discom and PFC within one month of signing of the Agreement. Any changes in designations/ registered office address shall be intimated in writing to all concerned parties.

ii) In case of any inconsistency between the Terms and Conditions of this Agreement and the provisions of RDSS Guidelines, the latter shall prevail.

iii) Any dispute arising out of this Agreement/interpretation of any clause may be referred to Secretary (Power), Govt. of India whose decision shall be final and binding on all parties.

19. NOTICE

i) All notices required or referred to under this Agreement, shall be in writing and signed by the respective authorized signatories of the parties mentioned herein above, unless otherwise notified. Each such notice shall be deemed to have been duly given if delivered or served by registered/speed post of Department of Posts to the respective heads on the addresses mentioned in the recital.

20. VALIDITY & TERMINATION

i) This agreement shall remain valid until all liabilities and obligations of the Discom pertaining to the RDSS scheme implementation are discharged to the satisfaction of the Nodal Agency/Ministry of Power.

ii) This agreement shall remain valid unless terminated with consent of all the Parties.

21. JURISDICTION

The competent Courts of Delhi shall have exclusive jurisdiction in all matters relating to or arising out under these presents.

IN WITNESS WHEREOF the parties have executed these presents through their Authorized Representatives at _____.

SIGNED AND DELIVERED BY (on behalf of **STATE GOVT. OF .....**) **Signature** ..... **Name & Designation** ..... **Address**	in the presence of ..... Signature ..... Name & Designation ..... Address ....
SIGNED AND DELIVERED BY (on behalf of **UTILITY**.....) **Signature** ..... **Name & Designation** ..... **Address**	in the presence of ..... Signature ..... Name & Designation ..... Address ....
SIGNED AND DELIVERED BY **Power Finance Corporation Ltd** (on behalf of **Ministry of Power, Govt. of India**) **Signature** ..... **Name & Designation** ..... **Address**	in the presence of ..... Signature ..... Name & Designation ..... Address ....

Annexure-F

Acceptance Letter

(From Government of .....)

No. Dated:

.....

The Chairman & Managing Director,
Power Finance Corporation Limited,
Urjanidhi, 1 Barakhamba Lane
Connaught Place,
New Delhi-110001

Sub: Acceptance of financial assistance to <DISCOM> for implementation of Projects under RDSS Scheme (Grant Nos. _____and PMA Grant No- _____) and terms and conditions for implementation of projects under RDSS

This is with reference to your sanction letter No..... dated: ..... conveying approval of Action Plan and DPRs for sanction of project cost of Rs.....Cr. for implementation of prepaid Smart metering works & Rs..... for implementation of Infrastructure works under Loss reduction in..... <DISCOM> under RDSS scheme.

The Government accepts the Action Plan and above sanctions on the terms and conditions as set out in the sanction letter under reference above and RDSS guidelines..

District wise and Project area wise bifurcation of work and project cost approved for Infrastructure – Loss reduction works etc. shall be submitted by <Discom> within 15 days of this letter as per the requirement of MOP/ Nodal Agency.

Yours faithfully,

(Authorized Officer)
State Government

Annexure-C

GUIDELINES

REVAMPED DISTRIBUTION SECTOR SCHEME

REFORMS-BASED AND RESULTS-LINKED

Nodal Agency

Nodal Agency

Abbreviations

ABC	Aerial Bunched Cable
ACS	Average Cost of Supply
AI	Artificial Intelligence
AMI	Advanced Metering Infrastructure
AMR	Automated Meter Reading
AT&C	Aggregate Technical and Commercial
ARR	Average Revenue Realised
DBFOOT	Design Build Finance Own Operate & Transfer
DBT	Direct Benefit Transfer
DMS	Distribution Management System
DRC	Distribution Reforms Committee
DPR	Detailed Project Report
DT	Distribution Transformer
EMD	Earnest Money Deposit
ERP	Enterprise Resource Planning
FI	Financial Institution
FMS	Feeder Monitoring System
GBS	Government Budgetary Support
HVDS	High Voltage Distribution System
ICT	Information and Communication Technology
IT	Information Technology
LD	Liquidated Damages
MBC	Metering, Billing and Collection
MDB	Multilateral Development Bank
ML	Machine Learning
MSME	Micro, Small and Medium Enterprises
MYT	Multi Year Tariff
NBFC	Non-Banking Financial Company
NFMS	National Feeder Monitoring System
OT	Operational Technology
PMA	Project Management Agency
PPP	Public Private Partnership
RPO	Renewable Purchase Obligation
T&D	Transmission & Distribution
ToD	Time of Day
TOTEX	Total Expenditure
TPA	Tripartite Agreement
SAIDI	System Average Interruption Duration Index
SAIFI	System Average Interruption Frequency Index
SBD	Standard Bidding Documents
STQC	Standardization Testing and Quality Certification
UG	Under-ground
UT	Union Territories

Chapter 1. Introduction

1.1 A well-functioning electricity infrastructure is essential for the success of a modern economy. 24x7 availability of reliable, quality and affordable power is key to economic development of the country. Power Sector has witnessed tremendous growth over the past five years in generation, transmission and universal access to electricity. India is surplus in power generation today. The continued progress in inter-state and intra-state transmission network has removed transmission bottlenecks and created sufficient transmission capacity to transmit electricity generated from one region to another.

1.2 In the Distribution Sector, Government of India has been assisting the States / Distribution Companies (DISCOMs) through various schemes since 2014, namely Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY); Pradhan Mantri Sahaj Bijli Har Ghar Yojana (SAUBHAGYA); and Integrated Power Development Scheme (IPDS). The Distribution system has been strengthened under DDUGJY and IPDS in rural and urban areas respectively. As a result of the implementation of these schemes, India has achieved universal electricity access by connecting ~28 million households in 18 months under Saubhagya. This was the largest expansion of access anywhere in the world in such a time frame.

1.3 Implementation of these schemes has also resulted in improved access to electricity. An independent survey shows that an average Indian household gets almost 20.6 hours of power supply every day, with urban areas getting 22-24 hours and rural areas getting 20 hours. Steps have also been taken for automation and use of Information Technology (IT) in Distribution Sector under IPDS and R-APDRP which includes the establishment of Data Centres, GIS mapping of consumers, Asset Mapping, Online energy auditing & accounting, Consumer care centres, AMI meters on feeders & Distribution Transformers, provision of Smart Metering to reduce losses etc. in urban areas.

1.4 Despite the above measures, consumers do not get reliable 24x7 electricity in many parts of the country. Aggregate Technical and Commercial (AT&C) losses and the Average Cost of Supply-Average Revenue Realized (ACS-ARR) gap continue to be high. This sub optimal performance of the Distribution Sector is due to structural and management deficiencies and some remaining weaknesses in the infrastructure. The DISCOMs need to focus on improving their operational efficiencies & financial sustainability; and improve consumer services to be able to meet the desired consumer service standards.

1.5 The above requires large scale reforms in Distribution Sector and schemes that would enable the DISCOMs to reduce losses to make them financially sustainable and operationally efficient.

1.6 It is with this aim and the Government of India's commitment for providing 24x7 uninterrupted, quality, reliable and affordable power supply, that the Revamped Reforms Based and Results Linked Distribution Sector Scheme has been formulated by Ministry of Power for supporting DISCOMs to undertake reforms and improve performance in a time bound manner.

1.7 The Revamped Reforms-based and Results-linked, Distribution Sector

Scheme seeks to improve the operational efficiencies and financial sustainability, by providing financial assistance to DISCOMs for strengthening of supply infrastructure based on meeting pre-qualifying criteria and achieving basic minimum benchmarks in reforms.

1.8 The Revamped Distribution Sector Scheme has the following parts:

1.8.1 **Part A – Metering & Distribution Infrastructure Works:**

- Facilitating in installing prepaid smart meters for all consumers along with associated AMI, communicable meters for DTs & Feeders, ICT including Artificial Intelligence (AI), Machine Learning (ML), etc. based solutions for power Sector and a unified billing and collection system[1];
- Distribution infrastructure works as required for strengthening and modernizing the system as well as measures for loss reduction. The infrastructure strengthening works will include separation of Agriculture feeders to enable implementation of the KUSUM scheme, Aerial Bunch cables and HVDS for loss reduction, replacement of HT/LT lines as required, construction of new/ upgradation of substations, SCADA and DMS system etc. Each DISCOM/ State will draw up the scheme according to its requirement with the end objective of reducing losses and ensuring 24 x 7 supply.

1.8.2 **Part B - Training & Capacity Building and other Enabling & Supporting Activities:** Supporting and enabling components, such as Nodal Agency fee, enabling components of MoP (communication plan, publicity, consumer awareness, consumer survey and other associated measures such as third-party evaluation etc.), up-gradation of Smart Grid Knowledge Centre, training and capacity building, awards and recognitions etc.

1.9 **Ongoing approved projects**: Schemes of IPDS, DDUGJY along with PMDP-2015 for the erstwhile State of Jammu & Kashmir are being subsumed in this scheme to be implemented as per their extant guidelines and under their existing terms & conditions. No new projects will be sanctioned under these schemes but projects already sanctioned under IPDS & DDUGJY will be eligible to receive funds up to 31st March 2022 under this scheme. However, projects sanctioned for Ayodhya, Uttar Pradesh under IPDS and also projects sanctioned under PMDP 2015 will get funds till 31st March 2023.

1.10 The Revamped Reforms based and Results Linked Distribution Sector Scheme will have an outlay of Rs.3,03,758 crore with an estimated GBS from Central Government of Rs.97,631 crore. It is envisaged that about Rs. 200 crores will be spent by the State Governments towards reforms support in the form of consultancy.

1.11 Office Memorandum issued by the Ministry of Power in respect of Reforms

[1] Nodal Agency / MoP may develop a unified billing and other software, which may be utilized by the Government DISCOMs / Power Departments of the country (as may be decided by Monitoring Committee), keeping in view issues such as interoperability, data security, and consumer privacy, which shall be optional for DISCOMs to use.

based and Results Linked Distribution Sector Scheme is enclosed as **Appendix-I.**

1.12 These guidelines shall be applicable for the clause 1.8 of the scheme. The existing operational Guidelines/ Standard documents/ procedures shall continue to prevail for implementation of projects sanctioned under DDUGJY, IPDS & PMDP.

Chapter 2. Objectives, Eligible Works and Eligible Entities

2.1 Objectives

2.1.1 The objectives of the scheme are to:

- Improve the quality, reliability and affordability of power supply to consumers through a financially sustainable and operationally efficient Distribution Sector.
- Reduce the AT&C losses[2] to pan-India levels of 12-15% by 2024-25.
- Reduce ACS-ARR[3] gap to zero by 2024-25.

The state-wise targets for each year will depend on their current levels of AT&C losses and ACS-ARR gap.

2.2 Parts of the Scheme

2.2.1 The Scheme has the following parts -

- **Part A**
  - Component I: Metering
  - Component II: Distribution Infrastructure Works
  - Component III: Project Management
- **Part B**: Training, Capacity Building and other Enabling & Supporting Activities.

2.3 Eligible Works and Activities under Part A - Metering

2.3.1 Under this part, Prepaid Smart metering for consumers, and System metering at Feeder and Distribution Transformer level with communicating feature along with associated Advanced Metering Infrastructure (AMI) will be done in TOTEX mode through PPP, to facilitate reduction of Distribution losses and enable automatic measurement of energy flows and energy accounting as well as auditing.

2.3.2 Funding under this Part will be available only if the DISCOM agrees to the operation of smart meters in prepayment mode for consumers, and in accordance with the uniform approach indicated by the Central Government, with implementation in TOTEX mode. Under this mode, a single agency will be contracted for supplying, maintaining and operating the metering infrastructure for the purpose of meter related data and services to the DISCOM. It will make both capital and operational expenditure under DBFOOT (Design Build Fund Own Operate & Transfer) or similar modes and will be paid for a portion of its capital expenditure initially and the remaining payment over the O&M period.

[2] AT&C losses will be calculated by Power Finance Corporation as per the latest approved formula.
[3] ACS-ARR gap for the purpose will be calculated by Power Finance Corporation on subsidy received basis duly adjusted for UDAY grants, and regulatory income, if any.

2.3.3 Pre-paid smart metering works carried out after 1st January, 2020 will be eligible for funding, if they were carried out in TOTEX mode, after obtaining approval from Monitoring Committee in this regard.

2.4 Eligible Works and Activities under Part A- Distribution Infrastructure Works

2.4.1 Under this component, DISCOM can take up works related to loss reduction and system strengthening. 33kv level and below will be eligible under this component. In areas, were 33kv system does not exist, 110 kV/66kV shall be permitted. A list of indicative works is given below:

i. Construction of new substations, augmentation of substations

ii. Provision of Armoured / Aerial bunched Cables (ABC) or High Voltage Distribution System in high loss areas.

iii. Segregation / Bifurcation of feeders and other allied works

iv. Replacement of conductors, which are old/frayed

v. Additional HT lines to improve quality of supply

vi. IT/OT works

vii. Supervisory Control and Data Acquisition (SCADA) and Distribution Management System (DMS) in urban areas

- SCADA/DMS in 100 towns (approx.) with eligibility of towns having population > =1 Lacs in special category states and towns having population > = 2.75 Lacs in other states as per Census 2011 data, as well as all Capital/DISCOM HQ towns, if not covered earlier.
- Basic SCADA in 3875 towns based on district-wise or Circle-wise common control centres in all other statutory towns

viii. Works like new feeders, capacitors, etc for loss reduction

ix. Under-ground cabling works

x. Any other works required for system strengthening and loss reduction

2.4.2 Segregation of feeders dedicated only for supply of power for agricultural purpose, which are proposed to be solarized under Kisan Urja Suraksha Evam Utthan Mahabhiyan (KUSUM) scheme will be sanctioned on priority under the scheme. Further, agricultural feeders once segregated will not be used for serving other non-agricultural consumers.

2.5 Scope of Work under Part A- Project Management

2.5.1 One or more Project Management Agency (PMA) shall be appointed by each DISCOM for project formulation and project management, based on their requirement to cover different phases of the project. The scope of PMA may include preparation of plan, DPR, tender documents, awarding, monitoring, quality assurance, material inspection, results evaluation or any other related works. (excluding signing of Joint Measurement Certificate).

2.6 Eligible entities for Part A

2.6.1 All State-owned Distribution companies and State /UT Power Departments (referred to as DISCOMs collectively) excluding private Sector power companies will be eligible for financial assistance under the revamped scheme. The State transmission utilities which own and operate network at 110 kV and 66 kV levels in areas where 33 kV system does not exist shall also be eligible (for this purpose, all eligibility, and other relevant parameters of respective DISCOMs shall be evaluated) Further, funds release and any coordination shall be through DISCOM only, for such works to be executed in the specific manner by the transmission utility).

2.6.2 The scheme would be optional to DISCOMs and will be implemented in urban and rural areas of all States/UTs except private DISCOMs.

2.7 Eligible Works and Activities under Part B - Training, Capacity Building and other Enabling & Supporting Activities

2.7.1 Part B focuses on the softer parts – up-gradation of human skills; process improvements; Nodal Agency fee, enabling components of MoP (communication plan, publicity, consumer survey, consumer awareness and other associated measures such as third-party evaluation etc), augmentation of Smart Grid Knowledge Centre including AI, training and capacity building for personnel involved in execution of the Scheme at field level, awards and recognitions etc.

2.8 Same works sanctioned under any other scheme of the Government of India will not be eligible for funding under this scheme.

Chapter 3. Project Formulation and Approval

3.1 Formulation of Action Plan

3.1.1 Applicant DISCOM will prepare an Action plan for strengthening its Distribution system and improving its performance by way of various reform measures, which would result in improvement in their operational efficiency and financial viability as well as improve the quality and reliability of power supply to the consumers. Each DISCOM will prepare an Action plan, with several subcomponents for strengthening its Distribution system, and to improve their performance. Works that are required for AT&C loss reduction would be given priority.

3.1.2 The first part of the action plan will analyze the reasons/ root cause for losses, and list out the steps which will be taken for the reduction of losses and ACS-ARR gaps, and the time frame for taking these steps. The first part would also include the reform measures for financial viability and operational efficiency of DISCOMs as well as annual Results, Outcomes and Evaluation framework for the scheme period.

3.1.3 The second part of the action plan will list out the need assessment and the work plan for loss reduction. The Work plan arising out of the analysis shall be detailed under metering and infrastructure works.

3.1.4 The Action plan will be formulated by the DISCOM in consultation with the Nodal Agency/Ministry of Power. The action plan will be submitted by the DISCOM to the Nodal Agency on the recommendation of the Distribution Reforms Committee (DRC)[4] and with the approval of the State Cabinet.

3.1.5 **Action Plan - I : Analysis of losses, Reform measures for financial viability, timelines, and Results Evaluation Framework**

3.1.5.1 This part will contain the analysis of the reasons for losses and describe the measures that will be taken for the reduction of AT&C losses and ACS-ARR gap, along-with the time frame for taking up these measures. DISCOM will specify activities and reforms they/ State Government will undertake to improve their performance in this part of the action plan.

3.1.5.2 These activities and reform measures will be finalized on basis of its operational and financial data and will be worked out to address DISCOM-specific problems. For example, if AT&C losses in a DISCOM are high, then root cause analysis, solutions proposed to be undertaken to address each of such causes and AT&C losses reduction trajectory should be indicated in the Action Plan.

3.1.5.3 Similarly, if the ACS-ARR gap is high, the reasons and activities to reduce the gap along with the trajectory for gap reduction need to be a part of the Action

[4]All States have already set up Distribution Reforms Committee (DRCs), which have been according approvals to the projects proposed by DISCOMs under scheme like IPDS to the Nodal Agency for approval. The same has been detailed in Chapter 7.

Plan. Likewise, all other problems impacting viability should be addressed in Action Plan - I.

3.1.5.4 An indicative list of reforms / activities is given below:

i. Putting in place a mechanism to ensure that the Government Departments pay for the for electricity consumed, promptly.

ii. Putting in place a mechanism for ensuring that the consumption by the subsidized categories is accounted properly and released to the DISCOM in advance as mandated by Section 65 of the Electricity Act 2003, which will be credited to the consumer account maintained by the DISCOM. Subsidy delivery must be targeted via Direct Benefit Transfer (DBT) for improvement in accountability regarding which the DISCOM shall maintain proper accounts to ensure right targeting of subsidy and its delivery to the respective beneficiaries.

iii. Tariff reforms, including annual tariff fixation, rationalization of consumer categories, and no Regulatory Assets to be created.

iv. Progression towards cost reflective tariffs, including timely filing of tariff petitions, MYT and timely issuance of tariff orders.

v. Preparation of and adherence to a roadmap for funding accumulated and current financial losses and clearance of part or whole of regulatory assets through tariff or state funding.

vi. Corporate Governance reforms, Operation of part or whole area of supply of DISCOM through private participation or through CPSUs/JVs of CPSUs.

vii. Distribution Franchisee arrangements in some areas of DISCOM.

viii. Setting up electricity police stations in line with the provisions of the Electricity Act, 2003 by the State Government out of its own resources.

ix. Training and Capacity Building of existing manpower, Creation of IT wing within DISCOM for management of IT/OT services or engaging knowledge partners / consultants for the same.

x. Energy Accounting with 100% feeder and transformer metering on TOTEX mode.

xi. Compliance of RPO trajectories.

xii. Publication of quarterly audited/unaudited accounts along with reports in a standardized format circulated by PFC. Quarterly and Annual Accounts of DISCOMs need to explicitly include details of subsidy and Govt. Dept. dues. The annual accounts of the previous year would be published by DISCOMs latest by September 30th of the current year (or as per timelines permitted in pre-qualification criteria).

xiii. Initiation of performance linked transfer policy for DISCOM staff.

xiv. Provision of Armoured / Aerial bunched Cables (ABC) or High Voltage

Distribution System in high loss areas

xv. Collection efficiency trajectory should be worked out to achieve the national target of at least 98%.

xvi. Billing efficiency trajectory should be worked out to achieve the national target of at least 85% - 90%.

xvii. Any other activity which serves to achieve the objective of the scheme.

3.1.5.5 The part should inter-alia lay down the road map for bringing down AT&C losses and reducing ACS-ARR gap to zero by 2024-25 and project the requirement of financial support required from the State Government towards payment of Government dues and subsidies each year for the entire scheme duration. Recognizing the fact that every DISCOM has its own set of problems, the plan should be tailor-made to each DISCOM's requirements with a mapping of the problems and solutions clearly demarcated.

3.1.5.6 Outcome and output parameters along with their year-wise targets with respect to the baseline data, weightage and marks shall be spelt out in this part in the form of a Results Evaluation Matrix. The details of results evaluation framework are given in Chapter 4. The baseline data related to AT&C losses, ACS-ARR gap and other parameters shall pertain to the base year i.e. FY 2019-20 or FY 2020-21, for which audited accounts are available at the time of submission of Action plan. It is acknowledged that parameters of FY 2020-21 may not reflect the correct picture because of the pandemic. For parameters, where the FY 2020-21 figures do not reflect the correct picture in view of the unprecedented circumstances, targets for outcomes for the succeeding years may be set accordingly considering the figures for FY 2019-20 and FY 2020-21 for reasons to be recorded in writing. Wherever, data is available in the audited annual accounts, the same shall be used for evaluation purpose.

3.1.6 Action Plan - II – Metering and Distribution Infrastructure Works

3.1.6.1 Based on the analysis in Action Plan – I, DISCOM will spell out major works for components of Part A of the scheme, namely metering including energy accounting and Distribution infrastructure works along-with their estimated cost.

3.1.6.2 Installation of Prepaid Smart Meters and System Meters shall be taken up in phases as per priority given in Para 3.2.2.2.

3.1.6.3 Distribution infrastructure works that are required for AT&C loss reduction shall be given priority. Works for improving the quality and reliability of the power supply shall also be taken up. The indicative list of works that can be taken up has been detailed in Chapter 2.

3.2 DPR Formulation

3.2.1 DPRs will be prepared by the applicant DISCOM with details of the works to be undertaken along with the estimated cost as per Action Plan - II. DPR, with

approval of DRC and in accordance with Action Plan approved by State Cabinet, shall be submitted by the DISCOMs to the Nodal Agency.

3.2.2 **Metering**

3.2.2.1 The DPR under Action plan - II for prepaid Smart metering will be submitted DISCOM wise to cover consumer and system metering at Feeder and DT level including operation and maintenance for a period as mentioned in the SBD. Different components may be packaged in two or more DPRs.

Consumer metering

3.2.2.2 With the objective of balancing the cost & benefits of prepaid smart meters and to reap the benefits of economies of scale, it has been decided that implementation of such meters shall be taken up in mission mode in identified contiguous areas.

The following areas will be taken up on priority for prepaid smart metering of all directly connected meters and AMI in case of other meters (other than agricultural consumers) in the first phase to be completed by December, 2023:

- All Union Territories
- All Electricity Divisions of 500 AMRUT cities, with AT&C Losses > 15% in the base year;
- Industrial and Commercial consumers;
- All Government offices at Block level and above;
- Other areas with high losses, which shall mandatorily include Electricity Divisions having more than 50% consumers in urban areas and with AT&C losses more than 15% and other Electricity Divisions with AT&C losses more than 25%, in the base year.

3.2.2.3 DISCOMs can cover any other areas as well as agricultural consumers, at their option, in the first phase.

3.2.2.4 Consumers in Electricity Divisions with more than 50% consumers in urban areas and with AT&C losses of 15% or less; and other Electricity Divisions with AT&C losses of 25% or less in the base year will be provided prepaid Smart Meters by March 2025.

3.2.2.5 In areas which do not have communication network, installation of prepayment meters, may be taken up.

System metering

3.2.2.6 A feeder and DT level automated online energy accounting system shall be put in place.

3.2.2.7 All feeders are to be metered with communicable & AMI/AMR meters by 31st December, 2022 so as to enable energy accounting and calculation of SAIFI and SAIDI. Existing non-communicable feeder meters shall also be replaced

with communicable meters and integrated with AMI.

3.2.2.8 All feeders shall be integrated with the National Feeder Monitoring System (NFMS) proposed to be put in place shortly.

3.2.2.9 All Distribution Transformers (DTs), other than DTs feeding only agricultural consumers and HVDS transformers having capacity up to 25 kVA and other DTs less than 25 kVA capacity shall be metered with communicable and AMI/AMR meters.

3.2.2.10 Installation of DT meters in areas where consumer smart metering is being carried out in first phase (as mentioned in clause 3.2.2.2) shall be completed by December 2023.

3.2.2.11 All other DTs shall be metered by March 2025.

3.2.2.12 Existing non-communicable DT meters shall also be replaced with communicable meters and integrated with AMI.

3.2.3 Distribution Infrastructure Works

3.2.3.1 For Distribution Infrastructure works, one DPR for the whole DISCOM or separate DPRs for each administration unit will be submitted. DPRs shall be prepared based on need assessment as per Action Plan Part 1.

3.2.3.2 DPRs for works leading to Loss Reduction and for Modernisation shall be prepared separately as below:

- DPR for Loss Reduction **:** Armoured Cabling, HVDS, AB Cables, Feeder Bifurcation, Feeder Segregation, IT/OT related works including ERP and Billing software, etc..
- DPR for Modernisation : Works leading to System Strengthening and modernisation such as Augmentation, Renovation & Modernisation of Substations & lines, UG cabling, HVDS, new substations and lines, etc..

3.2.3.3 The DPR for Loss Reduction shall be for at least 50% of the total eligible project cost. In case the Distribution losses (T&D) are low (less than 12% in the base year), then the DISCOM may allocate more funds to DPR for Modernisation with suitable justification and details.

3.2.4 Project Management

3.2.4.1 One or more independent Project Management Agency(ies) (PMA) may be appointed by the DISCOM for project management.

3.3 Approval of Action Plan and DPRs

3.3.1 The Action Plan and DPRs shall be submitted to the Nodal Agency by 31st October, 2021.

3.3.2 If a DISCOM does not submit the Action Plan and DPRs by 31st October 2021, then its total eligible sanction amount for Distribution Infrastructure works may

be restricted suitably keeping in view the already sanctioned DPRs of other States.

3.3.3 The Action Plan and DPRs for loss reduction and metering shall be scrutinized by the Nodal Agency and approved by the Monitoring Committee with such modifications, as are necessary to achieve the objectives of the Scheme.

3.3.4 For avoidance of doubt, it is clarified that pre-qualification conditions and Evaluation Matrix will not be applicable for approval of the Action Plan or sanction of DPRs for Loss reduction and metering. However, the release of funds for sanctioned loss reduction works from FY 2022-23 onwards shall be conditional to meeting the pre-qualification conditions and obtaining laid down minimum marks in Evaluation Matrix.

3.3.5 DPR for Modernisation shall be sanctioned, subject to DISCOM becoming eligible in the evaluation for FY 2021-22 to be carried out in FY 2022-23.

3.3.6 PMA charges, restricted to 2.5% of the GBS of component I - metering and 1.5% of project cost of component II - Distribution infrastructure works, shall be sanctioned as a separate component of the scheme by the Monitoring Committee. PMA charges, over and above the permitted amount shall be borne by the respective DISCOM / State government. Also, services of PMA shall be retained up to physical completion of the project, without any financial implications beyond that already provided.

Chapter 4. Project Implementation

4.1 Eligible Cost for determining grant

The project cost approved by the Monitoring Committee or actual cost incurred for all the three components of the scheme, whichever is less, shall be the eligible cost for determining the grant under the scheme. Any cost overrun after approval of the project (by Monitoring Committee) due to any reason whatsoever shall not be eligible for any grant and shall be borne by the DISCOM/respective State Government. The eligible project cost shall include Central taxes and all fees like forest clearance, highway and railway crossing fee etc. The project cost shall however not include the cost of land. Further, the project cost shall be reduced to the extent of any Liquidated Damages actually levied, but the encashment of performance security or bid security (EMD) shall not reduce the project cost.

4.2 Scheme Implementation Agreement

A Scheme Implementation Agreement will be signed between the State Government, DISCOM and Central Government (or Nodal agency on behalf of Central Government) for undertaking and agreeing to their stipulated roles and responsibilities as per provisions of the scheme guidelines. Amongst other clauses, the agreement will also include a clause that the performance of the DISCOMs in the Reforms Based Results Linked Revamped Distribution scheme would also form integral part of the financing norms of PFC, REC, Banks/FI's and MDBs for any project in the Distribution Sector even beyond those related to funding under this scheme.

4.3 Tripartite Agreement

In case loan component of the project cost is funded by the NBFCs under MoP, then in order to secure the loan, the existing TPA (Tri-partite Agreement) arrangement among Government of India, the State Government and the RBI shall be suitably amended to provide that the loan servicing payments in case of default can be recovered through RBI.

4.4 Mode of Implementation

4.4.1 **Metering:** These projects shall be implemented in TOTEX mode (Total expenditure includes both capital and operational expenditure) with the following options:

(i) Installation and commissioning of meters and cost recoveries in equated monthly instalments by PPP or implementation partner (or service provider) with no upfront payment by DISCOM

(ii) Some initial payment shall be made to the service provider upon installation and commissioning of the meters, with the rest of the payments made on equated monthly / quarterly instalments over the operational period.

4.4.2 **Distribution infrastructure works:** The projects shall be implemented normally on turnkey basis. However, certain works may be taken up on partial

turnkey basis or departmentally with the approval of DRC and consent of Nodal Agency, subject to, overall guidance of the Monitoring Committee. The reasons for the change shall be recorded.

4.4.3 **Project Management:** For project management, one or more PMA shall be appointed. Existing PMA of DDUGJY or Saubhagya or IPDS may be used for preparation of DPR and Action Plan, and the expenses incurred will be eligible under the scheme. However, for all other works including bid process, monitoring of implementation, project completion, result evaluation and related works, a new PMA will have to be appointed as per the SBD that will be circulated by the Nodal agency.

4.5 Standard Bidding Document

4.5.1 The NSGM/REC shall issue Standard Bidding Document (SBD) for selection of AMI service provider to bring uniformity of approach for implementation of smart metering solution across the country, which shall be followed by the DISCOMs. For Distribution infrastructure works and PMA, one of the nodal agencies shall circulate Standard Bidding Documents (SBD).

4.5.2 The DISCOMs may make minor changes in the SBD, while retaining its basic structure and essence, provided that the approval of the Nodal Agency is taken for the changes, subject to, overall guidance the Monitoring Committee.

4.5.3 Projects taken up by DISCOMs through MOU route with CPSUs or their JVs and Subsidiaries shall also be permitted subject to their being implemented in TOTEX mode as per the scope of work and methodology given in the SBD.

4.5.4 For metering, Standardization Testing and Quality Certification (STQC) & Cyber security aspects have to be mandatorily included in the contract, while following Government of India's stipulations related to source of procurement.

4.6 Make in India

4.6.1 Keeping in view the aims and objectives of Atma Nirbhar Bharat Abhiyan, Ministry of Power has issued Public Procurement (Preference to Make in India) for Purchase Preference (linked with local content) Order in respect of Power Sector on 28.7.2020. This order is in line with the DPIIT Notification No.P-45021/2/2017-PP(BE-II) dated 4th June,2020. This order along-with amendments, if any, from time to time, shall be followed by the DISCOMs in the implementation of the scheme.

4.6.2 However, in case a DISCOM is availing funds through multi-lateral financial institutions, applicable DEA directives may be followed.

4.7 Implementation Period

4.7.1 The base year for fixing of targets will be the latest year for which the audited annual accounts are available at the time of the submission of the action plan FY i.e. 2019-20 or FY 2020-21. Accordingly, DISCOMs are expected to approach Ministry of Power / Nodal agency with their Action Plan based on the audited Annual Accounts and DPRs, with targeted outcomes for FY 2021-22,

FY 2022-23, 2023-24 and 2024-25. There shall be no sanctions after 31.03.2023.

4.7.2 The sunset date for the scheme will be 31.03.2026, the works executed beyond which will not be eligible for release of Central Government grant.

4.7.3 As the sunset date of the scheme is already defined and disbursement of grant is based on progress and corresponding achievement of targets, it is in the interest of the DISCOMs to complete the projects expeditiously to avail the benefits under the Scheme.

4.8 MIS

4.8.1 A web portal shall be developed by the Nodal Agencies for submission of Action Plan & DPRs, capturing baseline data, physical & financial progress, quality reports, outcomes and achievements for evaluation under Result Evaluation Framework, closure, etc. The portal will enable seamless flow of data and ensure availability of information to all concerned. The web portal shall be DGQI 5.0 compliant.

4.8.2 MIS Reports on the basis of the same shall be made available to all for monitoring and evaluation.

4.9 Completion of the project

4.9.1 Nodal agency shall approve the project closure. A Project completion certificate, recommended and forwarded by State Energy Department shall be submitted after completion of scheme, which shall consist of:

(i) Details of major assets created along with actual cost incurred for the project;

(ii) Utilization certificate for grant disbursed;

(iii) Certificate of receipts and expenditure of the project certified by a Chartered Accountant;

(iv) Confirmation of remittance of unutilized grant to the GoI account;

(v) Confirmation that Interest earned on grant disbursed has been remitted to GoI account.

4.10 Results Evaluation Framework

4.10.1 As part of the action plan of the State, a Results Evaluation Framework would be formulated incorporating result parameters and trajectories. The Results Evaluation Framework would have two components (i) pre-qualifying criteria; and (ii) Evaluation Matrix.

4.10.2 The sanction of DPR for Modernisation and release of grant for both loss reduction works (other than the advance for DPR for Loss Reduction) and for the modernisation works will be based on the DISCOM meeting the pre-qualifying criteria and achieving the specified marks in the Evaluation Matrix.

4.10.3 It is clarified that pre-qualification conditions and Evaluation Matrix will not be considered for approval of the Action Plan or sanction of DPR for Loss Reduction in first year i.e. FY 2021-22 and the DPR for metering.

4.11 Pre-Qualification Criteria

4.11.1 The following pre-qualifying criteria must be mandatorily met by the DISCOM before it is evaluated on the basis of the Evaluation Matrix:

(i) DISCOMs would publish quarterly un-audited accounts within 60 days of the end of each quarter during first two years of operation of the scheme (i.e. for FY 2021-22 and FY 2022-23) and thereafter audited quarterly accounts within 45 days from 3rd year onwards.

[FY 2021-22 and FY 2022-23: Un-audited accounts for 1st Quarter ending June to be published by 31st August, for 2nd Quarter ending September by 30th November and so on.

FY 2023-24 and FY 2024-25: Un-audited accounts for 1st Quarter ending June to be published by 15th August, for 2nd Quarter ending September by 15th November and so on.

First evaluation would take place in FY 2022-23 for the performance in FY 2021-22. Accordingly, the un-audited quarterly accounts for FY 2021-22 for all four quarters should have been published as per above mentioned timelines. Further, un-audited accounts for quarter ending June and September of FY 2022-23 should also have been published as per above mentioned timelines.]

(ii) Further, DISCOMs would publish audited annual accounts by end of December of the following year during first two years of operation of the scheme (i.e. for FY 2021-22 and FY 2022-23) and thereafter audited annual accounts by end of September of the following year from 3rd year onwards.

[FY 2021-22 and FY 2022-23: Audited annual accounts to be published by 31st December 2022 and 31st December 2023 respectively.

FY 2023-24 and FY 2024-25: Audited annual accounts to be published by 30th September 2024 and 30th September, 2025 respectively.

First evaluation would take place in FY 2022-23 for the performance in FY 2021-22. Accordingly, it would be ensured that the audited annual accounts for FY 2021-22 are published by December 2022.]

(iii) DISCOMs will have ensured that no new Regulatory Assets have been created in latest tariff determination cycle.

[First evaluation would take place in FY 2022-23 and accordingly while evaluating results in this year, tariff order effective from 1st April 2022 will be considered and compared with previous tariff order for creation of any new regulatory assets. Similarly, while evaluating results in FY 2023-24, tariff order effective from 1st April 2023 will be considered and compared with 2022 order.]

(iv) State Government to ensure 100% payment of subsidy for the previous year and advance payment of subsidy up to current period in line with section 65 of EA2003 and wipe out the remaining subsidy amount by the end of the project period.

[First evaluation would take place in FY 2022-23 and accordingly while evaluating results in this year, 100% payment of subsidy for FY 2021-22 will have to be ensured along with advance payment of subsidy for FY 2022-23 up to date of submission of results to the nodal agency.

Further, it would also be ensured (by way of trajectory which would form part of REF, that the remaining subsidy of the previous years, if any, would be wiped out by the end of project period i.e. 2025-26.]

(v) All Government Departments/ Attached Offices/ Local Bodies/ Autonomous Bodies/ Boards/Corporations have made 100% payment of current electricity dues for the year under evaluation.

[First evaluation would take place in FY 2022-23 for the performance in FY 2021-22 and accordingly while evaluating results of FY 2021-22, 100% payment of current electricity dues for the FY 2021-22 will have to be ensured]

(vi) Progress commensurate to commitment in putting Govt. Offices on prepaid meters.

[Targets for putting Govt. Offices on prepaid meters would be fixed in Result Evaluation Matrix and accordingly the achievement of putting prepaid meters at Govt. offices would be seen w.r.t. agreed targets. The achievement w.r.t. targets should not be less than 100% to qualify for this condition.]

(vii) No. of days Payables to Creditors including Gencos for the year under evaluation is equal to or less than the projected trajectory as per results evaluation framework.

[Year-wise trajectory would be fixed in Result Evaluation Matrix. First evaluation would take place in FY 2022-23 for the performance in FY 2021-22 and accordingly while evaluating results of FY 2021-22, achievement w.r.t. agreed trajectory for FY 2021-22 would be considered. The achievement should be equal to or less than the agreed trajectory for FY 2021-22 to qualify for this condition.]

(viii) Tariff order for the current year in which evaluation is being done and true up of penultimate year has been issued and implemented w.e.f. 1st April of current FY.

[First evaluation would take place in FY 2022-23 and accordingly while evaluating results in this year, tariff order should have been implemented with effect from 1st April 2022 and true up should have been done for FY 2020-21.]

4.12 Evaluation Matrix

4.12.1 DISCOMs meeting the prequalification criteria shall be assessed on an Evaluation Matrix, agreed as part of Action Plan, comprising of four basic categories as below:

Sr. No.	Category	Weightage
1.	Financial Sustainability	60
2.	Operational	20
3.	Infrastructure Works	10
4.	Policy & Structural Reforms, Capacity Building and IT/OT Enablement	10
	Total	**100**

4.12.2 Recognizing that the year-wise emphasis on desired outcomes could be different, the maximum marks to individual result parameters may vary for

every year of evaluation. The Evaluation Matrix will be different for each DISCOM and will be fixed for each year based on the cumulative as well as annual performance subject to the condition that the weightage of the parameters related to financial sustainability shall remain at least 60%.

4.12.3 While the weightage of parameters related to Financial Sustainability shall remain at least 60%, variations specific to the needs of the States/DISCOMs for other categories may be made with the approval of the Monitoring Committee.

4.12.4 Within each of the above four categories, individual parameters will be decided as per the requirements of the DISCOM. Maximum marks and agreed targets may be assigned to each parameter in the matrix, based on agreed priority/ significance towards achieving the objectives of the scheme.

4.12.5 Evaluation of parameters relating to financial accounts shall be based on audited quarterly/annual accounts.

4.12.6 For qualifying in the Evaluation Matrix, a DISCOM needs to score a minimum of 60 marks.

4.12.7 An illustrative Evaluation Matrix is given below. Evaluation Matrix may be modified, if required, to include a smaller number of parameters and to exclude those included in the pre-qualifying criteria to avoid duplication or considering the specific requirement of the DISCOM and/or to make the Evaluation Matrix simple.

S No	Result Parameters	Weightage	Unit of Measurement	Base Year	Evaluation of Cumulative Improvement from Base Year up to Year under evaluation			
				(Values)	Max. Marks	Target	Achievement	Score
A.	**Financial Sustainability**							
1	ACS-ARR gap		Rs./kWh		25			
2	AT&C Loss - Increase in Billing and Collection Efficiency - Reduction in theft / line losses		%		25			
3	Outstanding/ Overdue Subsidy Payment by State Government		Rs. Crore		15			
4	Outstanding/ Overdue Government Dues	**60**	No. of Days Receivable		10			
5	Progress in putting Govt. Offices on prepaid meters		%		10			
6	No. of Creditor Days (including payment to Gencos for supply of power)		No. of days payable		5			
7	No. of Debtor Days		No. of days receiva		5			

S No	Result Parameters	Weightage	Unit of Measurement	Base Year	Evaluation of Cumulative Improvement from Base Year up to Year under evaluation			
				(Values)	Max. Marks	Target	Achievement	Score
			bles					
8	Unliquidated Regulatory Assets		Rs. Crore		5			
	Sub Total (A)				Σ Max. Marks			Σ Score
	Weighted Score (A) = (Weightage x ΣScore)/ ΣMaximum Marks							
B	**Operational- Outcomes of Infrastructure works**							
1	Hours of supply (Rural)	**20**	Avg. Hours/ Day		20			
2	Hours of supply (Urban)		Avg. Hours/ Day		20			
3	Accurate Energy Accounts		%		20			
4	Reliability of power supply - SAIFI (System Average Interruption Frequency Index)		Nos. / year		20			
5	Data availability in the National Feeder Monitoring System / NPP		%		20			
	Sub Total (B)				Σ Max. Marks			Σ Score
	Weighted Score (B) = (Weightage x ΣScore)/ ΣMaximum Marks							
C.	**Infrastructure Works**	**10**						
1	**Metering**							
I	Consumer Metering		Nos.		**10**			
ii	DT Metering		Nos.		**20**			
iii	Feeder Metering		Nos.		**20**			
2	**Feeder Separation - % of total Agriculture feeders separated (Feeders with Agricultural load of >= 30% of total load of feeder)**		**%**		**10**			
3	Replacement of existing LT overhead bare conductor lines with AB/UG cable		Ckm		10			
4	% of Consumers with Prepaid Smart Meters (other than Govt. Deptt.)		%		15			
5	Availability of Feeders in NFMS		%		15			
	Sub Total (C)				Σ Max. Marks			Σ Score
	Weighted Score (C) = (Weightage x ΣScore)/ ΣMaximum Marks							

S No	Result Parameters	Weightage	Unit of Measurement	Base Year	Evaluation of Cumulative Improvement from Base Year up to Year under evaluation			
				(Values)	Max. Marks	Target	Achievement	Score
D	**Policy & Structural Reforms, Capacity building and IT/OT enablement**							
1	SCADA	**10**	No. of Towns		15			
2	ERP Implementation		Yes/No		10			
3	Training of DISCOM Officials		Man-days		5			
4	Corporate Governance (Recommendations complied)		%		10			
5	Tariff Reforms (MYT / ToD / Cross Subsidy)				15			
6	Subsidy Delivery Mechanism/ DBT				15			
7	Consumer rights and grievance redressal				15			
8	Adoption of PPP mode				15			
	Sub Total (D)				Σ Max. Marks			Σ Score
	Weighted Score (D) = (Weightage x ΣScore)/ Σ Maximum Marks							
	Sum of Weighted Score (A+B+C+D)							

Note: In order to qualify for receipt of grant under the scheme, the total weighted score should be 60 or more.

4.12.8 The milestones against the parameters may be assigned based on the works planned as per the action plan. If the agreed milestone of respective parameters is met or exceeded, full marks corresponding to that parameter shall be given. If however, there is an underachievement with respect to any parameter, then the marks shall be proportionately reduced. If the parameter remains the same or deteriorates then no mark shall be given.

Chapter 5. Scheme Outlay, Funding pattern & Grant release

5.1 Scheme Outlay and Funding Pattern

5.1.1 The estimated outlay for the scheme is Rs 3,03,758 crore with an estimated grant from Central Government of Rs 97,631 crore. The funding pattern is as below:

S.No	Item Description	GBS % (Max)
A-1	Prepaid Smart metering solution including at consumer, DT, and feeder level including integration of existing infrastructure	15% / 22.5% as the case may be (limited up to Rs.900 or Rs.1350 respectively per meter for Consumer metering)#
A-2	Other costs including encumbrance free standardized billing modules for all states, data management, data analytics, and support to implementation etc.	100%
A-3 to A-6	Distribution Infrastructure works including SCADA, DMS, AB cables, feeder segregation etc.	60% or 90% as the case may be
B1-B4	Part-B	100%

A provision for additional incentive over and above this has been made, for Prepaid Smart Meters installed within targeted timelines of first phase mission i.e. December 2023 (as detailed in Para 5.1.3).

5.1.2 For the purpose of the grant under the Scheme, the states have been divided into two groups:

(i) All North Eastern States including Sikkim and States/Union Territories of Jammu & Kashmir, Ladakh, Himachal Pradesh, Uttarakhand, Andaman & Nicobar Islands, and Lakshadweep are categorized as Special Category States and will be eligible for grant of 90% the approved cost of Distribution infrastructure works and approved cost of PMA and 22.5% of the approved cost of metering including the operational cost, provided that it is not more than Rs. 1350 per meter for consumer metering only.

(ii) All other States will be eligible for grant of 60% of the approved cost of Distribution infrastructure works and approved cost of PMA and 15% of the approved cost of the metering works including the operational cost, provided that it is not more than Rs. 900 per meter for consumer metering only.

5.1.3 States/UTs would be incentivised for deployment of prepaid Smart meters by December, 2023. An incentive @ 7.5% of the cost per consumer meter worked out for the whole project or Rs. 450 per consumer meter, whichever is lower, would be provided for “Other than Special Category States” for prepaid Smart meters installed within the targeted timeline of first phase mission i.e. by December, 2023. The incentive for Special Category States would be @ 11.25% of the cost per consumer meter worked out for the whole project or Rs. 675 per consumer meter, whichever is lower. The funds for prepaid Smart Metering will be made available to the DISCOMs only after installation, commissioning and demonstration of at least one prepaid recharge in the area specified by the DISCOM in the DPR approved by the Monitoring Committee.

5.1.4 The operation and maintenance cost of the meter over the life of the meter as per the SBD shall be included in the cost of metering works for computation of grant.

5.1.5 For consumer metering, feeder and DT metering to be carried out in TOTEX mode, it is expected that the DISCOM will be able to finance balance cost other than grant, due to enhanced revenue as a result of improvement in billing and collection due to prepaid metering. This component is self-financing. State Government/DISCOM may also provide Budgetary support in TOTEX mode. Since the implementation of the metering scheme is proposed through PPP on TOTEX mode, the DISCOM will not have to pay upfront for all the capital expenditure.

Loan

5.1.6 For works other than metering works under Part A, counterpart funding will be provided by the DISCOM/ State Government. DISCOM can raise funds from REC, PFC, Banks & other FIs. Further, counterpart funding from bilateral/multilateral funding agencies can also be leveraged for which the Government of India would extend benefits of reduced Government Guarantee fee. The loan may be drawn at any stage of the project, whenever grant funds are not available to meet the obligations of the project. After grant is disbursed, the DISCOM may prepay the loan component to the extent of the grant disbursed, for which no prepayment shall be levied by REC and PFC, in case loan is taken from them.

5.2 Release of grant for Metering and Distribution Infrastructure Works

5.2.1 Metering

5.2.1.1 Grant for metering works, will be due when a meter is successfully installed and commissioned, and essential services and data related to it are provided for a period of one month to the DISCOM. It will be essential that a consumer meter is recharged at least once, for the release of grant pertaining to it to become due. The Nodal Agencies may decide as to what constitute essential services and data for system meters.

5.2.1.2 The DISCOM may submit claim for release of grant in a phased manner when grant becomes due against 5% of the total meters planned to be installed, or such number of meters or such period that the Nodal Agencies deem practical and convenient. After the first release, subsequent releases shall be subject to submission of utilization certificate of the previous releases.

5.2.1.3 It is clarified that grant shall not been given in advance for this component. Further it is also clarified that pre-qualification conditions and results evaluation matrix will not be applicable for release of grant for metering works.

5.2.2 Distribution Infrastructure Works

5.2.2.1 **Phase I:** After approval of the DPR for Loss Reduction, DISCOM will become eligible for release of 10% of the grant for Loss Reduction part of the project

as advance - 5% on sanction and further 5% on award of works.

5.2.2.2 **Phase II:** The DISCOM shall be evaluated in FY 2022-23 as per the Results Evaluation Framework of the Action Plan for FY 2021-22 and if it qualifies, then,

- It will become eligible for total release of 30% (including the advance 10%) of the grant component of the project cost of Loss Reduction part and
- It will become eligible for release of 30% of the grant component of the project cost of DPR for Modernization – 10 % on sanction and 20% on award of works.

5.2.2.3 **Phase III:** The DISCOM shall be evaluated in FY 2023-24 as per the Results Evaluation Framework of the Action Plan for the FY 2022-23, and if it qualifies, then it will become eligible for cumulative release of 60% (including the earlier release) of grant component of the project cost of DPRs.

5.2.2.4 **Phase IV:** The DISCOM shall be evaluated in FY 2024-25 as per the Results Evaluation Framework of the Action Plan for the FY 2023-24 and if it qualifies, then it will become eligible for cumulative release of 100% of the grant component of the project cost of DPRs. Out of the eligible 40%, 35% will be released on meeting the conditions prescribed in 5.3. and balance 5% will be released on submission of project completion report as per clause 4.8.1.

5.2.3 It is clarified that if a DISCOM achieves the targets as per Action Plan of any previous FY in a subsequent year, then it shall be eligible for release of grant pertaining to that FY. For example, DISCOM will be evaluated in FY 2022-23 as per the Results Evaluation Framework of the Action Plan for the FY 2021-22 and if DISCOM does not achieve the targets of FY 2021-22 then it will not be eligible for release pertaining to FY 2021-22. Subsequently, DISCOM will be evaluated in FY 2023-24 as per the Results Evaluation Framework of the Action Plan for the FY 2021-22 and FY 2022-23 and if it achieves the targets specified for FY 2021-22 then it becomes eligible for release pertaining to FY 2021-22 and if it has also achieved the targets for FY 2022-23 then it will be eligible for cumulative release/sanction pertaining to FY 2021-22 and FY 2022-23.

5.2.4 If by the end of year 2025-26, a DISCOM is not eligible for release of any grant, the initial advance of 10% of the grant component of the cost of DPR for Loss Reduction will have to be refunded by the DISCOM.

5.3 General Conditions for Release of Grant for Distribution Infrastructure Works

5.3.1 The grant (other than advance for project for Loss Reduction) shall be released to DISCOMs, which have been found eligible as above, subject to the following conditions:

(i) Submission of a certificate regarding utilization of grant already released;

(ii) Submission of a certificate regarding receipts and expenditure on the project certified by a Chartered Accountant;

(iii) Submission of physical and financial (grant and counterpart funding) progress report;

(iv) Sanction letter for counter-part funding / DISCOM's own resources / State Government funding for Distribution Infrastructure Works.

5.3.2 It is clarified that for release of advance pertaining to DPR of Loss Reduction and the first instalment of DPR for Modernisation, signing of the tripartite/bipartite agreement will be a necessary precondition.

5.4 Release of grant for PMA

5.4.1 Grant for PMA component shall be released, subject to the following conditions:

(i) Grant shall be released on the basis of the sanctioned cost or award cost, whichever is lower;

(ii) Grant will be released in the month of March, every year;

(iii) 10% shall be released as advance in the year of sanction;

(iv) 30% shall be released each year subsequent to the sanction year;

(v) Subsequent releases shall be subject to submission of utilization certificate of the previous releases and achievement against deliverables as specified in the SBD referred to in Clause 4.3.3 .

5.5 Fund Management by Nodal Agencies

5.5.1 Nodal Agencies shall adopt Corporate Internet Banking (CINB) and all payments shall be made directly to the DISCOM's dedicated bank account.

5.6 Fund Management by DISCOM

5.6.1 DISCOM shall also adopt CINB. All project related payments to the contractors (and others) by DISCOM shall be done directly from the dedicated bank account through e-banking only. DISCOM shall not open any other bank account(s) under the scheme. Nodal Agency shall have the right to view the DISCOM account. The nature of the account shall be savings bank account without CLTD (Corporate Liquid Term Deposit) facility or as per GoI's directions from time to time in this regard.

5.6.2 Any interest earned on grant shall be remitted to Ministry of Power's bank account on regular basis and at least once in a quarter.

5.6.3 Since grant under the scheme is Central Government money and DISCOMs are only the custodian of this money, income tax is not payable on interest earned on this money. DISCOMs shall take necessary steps to seek exemption from Income Tax Department regarding deduction of Tax at Source by the bank on interest accrued on un-utilized fund under the scheme. However, in case of deduction of TDS by bank, the Utilities shall claim refund

of the deducted amount from Income Tax Department directly while filing annual tax return and remit it to Ministry of Power's account.

5.6.4 The DISCOM shall ensure that funds released under the scheme are utilized for the purpose for which they are meant and are not diverted for any other purpose whatsoever. In case of any breach or deviation, further release of funds shall be stopped.

5.7 Public Financial Management System (PFMS)

5.7.1.1 The scheme being a Government of India program, the release from Nodal Agencies to the DISCOMs shall be done through PFMS and the DISCOMs shall use PFMS for fund flows under the scheme.

5.7.1.2 The DISCOMs shall mandatorily enter details like receipts, expenditures, etc. in PFMS portal. In case of non-entering desired details in PFMS portal, banks may not consider release of funds to contractors.

5.7.1.3 DISCOMs receiving funds under the scheme are to be registered / mapped in PFMS. Nodal Agencies / Programme Division of Ministry of Power will ensure that all DISCOMs to whom funds are to be released are properly registered/mapped in PFMS.

5.7.1.4 Nodal Agencies /DISCOMs shall submit status of unspent grant lying with them to Ministry of Power on a quarterly basis.

5.7.1.5 DISCOMs shall maintain books of accounts both for receipt of funds from Nodal Agency and release to contractors for each of the project.

5.7.1.6 The DISCOM shall ensure that fund shall not be invested in any other bank/branch, whether for short term or medium term, including fixed deposits.

5.8 Utilization Certificate

5.8.1 DISCOM shall submit utilization certificates (UC) for the funds released during the financial year in prescribed format latest by 30th April of succeeding year.

5.9 Audit

5.9.1 The DISCOM will ensure audit of the scheme accounts relating to receipts of funds from GoI / Nodal agency and expenditure incurred by the DISCOM against such receipts during the financial year by an independent Chartered Accountant and furnish a report to the Nodal agency latest by 30th June of the succeeding year. Nodal agency shall consider release of further funds on the receipt of audited report and certificate from Charter Accountant.

5.9.2 In addition to the above, the works and finances would be open to audit by the office of the Comptroller & Auditor General of India (C&AG) as well as Internal Audit Wing, Office of Controller of Accounts, MoP.

Chapter 6. Monitoring & Evaluation

6.1 Third Party Evaluation under Result Evaluation Framework

6.1.1 Appropriate third party/parties will be appointed by MOP / Nodal Agencies to assess / verify the achievements of DISCOMs with respect to the action plan finalized on periodical basis using the Result Evaluation Framework.

6.1.2 NITI Aayog will be involved in the process of selection of independent third parties to be appointed by MOP/Nodal Agencies for assessment and verification of results with respect to the agreed Action Plan and Result Evaluation Framework. Separate guidelines will be issued in this regard.

6.2 Performance Evaluation of the scheme

6.2.1 This will be carried out by a separate third-party agency(ies) by the Nodal Agencies. This will consist of following parts:

(i) **A Mid-term evaluation** of the scheme will be taken up by Ministry of Power on the basis of progress made by the scheme beneficiaries viz the DISCOMs, as demonstrated by results obtained for FY 2021-22 & FY 2022-23.

(ii) **A Post completion evaluation** of the scheme will be done.

6.2.2 Guidelines for Mid-Term and Post completion evaluation shall be issued separately.

6.3 The expenses for evaluations mentioned above (except annual evaluations under Results Evaluation Framework) shall be met from Part B component (enabling charges of MoP) of the scheme. The cost towards evaluation under Result Evaluation Framework shall be borne by the nodal agencies out of their eligible fee.

6.4 This scheme would also be reviewed by the District Development Coordination and Monitoring Committee (DDCMC), also known as DISHA.

6.5 Quality Assurance

6.5.1 The DISCOM shall be responsible & accountable for assuring quality in the scheme works. Accordingly, DISCOM shall formulate a comprehensive Quality Assurance (QA) and Inspection Plan with an objective to build quality infrastructure under the project. The QA and Inspection Plan shall be an integral Part of the contract agreement with turnkey contractor or equipment supplier/vendor and erection agency as the case may be in case of partial turnkey and departmental execution of works. Documentation with regard to Quality Assurance & Inspection Plan shall be maintained by DISCOM and kept in proper order for scrutiny during the course of project execution and for future reference. The DISCOM has to ensure that the quality of material/equipment supplied at site and field execution of works under the project is in accordance with Quality Assurance & Inspection Plan. DISCOM may use the MQP (Manufacturing Quality Plan) and FQP (Field Quality Plan) used in DDUGJY and IPDS schemes by suitably modifying as per requirement of this scheme.

Chapter 7. Stakeholders - Roles and Responsibilities

7.1 **Monitoring Committee:** The Office memorandum issued in this regard is enclosed as **Appendix-II**. The Committee will be empowered to:

(i) Approve operational guidelines including scope of work and to take necessary decisions for operationalization of various components of scheme and amendments thereof within the framework approved by CCEA;

(ii) Approve Action Plans including the results evaluation framework and sanction DPRs/Projects;

(iii) Monitor and review the implementation of the scheme;

(iv) Exercise powers vested with the Monitoring Committee constituted in terms of OM No. 20/9/2019-IPDS dated 20.7.2021 in respect of issues pertaining to the implementation of the scheme.

7.2 Nodal Agencies

7.2.1 REC and PFC have been designated as Nodal Agencies for the scheme. The states have been allocated between both organisations as stated in **Appendix-III**. However, they may, with mutual consent, change the states/works, based on their strength and competence in a state/work.

7.2.2 All works relating to these states right from sanction to closure shall be the responsibility of the concerned organisations under the overall guidance of the Monitoring Committee. The role of the Nodal Agencies includes the following:

(i) Notify all the guidelines and formats required for implementation of the project from time to time;

(ii) Appraise the Action Plan and DPRs before putting up to the Monitoring Committee;

(iii) Conduct all works relating to holding of the Monitoring Committee meetings for approvals;

(iv) Evaluation as per Results Framework and determine the eligible releases to be made every year;

(v) Administer the Grant Component;

(vi) Develop a dedicated web portal for submission of DPRs and for maintaining the MIS of the projects;

(vii) Monitor physical and financial progress of the projects.

(viii) PMU/ consultancy assistance for the Ministry

The expenditure on the aforementioned works (as applicable) shall be met out of the Nodal Agency fee.

7.3 **State Government** shall have the following responsibilities:

(i) To approve at the level of the State Cabinet the action plan under the Scheme;

(ii) To make upfront payment of revenue subsidy to the DISCOM;

(iii) To ensure dues of Govt departments and agencies, to the DISCOMs are paid on time;

(iv) To facilitate/enable approval of tariff for the DISCOM in time every year as per regulations and finance regulatory assets and financial losses;

(v) To provide support on policy issues on Distribution of power in the state;

(vi) To provide required land for sub stations and facilitate in obtaining other statutory clearances (ROW, forest etc.);

(vii) To arrange for DISCOM contribution in case DISCOM fails to arrange the same;

(viii) To furnish guarantee for the loan component under the scheme in case the DISCOM is not able to provide any other mode of security.

7.4 Distribution Reforms Committee (DRC)

7.4.1 A DRC shall be constituted which shall be chaired by the Chief Secretary, Secretary in charge of the Energy/Power Department of the State as the convener. The Committee shall comprise of Secretary (Finance), Secretary (Land Revenue) and Secretary (Forest and Environment) as its members.

7.4.2 The DRC shall review the progress of the scheme at the State level. Without prejudice to the generality of the above, it shall**:**

(i) Recommend the Action Plan for approval of State Cabinet;

(ii) Recommend the DPRs for approval of Monitoring Committee;

(iii) Approve change in the mode of execution with the consent of the Nodal agency;

(iv) Monitor the implementation of the Action Plan;

(v) Monitor physical and financial progress including quality of the projects.

7.5 DISCOMs shall be responsible for implementing the scheme as per the Guidelines, under the overall guidance of the DRC, Nodal Agencies and the Monitoring Committee. Without prejudice to the generality of the above, it shall have the following functions:

(i) Preparation of action plans and DPRs and online submission of the same to the Nodal Agency;

(ii) Implementation of the scheme within the scheduled completion period as per guidelines;

(iii) Appointment of Project Management Agency (PMA);

(iv) Establishment of a dedicated project implementation cell at district level and a centralized cell at Head office level;

(v) Submission of updated monthly physical and financial progress of the project to the Nodal Agency including its update on the web portal;

(vi) Ensuring that there is no duplication / overlapping of works with any other Government of India and State scheme;

(vii) Providing information to the Nodal Agency, as and when required.

Chapter 8. Part B of the scheme and other components fully funded by grant

8.1 Part B focusses on the softer part – up-gradation of human skills; process improvements; Nodal Agency fee and enabling provisions; awards; incentives, evaluation, PMA charges other than that covered in Part-A, scheme governance; and support for reforms through consultancy. This will include capacity building in frontier technologies such as smart grids and also on institutional capacity building.

8.1.1 Training

Training in good corporate governance practices, technical matters, advance technology intervention areas, new business processes, etc. for the personnel involved in execution of scheme at the field level are envisaged under this head. The details of the training programs will be finalized by the Nodal agency with the approval of the Monitoring Committee. The cost of these activities will be borne out of the MoP component of enabling charges.

8.1.2 Awards and Incentives

Ministry of Power will institute various awards and incentives for DISCOM personnel and management for showing exemplary performance in areas both within and beyond the realm of the scheme. The awards and incentives will be instituted from time to time by the Nodal agency with the approval of Monitoring Committee. The cost of these activities will be borne out of the MoP component of enabling charges.

8.1.3 Communication Plan & Consumer Engagement

The nodal agencies shall prepare a multi-modal communication plan in consultation with MoP for the scheme. Consumer engagement and consumer awareness on prepaid smart metering shall be designed and campaigning will be carried out in consultation with Nodal Agency . The cost of these activities will be borne out of the MoP component of enabling charges.

8.1.4 Nodal Agency Fee

Nodal agency shall be eligible for 0.5% of the sum total of the GBS component of the various projects of different eligible entities approved by Monitoring Committee as its fee for the works mentioned in para 7.2.2.

8.1.4.1 Release of Nodal Agency Fee

25% of the eligible Nodal Agency fee for the projects sanctioned in a year shall be released in the month of March of that year and the remaining in the month of March of subsequent years in three equal instalments

8.2 Unified Software

There is a provision in the smart metering component of Part- A of the scheme for development of software for the Digital Systems with approval of Monitoring Committee which can be utilised by willing DISCOMs at their option

so that each DISCOM does not have to spend money separately on the software. The software will be developed keeping in view issues such as interoperability, data security, and consumer privacy. This will be funded 100% as grant under Part A of the scheme.

8.3 Advanced ICT including AI and ML based solutions

Artificial Intelligence would be leveraged to analyse data generated through IT/OT devices including System Meters, prepaid Smart meters to prepare actionable MIS from system generated energy accounting reports every month so as to enable the DISCOMs take informed decisions on loss reduction, demand forecasting, asset management, Time of Day (ToD) tariff, Renewable Energy (RE) Integration, network management, consumer analytics and for other predictive analysis. This would contribute a great deal towards enhancing operational efficiency and financial sustainability of the DISCOMs.

A framework will be developed for promoting use of AI/Blockchain/Big Data/ML and such other new technology in power Distribution which shall be approved by the Monitoring Committee. On the basis of this framework, financial support will be provided to start ups, incubators and DISCOMs to promote such new technology. This will be funded 100% as grant under Part A of the scheme.

8.4 National Feeder Monitoring System (NFMS)

All feeders shall be integrated with the National Feeder Monitoring System (NFMS) which will be put in place. Full funding support will be provided for this purpose from Part-A of the scheme.

F. No. 20/9/2019-IPDS Appendix-I
Government of India
Ministry of Power
Shram Shakti Bhavan, Rafi Marg, New Delhi-110001

Dated, 20th July, 2021

To

1. Chief Secretary of all States and UTs
2. Additional Chief Secretary Principal Secretary/Secretary (Energy/Power) of all States and UTs
3. CMDs/MDs of State Power Distribution Utilities
4. CMD, REC Ltd.
5. CMD, Power Finance Corporation Ltd.

Subject: Revamped Distribution Sector Scheme: A Reforms-Based and Results-Linked Scheme.

Sir,

I am directed to forward herewith Office Memorandum of the Revamped Distribution Sector Scheme - A Reforms-Based and Results-Linked Scheme.

Encl: As above

Yours faithfully,

(M. Srikanth Reddy)
Deputy Director (UR&SI-II)
Tel:011-23319108
Email: srikanthreddy@nic.in

Copy to:

1. The CEO, NITI Aayog, Sansad Marg, New Delhi.
2. Secretary, Ministry of Finance, Department of Expenditure, North Block, New Delhi.
3. Secretary, Ministry of Home Affairs, North Block, New Delhi.
4. Secretary, Ministry of Electronics and IT, CGO Complex, New Delhi.
5. Secretary, Ministry of New & Renewable Energy, CGO Complex, New Delhi.
6. Prime Minister's Office (Shri Rohit Yadav, Joint Secretary), South Block, New Delhi.
7. Cabinet Secretariat (Shri Ashutosh Jindal, Joint Secretary), Rashtrapati Bhawan, New Delhi.
8. Cabinet Secretariat (Shri S.G.P. Verghese, Director), Rashtrapati Bhawan, New Delhi **with reference to their OM No. CCEA/11/2021(i) dated 02nd July, 2021.**
9. Chairperson, CEA, New Delhi
10. CMD, PGCIL
11. DG, Bureau of Energy Efficiency
12. Director, NPMU, NSGM

----2/-

13. Budget Section/Finance Division, Ministry of Power
14. Controller of Accounts, SevaBhavan, R.K. Puram, New Delhi.
15. Principal Director of Audit, Infrastructure, New Delhi

Copy also to, for information:

(i) PS to Hon'ble Minister of Power
(ii) PS to Hon'ble Minister of State for Power
(iii) Sr. PPS to Secretary (Power).
(iv) PPS to AS(Distribution)/PPS to AS&FA, Ministry of Power
(v) PPS to JS(Distribution/Hydro)/JS(R&R and OM)/JS(Trans./IT), Ministry of Power
(vi) PPS to Director(UR&SI)/ PS to Director(DS), Ministry of Power

F. No. 20/9/2019-IPDS
Government of India
Ministry of Power
Shram Shakti Bhawan, Rafi Marg, New Delhi-110001

Dated, 20th July, 2021

OFFICE MEMORANDUM

Subject: Revamped Distribution Sector Scheme: A Reforms based and Results linked Scheme.

Sanction of the President is conveyed for the implementation of "**Revamped Distribution Sector Scheme - A Reforms based and Results linked Scheme**" with the objective of improving the quality and reliability of power supply to consumers through a financially sustainable and operationally efficient distribution Sector. The Scheme aims to reduce the AT&C losses to pan-India levels of 12-15% and ACS-ARR gap to zero by 2024-25.

2. The Scheme has an outlay of Rs.3,03,758 crore with an estimated gross budgetary support of Rs.97,631 crore from the Government of India.

3. The ongoing approved projects under the Schemes of IPDS, DDUGJY along with PMDP-2015 for the erstwhile State of Jammu & Kashmir would be subsumed in this Scheme and the savings of the associated GBS (Gross Budgetary Support) of approx. Rs. 17000 crore would be part of the total outlay of the Revamped Distribution Sector Scheme under the existing terms and conditions till their sunset on 31" March, 2022. The funds under these Schemes would be available for the approved ongoing projects under Prime Ministers Development Program (PMDP) for the erstwhile state of J&K launched in 2015 (under IPDS and DDUGJY) and of Ayodhya, Uttar Pradesh (under IPDS) till 31 March, 2023.

4. Scope of Scheme :

4.1 The Scheme has two parts: **Part 'A'** – Financial support for upgradation of the Distribution Infrastructure and Prepaid Smart Metering & System Metering and **Part 'B'** – Training & Capacity Building and other Enabling & Supporting Activities. The details are enclosed at **Annexure – I (Page: 9-10).**

PART 'A'

4.2 To avail funding under this part, an eligible DISCOM is required to prepare an Action plan for strengthening their distribution system and improving its performance by way of various reform measures, which would result in improvement in their operational efficiency and financial viability as well as improve the quality and reliability of power supply to the consumers. DISCOMs will have the flexibility to draw up their Action plans keeping in view their own context. However, a DISCOM which is making losses will not be able to access funds under this Scheme unless it draws up a plan to reduce the losses, lists out the steps it will take to reduce such losses and the calendar thereof, get their State Government's approval to it, and file it with the Central Government. There will be a prequalification criteria in terms of compliance with best management practices; such as publication of audited accounts on time, not creating Regulatory Assets, accounting and payment of payable subsidy in accordance with Section 65 of the Electricity Act etc. The funding for the works (other than prepaid Smart Metering, Distribution Transformer Metering and Feeder Metering including integration of existing Metering infrastructure) would be contingent upon DISCOMs clearing the pre-qualifying criteria and taking steps in accordance with the loss reduction plan.

4.3 Each DISCOM will prepare an Action Plan, with subcomponents for strengthening its Distribution system , and to improve their performance . The Action Plan will have two parts. The first part will include an analysis of the reasons/root cause for losses, and list out the steps which are required and proposed for reduction of losses and ACS-ARR gap and the time taken for taking these steps. DISCOM will specify the activities and reforms proposed to improve their performance. These activities and reform measures will be finalized on basis of its operational and financial data and will be worked out to address DISCOM-specific problems. An indicative list of reforms/activities is enclosed at **Annexure – II (Page: 11).**

4.4 There shall be a Results Evaluation Framework which shall be finalized by the Monitoring Committee in respect of each DISCOM after incorporating result parameters and trajectories. It would have two components (i) Pre-qualifying criteria; and (ii) Result Evaluation Matrix. The pre-qualifying criteria need to be mandatorily met with by the DISCOMs before they can be evaluated on the basis of the Result

Evaluation Matrix. Thereafter, performance on the basis of Result Evaluation Matrix shall form the basis for release of funds under the Scheme. Details are enclosed at **Annexure-III (Page : 12-16).**

4.5 The second part of the Action plan will list out the Work plan for loss reduction and further strengthening the Distribution System as per needs assessment. States/DISCOMs will be able to access funds from this Scheme for addressing infrastructure constraints in Distribution System and for its further augmentation/strengthening. Works which are required for AT&C loss reduction will be given priority. Indicative list of works to be covered under the Scheme is enclosed at **Annexure – IV (Page : 17)**. There is a provision of Rs. 20,000 crores in the Scheme for agriculture feeders where these have not been segregated as yet. Thereafter, these feeders will be solarized under KUSUM – leading to cheap/ nominally priced day time power for agriculture irrigation as may be determined by the State Government .

4.6 Prepaid Smart Meters including System metering with communication features are important interventions in reducing Distribution losses in the Utilities and in facilitating automatic measurement of energy flows and energy accounting as well as auditing without any human intervention. This intervention will also facilitate switch over to digital pre-paid system, with recharging facility through mobile phones, and enabling of Time-of-Day tariff.

4.7 In order to attain the key objective of loss reduction in electricity distribution, the Scheme envisages providing funding through Gross Budgetary Support for the installation of prepaid Smart Meters under TOTEX (CAPEX plus OPEX) pattern and in a mission mode in the first phase in (i) all Electricity Divisions of 500 AMRUT cities, with AT&C Losses > 15% (ii) all Union Territories (iii) MSMEs and all other Industrial and Commercial consumers (iv) all Government offices at Block level and above (v) other areas with high losses. Prepaid Smart metering for remaining consumers would be taken up by the respective DISCOMs in a phased manner subsequently. Looking at the scattered nature of agriculture connections and their remoteness from the habitations; as well as their proposed solarization under Kusum; the smart meters need not be installed in Agriculture connections.

4.8 Along with installation of prepaid Smart metering and the associated Advanced Metering Infrastructure (AMI), installation of communicable System meters at Feeder and Distribution Transformer level with communication features will also be through Gross Budgetary Support under TOTEX mode to enable proper energy accounting every month for identification of theft prone pockets and high loss areas.

4.9 Advanced ICT like Artificial Intelligence, Machine Learning and Blockchain Technology would be leveraged to analyse data generated through IT/OT devices including System Meters, prepaid Smart meters to prepare actionable MIS from system generated energy accounting reports every month so as to enable the DISCOMs to take informed decisions on loss reduction, demand forecasting, asset management, Time of Day (ToD) tariff, Renewable Energy (RE) Integration and for other predictive analysis. This would contribute a great deal towards enhancing operational efficiency and financial sustainability of the DISCOMs. Gross Budgetary Support (GBS) under the Scheme would be used for development of applications related to the use of advanced ICT like Artificial Intelligence, Machine Learning and Blockchain Technology in the Distribution Sector and also for promoting development of Start-Ups in the Electricity Distribution Sector across the country.

4.10 GBS under the Scheme would also be available to MoP/Nodal Agency to develop a Software for the Digital systems which can be utilized by the DISCOMs / Power Departments of the country, so that each DISCOM does not have to spend money separately on the Software. This Software will be developed in consultation with the DISCOMs, keeping in view data security and consumer privacy. However, this Software will be optional for the DISCOMs.

PART 'B'

4.11 Part-B contains supporting and enabling components such as up-gradation of Smart Grid Knowledge Centre including AI, Training / Capacity building, awards and incentives, reform support in form of consultancy, Nodal Agency fee, MoP enabling activities (communication plan, consumer awareness and other associated measures such as third party evaluation etc), and PMA charges etc. Details are enclosed at **Annexure – V (Page : 18).**

5. DISCOMs Eligible :

All State-owned Distribution companies and State /UT Power Departments (referred to as DISCOMs collectively) excluding private Sector power companies will be eligible for financial assistance under the Revamped Scheme.

6. Funding Pattern :

6.1 For rolling out prepaid Smart metering in a mission mode under Part A – in "Other than Special Category States", a fixed amount of 15% (22.5% in case of Special Category States) of the cost per meter worked out over the whole project period, subject to a maximum of Rs. 900/- (Rs. 1350/- in case of special category States) per meter in case of consumer meters, will be funded.

6.2 States/UTs would be incentivised for deployment of prepaid Smart meters by December, 2023. An incentive @ 7.5% of the cost per consumer meter worked out for the whole project or Rs. 450 per consumer meter, whichever is lower, would be provided for "Other than Special Category States" for prepaid Smart meters installed within the targeted timeline of first phase mission i.e. by December, 2023. The incentive for Special Category States would be @ 11.25% of the cost per consumer meter worked out for the whole project or Rs. 675 per consumer meter, whichever is lower. The funds for prepaid Smart Metering will be made available to the DISCOMs only after installation, commissioning and demonstration of at least one prepaid billing period in the area specified by the DISCOM in the DPR approved by the Monitoring Committee.

6.3 Development of applications related to the use of advanced ICT like Artificial Intelligence, machine Learning and Blockchain Technology in the Distribution Sector and the unified billing and collection system will be funded 100% through the GBS.

6.4 For Distribution System upgradation works, maximum financial assistance given to DISCOMs of "Other than Special Category States" will be 60% of the approved cost, while for the DISCOMs in "Special Category States", the maximum financial assistance will be 90% of the approved cost.

6.5 For the purpose of execution of this Scheme, all North Eastern States including Sikkim and States of Himachal Pradesh & Uttarakhand and Union Territories of

Jammu & Kashmir, Ladakh, Andaman & Nicobar Islands, and Lakshadweep will be treated as Special Category States/UTs

6.6 Part B of the Scheme will be fully funded by grant through Central/State Governments.

7. Release of Funds :

7.1 The funds for prepaid Smart Metering will be made available to the DISCOMs only after installation, commissioning and demonstration of at least one prepaid billing period in the area specified by the DISCOM in the DPR approved by the Monitoring Committee.

7.2 All DISCOMs that initiate their prepaid Smart metering tenders after 1st January, 2020 will be eligible for funding, if they carry out prepaid Smart metering works in TOTEX mode after obtaining approval of Monitoring Committee in this regard.

7.3 The funding for the works other than prepaid Smart metering, DT Metering and Feeder Metering including integration of existing Metering infrastructure would be contingent upon DISCOMs clearing the pre-qualifying criteria and achieving at least 60% marks on the result evaluation matrix.

7.4 The first instalment will be released as 10% advance on DPR approval and yearly fund release for second and subsequent instalments will be based on annual evaluation (as per agreed Results Evaluation Framework) as under:

- 2nd Instalment - 20% of GBS after 1st evaluation (30% cumulative)
- 3rd Instalment - 30% GBS after 2nd evaluation (60% cumulative)
- 4th Instalment - 40% GBS after 3rd evaluation (100% cumulative)

8. Financing of the Scheme :

8.1 The estimated outlay for the Scheme is Rs 3,03,758 crore with an estimated GBS from Central Government of Rs 97,631 crore. The Government of India will provide Rs. 1,030 Crore for activities under Part B of the Scheme. It is envisaged that about Rs. 200 crores will be spent by the State Governments towards reforms support in the form of consultancy.

8.2 Savings under various components of this Scheme (GBS) will be fungible across all parts of the Scheme with the approval of the Monitoring Committee .

8.3 Counterpart funding will be provided to DISCOMs by PFC/REC and/or Banks/other FIs. Further, counterpart funding from bilateral/multilateral funding agencies can also be leveraged for which Government of India would extend benefits of reduced Government Guarantee fee.

9. The performance of the DISCOMs in the Reforms Based Results Linked Revamped Distribution Scheme would also form integral part of the financing norms of PFC, REC, Banks/FI's for any project in the Distribution Sector even beyond those related to funding under this Scheme.

10. Monitoring Committee:

10.1 An inter-ministerial Monitoring Committee for the Scheme will be constituted under the chairmanship of Secretary, Ministry of Power. The Monitoring Committee will frame and approve all operational guidelines, sanction all Action Plans & DPRs of DISCOMs / States and proposals/DPRs under Part B, and review and monitor implementation of Scheme including review of Third-Party Mid-Term Evaluation of the Scheme carried out by the Nodal Agency.

10.2 The Monitoring Committee will also approve scope of works and take necessary decisions for operationalization of various components of the Scheme and amendments thereof, within the framework approved by Cabinet Committee on Economic Affairs (CCEA). The Monitoring Committee will also be competent to modify the scope of works under various parts of the Scheme in line with the objectives of the Scheme.

10.3 The maximum marks and targets for individual parameters in Result Evaluation framework may differ for each year of evaluation .The result evaluation framework would be different for each DISCOM and would be fixed for each year depending on the cumulative performance as well as the annual performance. The funds for a particular year in respect of Infrastructure Works would be released in respect of a DISCOM for a particular year only after it has been found to have fulfilled the pre-qualifying criteria and its total weighted score is at least 60 marks on the result evaluation matrix after having been evaluated by the Nodal Agency and approved as

such by the Monitoring Committee . Evaluation of parameters relating to financial accounts shall be based on audited quarterly / annual accounts .

11. REC Limited and Power Finance Corporation Limited (PFC) would be the Nodal Agencies for the Scheme and would be responsible for operationalization of Scheme in the entire country.

12. The State Governments and their DISCOMs will sign a Tripartite Agreement with the Central Government before availing benefits under the Scheme.

13. The duration of the Scheme is 5 years (FY 2021-22 to FY 2025-26). The sunset date for the Scheme will be 31.03.2026.

14. The Nodal Agencies will submit monthly progress report indicating both financial and physical progress on the implementation of the Scheme to Ministry of Power and CEA.

15. The detailed guidelines for the implementation of the Scheme will be issued separately.

16. The expenditure under the Scheme would be debited to the budget grant no. 78 of Ministry of Power.

17. This issues with the concurrence of Finance Branch of the Ministry of Power vide their Dy. No. 379/Fin./2021 dated 20.07.2021.

20/7/21

(Tanmay Kumar)
Joint Secretary to the Government of India
Tele-Fax No.: 23714168
E-mail: tanmay.kumar-rj@gov.in

Annexure - I

Details of Part – 'A' and Part – 'B' of Scheme

Part- 'A' of Scheme – Funding for Smart Metering

Item Head	Item Description	Quantity	GBS, % (Max)
A-1	Prepaid Smart metering solution including at consumer, DT, and feeder level including integration of existing infrastructure	25 crore	15% / 22.5% **(limited upto Rs.900 or Rs.1350 respectively per meter for Consumer metering)###**
A-2	Other costs including encumbrance free standardized billing modules for all States, data management, data analytics, and support to implementation, AI etc.	Lumpsum	100%

Part- 'A' of Scheme – Funding for Infrastructure Creation

Item Head	Item Description	Quantity Estimated
A-3	Segregation of agriculture feeders	10,000 Nos.
A-4	Replacement of existing LT Overhead bare conductor lines with AB Cable / HVDS in theft prone areas	4,00,000 Kms
A-5	Distribution Automation in Urban Areas	
A-5.1	SCADA/DMS in Big cities, having population >2.75 lakh, including opex for 2 years	100 Nos.
A-5.2	SCADA (Real Time Supervision & Controllability of Sub-station) including opex for 2 years	3875 Nos.
A-6	Funding for distribution infrastructure including HVDS, IT and OT in Distribution Sector, Feeders, conductors, Transformers, cables, substations, feeders, capacitors etc. to cater to load growth and increasing demand	As required

Part- 'B' of Scheme

Item Head	Item Description	Quantity	Outlay (Rs. Crore)	GBS % (Max)	GBS(Rs. Crore)
B-1	Augmentation of Smart Grid Knowledge center including AI	-	30	100%	30
B-2	Training / Capacity building/ Awards and incentives	-	200	100%	200
B-3	Reforms support in form of consultancy		200	100%	-200*
B-4	Nodal agency fee, MoP enabling activities and PMA charges**	-	1,000	100%	1000
Sub-Total (Part-B):			**1,430**		**1,030**

*Amount for reform support in form of consultancy may be taken State Governments and utilized for the Scheme.

**Approximately 1% of the estimated GBS for Part A for smart metering and Infra creation.

For Part A – Prepaid Smart metering in "Other than Special Category States", a fixed amount of Rs 900 per consumer meter or 15% of the cost per consumer meter worked out for the whole project, whichever is lower, would be funded. In case of "Special Category States", a fixed amount of Rs 1350 per consumer meter or 22.5% of the cost per consumer meter worked out for the whole project, whichever is lower, would be funded. To incentivize the States/UTs for deployment of prepaid Smart meters by December, 2023. An incentive @ 7.5% of the cost per consumer meter worked out for the whole project or Rs. 450 per consumer meter, whichever is lower, would be provided for "Other than Special Category States" for prepaid Smart meters installed within the targeted timeline of first phase mission i.e. by December, 2023. The incentive for Special Category States would be @ 11.25% of the cost per consumer meter worked out for the whole project or Rs. 675 per consumer meter, whichever is lower. The incentive would be met out of overall provision of GBS for Smart Metering under the Scheme (Rs. 23,300 crore) along with expected cost reduction benefits arising out of economies of scale looking to the large-scale deployment of prepaid Smart meters in first phase, similar to the huge reduction in price experienced in large scale use of LED bulbs and solar power.

Annexure – II

Indicative List of Reforms under PART-'A'

An indicative list of reforms / activities to be covered under the Scheme:

(i) Putting in place a mechanism to ensure that the Government Departments pay for the for electricity consumed, promptly

(ii) Putting in place a mechanism for ensuring that the consumption by the subsidized categories is accounted for properly and released to the DISCOM in advance as mandated by Section 65 of the Electricity Act 2003, which will be credited to the consumer account maintained by the DISCOM. Subsidy delivery must be targeted via Direct Benefit Transfer (DBT) for improvement in accountability

(iii) Annual Tariff Fixation, Tariff to reflect prudent costs; costs not reflected in Tariff shown separately, to be funded by the DISCOM/State Govt.; no Regulatory assets to be created, Multi Year Tariff (MYT).

(iv) Preparation of and adherence to a roadmap for funding accumulated and current financial losses, if any, through clearance of part or whole of regulatory assets and state funding.

(v) Energy Accounting with 100% feeder and transformer metering on OPEX model.

(vi) Corporate Governance reforms, Operation of part or whole area of supply of DISCOM through private participation or through CPSUs/JVs of CPSUs

(vii) Distribution Franchisee arrangements in some areas of DISCOM

(viii) Setting up electricity police stations in line with the provisions of the Electricity Act, 2003

(ix) Training and Capacity Building of existing manpower, Creation of IT cadre for management of IT/OT services or engaging knowledge partners / consultants for the same.

(x) Compliance of RPO trajectories

(xi) Publication of quarterly audited/unaudited reports in a standardized format circulated by PFC. Quarterly and Annual Accounts of DISCOMs need to explicitly include details of subsidy and Govt. Department dues. The annual accounts of the previous year would be published by DISCOMs latest by September 30th of the current year.

(xii) Initiation of performance linked transfer policy for DISCOM staff

(xiii) Any other activity which serves to achieve the objective of the Scheme.

Annexure – III

Results Evaluation Framework

The Results evaluation framework would have two components (i) Prequalifying criteria; and, (ii) Result evaluation matrix.

Pre-Qualification Conditions:

I. DISCOMs would publish quarterly un-audited accounts within 60 days of the end of each quarter during first two years of operation of the Scheme (i.e. for FY 2021-22 and FY 2022-23) and thereafter audited quarterly accounts within 45 days from 3rd year onwards.

II. Further, DISCOMs would publish audited annual accounts by end of December of the following year during first two years of operation of the Scheme (i.e. for FY 2021-22 and FY 2022-23) and thereafter audited annual accounts by end of September of the following year from 3rd year onwards.

III. DISCOMs will have ensured that no new Regulatory Assets have been created in latest tariff determination cycle.

IV. State Government to ensure 100% payment of subsidy for the previous year and advance payment of subsidy up to current period in line with section 65 of EA2003 and wipe out the remaining subsidy amount by the end of the project period.

V. All Government Department/ Attached Offices/ Local Bodies have made100% payment of current electricity dues for the year under evaluation.

VI. Progress commensurate to commitment in putting Govt. Offices on prepaid meters.

VII. No. of days Payables to Creditors / suppliers for the year under evaluation is equal to or less than the projected trajectory as per results evaluation framework.

VIII. Tariff order for the current year in which evaluation is being done and true up of penultimate year has been issued and implemented w.e.f. 1st April of current FY.

Utilities clearing the pre-qualifying criteria would be eligible for evaluation against the result evaluation matrix, which would determine their eligibility for release of funds for a particular year. The result evaluation framework would be different for each DISCOM and would be fixed for each year depending on the cumulative performance as well as the annual performance.

Four basic categories of Results Parameters have been identified and weightage has been assigned to each of the category as under:

Sr. No.	Category	Weightage for Evaluation
1.	Financial Sustainability	60
2.	Outcome of infrastructure Works	20
3.	Infrastructure Works	10
4.	Policy & Structural Reforms, Capacity Building and IT/OT Enablement	10
	Total	100

While the weightage of Financial sustainability would remain static at 60%, Monitoring Committee of the Scheme may make variations specific to the needs of the States/DISCOMs for other weightages

Under each of the categories above, there would be result parameters in the matrix, which will be assigned maximum marks on the basis of agreed priority/ significance towards achieving the objectives of the Scheme. The maximum marks and targets for individual parameters may differ for each of the evaluation years.

The funds for a particular year will be released only if the Utility clears the pre-qualifying criteria and the total weighted score is more than 60 marks on the evaluation matrix. Evaluation of parameters relating to financial accounts shall be based on audited quarterly/annual accounts.

Recognising that the year-wise emphasis on desired outcomes could be different, the Monitoring committee will reserve the right to allocate the maximum marks to individual result parameters for every year of evaluation. Result Evaluation Framework may be modified, if required, to include a smaller number of parameters and to exclude those included in the pre-qualifying criteria to avoid duplication and to make the Result Evaluation Framework simplistic.

RESULTS EVALUATION MATRIX (ILLUSTRATIVE)

Name of DISCOM:_____

SN	Result Parameters	Weightage	Unit of Measurement	Base Year [2020-21]	Evaluation of Cumulative Improvement from Base Year up to Year under evaluation			
				(Values)	Max. Marks	Target	Achievement	Score
A.	**Financial Sustainability**	**60**						
1	ACS-ARR gap		Rs./kWh		25			
2	AT&C Loss - Increase in Billing and Collection Efficiency - Reduction in theft / line losses		%		25			
3	Outstanding/ Overdue Subsidy Payment by State Government		Rs. Crore		15			
4	Outstanding/ Overdue Government Dues		No. of Days Receivable		10			
5	Progress in putting Govt. Offices on prepaid meters		%		10			
6	No. of Creditor Days (including payment to Gencos for supply of power)		No. of days payable		5			
7	No. of Debtor Days		No. of days receivables		5			
8	Unliquidated Regulatory Assets		Rs. Crore		5			
	Sub Total (A)				Σ Max. Marks			Σ Score
	Weighted Score (A) = (Weightage x ΣScore)/ ΣMaximum Marks							
B	**Outcomes of Infrastructure works**	**20**						
1	Hours of supply (Rural)		Avg. Hours/ Day		20			
2	Hours of supply (Urban)		Avg. Hours/ Day		20			
3	Accurate Energy Accounts		%		20			
4	Reliability of power supply - SAIFI (System Average Interruption Frequency Index)		Nos. / year		20			
5	Reliability of power supply - SAIDI (System Average Interruption Duration Index		Hours or minutes/ year		20			

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SN	Result Parameters	Weightage	Unit of Measurement	Base Year [2020-21]	Evaluation of Cumulative Improvement from Base Year up to Year under evaluation			
				(Values)	Max. Marks	Target	Achievement	Score
	Sub Total (B)				Σ Max. Marks			Σ Score
	Weighted Score (B) = (Weightage x ΣScore)/ ΣMaximum Marks							
C.	**Infrastructure Works**	**10**						
1	**Metering**							
I	Consumer Metering		Nos.		10			
Ii	DT Metering		Nos.		20			
Iii	Feeder Metering		Nos.		20			
2	**Feeder Separation - % of total Agriculture feeders separated (Feeders with Agricultural load of >= 30% of total load of feeder)**		%		10			
3	Replacement of existing LT overhead bare conductor lines with AB/UG cable		Ckm		10			
4	% of Consumers with Prepaid Smart Meters (other than Govt. Deptt.)		%		15			
5	% of Govt Departments with Prepaid Smart Meters		%		15			
	Sub Total (C)				Σ Max. Marks			Σ Score
	Weighted Score (C) = (Weightage x ΣScore)/ ΣMaximum Marks							
D	**Policy & Structural Reforms, Capacity building and IT/OT enablement**	**10**						
1	SCADA		No. of Towns		15			
2	ERP Implementation		Yes/No		10			
3	Training of DISCOM Officials		Man-days		5			
4	Corporate Governance (Recommendations complied)		%		10			
5	Tariff Reforms (MYT / ToD / Cross Subsidy)				15			
6	Subsidy Delivery Mechanism/ DBT				15			

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SN	Result Parameters	Weightage	Unit of Measurement	Base Year [2020-21]	Evaluation of Cumulative Improvement from Base Year up to Year under evaluation			
				(Values)	Max. Marks	Target	Achievement	Score
7	Consumer rights and grievance redressal				15			
8	Adoption of PPP mode				15			
	Sub Total (D)				Σ Max. Marks			Σ Score
	Weighted Score (D) = (Weightage x ΣScore)/ Σ Maximum Marks							
	Sum of Weighted Score (A+B+C+D)							

Note : In order to qualify for receipt of grant under the Scheme , the total weighted score should be 60 or more .

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Annexure – IV

Indicative List of Works under Part – 'A'

An indicative list of works to be covered under the Scheme:

(i) Replacement of conductors, which are old/frayed
(ii) Additional HT lines to improve quality of supply
(iii) Segregation of agricultural feeders
(iv) Provision of Aerial bunched Cables (ABC) in high loss areas
(v) High Voltage Distribution System (HVDS) in high loss areas
(vi) Supervisory Control and Data Acquisition (SCADA) in all urban areas; and DMS in 100 urban centres above the population of 2.75 lakhs as per urban census 2011
(vii) Prepaid/Smart metering systems
(viii) Works like new feeders, capacitors, etc for loss reduction
(ix) IT/OT enablement works
(x) Prepaid metering for all Government Departments
(xi) Distribution Works for system strengthening
(xii) Transformer / Feeder Metering – on OPEX Model

Segregation of feeders dedicated only for supply of power for agricultural purpose, which are proposed to be solarized under Kisan Urja Suraksha Evam Utthan Mahabhiyan (KUSUM) Scheme will be sanctioned on priority under the Scheme. Further, feeders once segregated will not be used for serving other than agricultural loads.

Part B: Training & Capacity Building and Other Enabling & Supporting Activities

The major components covered under the Part B of the Scheme are:

I. Augmentation of Smart Grid Knowledge Centre including AI

Smart Grid Knowledge Center (SGKC) at PGCIL, Manesar is a facility developed under assistance from the Integrated Power Development Scheme (IPDS). The center has been established to act as resource center for smart grid activities in the country with various smart grid technologies on display on a lab scale. It also has state of the art Smart grid training facilities. SGKC will be upscaled as an incubation center for evaluating and disseminating new technologies, and also as an innovation park. An amount of Rs 30 Crores is earmarked for expansion of centers' activities with 100% gross budgetary support. These funds would also be used for creation of Center for development of applications related to use of Artificial Intelligence in Distribution Sector.

II. Training / Capacity building/ Awards and incentives

Training and capacity building of professionals in the Distribution Sector is a much-felt need. Training in good corporate governance practices, technical matters, advance technology intervention areas, new business processes, etc. both in India and abroad are envisaged under this head. The details of the training programs will be finalized by the Monitoring Committee.

Ministry of Power will institute various awards and incentives for DISCOM personnel and management for showing exemplary performance in areas both within and beyond the realm of the Scheme. These will be instituted with the approval of Monitoring Committee.

III. Reforms support in form of consultancy

The Scheme also envisages consultancy support for reform implementation. Ministry of Power, through the Nodal Agency, will appoint consultants both at national and state/regional levels based on the action plans finalized by the Monitoring Committee who will advise and assist MoP and States/DISCOMs in Scheme implementation, especially the reforms in DISCOMs

The consultancy support provided by the MoP to Union Territories for privatization of Power Departments/ Utilities under AatmaNirbhar Bharat Abhiyan will also be funded out of this component. The details of the consultancies shall be finalized by the Monitoring Committee. The costs towards this consultancy for the Scheme period will be borne by the Ministry of Power out of allocation under Part-B of the Scheme.

IV. Nodal agency fee, MoP enabling activities and PMA charges

This head will cover various enabling activities viz. communication plan, consumer awareness and other associated measures such as third-party evaluation, nodal agency fee and PMA charges etc.

No. 10/03/2021-UR&SI-II(E- 258311) Appendix-II

Government of India

Ministry of Power

*****

Shram Shakti Bhawan, Rafi Marg

New Delhi the 20th July 2021

OFFICE MEMORANDUM

Subject: Constitution of Monitoring Committee for implementation of Revamped Distribution Sector Scheme: A Reforms based and Results linked Scheme. – regarding

The "**Revamped Distribution Sector Scheme - A Reforms based and Results linked Scheme**" has been approved by Government of India with the objective of improving the quality and reliability of power supply to consumers through a financially sustainable and operationally efficient Distribution Sector.

2. A Monitoring Committee for the scheme is being constituted comprising the following members:

(i)	Secretary, Ministry of Power	Chairperson
(ii)	Chairperson, Central Electricity Authority	Member
(iii)	Principal Advisor (Energy), NITI Aayog	Member
(iv)	Joint Secretary, Ministry of Finance (D/o Expenditure)	Member
(v)	Joint Secretary, Ministry of New and Renewable Energy	Member
(vi)	Joint Secretary, Ministry of Home Affairs	Member
(vii)	Joint Secretary, Ministry of Electronics and IT	Member
(viii)	Additional Secretary(Distribution),Ministry of Power	Member
(ix)	Additional Secretary & Financial Advisor, Ministry of Power	Member
(x)	Joint Secretary (Distribution), Ministry of Power	Member
(xi)	CMD, Power Finance Corporation Ltd.	Member
(xii)	CMD, PGCIL	Member
(xiii)	DG, Bureau of Energy Efficiency (BEE)	Member

(xiv)	Director, NPMU	Member
(xv)	CMD, REC Ltd.	Member Secretary & Convener

3. The Monitoring Committee will frame and approve all operational guidelines, sanction all Action Plans & DPRs of DISCOMs / States and proposals/DPRs under Part-B, and review and monitor implementation of Scheme including review of Third-Party Mid-Term Evaluation of the Scheme carried out by the Nodal Agency.

4. The Monitoring Committee will exercise powers vested with it in terms of OM No 20/9/2019-IPDS dated 20th July, 2021 issued by Ministry of Power for implementation of Revamped Distribution Sector Scheme. In addition, the Monitoring Committee would also exercise powers vested with it in terms of the OM No 44/44/2014-RE dated 17th December, 2014 and OM No 26/1/2014-APDRP dated 15th December, 2014 in respect to issues pertaining to the DDUGJY,IPDS and PMDP Schemes respectively, including on their subsumed components.

5. REC Ltd. and Power Finance Corporation Limited being the Nodal Agencies will provide necessary secretarial assistance such as manpower, material and other logistic support to the committee for smooth implementation of the scheme.

6. The members of the Committee will draw TA/DA if any, from their respective offices.

7. This issues with the approval of Hon'ble Minister of Power, and New & Renewable Energy.

Srikanth

(M. Srikanth Reddy)
Deputy Director(UR&SI-II)
Tel.No.011-2339108

To

1. All Members of the Monitoring Committee.
2. CMD, REC Ltd.

Copy to:

1. PS to Hon'ble Minister of Power
2. PS to Hon'ble Minister of State for Power
3. Sr. PPS to Secretary (Power)
4. PPS to AS(Distribution),/PPS to AS&FA, Ministry of Power
5. PPS to JS(Distribution), Ministry of Power
6. PPS to Director (UR&SI)/ PS to Director (Distribution Schemes), Ministry of Power

Appendix-III

Allocation of States between Nodal agencies

States and UTs allocated to REC

1. Assam
2. Meghalaya
3. Arunachal Pradesh
4. Chhattisgarh
5. J&K
6. Ladakh
7. Goa
8. Tamil Nadu
9. Karnataka
10. Bihar
11. Rajasthan
12. Uttar Pradesh
13. West Bengal
14. Andaman Nicobar
15. Sikkim
16. Mizoram
17. Manipur
18. Nagaland
19. Tripura

States and UTs allocated to PFC

1. Maharashtra
2. Gujarat
3. Andhra Pradesh
4. Telangana
5. Kerala
6. Madhya Pradesh
7. Uttarakhand
8. Odisha
9. Jharkhand
10. Punjab
11. Haryana
12. Himachal Pradesh
13. Chandigarh
14. Delhi
15. Puducherry
16. Lakshadweep
17. DNH and Daman & Diu

THE BRIHAN MUMBAI ELECTRIC SUPPLY & TRANSPORT UNDERTAKING
(OF THE BRIHAN MUMBAI MAHANAGARPALIKA)

☏ : 2377 5544, 2374 3933
Mob.: 9867830770
E_MAIL: mypednekar@bestmmd.net

ADD: MATERIALS MANAGEMENT DEPT.
Bijlee Bhavan, 2nd Floor, Mazagaon,
Kussara Bunder Road, Mumbai–400 010.

Ref.: DMM/SB/06/T-TA73759/4494/2022-23 Date: 30.09.2022

ADANI TRANSMISSION LIMITED
Adani Corporate House, Shantigram,
Near Vaishnodevi Circle,
S. G. Highway,
AHMEDABAD – 382 421

Kind attn.: Shri. Vaibhav Tandon
(Asst. Vice President)

E-mail: tandon.vaibhav@adani.com

Dear Sirs,

Sub: Letter of Award for Appointment of Advanced Metering Infrastructure (AMI) Service Provider for Implementing Prepaid Smart Metering Project in the Brihan-Mumbai Electric Supply & Transport Undertaking (BEST) on Design, Built, Finance, Own, Operate & Transfer (DBFOOT) basis

Ref.: 1. Tender No. DMM(SB)I/06/TCU/73759/2022-23/Advt., opened under Reverse Auctioning mechanism with Techno-commercial bids opened on 21.07.2022 & Price bids opened & Reverse Auction carried out on 06.09.2022
2. A. R. No. 97 dtd. 29.09.2022

This is in reference to your proposal in relation to the Request for Proposal (RFP). Pursuant to the evaluation of the bid, your bid has been found to be most suited. Vide A. R. No. 97 dtd. 29.09.2022, the Administrator (BEST Committee) has approved the proposal to enter into contract with the firm viz. Adani Transmission Limited for Appointment of Advanced Metering Infrastructure (AMI) Service Provider for Implementing Prepaid Smart Metering Project in the Brihan-Mumbai Electric Supply & Transport (BEST) Undertaking on Design, Built, Finance, Own, Operate & Transfer (DBFOOT) basis.

We are, therefore, pleased to inform you that the BEST Undertaking has accepted your offer, the details of which are as shown below:

Description	Basic Rate Rs.P.	Gross Rate Rs.P.	Approx. Total Cost Rs.P.
Appointment of Advanced Metering Infrastructure (AMI) Service Provider for Implementing Prepaid Smart Metering Project in the Brihan-Mumbai Electric Supply & Transport Undertaking (BEST) on DBFOOT basis as per the Undertaking's Technical Specifications	11,04,37,55,237.00	13,03,16,31,179.89	**13,03,16,31,179.89**

You are, therefore, requested to please take steps for incorporation of the SPV in terms of the RFP for execution of the AMISP contract. The execution of the AMISP contract shall happen only after you have furnished the Performance Security in terms of the RFP.

TERMS & CONDITIONS:

a)	**PRICES**	:	Unconditionally 'Firm' throughout the contractual period. The detailed price breakup is as per attached Annexure-A.
b)	**TAXES & STATUTORY LEVIES**	:	SGST @ 9% & CGST @ 9%. However, those applicable at the time of supply will be charged.
c)	**TERMS OF PAYMENT (CONTRACT PRICE & PAYMENT)**	:	As per the attached Annexure-B.
d)	**SCOPE OF WORK**	:	As per the attached Annexure-C.
e)	**WARRANTY CLAUSE**	:	i) The AMISP warrants that all the Goods that would be used as part of Solution would be new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the contract. ii) The AMISP further warrants that the Goods shall be free from defects arising from any act or omission of the AMISP or arising from design, materials, and workmanship, under normal use in the conditions prevailing in the country of final destination iii) The warranty of the AMI system including field and remote Hardwares, software and meters shall remain valid till expiry of the contract Period. iv) The AMISP shall be responsible for comprehensive maintenance of all the equipment and systems supplied & installed under this contract during the Operational Period. There may be some variation during detailed engineering. AMISP will have to make their own assessment of the systems and deploy manpower accordingly. However, it is to be ensured that specified manpower of requisite qualification is deployed. v) The maintenance of the system supplied & installed by the AMISP shall be comprehensive. The AMISP shall be responsible for providing all the spares as may be required. The spares shall be maintained by the AMISP at no extra cost to the Utility/AMI-IA. vi) At the end of the contract or at the time of transfer in case of termination, the meters shall have a warranty of 5 years from their installation.

f)	**PERFORMANCE SECURITY**	:	i) The AMISP shall furnish Performance Security in the form of an irrevocable bank guarantee valid up to a period of 6 (six) months beyond the end of the contract Period or extended thereafter, for the amount indicated in Special Conditions of contract (SCC) on the prescribed format. However, in case of delay in Installation Milestone, the validity of the initial Performance Security shall be extended by the period of such delay. In the event delay is solely due to acts and/ or omission of the AMI-IA cost of extending the validity of Performance Security shall be reimbursed to the AMISP by the AMI-IA. ii) Upon achievement of Installation Milestone, the value of the Performance Security shall be reduced by AMISP, to the extent indicated in SCC as determined in accordance with numbers of meters considered for Installation Milestone. iii) Any payments shall be made to the AMISP only after receipt of the initial Performance Security by AMI-IA. iv) Upon Termination of the contract due to AMI-IA Event of default or expiry of the contract Period, the separate Performance Security shall be discharged by AMI-IA without any interest and returned to the AMISP not later than 14 (fourteen) working days following the date of Termination of the contract. Upon Termination of the contract due to AMISP Event of default, the Performance Security shall be forfeited by AMI-IA. v) In case of any delay by the AMISP in performing the activities of the scope of work with respect to the Project Implementation Schedule, then upon AMI-IA's request, the AMISP shall extend the validity of the separate Performance Security for the period for which the contract is extended. In the event delay is solely due to acts and/ or omission of the AMI-IA cost of extending the validity of separate Performance Security shall be reimbursed to the AMISP by the AMI-IA.
g)	**LIQUIDATED DAMAGES, PENALTY & INCENTIVES CLAUSE**	:	i) Except in case of Force Majeure or where the delay in delivery of the Solution is caused due to any delay or default of AMI-IA, if the Installation Milestone is delayed by more

			than 30 (thirty) months from the date of execution of the contract the AMISP shall be liable to pay liquidated damages as per the specified rates. ii) Except in case of Force Majeure or where the delay in delivery of the Solution is caused due to any delay or default of AMI-IA if the delivery, site installation, integration and operationalization of 100% of Feeder Meters each with related hardware, software and equipment is delayed by more than 9 (nine) months from the date of execution of the contract the AMISP shall be liable to pay liquidated damages as per the specified rates. iii) AMI-IA shall without prejudice to all its other remedies under the contract, deduct from the amount due to be paid, as liquidated damages, 50% of AMISP Service Charge for each delayed meter for each completed month of delay for a maximum period of 12 (twelve) months. An illustrative example for arriving at the deductions is given in SCC. iv) If the AMISP achieves milestone of "Installation Milestone atleast one month in advance than the timelines specified in the contract, AMI-IA shall provide an incentive as specified in SCC. v) Upon achieving Installation Milestone, AMISP shall be entitled to raise a supplementary invoice for the amount indicated therein. The Supplementary invoice shall be paid along with the amount due to be paid for AMISP Service Charges for the immediately succeeding month.
h)	**QUANTITY VARIATION CLAUSE**	:	AMI-IA reserves the right to increase or decrease the number of items under the AMI-SP contract subject to the limit of -20% (twenty percent) upto +30% (thirty percent) of the existing no. of items, covered under the AMI-SP contract, without any change in the unit prices or other terms and conditions of the AMI-SP contract and the Bid.
i)	**CONTRACT VALIDITY PERIOD (EFFECTIVENESS & TERM)**	:	i) This contract shall come into force and effect on the date of execution of the contract by the Parties; ii) Unless terminated earlier by either Party or extended by the AMI-IA in accordance with the terms of this contract, this contract shall continue in full force and effect until the earlier of (a) 10 (ten) years from the date of execution of the

			contract or (b) As soon as the "Meter-Months" exceeds "Total Meter- months" ("Term of the contract"). iii) The AMI-IA, at its own discretion, may extend the operation and maintenance period of the AMI system at terms mutuallyagreed upon with the AMISP.
j)	**PROTOTYPE & LOT INSPECTION**	:	i) Prototype Inspection: The Prototype inspection is applicable for this particular tender and the Undertaking's officers shall visit the firm's factory premises to inspect quality of Prototype produced and the Undertaking shall bear the expenditure of to and fro travelling, lodging and boarding of the Undertaking's two inspecting officers. The Prototype meters will be carefully preserved by BEST Undertaking for the guarantee period of five years. If any deviation is observed in the meter supplied by the Tenderer in subsequent lot, the meter(s) with deviation will be liable to be rejected. ii) Lot Inspection: The Lot Inspection is applicable for one Lot preferably first for this particular tender and the Undertaking's officers shall visit the firm's factory premises to inspect the quality of Lot produced and the Undertaking will bear the expenditure of to and fro travelling, lodging and boarding of the Undertaking's two inspecting officers. For subsequent visits required, if any, the Undertaking will bear the expenditure.
k)	**OTHER CONDITIONS**	:	In case any upfront payment is made by the Undertaking, then the monthly payable amount shall be reduced based on the then calculated Net Present Value (NPV).

You will be required to furnish Performance Security for the amount equivalent to Rs.39,09,48,936.00 in the form of Bank Guarantee valid for the period of 126 months from the date of release of this Letter of Award. For scrutiny of Bank Guarantee, you will have to pay Administrative Charges of Rs. 2,000/- + GST @ 18% in our Cash Department at Colaba or Dadar.

Further, this Letter of Award is also subject to other terms and conditions which are incorporated in the tender document and there shall be no change whatsoever in the Terms & Conditions as set out in the Draft contract. After receipt of Performance Security and signing of AMISP Contract Agreement, the Purchase Order will be released. Till that time, for all purposes, this Letter of Award shall be treated as Purchase Order.

The terms & conditions as set out in this Letter of Award shall stand valid until execution of AMISP contract. Please acknowledge the receipt and return the duplicate copy of this Letter of Award after signing & stamping it in all the pages to the undersigned as a token of acceptance.

Encl.: 1. Annexure-A
2. Annexure-B
3. Annexure-C

Yours faithfully,

(M. Y. Pednekar)
DY. MATERIALS MANAGER (SB)I

ANNEXURE-A

DETAILED PRICE BREAKUP (AS PER REVERSE AUCTION)
NAME OF THE FIRM: ADANI TRANSMISSION LIMITED (TR.3)

Sr. No.	Description of item	Quantity	Proc. unit	Basic Rate (per unit) Rs. P.	Gross Rate (per unit) Incl. of GST @ 18% Rs. P.	Item-wise contractual value Rs. P.
1.	**Complete AMI Infrastructure:**					
1.1	Supply, installation, integration, testing and commissioning of Single phase whole current Smart Meter with inbuilt NIC module – (Consumer Meter) (Inclusive of 10 net meters) along with Communication Solution, HES hosted on cloud, procuring all the necessary licenses, setting up NOMC with suitable backend communication and infrastructure, integration of HES with Meter Data Management system of BEST and its O&M including data availability.	901212	Nos.	9,332.06	11,011.83	9,92,39,93,337.96
1.2	Supply, installation, integration, testing and commissioning of Three Phase whole current Smart Meter with inbuilt NIC module (Inclusive of Existing 212 nos. Solar /Net Meter & 15573 nos. (without solar/net meters) of whole current 50 - 100 A size Meters consumers) – Consumer Meter along with Communication Solution, HES hosted on cloud, procuring all the necessary licenses, setting up NOMC with suitable backend communication and infrastructure, integration of HES with Meter Data Management system of BEST and its O&M including data availability.	168419	Nos.	13,933.31	16,441.31	2,76,90,28,988.89
1.3	Supply, installation, integration, testing and commissioning of Three Phase HT current Smart Meter with inbuilt NIC module (Inclusive of 12 nos. Existing Solar/Net Meter Consumers) – Consumer Meter along with Communication Solution, HES hosted on cloud, procuring all the necessary licenses, setting up NOMC with suitable backend communication and infrastructure, integration of HES with Meter Data Management system of BEST and its O&M including data availability.	206	Nos.	34,321.60	40,499.49	83,42,894.94
1.4	Supply, installation, integration, testing and commissioning of Three phase LT-CT operated Smart Meter with inbuilt NIC	6053	Nos.	17,160.70	20,249.63	12,25,71,010.39

Sr. No.	Description of item	Quantity	Proc. unit	Basic Rate (per unit) Rs. P.	Gross Rate (per unit) Incl. of GST @ 18% Rs. P.	Item-wise contractual value Rs. P.
	module (Inclusive of 97 nos. Existing Solar/Net Meter Consumers) – Consumer Meter along with Communication Solution, HES hosted on cloud, procuring all the necessary licenses, setting up NOMC with suitable backend communication and infrastructure, integration of HES with Meter Data Management system of BEST and its O&M including data availability.					
1.5	Supply, installation, integration, testing and commissioning of Three phase LT-CT operated Smart Meter with inbuilt NIC module (with Net-Metering) – DT Meter along with Communication Solution, HES hosted on cloud, procuring all the necessary licenses, setting up NOMC with suitable backend communication and infrastructure, integration of HES with Meter Data Management system of BEST and its O&M including data availability.	3398	Nos.	17,160.70	20,249.63	6,88,08,242.74
1.6	Supply, installation, integration, testing and commissioning of Three phase CT/PT operated Smart Meter with inbuilt NIC module – Feeder Meter (with suitable box & TTB arrangement for individual meters meters) along with Communication Solution, HES hosted on cloud, procuring all the necessary licenses, setting up NOMC with suitable backend communication and infrastructure, integration of HES with Meter Data Management system of BEST and its O&M including data availability.	1255	Nos.	34,321.60	40,499.49	5,08,26,859.95
1.7	Supply, installation, integration, testing and commissioning of Three phase CT/PT operated Smart Meter with inbuilt NIC module (ABT Meters) (With Suitable box & TTB arrangement for individual meters) along with Communication Solution, HES hosted on cloud, procuring all the necessary licenses, setting up NOMC with suitable backend communication and infrastructure, integration of HES with Meter Data Management system of BEST and its O&M including data availability.	133	Nos.	88,255.50	1,04,141.49	1,38,50,818.17
1.8	Supply and installation of Meter Boxes for DT check meters	3398	Nos.	1,705.40	2,012.37	68,38,033.26

Sr. No.	Description of item	Quantity	Proc. unit	Basic Rate (per unit) Rs. P.	Gross Rate (per unit) Incl. of GST @ 18% Rs. P.	Item-wise contractual value Rs. P.
1.9	Supply and installation of LT Compact CTs of LT CT Meters (Set of 3 CTs)	6053	Nos.	2,131.67	2,515.37	1,52,25,534.61
1.10	Supply and installation of LT CTs for DT metering (Ring Type)	5610	Nos.	2,131.67	2,515.37	1,41,11,225.70
2.0	**New requirement for software (Estimated):**					
2.1	Architecture Specialists (Experience- 10+ years)	12	Man months	2,13,180.00	2,51,552.40	30,18,628.80
2.2	Security Specialists (Experience- 10+ years)	12	Man months	1,91,859.71	2,26,394.46	27,16,733.52
2.3	Integration Specialists (Experience- 10+ years)	12	Man months	1,91,859.71	2,26,394.46	27,16,733.52
2.4	Data Base Developer- Sr. (Experience- 5+ years)	24	Man months	1,49,224.00	1,76,084.32	42,26,023.68
2.5	Web/ Mobile Application Developer- Sr. (Experience- 5+ years)	24	Man months	1,49,224.00	1,76,084.32	42,26,023.68
2.6	Core Application Developer- Sr. (Experience- 5+ years)	24	Man months	1,70,542.00	2,01,239.56	48,29,749.44
2.7	Data Base Developer- Jr. (Experience- Less than 5 years)	36	Man months	1,27,906.00	1,50,929.08	54,33,446.88
2.8	Web/ Mobile Application Developer- Jr. (Experience- Less than 5 years)	36	Man months	1,27,906.00	1,50,929.08	54,33,446.88
2.9	Core Application Developer- Jr. (Experience- Less than 5 years)	36	Man months	1,27,906.00	1,50,929.08	54,33,446.88
					Total Contractual Value:	**13,03,16,31,179.89**

ANNEXURE-B

SCOPE OF WORK

1.	"Advance Metering Infrastructure Service Provider (AMISP)" or the "AMISP" shall Design, Build, Finance, Own, Operate, Transfer (DBFOOT) the Advance Metering Infrastructure (AMI) Project in the pre-paid (by default) mode in selected AMI Project Area. The AMISP shall finance and implement the project including end-to-end smart metering, operate for 'Total Meter-months' as defined in this Contract and thereafter transfer the ownership of the entire system including all the hardware, software along with its valid licenses, and any data collected during the Project to the AMI-IA at the end of the Contract Period to facilitate seamless operation of AMI-IA businesses. AMI-IA shall make payments to the AMISP in accordance with the terms and conditions of this Contract.
2.	**The AMI Project Area:** The AMI Project shall cover end-to-end smart metering (from Feeders, Distribution Transformers (DTs) and all end consumers) at contiguous electrical locations (which will be ring fenced with boundary meters) to enable complete energy accounting with zero manual intervention and dispersed metering (for certain Industrial, Commercial and Government consumers) at non-contiguous electrical locations in the selected AMI Project Area.
3.	A) **About Project Area:** The area wise details along with project area coverage, no. of consumers, category of consumers and DTs in these areas is detailed in Annexure S of Section 6 for both the Lots i.e. Lot A & Lot B. It is to note that the details have been provided based on the available data with an objective of saturation of feeders completely. The same has to be ensured during field survey and finalization of consumer base for installation. Further, the bidder jointly with AMI IA team shall prepare field installation and roll-out strategy prioritizing the following: 1. High Consumption Centers 2. Priority to DT metering 3. Commercial Consumers 4. Govt. Connections Further, the readiness of AB cabling should be taken into account during strategy making. Number of single phase whole current Smart Meters (with/without net-metering), three phase whole current Smart Meters (with/without net-metering), LT-CT operated three phase Smart Meters (with/without net-metering), Three HT Smart meters and CT/PT operated three phase Smart meters to be installed;

Meter Type	Qty.
Single Phase Meter-WC	9,01,212
Three Phase Meter-WC	1,68,419

	Three Phase Meter- LTCT	6,053
	Three Phase Meter- LTCT - DT METER	3,398
	Three Phase Meter- HT METER	206
	Three Phase Meter- HT -FEEDER METER	1,255
	Three Phase Meter- CT/PT OPERATED ABT Meters	133
	Grand Total:	**10,80,676**

**Base quantity of meters is 10.5 lakhs. Total Quantity mentioned indicative based on projected growth estimate of 1%

B) **Other Details**:

a) The data is to be captured at a periodicity of 15 mins. The AMI system till HES thus deployed should be integrated to the MDM being deployed under the ongoing project. The bidder to provide data in the requisite format/periodicity as per the deployed solution for seamless operation of the entire system;

b) The infrastructure for recharge through feature phones/ offline channels be adopted based on one kiosk per existing bill pay centre for the total no. of meter months.

c) Meters to be covered through RF mesh or 4G LTE/5G with fallback provision.

1.3 The AMI system should be designed such that all the required hardware, software, and firmware with upgrades satisfy the AMI system requirements and service level agreements as specified in this Contract while considering technical obsolescence over the operating life of the system and suitability for future scale up. AMISP is free to decide upon the best solution out of all the available options. However, the entire responsibility of fully functional AMI system shall rest with the AMISP in order to meet the performance levels as given in the Contract. The AMISP shall ensure that the Solution complies with the Applicable Law, technical specifications and other provisions of the Contract.

1.4 **Brief Scope of Work:**

AMISP shall include, in complete conformity with the technical and financial bid as mentioned in this contract as well as AMI system requirements and Service Level Agreements as mentioned in this Contract and Applicable Laws.

The Scope of work of AMISP shall include site survey, planning, designing, financing, engineering, manufacturing, supply, transportation & insurance, delivery at site, unloading, handling, storage, installation, integration, testing, commissioning, demonstration for acceptance, training, maintenance, operation and documentation of various AMISP components. Given below:

A. Supply, installation, integration, testing & commissioning of:
   a. Smart pre-paid metering as per Clause 2.1 of this Section.
   b. Communication Infrastructure to ensure the performance levels provided in this Contract as per Clause 2.2 of this Section;

	c. Head End System (HES) and deployment on cloud as per lCause 2.3 of this Section; d. Network Operation cum Monitoring 6entre (NOM6 with suitable backend communication infrastructure, hardware and power supply as per 6ause 2.6 of this Section; e. All other necessary software along with valid licenses relevant to the Project (as per 6ause 2.7 of this Section); f. HES data can be hosted on secured cloud by AMI SP for the agreement period. In case AMI-IA want to shift the data to on-premises or any other cloud, the AMI SP shall transfer the entire data along with the systems and configure all associated similar connecting network facilities / monitoring and management (administration) tools / software solutions framework for normal functioning state without any additional charges. B. AMI System integration as per 6ause 3 of this Section; C 6nsumer indexing on de-novo basis for contiguous electrical locations in the selected AMI Project Area along with its regular updates during contract period as per lCause 4 of this Section; D. Development of a comprehensive consumer engagement plan (as per 6ause 5 of this Section) related to different stages of implementation (Pre, during and post installation phases of smart metering) in consultation with AMI-IA and implement its part of its activities as per the developed plan. The plan at the minimum should include consumer engagement activities to be undertaken at AMI-IA's headquarter, division and sub-division level as well as communication and media plan; E. Operation, maintenance, and support services after the successful completion of the Operational Go-Live of the system as per 6ause 7 of this Section; F. Training of personnel, as required for efficient, viable and fully functional system as per lCause 8 of this Section.
1.5	Guidelines for testing, inspection, approval of test records and in general, management of the Quality Assurance / Quality 6ntrol program of the AMI project as given in 6ause 9 of this Section shall be generally adhered to.
1.6	Guidelines for project management as given in 6ause 10 shall generally be adhered to.
1.7	The AMISP shall be required to submit project documentation describing the system operations for information/ approval as per 6ause 11 to the AMI-IA.
1.8	Unless otherwise stipulated in the RFP or 6ntra ct, the scope of work shall include all such items not specifically mentioned in the 6ntract but that can be reasonably inferred from the 6ntract as being required for comprehensive, successful and satisfactory implementation of the Solution as if such items were expressly mentioned in the 6ntract. The same may be mutually enlisted and agreed upon by AMI-IA and AMISP during the

	design phase as defined in the Contract;
1.9	Wherever references are made in the RFP to codes and standards in accordance with which the Solution shall be executed, the edition or the revised version of such codes and standards shall be those specifiedin the scope of work;
1.10	The systems which are at a risk of technical obsolescence over the operating life of the system should be identified; this should include end-of-sale and end-of-support policies governing the proposed technologies. Forward and backward compatibility need to be considered and mitigation option shall be indicated in detail and shall not be limited to periodic update from OEM/System supplier
1.11	**Exclusion from Scope of Work: Following shall be excluded from AMISP's scope of work** a. Construction of building for AMI Network Operation cum Monitoring Centre; b. Lighting system for AMI Network Operation cum Monitoring Centre; c. Interior and Integrated Building Management System (IBMS) of building for AMI Network Operation cum Monitoring Centre; d. Air conditioning and ventilation for AMI Network Operation cum Monitoring Centre; e. Firefighting system for AMI Network Operation cum Monitoring Centre; f. A.C input power and back-up supply for AMI Network Operation cum Monitoring Centre; g. Service cable including electrical neutral connectivity to the transformer, wherever applicable; h. Any modifications required in the existing system of the Utility (Billing, Website, etc.). i. Consumer indexing for dispersed metering at non-contiguous electrical locations in the selected AMI Project Area.
1.12	**Responsibilities of the AMI-IA:** The Chairman/Managing Director of AMI-IA or any other person designated by the Chairman/Managing Director of AMI-IA shall act as the nodal point for the implementation of the Contract and for issuing necessary instructions, approvals, commissioning, acceptance certificates, payments etc. to the AMISP. The AMI-IA shall: a) Whenever implementation of any component of the Solution requires that the AMISP obtain permits, approvals, and import and other licenses from local public authorities, if so required by the AMISP, make its best effort to assist the AMISP in complying with such requirements in a timely and expeditious manner; b) Erection of requisite structure for installation of boundary meters and corresponding ringfencing of Project Area. c) The Chairman/ Managing Director of AMI-IA or any other person designated by the Chairman/ Managing Director of AMI-IA shall approve all such documents required for

	completion of Pre-Operational Go-Live Phase, in accordance with Clause 11 of this Section, within 15 (fifteen) working days from the date of submission of such documents; d) Provide on AMISP's request, particulars/ information / or documentation that may be required by the AMISP within 30 (thirty) days from date of execution of the Contract to enable preparation of the Project Implementation plan by the AMISP; e) Provide existing database of consumer indexing and physical & IT infrastructure as available with the AMI-IA. AMI-IA shall provide all required data to the AMISP to identify all the consumers connected on the identified sub-stations, feeder lines and transformers of the AMISP Project area; f) Review and approval of AMISP's Project Implementation Plan; g) Provide drawings for NOMCbuilding where AMI system installations are planned; h) Provide necessary inputs for developing a comprehensive consumer engagement plan; i) Provide necessary approvals for shutdowns as required for implementing the AMI System; j) [Storage and disposal of replaced old meters]; k) Implement consumer engagement plan with support of AMISP. This would include running media campaign to raise awareness and countering myths around smart metering prior to installation, providing SOPs for smart meter installation to AMISP, etc.; l) Keep AMISP informed of any changes in the area network during the project installation and operation period. Furthermore, AMI-IA will partner with AMISP for discovering/ updating consumer indexing (DT/ Feeder wise) after installation of smart meters through structured power events dataanalysis including scheduling such events for each node with minimum inconvenience to consumer; m) Provide A.Cpower supply inputs; n) Provide all required documents for delivery of material at site; o) Provide at its expense, the electrical energy required for performance of the Project activities,installation, testing, and operation of the AMI Systems; p) Providing support and access to facilities at the sites, including consumer premises; q) Arrange for necessary shutdowns and work permits; r) Implement major civil works such as expansions or construction of rooms, trenches etc. as requiredfor the AMI equipment; s) Ensure that sites for installation for Smart Meters are ready along with service cable including electrical neutral connectivity to the transformer, wherever applicable for AMISP; t) Provide the required integration interface details of the existing billing enterprise and related information required for Operational Go-Live of the AMI system, within 6 (six)

	months from date of execution of the Contract; u) Provide necessary clearance/ approval/ permits that are to be issued by it for initial 20% of contiguous electrical locations for Smart Meter deployment along with related documentation within 6 (six) months from date of execution of this Contract. Provide necessary clearance/ approval/ permits to be issued by it for remaining contiguous electrical locations as well as non- contiguous electrical locations for Smart Meter deployment along with related documentation on quarterly basis. AMI-IA shall endeavor to provide 20% of contiguous electrical locations cleared each quarter and complete area within 18 (eighteen) months from date of execution of the Contract. Utility/AMI-IA shall issue a Notice (provided if the Utility/AMI-IA has not been able to provide clearance/ approval/ permits for installation of the meters) no later than 7 days of expiry of time period specified above confirming the actual number of meters for which clearance/ approval/ permits is available. v) Review the specifications of the Goods proposed to be used to ensure compliance with the provisions of this Contract. w) Provide reasonable support to the AMISP for the Operational Go-Live in terms of the provisions of this Contract x) Provide necessary support to AMISP in the Project area, in relation to (amongst others) access to Utility's/AMI-IA's/consumers premises, installation of AMI system, repair and maintenance services, etc. Utility/AMI-IA shall also: i. Give access to AMISP supervisor or its operation & maintenance staff to work in the Project area during the Contract Period; ii. Provide an office space for AMISP personnel as mentioned in Clause 10 of this Section document within the Utility/AMI-IA premises; iii. Give access to AMISP to use existing power and water supply, and other necessary equipment, as mutually agreed with the AMISP; iv. Not move, remove, modify, alter, or change the AMI system or any part thereof in the boundary of the AMI system installed by the AMISP without the prior written consent of AMISP. Utility/AMI-IA shall take all reasonable steps to protect the AMI system from damage or injury and shall follow procedure for emergency action provided in advance by AMISP; y) Participate in periodic review meetings as per the project governance structure, and shall support with the required interventions requested; z) Be responsible for operation and maintenance of power supply system, and promptly attend to any break down including repair or replacement of any equipment used/needed for maintaining continuity of electricity supply for AMI system operation; aa) Permit AMISP to perform the project activities during working hours, and also after

	working hoursas necessary, to meet the requirements of Project Implementation Plan; bb) Provide necessary support in creation of pre-payment infrastructure; cc) Attend to any irregularity with respect to AMI system operation, the cause of which has been brought to its attention by the AMISP; dd) Promptly notify the AMISP of any events or circumstances that could affect the Project outcomes, or the AMISP's Services and obligations under this Contract; ee) Allow AMISP (and/or its implementation partner, investor(s), authorized agency) unfettered access to network operation cum monitoring centre. Such covered and enclosed space as required by AMISP shall be provided to it by Utility/AMI-IA free of cost during the Contract Period; ff) Cooperate with AMISP in arranging financing for the Project, including by signing any relevant documents (such as substitution Contract) and providing such approvals, no-objections and waiversas may be required by investors/lenders; gg) Appoint and notify to AMISP of the names and contact details of the Utility/AMI-IA representative and its dedicated staff for the Project, which would include: i. An engineer-in-charge for the Project who shall render full support to AMISP for Service delivery during the Term of this Contract and shall coordinate for payment to AMISP; ii. A nodal officer, Utility/AMI-IA Project Manager, to co-ordinate with AMISP in relation to the Project. hh) Maintain consumer expectations basis the consumer engagement plan; Certify Installation Milestone in accordance with the provisions of this Contract. ii) Facilitate AMISP for the timely implementation of the AMI Project and for its successful operationand maintenance during the Contract Period; AMI-IA to select one of these two and accordingly provide clear directions on the same as well as select relevant point 3.3.1.b kk) Release payments to AMISP as per agreed terms; ll) At its own cost, replace or repair existing equipment (other than AMI systems), such as poles, cables including consumer service lines, and transformers etc. where necessary to make the AMI system operational and/ or safe from hazards and maintain in proper working condition all portions of all facilities that are not included in the AMISP's scope of maintenance; mm) Provide all other necessary support as may be required time to time.

MAHARASHTRA ELECTRICITY REGULATORY COMMISSION

Maharashtra Electricity Regulatory Commission (Electricity Supply Code and Standards of Performance of Distribution Licensees including Power Quality) Regulations, 2021

ELECTRICITY ACT, 2003

No. MERC/Legal/2021/66 - In exercise of the powers conferred by the proviso to sub-section (1) of Section 43 read with clause (t) of sub-section (2) of Section 181 and clause (a) of sub- section (2) of Section 45 read with clause (u) of sub-section (2) of Section 181, sub-section (5) of Section 45, Section 46, sub-section (1) and sub-section (4) of Section 47 read with clause (v) and clause (w) of sub-section (2) of Section 181 and Section 50 read with clause (x) of sub-section (2) of Section 181 and sub-section (1) and sub-section (2) of Section 57 read with clause (za) of sub-section (2) of Section 181, Section 59 and clause (zp) of sub-section (2) of Section 181 of the Electricity Act, 2003,. the Maharashtra Electricity Regulatory Commission hereby makes the following Regulations, namely:

1. Short Title, Scope Extent and Commencement

1.1. These Regulations may be called the "Maharashtra Electricity Regulatory Commission (Electricity Supply Code and Standards of Performance of Distribution Licensees including Power Quality) Regulations, 2021. (hereinafter referred to as 'the Code')

1.2. Save as otherwise provided in this Code, Maharashtra Electricity Regulatory Commission (Electricity Supply Code and Other Conditions of Supply) Regulations, 2005 and Maharashtra Electricity Regulatory Commission (Standards of Performance of Distribution Licensees, Period for Giving Supply and Determination of Compensation) Regulations, 2014 are hereby repealed.

1.3. Notwithstanding such repeal anything done or action taken or purported to have been taken, or proceedings initiated under such repealed Regulations, shall be deemed to have been taken under this Code to the extent that same were not inconsistent with the Act; and

1.4. All the forms and formats annexed to the Code set out the minimum requirements to be maintained by the Distribution Licensees in their forms and formats. The Distribution Licensee may make suitable amendments in the forms/formats maintaining the minimum information and may include such provisions which are not inconsistent with the Act and the Regulations after seeking prior approval of the Commission. Such amended forms/ formats would be posted on the website of the respective Distribution Licensees for use by Consumers only after prior approval of the Commission.

b. with no undisputed sums payable to the Distribution Licensee under Section 56 of the Act

may, at the option of such Consumer, deposit security under this Regulation 13, by way of cash, irrevocable letter of credit or unconditional bank guarantee issued by a scheduled commercial bank.

13.11 The Distribution Licensee shall pay interest on the amount of security deposited in cash (including payments made through NEFT/RTGS, cheque and demand draft) by the Consumer at a rate equivalent to the Bank Rate of the Reserve Bank of India:

Provided that such interest shall be paid where the amount of security deposited in cash under this Regulation 13 is equal to or more than Rupees Fifty.

13.12 Interest on cash security deposit shall be payable from the date of deposit by the Consumer till the date of dispatch of the refund by the Distribution Licensee.

14. Classification and Reclassification of Consumers into Tariff Categories

The Distribution Licensee may classify or reclassify a Consumer into various Commission's approved tariff categories based on the purpose of usage of supply by such Consumer:

Provided that the Distribution Licensee shall not create any tariff category other than those approved by the Commission.

15. Meters

15.1 Requirement of Meters

15.1.1. All connections shall be released with an appropriate meter. All meters shall conform to requirements as laid down by various Regulations issued by Central Electricity Authority (Installation & Operation of Meters) Regulations, 2006 and as amended from time to time. The Distribution Licensee shall also comply with these Regulations for energizing a new connection or for replacement of meter or for other purposes such as energy audit and interface meter:

Provided that all the new connections shall be released with the Smart Meter or Meter having at least the facility of remote reading:

Provided further that all the existing meters whenever replaced shall be replaced only by Smart Meter or Meter having at least the facility of remote reading.

रजिस्ट्री सं. डी.एल.- 33004/99 REGD. No. D. L.-33004/99

भारत का राजपत्र
The Gazette of India

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असाधारण
EXTRAORDINARY

भाग I—खण्ड 1
PART I—Section 1

प्राधिकार से प्रकाशित
PUBLISHED BY AUTHORITY

सं. 230] नई दिल्ली, बृहस्पतिवार, अगस्त 19, 2021/श्रावण 28, 1943
No. 230] NEW DELHI, THURSDAY, AUGUST 19, 2021/SRAVANA 28, 1943

विद्युत मंत्रालय

अधिसूचना

नई दिल्ली, 17 अगस्त, 2021

फा.सं. 23/35/2019-आरएण्डआर.—विद्युत अधिनियम, 2003 की धारा 177 की उप धारा (2) के खंड (ग) के साथ पठित धारा 55 की उप धारा (1) के अंतर्गत बनाए गए केंद्रीय विद्युत प्राधिकरण (मीटरों का अधिष्ठापन और प्रचालन) (संशोधन) विनियम, 2019 के खंड 4(1)(ख) के प्रावधानों के अनुसरण में, केंद्र सरकार एतदद्वारा मौजूदा मीटरों को पूर्व भुगतान सुविधा वाले स्मार्ट मीटरों से प्रतिस्थापित करने के लिए निम्नलिखित समय-सीमा अधिसूचित करती है:

1. संचार नेटवर्क युक्त क्षेत्रों के सभी उपभोक्ताओं (कृषि उपभोक्ताओं को छोड़कर) को, नीचे विनिर्दिष्ट समय-सीमा के भीतर, पूर्व भुगतान मोड में कार्य कर रहे स्मार्ट मीटरों से विद्युत की आपूर्ति, प्रासंगिक आईएस के अनुरूप, की जाएगी:

(i) सभी संघ राज्य क्षेत्रों, वित्तीय वर्ष 2019-20 में 15% से अधिक एटी एंड सी हानियों के साथ शहरी क्षेत्रों में 50% अधिक से उपभोक्ता वाले विद्युत मंडलों, वित्तीय वर्ष 2019-20 में 25% से अधिक एटी एंड सी हानियों वाले अन्य विद्युत मंडलों, ब्लॉक स्तर या उससे ऊपर के सभी सरकारी कार्यालयों और सभी औद्योगिक तथा वाणिज्यिक उपभोक्ताओं को दिसंबर, 2023 तक पूर्व भुगतान मोड वाले स्मार्ट मीटरों से मीटरीकृत किया जाएगा:

परंतु कि राज्य विनियामक आयोग, अधिसूचना के माध्यम से, उस अधिसूचना में यथा विनिर्दिष्टित उपभोक्ताओं के एक वर्ग या वर्गों के लिए या ऐसे क्षेत्रों के लिए कारण बताते हुए, कार्यान्वयन की उक्त अवधि को केवल दो बार, लेकिन एक बार में छह माह से अधिक बढ़ाया नहीं बढ़ा सकेगा।

(ii) अन्य सभी क्षेत्रों को मार्च, 2025 तक पूर्व भुगतान मोड वाले स्मार्ट मीटरों से मीटरीकृत किया जाएगा:

परंतु कि ऐसे क्षेत्रों में जहां संचार नेटवर्क उपलब्ध नहीं हैं, संबंधित राज्य विद्युत विनियामक आयोग द्वारा, प्रासंगिक आईएस के अनुरूप, पूर्व भुगतान मीटरों के अधिष्ठापन की अनुमति दी जा सकेगी:

(iii) सभी उपभोक्ता कनेक्शनों, जिनकी वर्तमान वहन क्षमता प्रासंगिक आई एस में विनिर्दिष्ट क्षमता से अधिक है, को ऐसे मीटर उपलब्ध कराए जाएंगे जो एएमआर सुविधा युक्त स्मार्ट मीटर हैं।

2. सभी फीडरों और वितरण ट्रांस्फार्मरों (डीटीज) को नीचे विनिर्दिष्ट समय-सीमा के अनुसार एएमआर सुविधा युक्त या एएमआई के अंतर्गत शामिल मीटर उपलब्ध कराए जाएंगे:

(i) सभी फीडरों को दिसंबर, 2022 तक मीटरीकृत कर दिया जाएगा।

(ii) वित्तीय वर्ष 2019-20 में 15% से अधिक एटी एंड सी हानियों वाले शहरी क्षेत्रों में 50% से अधिक उपभोक्ता वाले विद्युत मंडलों और वित्तीय वर्ष 2019-20 में 25% से अधिक एटी एंड सी हानियों वाले सभी अन्य विद्युत मंडलों में सभी डीटीज को दिसंबर, 2023 तक मीटरीकृत किया जाएगा।

(iii) उपरोक्त (ii) में उल्लिखित क्षेत्रों के अतिरिक्त अन्य सभी डीटीज को मार्च, 2025 तक मीटरीकृत किया जाएगा।

(iv) 25 केवीए से कम क्षमता वाले डीटीज और एचवीडीएस ट्रांसफार्मरों को उपरोक्त समय-सीमा से बाहर रखा जाएगा।

3. यह अधिसूचना भारत के राजपत्र में प्रकाशित होने की तारीख से प्रभावी होगी।

घनश्याम प्रसाद, संयुक्त सचिव

MINISTRY OF POWER

NOTIFICATION

New Delhi, the 17th August, 2021

F.No. 23/35/2019-R&R.—In pursuance to the provisions made in clause 4(1) (b) of the Central Electricity Authority (Installation and Operation of Meters) (Amendment) Regulations, 2019 framed under sub-section (1) of section 55 read with clause(c) of sub-section (2) of section 177 of the Electricity Act, 2003, the Central Government hereby notifies the following timelines for the replacement of existing meters with smart meters with prepayment feature:

1. All consumers (other than agricultural consumers) in areas with communication network, shall be supplied electricity with Smart Meters working in prepayment mode, conforming to relevant IS, within the timelines specified below:

(i) All Union Territories, electrical divisions having more than 50% consumers in urban areas with AT&C losses more than 15% in financial year 2019-20, other electrical divisions with AT&C losses more than 25% in financial year 2019-20, all Government offices at Block level and above, and all industrial and commercial consumers, shall be metered with smart meters with prepayment mode by December, 2023:

Provided that the State Regulatory Commission may, by notification, extend the said period of implementation, giving reasons to do so, only twice but not more than six months at a time, for a class or classes of consumers or for such areas as may be specified in that notification;

(ii) All other areas shall be metered with smart meters with prepayment mode by March, 2025:

Provided that in areas which do not have communication network, installation of prepayment meters, conforming to relevant IS, may be allowed by the respective State Electricity Regulatory Commission:

(iii) All consumer connections having current carrying capacity beyond that specified in relevant IS, may be provided with meters with smart meters having AMR facility.

2. All feeders and distribution transformers (DTs) shall be provided with meters having AMR facility or covered under AMI, as per the timelines specified below:

(i) All feeders shall be metered by December, 2022.

(ii) All DTs in electrical divisions having more than 50% consumers in urban areas with AT&C losses more than 15% in financial year 2019-20, and in all other electrical divisions with AT&C losses more than 25% in financial year 2019-20, shall be metered by December, 2023.

(iii) All DTs in areas other than those mentioned in (ii) above, shall be metered by March, 2025.

(iv) DTs and HVDS transformers having capacity less than 25 kVA may be excluded from the above timelines.

3. This notification shall be effective from the date of publishing in the Gazette of India.

GHANSHYAM PRASAD, Jt. Secy.

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SURENDER MAHADASAM
Digitally signed by SURENDER MAHADASAM
Date: 2021.08.19 16:00:40 +05'30'

Annexure-D

Sr. No.	Particulars	Unit Cost Gross (in Rs)	Qty (in Nos.)	Cost (in Rs.)
A	B	C	D	E = C X D
1	Single Phase Smart meters with installation, communication & integration-Consumer Meter	11011.83	901212	9923993337.96
2	Poly Phase Smart meters with installation, communication & integration-Consumer Meter	16441.31	168419	2769028988.89
3	Poly Phase HT current Smart Meter -Consumer Meter	40499.49	206	8342894.94
4	Three phase LT-CT operated Smart Meter (inclusive of 97 nos. existing Solar/Net Consumer Meters)-	20249.63	6053	122571010.39
5	LVCTO Smart Meters installation,communication & integration-DT Meter	20249.63	3398	68808242.74
6	CTPTO Smart Meters installation, communication & integration-Feeder Meter	40499.49	1255	50826859.95
7	CTPTO Smart DT Meters installation, communication & integration-ABT Meter	104141.49	133	13850818.17
	TOTAL PART-A	-		**12957422153.04**
8	Supply and installation of Meter Boxes for DT check m	2012.37	3398	6838033.26
9	Supply and installation of LT Compact CTs of LT CT Meters (3 CTs)	2515.37	6053	15225534.61
10	Supply and installation of LT CTs for DT metering (Ring Type)	2515.37	5610	14111225.70
	TOTAL PART-B			**36174793.57**
11	Architecture Specialists	251552.40	12	3018628.80
12	Security Specialists	226394.46	12	2716733.52
13	Integration Specialists	226394.46	12	2716733.52
14	Data Base Developer- Sr.	176084.32	24	4226023.68
15	Web/ Mobile Application Developer- Sr.	176084.32	24	4226023.68
16	Core Application Developer- Sr.	201239.56	24	4829749.44
17	Data Base Developer- Jr.	150929.08	36	5433446.88
18	Web/ Mobile Application Developer- Jr.	150929.08	36	5433446.88
19	Core Application Developer- Jr.	150929.08	36	5433446.88
	TOTAL PART-C			**38034233.28**
	GRAND TOTAL -PART (A+B+C)			**13031631179.89**
	GRAND TOTAL (Rs. in Crore)			**1303.16**

(Published in the Gazette of India, Extraordinary, Part III, section iv)

Central Electricity Authority

New Delhi, dated the 17th March, 2006

NOTIFICATION

No. 502/70/CEA/DP&D In exercise of the powers conferred by sub-section (1) of section 55 and clause (e) of section 73 read with sub-section (2) of section 177 of Electricity Act, 2003, the Central Electricity Authority hereby makes the following regulations for regulating the installation and operation of meters, namely :-

1. Short title and commencement. -

(1) These regulations may be called the Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006.

(2) These Regulations shall come into force on the date of their publication in the Gazette of India.

2. Definitions. -

(1) In these regulations, unless the context other wise requires, -

(a) 'Act' means the Electricity Act, 2003;
(b) 'Accredited Test Laboratory' means a test laboratory accredited by National Accreditation Board for Testing and Calibration Laboratories (NABL);
(c) 'Active Energy' means the electricity supplied or consumed during a time interval, being the integral of Active Power with respect to time, measured in the units of 'Watt – hours' or standard multiples thereof. One 'kilowatt – hour' (kWh) is one unit;
(d) 'Active Power' means the electrical power, being the product of root mean square (rms) voltage, root mean square (rms) current and cosine of the phase angle between the voltage and current vectors and measured in units of 'Watt' (W) or in standard multiples thereof;
(e) 'Appropriate Load Despatch Centre' means 'National Load Despatch Centre' (NLDC) or 'Regional Load Despatch Centre' (RLDC) or the 'State Load Despatch Centre' (SLDC) as the case may be;
(f) 'Appropriate Transmission Utility' means the 'Central Transmission Utility' (CTU) or the 'State Transmission Utility' (STU), as the case may be;
(g) 'Availability Based Tariff (ABT)' means a tariff structure based on availability of generating units and having components, viz, Capacity Charges (CC),

Energy Charges (EC) or Variable Charges (VC) and charges for Unscheduled Interchange (UI);

(h) 'Buyer' means any generating company or licensee or consumer whose system receives electricity from the system of generating company or licensee;

(i) 'Check Meter' means a meter, which shall be connected to the same core of the Current Transformer (CT) and Voltage Transformer (VT) to which main meter is connected and shall be used for accounting and billing of electricity in case of failure of main meter;

(j) 'Consumer Meter' means a meter used for accounting and billing of electricity supplied to the consumer but excluding those consumers covered under Interface Meters;

(k) 'Correct Meter' means a meter, which shall at least have, features, Accuracy Class and specifications as per the Standards on Installation and Operation of Meters given in Schedule of these Regulations;

(l) 'Energy Accounting and Audit Meters' means meters used for accounting of the electricity to various segments of electrical system so as to carry out further analysis to determine the consumption and loss of energy therein over a specified time period;

(m) 'Instrument Transformer' means the 'Current Transformer' (CT), 'Voltage Transformer' (VT) and 'Capacitor Voltage Transformer' (CVT);

(n) 'Interface Meter' means a meter used for accounting and billing of electricity, connected at the point of interconnection between electrical systems of generating company, licensee and consumers, directly connected to the Inter-State Transmission System or Intra-State_Transmission System who have to be covered under ABT and have been permitted open access by the Appropriate Commission;

(o) 'Main Meter' means a meter, which would primarily be used for accounting and billing of electricity;

(p) 'Meter' means a device suitable for measuring, indicating and recording consumption of electricity or any other quantity related with electrical system and shall include, wherever applicable, other equipment such as Current Transformer (CT), Voltage Transformer (VT) or Capacitor Voltage Transformer (CVT) necessary for such purpose;

(q) 'Power Factor' means the cosine of the electrical angle between the voltage and current vectors in an AC electrical circuit;

(r) 'Prepaid Meter' means a meter which facilitates use of electricity only after advance payment;

(s) 'Reactive Energy' means, the integral of Reactive Power with respect to time and measured in the units of 'Volt-Ampere hours reactive (VARh) or in standard multiples thereof;

(t) 'Reactive Power' means the product of root mean square (rms) voltage, root mean square (rms) current and the sine of the electrical phase angle between the voltage complexor and current complexor, measured in 'Volt – ampere reactive' (VAr) and in standard multiples thereof;

(u) 'Standards' means 'Standards on Installation and Operation of Meters' given in the Schedule of these Regulations unless otherwise any other standard specifically referred;

(v) 'Standby Meter' means a meter connected to CT and VT, other than those used for main meter and check meter and shall be used for accounting and billing of electricity in case of failure of both main meter and check meter;

(w) 'Supplier' means any generating company or licensee from whose system electricity flows into the system of another generating company or licensee or consumer;

(x) 'Time of the Day (TOD) Meter' means a meter suitable for recording and indicating consumption of electricity during specified time periods of the day.

(2) The words and expressions used and not defined in these Regulations but defined in the Act shall have the meaning assigned to them in the Act.

3. Applicability of regulations. -

(1) These Regulations shall be applicable to meters installed and to be installed by all the generating companies and licensees who are engaged in the business of generation, transmission, trading, distribution, supply of electricity and to all categories of consumers.

(2) After coming into force of these regulations, the provisions of the Indian Electricity Rules, 1956 relating to installation and operation of meters in this regard shall not be applicable.

(3) These regulations provide for type, standards, ownership, location, accuracy class, installation, operation, testing and maintenance, access, sealing, safety, meter reading and recording, meter failure or discrepancies, anti tampering features, quality assurance, calibration and periodical testing of meters, additional meters and adoption of new technologies in respect of following meters for correct accounting, billing and audit of electricity:

(i) Interface meter
(ii) Consumer meter
(iii) Energy accounting and audit Meter

4. Type of meters. -

(1) All interface meters, consumer meters and energy accounting and audit meters shall be of static type.

(2) The meters not complying with these regulations shall be replaced by the licensee on his own or on request of the consumer. The meters may also be replaced as per the regulations or directions of the Appropriate Commission or pursuant to the reforms programme of the Appropriate Government.

5. Standards. -

All interface meters, consumer meters and energy accounting and audit meters shall –

(a) comply with the relevant standards of Bureau of Indian Standards (BIS). If BIS Standards are not available for a particular equipment or material, the relevant British Standards (BS), International Electro-technical Commission (IEC) Standards, or any other equivalent Standard shall be followed:

Provided that whenever an international Standard or IEC Standard is followed, necessary corrections or modifications shall be made for nominal system frequency, nominal system voltage, ambient temperature, humidity and other conditions prevailing in India before actual adoption of the said Standard;

(b) conform to the standards on 'Installation and Operation of Meters' as specified in Schedule annexed to these regulations and as amended from time to time.

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6. Ownership of meters. -

(1) **Interface meters**

(a) All interface meters installed at the points of interconnection with Inter-State Transmission System (ISTS) for the purpose of electricity accounting and billing shall be owned by CTU.

(b) All interface meters installed at the points of interconnection with Intra-State Transmission System excluding the system covered under sub-clause (a) above for the purpose of electricity accounting and billing shall be owned by STU.

(c) All interface meters installed at the points of inter connection between the two licensees excluding those covered under sub-clauses (a) and (b) above for the purpose of electricity accounting and billing shall be owned by respective licensee of each end.

(d) All interface meters installed at the points of inter connection for the purpose of electricity accounting and billing not covered under sub-clauses (a), (b) and (c) above shall be owned by supplier of electricity.

(2) **Consumer meters**

(a) Consumer meters shall generally be owned by the licensee.

(b) If any consumer elects to purchase a meter, the same may be purchased by him. Meter purchased by the consumer shall be tested, installed and sealed

by the licensee. The consumer shall claim the meter purchased by him as his asset only after it is permanently removed from the system of the licensee.

(c) All consumer meters shall bear BIS mark, meet the requirements of these regulations and have additional features as approved by the Appropriate Commission or pursuant to the reforms programme of the Appropriate Government. To facilitate this, the licensee shall provide a list of makes and models of the meters.

(3) **Energy accounting and audit meters**

Energy accounting and audit meters shall be owned by the generating company or licensee, as the case may be.

7. Locations of meters.-

(1) The location of interface meters, consumer meters and energy accounting and audit meters shall be as per the Table given below :

Provided that the generating companies or licensees may install meters at additional locations in their systems depending upon the requirement.

Table

Sl. No	Stages	Main meter	Check meter	Standby meter
A.	**Generating Station**	On all outgoing feeders.	On all outgoing feeders.	(i) High Voltage (HV) side of Generator Transformers (ii) High Voltage (HV) side of all Station Auxiliary Transformers
Explanation: The location of main, check and standby meters installed at the existing generating stations shall not be changed unless permitted by the Authority.				
B.	**Transmission and Distribution System**	At one end of the line between the sub-stations of the same licensee, and at both ends of the line between sub-stations of two different licensees. Meters at both ends shall be considered as main meters for respective	-	There shall be no separate standby meter. Meter installed at other end of the line in case of two different licensees shall work as standby meter.

		licensees.		
C.	**Inter-Connecting Transformer (ICT)**	High Voltage (HV) side of ICT.	-	Low Voltage (LV) side of ICT.
D.	**Consumer directly connected to the Inter-State Transmission System or Intra-State Transmission System who have to be covered under ABT and have been permitted open access by the Appropriate Commission or Any other system not covered above**	As decided by the Appropriate Commission.		

(a) **Interface Meters**

(i) Consumers who have interconnection with the Inter-State Transmission System or Intra-State Transmission System and have been permitted open access by the Appropriate Commission shall be provided with interface meters.

(ii) For consumers connected to distribution system and permitted open acess, provision of interface meters may be made as per the regulations or directions of the Appropriate Commission.

(iii) The scheme for location of interface meters shall be submitted to the CTU or the STU or the CTU or the STU or the licensee by owner of the meter in advance, before the installation of the scheme.

(b) **Consumer meters**

(i) The consumer meter shall be installed by the licensee either at consumer premises or outside the consumer premises:

Provided that where the licensee installs the meter outside the premises of the consumer, then the licensee shall provide real time display unit at the consumer premises for his information to indicate the electricity consumed by the consumer:

Provided further that for the billing purpose, reading of consumer meter and not the display unit shall be taken into account.

(ii) In the event the Appropriate Commission allows supply of electricity directly from a generating company to consumer on a dedicated transmission system, the location of the meter will be as per their mutual agreement.

(c) **Energy accounting and audit meters**

Energy accounting and audit meters shall be installed at such locations so as to facilitate to account for the energy generated, transmitted, distributed and consumed in the various segments of the power system and the energy loss. The location of these meters shall be as under:

(i)Generating Stations

(1) at the stator terminal of the generator;
(2) on HV and LV sides of the station and the unit auxiliary transformers;
(3) on feeders to various auxiliaries.

(ii)Transmission System

All incoming and out going feeders (If the interface meters do not exist).

(iii)Distribution System

(1) all incoming feeders (11 kV and above);
(2) all outgoing feeders (11 kV and above);
(3) Sub-Station Transformer including Distribution Transformer – Licensee may provide the meter on primary or secondary side or both sides depending upon the requirement for energy accounting and audit.

8. Accuracy Class of meters. -

Every meter shall meet the requirement of accuracy class as specified in the standards given in the Schedule.

9. Installation of meters. -

(1) Generating company or licensee, as the case may be, shall examine, test and regulate all meters before installation and only correct meters shall be installed.

(2) The meter shall be installed at locations, which are easily accessible for installation, testing, commissioning, reading, recording and maintenance. The place of installation of meter shall be such that minimum inconvenience and disruptions are caused to the site owners and the concerned organizations.

(3) In case of single phase meters, the consumer shall ensure that there is no common neutral or phase or looping of neutral or phase of two or more consumers on consumers' side wiring. If such common neutral or phase or looping of neutral or phase comes to the notice of the licensee, it shall suitably inform the consumer through installation report or regular electricity bills or meter test report as applicable.

(4) Consumer shall install the Earth Leakage Protective Device (ELPD) in accordance with the provisions of the rules or regulations in this regard.

(5) If the earth leakage indication is displayed in the meter the licensees shall suitably inform the consumer through installation report or regular electricity bills or meter test report as applicable.

(6) In case CTs and VTs form part of the meters, the meter shall be installed as near the instrument transformers as possible to reduce the potential drop in the secondary leads.

10. Operation, Testing and Maintenance of meters. -

The operation, testing and maintenance of all types of meters shall be carried out by the generating company or the licensee, as the case may be.

11. Access to meter. -

The owner of the premises where, the meter is installed shall provide access to the authorized representative(s) of the licensee for installation, testing, commissioning, reading and recording and maintenance of meters.

12. Sealing of meters. -

(1) Sealing Arrangements

(a) All meters shall be sealed by the manufacturer at its works. In addition to the seal provided by the manufacturer at its works, the sealing of all meters shall be done as follows at various sealing points as per the standards given in the Schedule:

(i) Sealing of interface meters, shall also be done by both the supplier and the buyer.
(ii) Sealing of consumer meters shall be done by the licensee.
(iii) Sealing of energy accounting and audit meters shall be done by the licensee or generating company as the case may be.

(b) A tracking and recording software for all new seals shall be provided by the manufacturer of the meter so as to track total movement of seals starting from manufacturing, procurement, storage, record keeping, installation, series of inspections, removal and disposal.

(c) Seal shall be unique for each utility and name or logo of the utility shall be clearly visible on the seals.

(d) Only the patented seals (seal from the manufacturer who has official right to manufacture the seal) shall be used.

(e) Polycarbonate or acrylic seals or plastic seals or holographic seals or any other superior seal shall be used.

(f) Lead seals shall not be used in the new meters. Old lead seals shall be replaced by new seals in a phased manner and the time frame of the same shall be submitted by the licensee to the Appropriate Commission for approval.

(2) Removal of seals from meters

(a) Interface meters

Whenever seals of the interface meters have to be removed for any reason, advance notice shall be given to other party for witnessing the removal of seals and resealing of the interface meter. The breaking and re-sealing of the meters shall be recorded by the party, who carried out the work, in the meter register, mentioning the date of removal and resealing, serial numbers of the broken and new seals and the reason for removal of seals.

(b) Consumer meters

Seal of the consumer meter shall be removed only by the licensee. No consumer shall tamper with, break or remove the seal under any circumstances. Any tampering, breaking or removing the seal from the meter shall be dealt with as per relevant provisions of the Act.

(c) Energy accounting and audit meters

Seal of the energy accounting and audit meter shall be removed only by the generating company or the licensee who owns the meter.

13. Safety of meters. -

(1) The supplier or buyer in whose premises the interface meters are installed shall be responsible for their safety.

(2) The consumer shall, as far as circumstances permit, take precautions for the safety of the consumer meter installed in his premises belonging to the licensee.

(3) Licensee shall be responsible for the safety of the consumer meter located outside the premises of the consumer and the consumer shall be responsible for the safety of the real time display unit installed by the licensee in consumer premises.

(4) The generating company or the licensee who owns the energy accounting and audit meters shall be responsible for its safety.

14. Meter reading and recording. -

(1) **Interface meters**

It shall be the responsibility of the Appropriate Transmission Utility or the licensee to take down the meter reading and record the metered data, maintain database of all the information associated with the interface meters and verify the correctness of metered data and furnish the same to various agencies as per the procedure laid down by the Appropriate Commission.

(2) **Consumer meters**

(a) It shall be the responsibility of the licensee to record the metered data, maintain database of all the information associated with the consumer meters and verify the correctness of metered data.

(b) The licensee shall maintain accounts for the electricity consumption and other electrical quantities of its consumers.

(c) Brief history, date of installation and details of testing, calibration and replacement of meters shall be maintained by the licensee.

(3) **Energy accounting and audit meters**

It shall be the responsibility of the generating company or licensee to record the metered data, maintain database of all the information associated with the energy accounting and audit meters and verify the correctness of metered data. Each generating company or licensee shall prepare quarterly, half-yearly and yearly energy account for its system for taking appropriate action for efficient operation and system development.

15. Meter failure or discrepancies. -

(1) **Interface meters**

(a) Whenever difference between the readings of the Main meter and the Check meter for any month is more than 0.5%, the following steps shall be taken:

(i) checking of CT and VT connections;
(ii) testing of accuracy of interface meter at site with reference standard meter of accuracy class higher than the meter under test.

If the difference exists even after such checking or testing, then the defective meter shall be replaced with a correct meter.

(b) In case of conspicuous failures like burning of meter and erratic display of metered parameters and when the error found in testing of meter is beyond the permissible limit of error provided in the relevant standard, the meter shall be immediately replaced with a correct meter.

(c) In case where both the Main meter and Check meter fail, at least one of the meters shall be immediately replaced by a correct meter.

(d) Billing for the Failure period:

(i) The billing for the failure period of the meter shall be done as per the procedure laid down by the Appropriate Commission.

(ii) Readings recorded by Main, Check and Standby meters for every time slot shall be analysed, crosschecked and validated by the Appropriate Load Despatch Centre (LDC). The discrepancies, if any, noticed in the readings shall be informed by the LDC in writing to the energy accounting agency for proper accounting of energy. LDC shall also intimate the discrepancies to the Appropriate Transmission Utility or the licensee, who shall take further necessary action regarding testing, calibration or replacement of the faulty meters in accordance with the provisions laid down.

(e) The defective meter shall be immediately tested and calibrated

(2) **Consumer meters**

In case the consumer reports to the licensee about consumer meter readings not commensurate with his consumption of electricity, stoppage of meter, damage to the seal, burning or damage of the meter, the licensee shall take necessary steps as per the procedures given in the Electricity Supply Code of the Appropriate Commission read with the notified conditions of supply of electricity.

(3) **Energy accounting and audit meters**

Energy accounting and audit meters shall be rectified or replaced by the generating company or licensee immediately after notice of any of the following abnormalities:

(a) the errors in the meter readings are outside the limits prescribed for the specified Accuracy Class;
(b) meter readings are not in accordance with the normal pattern of the load demand;
(c) meter tampering, or erratic display or damage.

16. Anti-tampering features of meters. -

The meters shall be provided with such anti-tampering features as per the Standards on Installation and Operation of Meters given in the Schedule.

17. Quality assurance of meters. -

(1) The distribution licensee shall put in place a system of quality assurance and testing of meters with the approval of Appropriate Commission.

(2) The licensee shall set up appropriate number of accredited testing laboratories or utilize the services of other accredited testing laboratories. The licensee shall take immediate action to get the accreditations of their existing meter testing laboratories from NABL, if not already done.

(3) The generating company or licensee shall ensure that all type, routine and acceptance tests are carried out by the manufacturer complying with the requirement of the relevant IS or BS or IEC as the case may be.

18. Calibration and periodical testing of meters. –

(1) **Interface meter**

(a) At the time of commissioning, each interface meter shall be tested by the owner at site for accuracy using standard reference meter of better accuracy class than the meter under test.

(b)All interface meters shall be tested at least once in five years. These meters shall also be tested whenever the energy and other quantities recorded by the meter are abnormal or inconsistent with electrically adjacent meters. Whenever there is unreasonable difference between the quantity recorded by interface meter and the corresponding value monitored at the billing center via communication network, the communication system and terminal equipment shall be tested and rectified. The meters may be tested using NABL accredited mobile laboratory or at any accredited laboratory and recalibrated if required at manufacturer's works.

(c) Testing and calibration of interface meters may be carried out in the presence of the representatives of the supplier and buyer. The owner of the meter shall send advance notice to the other party regarding the date of testing.

(2) **Consumer meters**

The testing of consumer meters shall be done at site at least once in five years. The licensee may instead of testing the meter at site can remove the meter and replace the same by a tested meter duly tested in an accredited test laboratory. In addition, meters installed in the circuit shall be tested if study of consumption pattern changes drastically from the similar months or season of the previous years or if there is consumer's complaint pertaining to a meter. The standard reference meter of better accuracy class than the meter under test shall be used for site testing of consumer meters up to 650 volts. The testing for consumers meters above 650 volts should cover the entire metering system including CTs, VTs. Testing may be carried out through NABL accredited mobile laboratory using secondary injection kit, measuring unit and phantom loading or at any accredited test laboratory and recalibrated if required at manufacturer's works.

(3) **Energy accounting and audit meters**

Energy accounting and audit meters shall be tested at site at least once in five years or whenever the accuracy is suspected or whenever the readings are inconsistent with the readings of other meters, e.g., check meters, standby meters. The testing must be carried out without removing the CTs and VTs connection. Testing may be carried out through NABL accredited mobile laboratory using secondary injection kit, measuring unit and phantom loading or at any accredited test laboratory and recalibrated if required at manufacturer's works.

19. Additional meters. -

In addition to any meter which may be placed for recording the electricity consumed by the consumer, the licensee may connect additional meters, maximum demand indicator or other apparatus as he may think fit for the purposes of ascertaining or regulating either the quantity of electricity supplied to the consumer, or the number of hours during which the supply is given, or the rate per unit of time at which energy is supplied to the consumer, or any other quantity or time connected with the supply to consumer:

Provided that the meter, indicator or apparatus shall not, in the absence of an agreement to the contrary, be placed otherwise than between the distributing mains of the licensee and any meter:

Provided further that, where the charges for the supply of energy depend wholly or partly upon the reading or indication of any such meter, indicator or apparatus as aforesaid, the licensee shall, in the absence of an agreement to the contrary, keep the meter, indicator or apparatus correct.

20. Adoption of new technologies. -

The distribution licensee shall make out a plan for introduction and adoption of new technologies such as pre-paid meters, time of the day meters (TOD), automatic remote meter reading system through appropriate communication system with the approval of the Appropriate Commission or as per the regulations or directions of the Appropriate Commission or pursuant to the reforms programme of the Appropriate Government.

SCHEDULE

(see regulations 2,5,8,12 and 16)

Standards on Installation and Operation of Meters

Part I Standards Common To All Type of Meters

(1) These standards provide for specification of meters, immunity to external factors, sealing points and functional requirements that are required from regulatory perspective. Detailed technical specification shall be prepared by the purchaser of the meter.

(2) **Specifications of meters**

<table>
<tr><td>Standard Reference Voltage</td><td>As per IS</td></tr>
<tr><td>Voltage Range</td><td>As per IS</td></tr>
<tr><td>Standard Frequency</td><td>As per IS</td></tr>
<tr><td>Standard Basic Current</td><td>As per IS

(Current range of consumer meters shall be so chosen as to record the load current corresponding to the sanctioned load)</td></tr>
<tr><td>Accuracy Class</td><td>Meters shall meet the following requirements of Accuracy Class:

<table>
<tr><td>Interface meters</td><td>0.2S</td></tr>
<tr><td colspan="2">Consumer meters</td></tr>
<tr><td>Up to 650 volts</td><td>1.0 or better</td></tr>
<tr><td>Above 650 volts and up to 33 kilo volts</td><td>0.5S or better</td></tr>
<tr><td>Above 33 kilo volts</td><td>0.2S</td></tr>
<tr><td colspan="2">Energy accounting and audit meters

The accuracy class of meters in generation and transmission system shall not be inferior to that of 0.2S Accuracy Class. The accuracy class of meters in distribution system shall not be inferior to that of 0.5S Accuracy Class</td></tr>
</table>
</td></tr>
<tr><td>Starting Current and Maximum Current</td><td>As per IS</td></tr>
</table>

Power Factor Range	As per IS
Power Frequency Withstand Voltage	As per IS
Impulse Voltage Withstand Test for 1.2/50 micro sec	As per IS
Power Consumption	As per IS

(3) Meter shall have downloading facilities of metered data through Meter Reading Instrument (MRI).

(4) **Immunity to External Factors**

The meter shall be immune to external influences like magnetic induction, vibration, electrostatic discharge, switching transients, surge voltages, oblique suspension and harmonics and necessary tests shall be carried out in accordance with relevant standard.

(5) **Sealing Points**

Sealing shall be done at the following points (as applicable):

(a) Meter body or cover

(b) Meter terminal cover

(c) Meter test terminal block

(d) Meter cabinet

(6) The accuracy class of Current transformers (CTs) and Voltage transformers (VTs) shall not be inferior to that of associated meters. The existing CTs and VTs not complying with these regulations shall be replaced by new CTs and VTs, if found defective, non-functional or as per the directions of the Appropriate Commission. In case the CTs and VTs of the same Accuracy Class as that of meters can not be accommodated in the metering cubicle or panel due to space constraints, the CTs and VTs of the next lower Accuracy Class can be installed.

(7) The Voltage Transformers shall be electromagnetic VT or Capacitive Voltage Transformer (CVT).

Part II Standards for interface meters

(1) **Functional Requirements:**

(a) The Interface meters suitable for ABT shall be static type, composite meters , as self –contained devices for measurement of active and reactive energy, and certain other parameters as described in the following paragraphs. The meters shall be suitable for being connected directly to voltage transformers (VTs) having a rated secondary line-to-line voltage of 110 V, and to current transformers (CTs) having a rated secondary current of IA (Model-A :3 element 4 wire or Model C: 2 element , 3 wire) or 5A (model-B: 3 element , 4 wire or Model D: 2 element 3 wire). The reference frequency shall be 50Hz.

(b) The meters shall have a non-volatile memory in which the following shall be automatically stored:

(i) Average frequency for each successive 15-minute block, as a two digit code (00 to 99 for frequency from 49.0 to 51.0Hz).
(ii) Net Wh transmittal during each successive 15-minute block, upto second decimal, with plus/minus sign.
(iii) Cumulative Wh transmittal at each midnight, in six digits including one decimal.
(iv) Cumulative VArh transmittal for voltage high condition, at each midnight, in six digits including one decimal.
(v) Cumulative VArh transmittal for voltage low condition, at each midnight, in six digits including one decimal.
(vi) Date and time blocks of failure of VT supply on any phase, as a star(*) mark.

(c) The meters shall store all the above listed data in their memories for a period of at least ten days. The data older than ten days shall get erased automatically. Each meter shall have an optical port on its front for tapping all data stored in its memory using a hand held data collection device. The meter shall be suitable for transmitting the data to remote location using appropriate communication medium.

(d) The active energy (Wh) measurement shall be carried out on 3-phase, 4-wire principle, with an accuracy as per class 0.2 S of IEC-687/IEC-62053-22. In model-A and C, the energy shall be computed directly in CT and VT secondary quantities, and indicated in watt-hours. In model-B and Model D , the energy display and recording shall be one fifth of the Wh computed in CT and VT secondary quantities.

(e) The Var and reactive energy measurement shall also be on 3-phase, 4-wire principle, with an accuracy as per class 2 of IEC-62053-23 or better. In model-A or Model C, the Var and VArh computation shall be directly in CT and VT secondary quantities. In model-B or Model D, the above quantities shall be displayed and recorded as one-fifth of those computed in CT and VT secondary quantities. There shall be two reactive energy registers, one for the period when average RMS voltage is above 103% and the other for the period the voltage is below 97%.

(f) The 15-minute Wh shall have a +ve sign when there is a net Wh export from substation busbars, and a –ve sign when there is a net Wh import. The integrating (cumulative) registers for Wh and Varh shall move forward when there is Wh/Varh export from substation busbars, and backward when there is an import.

(g) The meters shall also display (on demand), by turn, the following parameters :

(i) Unique identification number of the meter
(ii) Date
(iii) Time
(iv) Cumulative Wh register reading
(v) Average frequency of the previous 15-minute block
(vi) Net Wh transmittal in the previous 15-minute block, with +/-sign
(vii) Average percentage voltage
(viii) Reactive power with +/- sign
(ix) Voltage-high VArh register reading
(x) Voltage-low VArh register reading.

(h) The three line-to-neutral voltages shall be continuously monitored, and in case any of these falls below 70%, the condition shall be suitably indicated and recorded. The meters shall operate with the power drawn from the VT secondary circuits, without the need for any auxiliary power supply. Each meter shall have a built-in calendar and clock, having an accuracy of 30 seconds per month or better.

(i) The meters shall be totally sealed and tamper-proof, with no possibility of any adjustment at site, except for a restricted clock correction. The harmonics shall be filtered out while measuring Wh, Var and VArh, and only fundamental frequency quantities shall be measured/computed.

(j) The Main meter and the Check meter shall be connected to same core of CTs and VTs.

Part III Standards for consumers meters

(1) **Measuring Parameters**

(a) The consumer meter shall be suitable for measurement of cumulative active energy utilized by the consumer.

(b) The consumer meter may have the facilities to measure, record and display one or more of the following parameters depending upon the tariff requirement for various categories of consumers. All parameters excluding instantaneous electrical parameters shall also be stored in memory.

(i) Cumulative reactive energy

(ii) Average power factor

(iii) Time of use of energy

(iv) Apparent power

(v) Maximum demand

(vi) Phase voltage and line currents

(2) All the three phase meters shall have data storage capacity for at least 35 days in a non-volatile memory.

(3) **Anti-Tampering Features**

(a) The meter shall not get damaged or rendered non-functional even if any phase and neutral are interchanged.

(b) The meter shall register energy even when the return path of the load current is not terminated back at the meter and in such a case the circuit shall be completed through the earth. In case of metallic bodies, the earth terminal shall be brought out and provided on the outside of the case.

(c) The meter shall work correctly irrespective of the phase sequence of supply (only for poly phase).

(d) In the case of 3 phase, 3 wire meter even if reference Y phase is removed, the meter shall continue to work. In the case of 3 phase, 4 wire system, the meter shall keep working even in the presence of any two wires i.e., even in the absence of neutral and any one phase or any two phases.

(e) In case of whole current meters and LV CT operated meter, the meter shall be capable of recording energy correctly even if input and output terminals are interchanged.

(f) The registration must occur whether input phase or neutral wires are connected properly or they are interchanged at the input terminals.

(g) The meter shall be factory calibrated and shall be sealed suitably before dispatch.

(h) The meter shall be capable of recording occurrences of a missing potential (only for VT operated meters) and its restoration with date and time of first such occurrence and last restoration along with total number and duration of such occurrences during the above period for all phases.

(i) Additional anti-tampering features including logging of tampers such as current circuit reversal, current circuit short or open and presence of abnormal magnetic field may be provided as per the regulations or directions of the Appropriate Commission or pursuant to the reforms programme of the Appropriate Government.

Part IV Standards for energy accounting and audit meters

(1)The energy accounting and audit meters shall be suitable for measurement, recording and display of cumulative active energy with date and time.

(2) The energy accounting and audit meters may also have the facility to measure, record and display one or more of the following parameters depending upon the energy accounting and audit requirement. All parameters excluding instantaneous electrical parameters shall also be stored in memory.

(a) Apparent power

(b) Phase wise kilowatt at peak KVA

(c) Phase wise KVA(reactive) at peak KVA

(d) Phase wise voltage at peak KVA

(e) Power down time

(f) Average power factor

(g) Line currents

(h) Phase voltages

(i) Date and time

(j) Tamper events

(3) The energy accounting and audit meter shall have data storage capacity for at least 35 days in a non-volatile memory.

(4) Energy accounting and audit meters shall have facility to download the parameters through meter reading instruments as well as remote transmission of data over communication network.

Sd/-

(R. Dahiya)
Secretary, Central Electricity Authority

Annexure G

Annexure A :Technical Specifications for Whole Current A.C. Single Phase Smart Energy Meter

Scope

These specifications cover the design, manufacturing, testing, supply and delivery of AC whole current, single phase, 2 wires Smart Energy Meter with bidirectional communication facility & remote connect/disconnect switch. The meter shall communicate with Head End System (HES) on any one of the communication technologies mentioned in IS16444 Part 1, as per the requirement of the Utility/AMI-IA.

Basic Features

The Smart Meter would have the following minimum basic features-

- Measurement of electrical energy parameters
- Bidirectional Communication
- Integrated Load limiting /connect/disconnect switch
- Tamper event detection, recording and reporting
- Power event alarms as per IS 16444 Part 1
- Remote firmware upgrade
- TOD features
- Net Metering(kWh) features (optional as per requirement of Utility/AMI-IA)
- On demand reading

General standards applicable for meters

S. No.	Standard No.	Title
1	IS 13779 with latest amendments	AC Static Watt-hour Meter class 1& 2
2	IS 15884 with latest amendments	Alternating Current Direct Connected Static Prepayment Meters for Active Energy (Class 1 and 2)-
3	IS 16444 Part 1 with latest amendments	A.C. Static Direct Connected Watt Hour Smart Meter Class 1 and 2- Specification
4	IS 15959 Part 1 & Part 2 with latest amendments	Data Exchange for Electricity Meter Reading, Tariff and Load Control-Companion Standards

Communication

Meter shall have the ability to communicate with Head End System (HES) on any one of the communication technologies mentioned in IS16444 Part 1 (RF Mesh/Cellular) in a secure manner. The selection of communication technology should be as per the site conditions and as per design consideration of AMI Implementing agency to meet the performance as per agreed Service Level Agreements (SLAs). In case of Cellular based meter, the meter shall accommodate SIM card/ e-SIM of any service provider. The meter shall log the removal of the plug-in type communication module removal /nonresponsive event with snapshot.

Remote connect/disconnect/load limiting: Remote Connect/disconnect/Load control facilities would be as per IS 16444 part 1.

Other Specifications

Features	Minimum Requirement of Features
Applicable Standards	The meters shall comply with IS 16444 Part 1 for all requirements.
Reference Voltage	As per relevant IS (240 V)
Current Rating	10-60 A
Category	UC1
Starting Current	As per IS 16444 Part 1
Accuracy	Class 1.0 as per IS 16444 Part 1
Limits of error	As per IS 16444 Part 1
Operating Temperature range	As per IS 13779
Humidity	As per IS 13779
Frequency	As per IS 16444 Part 1
Influence Quantities	As per IS 16444 Part 1
Power Consumption of meter	As per IS 16444 Part 1
Current and Voltage Circuit	As per IS 16444 Part 1
Running at No Load	As per IS 16444 Part 1
Test output device	As per IS 16444 Part 1
Meter Display	Backlit LCD, Scrolling, 10 seconds for each parameter minimum 7 Digits LCD display. The back lit must be green in color
Name Plate & marking Meter Display	i.Manufacturer's name ii.Type designation iii.Number of phases and wires iv.Serial number (Meter serial number shall be laser printed on name plate instead on sticker). v.Serial number along with barcode vi.Month and Year of manufacture vii.Unit of measurement viii.Reference voltage ,frequency ix.Ref. temperature x.Rated basic and maximum Current xi.Meter constant (imp/kWh) xii.'BIS' Mark

	xiii.Class index of meter xiv."Property of BEST Undertaking" xv.Purchase Order No. & date xvi.Guarantee period. xvii.Sign of double square xviii.Country of manufacture. xix.Firmware version of meter xx.Symbol of load switch. xxi.NIC serial NO (Shall be visible from Communication Module Slot) xxii.Compatibility of NIC Card.
Parameters to be measured	As per IS 16444 Part 1 / As per IS 15959 Part-2 RF/ GSM signal Strength in milli db to be available in instantaneous parameters. All energies and demand will be available TOD wise in billing/ LS parameters.
Maximum Demand resetting	As per IS 15959 Part 2
Time of Use registers	As given in the document
Power Quality Information	As per IS 15959 part 2
LED/LCD Indicators	As per IS 16444 Part 1
Load Survey/Interval Data	DIP: 30 min (Block window method) SIP: 30 min LS Days: 60
Tamper/ Event Recording	As given in the document
Measuring Elements	As per IS 16444 Part 1.
Alarm	As per IS 16444 Part 1/ 15959 Part 2

Features	Minimum Requirement of Features
Load Control	As per IS 16444 Part 1
Connect/Disconnect switch	UC1 (As per IS 16444 part 1)
Status of load switch	As per IS 16444 Part 1
Programmability	As per IS 16444 Part 1
Communication	As per IS 16444. Part 1
Data Exchange Protocol	As per IS 16444 Part 1
Remote Firmware upgrade	As per IS 15959 Part 2

Real Time Clock (RTC)	As per IS 16444 Part 1/ IS 15959 Part1 & Part 2
Data Retention	As per IS 16444 Part 1

Features	Minimum Requirement of Features
Battery Backup	Meter shall be supplied with separate battery backup for RTC.
First Breath (power on) and Last gasp (power off) condition detection and communication to HES	As per IS 16444 Part 1
Plug-in Communication Module	The Smart Meters shall be have a dedicated sealable slot for accommodating plug-in type bi -directional communication module which shall integrate the respective communication technology (RF Mesh/ Cellular) with the Smart Meters, leading to easy adaptability for network interfaces (WAN/NAN).The Plug-In module shall be field hot swappable/ replaceable. Same NIC shall work with different types of meters of same make (1P, 3P, LTCT, HT etc).
Optical Port	The meter shall have optical port for downloading data. Optical port shall be with a rust resistance coated metal ring to hold magnet of downloading probe. The optical head used for meter reading shall comply with IEC 62056-21 as far as physical construction is concerned. 10 Nos. of optical chords shall be provided for downloading the data from Meter to PC using BCS software in the Lab. The Optical Port provided on meter shall have flap & sealing provision.
Calibration	Meters shall be software calibrated at factory and modifications in calibration shall not be possible at site by any means. However parameters like RTC, TOD slots & timings, DIP (billing & load survey), billing date change, relay connect/Disconnect, Set load limit, Pre paid/post paid, Set metering mode (Import/Export), display setting shall be reconfigure through CMRI and remotely over the air (OTA), and any other support will be provided without any additional cost to BEST till the useful life of the meters.

Meter Dimension in MM	Is not more than 170(Height)*140(Width)*100(Depth)
Features	**Minimum Requirement of Features**
Software and communication compatibility	The bidder shall supply software required for communication though local (CMRI and BCS software) and remote (AMI) connectivity free of cost and necessary training. For existing meter manufacturer, it should be ensured that all meters (existing non-smart &upcoming smart meters) can be read through one BCS only. The list of OBIS codes for the parameters will be provided at the time of placement of PO in case of not specified in IS 15959. There shall be facility to export the data in Excel/txt/csv/PDF and XML format.
KVAH & KVA calculation	Meter shall be programed as Lag+ Lead configuration i.e. Leading PF shall not be considered as unity
Internal component specification	AS given in the document

Data display facility (auto/manual)

For single phase unidirectional meter Display1 Parameters

(Auto Scroll Mode) Cumulative Forward kWh (7+0)

Display2 Parameters (Manual Scroll Mode)

Display Check
Meter Serial Number
RTC- Date (DD.MM.YY)
RTC- Time (HH:MM:SS)
Cumulative Forward kWh (7+0)
TOD 1 Forward kWh
TOD 2 Forward kWh
TOD 3 Forward kWh
TOD 4 Forward kWh
TOD 5 Forward kWh
Cumulative Forward kVArh lag (6+0)
Cumulative Forward kVArh lead (6+0)
Cumulative Forward kVAh (6+0)
TOD 1 Forward kVAh
TOD 2 Forward kVAh
TOD 3 Forward kVAh
TOD 4 Forward kVAh
TOD 5 Forward kVAh

Present Maximum Demand in Forward kW with date & time
Present Maximum Demand in Forward kVA with date & time
Instantaneous Voltage
Instantaneous Phase Current

Instantaneous Neutral Current
Instantaneous P.F
Instantaneous Active power (3+3)
Instantaneous Apparent power (3+3)
Instantaneous Reactive power (3+3) (Lag or Lead)
TOD 1 Frozen Maximum demand in Forward kW with date & time
TOD 2 Frozen Maximum demand in Forward kW with date & time
TOD 3 Frozen Maximum demand in Forward kW with date & time
TOD 4 Frozen Maximum demand in Forward kW with date & time
TOD 5 Frozen Maximum demand in Forward kW with date & time TOD 1 Frozen Maximum demand in Forward kVA with date & time
TOD 2 Frozen Maximum demand in Forward kVA with date & time
TOD 3 Frozen Maximum demand in Forward kVA with date & time TOD 4
Frozen Maximum demand in Forward kVA with date & time TOD 5 Frozen
Maximum demand in Forward kVA with date & time
Frozen energy in Forward kWh for last 6 reset
Frozen energy in Forward kVAh for last 6 reset
Frozen Maximum demand in Forward kW for last 6 reset
Frozen Maximum demand in Forward kVA for last 6 reset
Rising Demand Forward kW along with time elapsed.
Cumulative Tamper Count
History of last 3 tampers occurrence & recovery
Defraud Register Cumulative kWh during Magnetic Tamper (6+0)
Defraud Register Cumulative kWh during ND Tamper (6+0)
Defraud Register Cumulative kWh during NM Tamper (6+0)
Latest Magnetic tamper occurrence date & time
Latest Magnetic tamper recovery date &time
Latest Neutral Disturbance occurrence date & time
Latest Neutral Disturbance recovery date & time
Latest Neutral Missing occurrence date & time
Latest Neutral Missing recovery date & time
Cover Open tamper occurrence Date (If Occurred Only) Cover Open tamper occurrence Time (If Occurred Only)
Status of Load Switch
Count of Relay connect
Relay connect Date of last occurrence
Relay connect Time of last occurrence
Count of Relay disconnect
Relay disconnect Date of last occurrence
Relay disconnect Time of last occurrence
Meter Version
DLMS Version
RTC Date Status
Battery Status
Non volatile memory status
NIC card status
RSSI Value

Display 3 Parameters (High Resolution Mode)

Cumulative Forward kWh (2+4)

TOD 1 Forward kWh (6+0)
TOD 2 Forward kWh (6+0)
TOD 3 Forward kWh (6+0) TOD 4
Forward kWh (6+0)
TOD 5 Forward kWh (6+0)
Cumulative Forward kVArh lag (2+4)
Cumulative Forward kVArh lead (2+4)
Cumulative Forward kVAh (2+4)
TOD 1 Forward kVAh (6+0)
TOD 2 Forward kVAh (6+0)
TOD 3 Forward kVAh (6+0)
TOD 4 Forward kVAh (6+0)
TOD 5 Forward kVAh (6+0)
Frozen Maximum demand in Forward kW for last 6 reset with date & time
Frozen Maximum demand in Forward kVA for last 6 reset with date
& time

For single phase Bi-directional meter-

Display1 Parameters (Auto Scroll Mode)

Display Check
Meter Serial Number
RTC- Date (DD.MM.YY)
RTC- Time (HH:MM:SS)
Cumulative kWh (6+0) - Import
TOD 1 kWh - Import
TOD 2 kWh - Import
TOD 3 kWh - Import
TOD 4 kWh - Import
TOD 5 kWh - Import
Cumulative kVArh lag - Import
Tariff wise MD kVA Date & time - Import
Cumulative kVArh lead - Import
Cumulative kVAh - Import
TOD 1 kVAh - Import
TOD 2 kVAh - Import
TOD 3 kVAh - Import
TOD 4 kVAh - Import
TOD 5 kVAh - Import
Cumulative kWh (6+0) - Export
TOD 1 kWh - Export
TOD 2 kWh - Export
TOD 3 kWh - Export
TOD 4 kWh - Export
TOD 5 kWh - Export
Cumulative kVArh lag - Export
Tariff wise MD kVA Date & time - Export
Cumulative kVArh lead - Export
Cumulative kVAh - Export
TOD 1 kVAh - Export

TOD 2 kVAh - Export
TOD 3 kVAh - Export
TOD 4 kVAh - Export
TOD 5 kVAh - Export

Display2 Parameters (Manual Scroll Mode)

Display Check
Meter Serial Number
RTC- Date (DD.MM.YY)
RTC- Time (HH:MM:SS)
Instantaneous Voltage
Instantaneous Phase Current
Instantaneous Neutral Current
Instantaneous P.F
Instantaneous Active power (3+3)
Instantaneous Apparent power (3+3)
Instantaneous Reactive power (3+3) (Lag or Lead)
Cumulative kWh (6+0) - Import
TOD 1 kWh - Import
TOD 2 kWh - Import
TOD 3 kWh - Import
TOD 4 kWh - Import
TOD 5 kWh - Import
Cumulative kVArh lag - Import
Tariff wise MD kVA Date & time - Import
Cumulative kVArh lead - Import Cumulative kVAh - Import
TOD 1 kVAh - Import
TOD 2 kVAh - Import
TOD 3 kVAh - Import
TOD 4 kVAh - Import TOD 5 kVAh - Import
Cumulative kWh (6+0) - Export
TOD 1 kWh - Export
TOD 2 kWh - Export
TOD 3 kWh - Export
TOD 4 kWh - Export TOD 5 kWh - Export
Cumulative kVArh lag - Export
Tariff wise MD kVA Date & time - Export
Cumulative kVArh lead - Export
Cumulative kVAh - Export
TOD 1 kVAh - Export
TOD 2 kVAh - Export
TOD 3 kVAh - Export
TOD 4 kVAh - Export
TOD 5 kVAh - Export
Latest reset- Cumulative kWh (6+0) - Import

Latest reset- TOD 1 kWh - Import
Latest reset- TOD 2 kWh - Import
Latest reset- TOD 3 kWh - Import
Latest reset- TOD 4 kWh - Import
Latest reset- TOD 5 kWh - Import
Latest reset- Cumulative kVArh lag - Import
Latest reset- Tariff wise MD kVA Date & time - Import
Latest reset- Cumulative kVArh lead - Import
Latest reset- Cumulative kVAh - Import
Latest reset- TOD 1 kVAh - Import
Latest reset- TOD 2 kVAh - Import
Latest reset- TOD 3 kVAh - Import
Latest reset- TOD 4 kVAh - Import
Latest reset- TOD 5 kVAh - Import
Latest reset- Cumulative kWh (6+0) - Export
Latest reset- TOD 1 kWh - Export
Latest reset- TOD 2 kWh - Export
Latest reset- TOD 3 kWh - Export
Latest reset- TOD 4 kWh - Export
Latest reset- TOD 5 kWh - Export
Latest reset- Cumulative kVArh lag - Export
Latest reset- Tariff wise MD kVA Date & time - Export
Latest reset- Cumulative kVArh lead - Export
Latest reset- Cumulative kVAh - Export
Latest reset- TOD 1 kVAh - Export
Latest reset- TOD 2 kVAh - Export
Latest reset- TOD 3 kVAh - Export
Latest reset- TOD 4 kVAh - Export
Latest reset- TOD 5 kVAh - Export
Frozen energy in kWh for last 6 reset- Import
Frozen energy in kVAh for last 6 reset- Import
Frozen Maximum demand in kW for last 6 reset- Import Frozen Maximum demand in kVA for last 6 reset- Import
Frozen energy in kWh for last 6 reset- Export
Frozen energy in kVAh for last 6 reset- Export
Frozen Maximum demand in kW for last 6 reset- Export
Frozen Maximum demand in kVA for last 6 reset- Export Rising Demand Forward kW along with time elapsed.
Cumulative Tamper Count
History of last 3 tampers occurrence & recovery
Defraud Register Cumulative kWh during Magnetic Tamper (6+0) Defraud Register Cumulative kWh during ND Tamper (6+0)
Defraud Register Cumulative kWh during NM Tamper (6+0) Latest Magnetic tamper occurrence date & time
Latest Magnetic tamper recovery date & time
Latest Neutral Disturbance occurrence date & time
Latest Neutral Disturbance recovery date & time
Latest Neutral Missing occurrence date & time
Latest Neutral Missing recovery date & time

Cover Open tamper occurrence Date (If Occurred Only)
Cover Open tamper occurrence Time (If Occurred Only)
Status of Load Switch
Count of Relay connect
Relay connect Date of last occurrence
Relay connect Time of last occurrence
Count of Relay disconnect
Relay disconnect Date of last occurrence
Relay disconnect Time of last occurrence
Meter Version
DLMS Version
RTC Date Status
Battery Status
Non volatile memory status
NIC card status
RSSI Value

Display 3 Parameters (High Resolution Mode) Cumulative
Forward kWh (2+4) - Import
Cumulative Forward kVArh lag (2+4) - Import
Cumulative Forward kVArh lead (2+4) - Import
Cumulative Forward kVAh (2+4) - Import
Cumulative Forward kWh (2+4) - Export
Cumulative Forward kVArh lag (2+4) - Export
Cumulative Forward kVArh lead (2+4) - Export
Cumulative Forward kVAh (2+4) - Export

1 TOD Feature:

The meter shall be capable of measuring Cumulative Energy (KWh), KVarh Lag, Kvarh Lead, Kvah and MD (KW, KVA)with time of day (TOD) registers having 5 zones (no. of zones & time slot shall be programmable by CMRI with adequate security level).
TOD Slot Configuration shall be as follows-

Slot	Time Slots
TOD 1	22 to 06 Hrs
TOD 2	06 to 09 Hrs
TOD 3	09 to 12 Hrs
TOD 4	12 to 18 Hrs.
TOD 5	18 to 22 Hrs

Further, the Meter should display high resolution energy values with resolution of 2 digits before decimal and 4 digits after decimal in push button mode
The meter's display should return to default display mode (continues auto scroll) if push button is not operated for more than 10 seconds. (The order of display may be revised as per requirement of the Utility/AMI-IA). Meter display should not go in to the sleep mode during Power-On condition in case the push button is not operated for more than 10 minutes.

Anti-tamper features

The meter shall continue working under tamper conditions as defined in IS 15959 Part 2 and would log the event and send alarm at Head End System after detection of the defined tamper features as given below.

1Immunity against external influencing signals:

Magnetic Field:

Meter shall record accurate energy in case of any external influencing signals in line with IS 13779:1999 Cl.11.2 and variation in limits of error (up to 100% Imax) shall be as per the table 17 of IS 13779. Meter shall be immune to magnetic field such that it shall not affect the normal overall functionality However, in case of abnormal magnetic field as defined below meter shall perform as per the following features:

a.Meter shall log the event in its memory as" MAGNET" with date and time stamp within 30 sec or immediate of application of abnormal magnetic field and shall start recording at 100% Imax and after removal of magnet, back to normal recording within 30 sec or immediate b.Meter shall show "Magnet" in the display.

Abnormal Magnetic field is defined as below;

a. Continuous DC magnetic induction: >0.27 Tesla ± 5%(Value of the magneto motive force to be applied shall be generally >10000 ATs, Should be immune up to 0.27Tesla)

b. AC magnetic induction: Immune for 10 milli Tesla (if produced with circular metal core with square cross section as specified in CBIP latest report with 2800 AT

c. Permanent Magnet: Immune up to 0.5T and Event logging >0.5T

Electrostatic Discharge (ESD)

Meter shall be immune up to 50 kV and shall record accurate energy as per IS-13779:1999.Meter shall log the event into memory as 'ESD' with date & time stamp for any ESD greater than 50 kV and shall show 'ESD' in the display.

The shielding around the meter shall be such that it does not get affected by high voltage, high and low energy impulse when comes in contact with meter from any side.

The meter should immune to high/ low frequency Jammer devices. Meter shall log event in its memory as jammer with date and time stamp along with snapshot.

The meter should be immune or log the tamper on application of any other higher magnetic field of any frequency waves, micro waves

Neutral Disturbance

The meter shall log in the memory as 'NEUTRAL DISTURBANCE' with date and time stamp and show 'ND' in the display for Frequency variation below 45 Hz and above 55 Hz with time delay of 2 min and for Pulsating DC and Chopped AC of any value with time delay of 2 min.

The meter shall not saturate on passage of direct current, which can cause the meter either to stop recording/ record inaccurately. DC injection shall be tested both in phase and neutral. Measurement by meter shall not get influenced by injection of DC signal/ DC pulse upto 330V and for any value beyond this, the meter shall log

the event into memory as 'NEUTRAL DISTURBANCE' with date & time stamp and shall show 'ND 'in the display after time delay of 2 min(occurrences and restoration time).

The meter shall record energy proportional to the current and V Ref (240V) when any of the tamper circuits enclosed as per annexure are used to tamper energy using a diode or a variable resistance or a variable capacitance energy saving device and meter should recorded ND in meter memory. The measurement by meter shall not get influenced by injection of AC Voltages/Chopped signal/DC signal/ DC pulse of low frequency and harmonics. The meter should be immune to such Neutral Disturbance. In case the meter accuracy is disturbed under Neutral Disturbance, it should be able to log the event.

Single Wire

Single Wire tamper (Neutral Missing): When neutral is disconnected from both load side and supply side, the meter should record energy as per rated parameters (Vref). However, meter shall start registering energy

At a current of >500mA under tamper condition of neutral missing (where battery is used for voltage reference). Meter will perform the fraud energy registration above 500mA assuming Vref (from battery) and Unity power factor.

Condition no. 38 of Annexure I (Timer test) : The timer operation duration shall be 30 seconds.

Abnormal and Tamper conditions:

The meter shall record forward energy under any abnormal conditions as given in the annexure I.

All the tamper events i.e. shall be logged in the memory of the meter with date and time stamp of occurrence and restoration along with instantaneous electrical parameter (Voltage, Current (phase and neutral), energy, pf , frequency
)

Meter shall store cumulative count and cumulative durations of all the tamper event which have logged by meter from the date of energization till life of meter.

Tamper count shall be incremented only on the occurrence of the any tamper event with date and time
Stamp on FIFO basis. The event of which the restoration not occurred those should not be removed from meter memory and FIFO should not applicable for unrestored event.

The cover open tamper detection should be through heavy duty, sturdy micro switch such that it should not Operate on vibration or impact during handling or testing.

Meter shall have neutral CT for tamper identification and analysis.

The size of compartments should be such that all above event are accommodated in the assigned event compartment.
i.e. if in case of voltage compartment assigned to 4 number of events then the minimum size of this compartment should be such that it should accommodate sum of all maximum number of events as per below table.

Transaction event compartment size shall be minimum 100 events

Persistence time for occurrence and restoration for the events and compartment block size shall be as per table given.

S.NO.	EVENT (BCS)	IN METER DISPLAY	COMPARTMENT SIZE
1	MAGNET	MAGNET	25
2	HV ESD	ESD	25
3	NEUTRAL DISTURBANCE	ND	25
4	SINGLE WIRE (SW)	SW	25
5	METER COVER OPEN	C OPEN	2
6	Relay Connect/Disconnect	RL CON/ RL DIS	10

Compartment	Event Description	Size	Occurrence	Time for occurrence	Restoration	Time for restoration
1	Current reversal,	25	Active current negative	2 Min		2 Min
2	Over current	25	> 59 Amp	2 Min	< 60 Amp	2 Min
3	Current mismatch	25	In-Ip >= 20% Ib and In>Ip	2 Min	In-Ip<20% Ib	2 Min
4	Earth Load	25	Difference between Phase and Neutral current more than 10%	5 Min	Difference between Phase and Neutral current less than 10%	5 Min
5	Single Wire / Neutral Cut / Netural missing	25	If neutral is removed and current drawn > 0.2%Ib in other wire	2 Min	If neutral is restored and meter is in normal condition	2 Min
6	Neutral Disturbance	25	(1) Vph > 150% Vref OR (2) In case of external signal injection (Chopped DC, Chopped AC and DC injection through diode) OR both above	2 min	If meter is in normal condition	2 Min
7	H.V. Tamper	5	Vph > 110% of Vref	5 min	Vph < 110% of Vref	5 min
8	Low Voltage	25	120>Vphase< 216	30 min	Vphase > 215	5 min
9	ESD/JAMMER Tamper	25	> 50 KV	immediate	Removal of ESD/Jammer signal	immediate
10	Magnet	25	Whenever meter sense abnormal magnetic field it shall record Active and Apparent energy at Imax at UPF	immediate	If magnet is removed and meter is in normal condition	immediate

Com part ment	Event Description	Size	Occurrence	Time for occurrence	Restoration	Time for restoratio n
11	Power On/OFF	20	Actual voltage Off.	60 sec		immediate
12	Cover Open	5	When cover opens by more than 2 to 4 mm.	Immd		
13	Temperature Rise	25	Occ: T > 70˚C REC: T < 60˚C	2		
14	NIC card Removed (Immediate)	25	OCC: On removal of card RES: On Inserction card	Immediate		

In case of bidirectional meter, reverse current & magnet tamper conditions shall be modified accordingly.

Anti-tamper features

The meter shall continue recording energy under tamper conditions as defined in IS 15959 Part 2 and would log the event and send alarm at Head End System after detection of the defined tamper features as per IS 15959 Part 2.

Type Tests & Test Certificates

Smart Meter shall be type tested for all the tests as per relevant parts of IS 16444 (latest versions) and certified by Indian Standard wise list of BIS recognized labs as available at https://bis.gov.in/index.php/laboratorys/list-of-bis-recognized-lab/. The number of sampling for testing of meters and criteria for conformity would be as per IS 16444 (as amended up to date). Necessary copies of test certificates shall be submitted as per agreement with the Utility/AMI-IA.

Routine & Acceptance Tests

The Factory Acceptance and Routine tests shall be carried out as per IS 16444 Part 1.

General & Constructional requirements

Meter shall be BIS marked as per IS 16444 Part 1. General & construction requirement shall be as per IS 16444/IS 13779

Meter base & cover - Meter base & cover shall be as per IS 16444 Part1 / IS 13779. The meter Base & cover shall be Encapsulated type with “screwless break to open” design conform to the degree of protection IP 54 against ingress of dust, moisture and vermin.

The meter Base & cover shall be ultrasonically welded / Chemically welded or other suitable bonding technology and it will not be possible to remove the cover from the base without evidence of damage and necessary sealing provision shall be provided on the both sides of the meter.

Terminal block & cover - As per IS 16444 Part 1/IS 13779

The terminal cover shall be transparent and short. The terminal cover shall be fully enclosed type. The connection diagram shall be marked on Terminal Block cover.

Design

Voltage circuit, sealing arrangement, terminal block, terminal cover, and nameplate etc. shall be in accordance with IS-16444 Part 1(latest version).

The meter shall be compact and reliable in design, easy to transport and immune to vibration and shock involved in transportation and handling.

Name plate and marking

The name plate on the meter should be clearly visible, effectively secured against removal and indelibly/distinctly marked in accordance with relevant IS. In addition, "Name of the Utility/AMI- IA", purchase order no. & year/month of manufacturing shall be provided on the name plate. The ratingplate information shall be as per relevant IS. ***Connection diagram:*** As per IS 16444 Part 1

Fixing arrangements

The meter shall be mounted type. The Meter should have three fixing holes, one at top and two at the bottom. The Top hole should be such that the holding screw is not accessible to the consumer after fixing the meters. The lower screws should be provided under sealable terminal cover.

Sealing arrangement:

Arrangements shall be provided for proper sealing of the meter cover so that access to the working parts shall not be possible without breaking the seal. The sealing arrangement and number of seals shall be as per relevant IS/ requirement of Utility/AMI-IA.

The sealing point shall be as per CEA regulation 2006 with latest amendments. Supplier shall fix tamper evident barcoded holographic seal on left side of the meter. It shall not be possible to remove the seal intact. Details of holographic seals used by supplier shall be provided in hard as well as in soft copy on CD/email as per format given by BEST. Additional seals will be provided by BEST to supplier for putting them on meter body as per requirement.

Packing

The meters shall be suitably packed for vertical/horizontal support to withstand handling during transportation. The meter shall be packed appropriately to ensure safe transportation, handling, identification, and storage. All packing materials shall be as per environment law in force. The primary packing shall ensure protection against humidity, dust, grease and safeguard the meter's performance until its installation. The secondary packing shall provide protection during transportation. The packing case shall indicate "Fragile in nature" and direction of placement of box. The packing shall indicate marking details like Manufacturer's name, S.No. of meters, quantityetc.

Transportation

- The meter shall be compact in design. The meter block unit shall be capable of withstanding stresses likely to occur in actual service and rough handling during transportation.
- The meter shall be convenient to transport and immune to shock and vibration during transportation and handling.
- The meter should not be exposed to undue shock and mishandling during transportation.
- The stacking of box inside transport media should be such as to avoid their free movement.
- The packing should also be protected from rain and dust by transport media.
- The AMISP shall be responsible for any damage during transit due to inadequate or improper packing.

Testing and Manufacturing Facilities at Manufacturer's Place

The manufacturer shall have facilities of conducting Acceptance Testing as per IS 16444 Part 1.

Inspection

- The meters shall be sealed as per the mutual agreement of the supplier and the purchaser
- The Utility/AMI-IA/ purchaser may inspect the meter randomly as per sampling plan for acceptance testas per IS 16444 Part 1. The meters shall be tested for acceptance test as per IS 16444 Part 1
- All meters are factory tested at manufacturer's work place and RTR (Routine Test Report) to be submitted to BEST for each meters in soft copy before dispatch of meters.

Tender sample

- Tenderer shall submit 3 sample meters out of which one sample meter shall be without Ultrasonic welding to confirm constructional features and other destructive tests if any.
- After successful passing the tests carried out at BEST laboratory the tenderer shall give the demonstration of the meter offered against the tender to demonstrate the features incorporated in the meter.
- Sample meter submitted against the tender will not be returned to the supplier till the completion of guarantee period.

Guarantee.

- 7.5 years from the date of dispatch or 7 year from date of commissioning, whichever is earlier
- Manufacturer shall undertake a guarantee to replace meter up to a period of 7 Year from the date of supply. The meters which are found defective/inoperative within the guarantee period shall be replaced as per meter service level agreement.

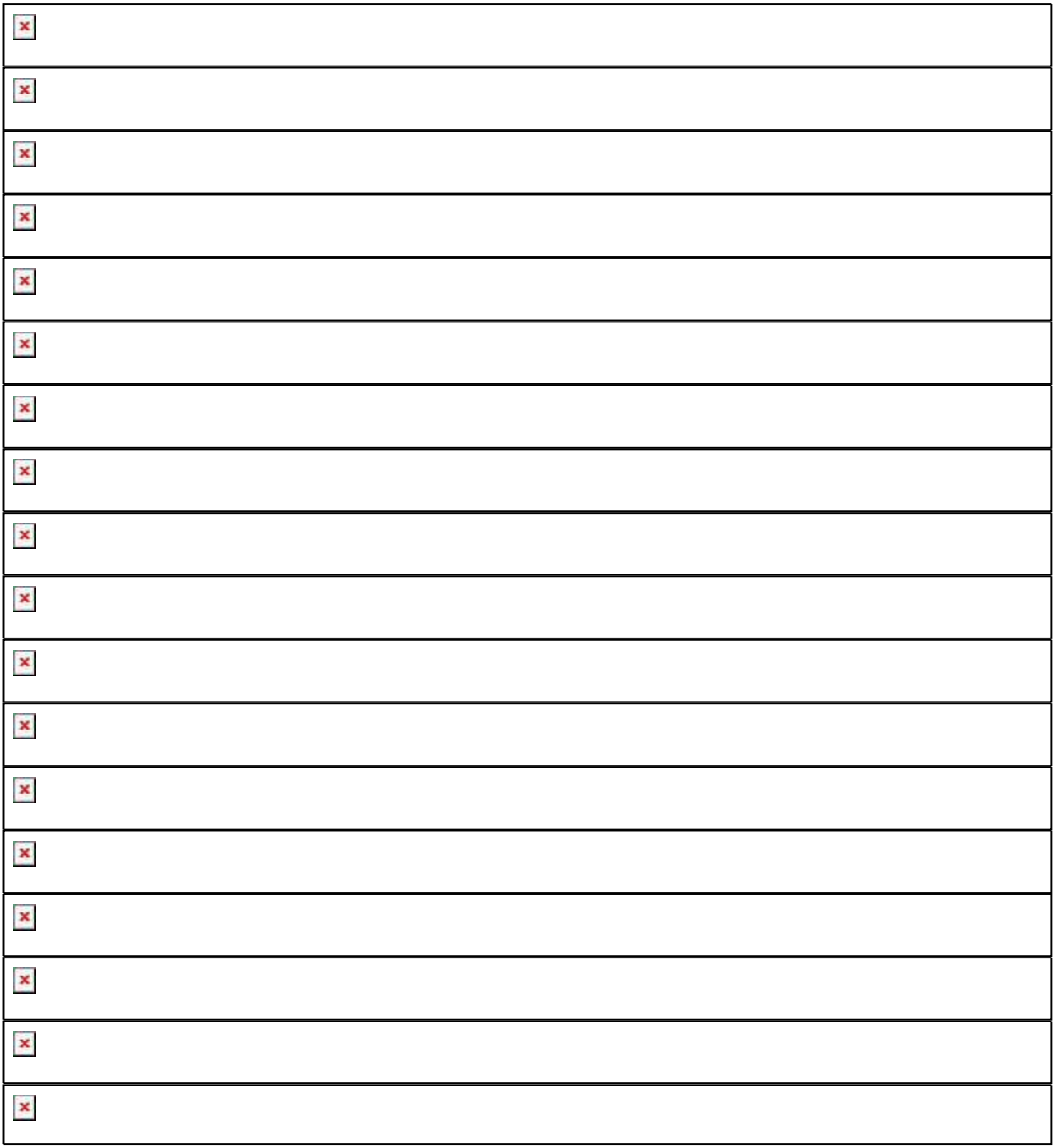
Sr No	Component function	Requirement	Preferable Makes and Origin
Section 6. Project Req uirements			290
1	Measurement or Computing Chips.	The measurement or computing chips used in the meter shall be with the Surface mount type along with Application Specific Integrated Circuits (ASIC).	USA: Analog Devices, Cyrus Logic, Atmel, Philips, Teridian, Dallas, ST, Texas Instruments, Motorola, Maxim, National Semiconductors, Freescale, On semiconductors. Germany: Siemens. South Africa: SAMES. Japan: NEC, Toshiba, Renesas, Hitachi. Austria: AMS. Holland: Philips (NXP).
2	Memory Chips.	The memory chips shall not be affected by external parameters like sparking, high voltage spikes or electrostatic discharges.	USA: Atmel,Teridian, National Semiconductors, Philips, Texas Instruments, ST, Microchip, Spanson (Fujitsu), Ramtron. Japan: Hitachi, Renasas, Oki. Germany: Siemens.
		Meter shall have Non-Volatile Memory (NVM) to store energy meter data.	
		NVM shall be external (Outside ASIC).	
		In case of input power fail to Energy Meter it shall record last sampled important data in EEPROM using capacitance tank of power supply. Use of Non- rechargeable battery should only be restricted to minimum absolute power requirement of meter. Non-rechargeable battery shall not be used for this function.	
3.	Display Modules.	The display modules shall be well protected from the external Ultra Violet (UV) radiations.	Display Make:- Singapore: E-smart, Bonafied Technologies,Display Tech. Korea: Advantek, Jebon, Union Display Inc. Japan: Hitachi, Sony, L&G. Malaysia: Crystal ClearTechnology. Holland/Korea: Phillips. Hongkong: Genda. China: Tianma, JIA.
		The display visibility shall be sufficient to read the meter mounted at height of 0.5 meter as well as at the height of 2 meters.	
		The construction of the modules should be such that the displayed quantity shall not disturbed with the life of display (PIN Type).	
		It shall be trans reflective STN (STN – Super Twisted Nematic (160°) type industrial grade with extended temperature range.	

4	Optical Port.	Optical port shall be used to transfer the meter data to Common Meter Reading Instrument (CMRI/ DCU). The mechanical construction of the port shall be such to facilitate the data transfer easily.	USA: National Semiconductors, HP, Optonica, ST. Holland/Korea: Phillips. Japan: Hitachi. Taiwan: Ligitek. Osram, Everlight, Liteon, Avego.

Sr	Component	Requirement	Preferable Makes and Origin No function
5	Electronic Components.	The active and passive components shall be of the surface mount type and are to be handled and soldered by the state of art assembly processes.	USA: National Semiconductors, Atmel, Philips, Texas Instruments, BC Component, Analog devices, ST, Maxim, Kemet, On semiconductors, Freescale, Intersil, Raltron, Fairchild, Muruta, Agilent, AVX, Abracon, Sipex, Diode Inc., Honeywell, Power Integration, Fox, Roham, Onsemi. Japan: Hitachi, Oki, AVZ or Ricoh, Toshiba, Epson, Kemet,
			Alps, Muruta, TDK, Sanyo, Samsung, Panasonic. Korea: Samsung. India: Keltron, Incap, VEPL, PEC, RMC, Gujarat Polyavx, Prismatic, MFR Electronic components Pvt. Ltd, Cermet. Germany: Vishay, Epcos, Diotech, Kemet.
		The Plated Through Hole (PTH) component should be positioned such a way that the leads of the component shall not be under stress and not touching the internal wires.	
6	Battery.	Non rechargeable Lithium battery with guaranteed life of about 10 years shall be used.	Varta, Tedirun, Sanyo or National, Panasonic, Tekcell, Vitzrocell, Mitsubishi.
		Battery for RTC and for Meter Display in absence of Power shall be Separate.	
7	RTC.	The accuracy of RTC shall be as per relevant IEC/IS standards.	USA: Philips, Dallas Atmel, Motorola, Microchip, Maxell, Renata Japan: NEC or Oki.
8	Measuring Element.	Measuring elements used shall be as per Clause No. 8.11 of the specification.	
9	Power Supply.	The power supply shall be with the capabilities as per the relevant standards.	
		The power supply unit of the meter shall not be affected in case the maximum voltage of the system appears to the terminals due to faults or due to wrong connections.	
		The ratings of Power Supply module and power consumed by various modules and circuits shall be specified.	

		The power supply shall be at least 125% rated than the maximum load on the power supply.	
		In case of capacitive power supply, the voltage rating of series power circuit capacitor shall be adequate to withstand 440V AC applied at meter terminals continuously for 5 minutes without	

Sr No	Component function	Requirement	Preferable Makes and Origin
		damage.	
		All the electrolytic capacitors shall have preferably low ESR value.	
10	Electrical Components.	The internal electrical component shall be of electrolytic copper & shall be protected from corrosion, rust etc.	
11	Mechanical Parts.	The other mechanical components shall be protected from corrosion etc. by suitable plating/painting methods.	
12	P.C.B.	Glass Epoxy, fire resistance grade FR4 with adequate strength.	
		PCB shall be Bare Board Test (BBT) certified.	
		The meter shall preferably with minimum jumper/wires/connectors.	
		PCB shall be suitably masked with protection coating.	
13	Push Button.	Carbon pill and silicon rubber contact / Tactile/ Captive Push button type high performance push buttons shall be used.	
14	Magnetic Tamper Detection Sensor.	Hall Effect IC / Inductor Sensor shall be used.	Make-Diode, Allegro etc.
15.	Load Switch	Load switch shall be of rating similar to Energy meter rating.	Superior in quality as similar to branded miniature circuit breaker.



Annexure B Technical Specifications for Whole Current A.C. Three Phase Smart EnergyMeter

Scope

The specification covers the design, manufacturing, testing, supply, and delivery of AC whole current 3 phase 4 wires Smart Energy Meter with bidirectional communication facility suitable for Advanced Metering Infrastructure (AMI) with connect/disconnect switch. The meter shall communicate with Head End System (HES) on any one of the communication technologies mentioned in IS16444 Part 1, as per the requirement of the Utility/AMI-IA / authorized system integrator.

Basic Features

The Smart Meter would have the following minimum basic features-

- Measurement of electrical energy parameters
- Bidirectional Communication
- Integrated Load limiting switch /relay
- Tamper event detection, recording and reporting
- Power event alarms as per IS 16444 Part 1
- Remote firmware upgrade
-
- TOD feature
- Net Metering(kWh) features (optional as per requirement of Utility/AMI-IA)
- On demand reading

General standards applicable for meters

S. No.	Standard No.	Title
1	IS 13779 with latest amendments	AC Static Watt-hour Meter class 1& 2
2	IS 15884 with latest amendments	Alternating Current Direct Connected Static Prepayment Meters for Active Energy (Class 1 and 2)- Specification
3	IS 16444 Part 1 with latest amendments	A.C. Static Direct Connected Watt Hour Smart Meter Class 1 and 2- Specification
4	IS 15959 Part 1 & Part 2 with latest amendments	Data Exchange for Electricity Meter Reading, Tariff and Load Control-Companion Standards

Communication

Meter shall have the ability to communicate with Head End System (HES) on any one of the communication technologies mentioned in IS16444 Part 1 (RF / Cellular) in a secure manner.The selection of communication technology should be as per the site conditions and as per design requirement of AMI Implementing agency to meet the performance as per agreed Service Level Agreements (SLAs). In case of Cellular based meter, the meter shall accommodate SIM card/ e-SIM of any service provider. The meter shall log the removal of the plug-in type communication module removal /nonresponsive event with snapshot.

Remote connect/disconnect/load limiting: Remote Connect/disconnect/Load control facilities would be as per IS 16444 part 1.

Other Specifications

Features	Minimum requirement of features

Applicable Standards	The meters shall comply with IS 16444 Part 1 for all requirements.
Reference Voltage	As per relevant IS
Current Rating	10-60 A / 20-100 A
Category	UC1
Starting Current	As per IS 16444 Part 1
Accuracy	Class 1.0 as per IS 16444 Part 1
Limits of error	As per IS 16444 Part 1
Operating Temperature range	As per IS 13779
Humidity	As per IS 13779
Frequency	As per IS 16444 Part 1
Influence Quantities	As per IS 16444 Part 1
Power Consumption of meter	As per IS 16444 Part 1
Current and Voltage Circuit	As per IS 16444 Part 1
Running at No Load	As per IS 16444 Part 1
Test output device	As per IS 16444 Part 1
Meter Display	As given in the document
Name Plate & marking Meter Display	i. Manufacturer's name ii. Type designation iii. Number of phases and wires iv.Serial number (Meter serial number shall be laser printed on name plate instead on sticker). v. Serial number along with barcode vi. Month and Year of manufacture vii. Unit of measurement viii. Reference voltage ,frequency ix. Ref. temperature x. Rated basic and maximum Current xi. Meter constant (imp/kWh) xii. 'BIS' Mark xiii. Class index of meter xiv. Property of BEST Undertaking xv.Purchase Order No. & date xvi. Guarantee period. xvii. Sign of double square xviii. Country of manufacture. xix. Firmware version of meter xx.Symbol of load switch.

Features	Minimum requirement of features
	xxi.NIC serial NO (Shall be visible from Communication Module Slot) xxii.Compatibility of NIC Card.
Parameters to be measured	As per IS 16444 Part 1 / As per IS 15959 Part-2 RF/ GSM signal Strength in milli db to be available in instantaneous parameters. All energies and demand will be available TOD wise in billing/ LS parameters.
Maximum Demand resetting	As per IS 15959 Part-2
Time of Use registers	As given in the document
Power Quality Information	As per IS 15959 Part-2
LED/LCD Indicators	As per IS 16444 Part 1
Load Survey/Interval Data	DIP: 15 min SIP:15 min LS Days: 45
Tamper/ Event Recording	As given in the document
Measuring Elements	a. Current Transformer shall be provided as measuring element in the phase circuit. b. Additional CT/Shunt shall be provided in the neutral circuit of meter to detect phase CT bypass. Any unbalance current of vector summation of all three phase currents, if not recorded as neutral current, to be treated as tamper event, and also current imbalance to be detected. c. The meter shall have CTs with Magnetic shielding and same shall be tested separately prior to assembly. d. The Current Transformers used shall not saturate with passage of DC current as per IS: 13779:1999 with latest amendments.
Alarm	As per IS 16444 Part 1 / As per IS 15959 Part-2
Load Control	As per IS 16444 Part 1
Connect/Disconnect switch	UC1 as per IS 16444 Part 1
Status of Load switch	As per IS 16444 Part 1
Programmability	As per IS 16444 Part 1
Communication	As per IS 16444 Part 1
Communication Protocol	As per IS 16444 Part 1
Remote Firmware upgrade	As per IS 15959 Part-2
Real Time Clock (RTC)	As per IS 16444 Part 1 / IS 15959 Part 1 & Part 2
Data Retention	As per IS 16444 Part 1

Battery Backup	Meter shall be supplied with adequate separate battery backup for RTC.
First Breath (Power on) and Last gasp (Power off) condition detection and communication to HES	As per IS 16444 Part 1

Features	Minimum requirement of features
Plug-in Communication Module	The Smart Meters shall be have a dedicated sealable slot for accommodating plug-in type bi -directional communication module which shall integrate the respective communication technology (RF Mesh/ Cellular) with the Smart Meters, leading to easy adaptability for network interfaces (WAN/NAN).The Plug-In module shall be field hot swappable/ replaceable. Same NIC shall work with different types of meters of same make (1P, 3P, LTCT, HT etc).
Optical Port	The meter shall have optical port for downloading data. Optical port shall be with a rust resistance coated metal ring to hold magnet of downloading probe. The optical head used for meter reading shall comply with IEC 62056- 21 as far as physical construction is concerned. 10 Nos. of optical chords shall be provided for downloading the data from Meter to PC using BCS software in the Lab. The Optical Port provided on meter shall have flap & sealing provision.
Calibration	Meters shall be software calibrated at factory and modifications in calibration shall not be possible at site by any means. However parameters like RTC, TOD slots & timings, DIP (billing & load survey), billing date change, relay connect/Disconnect, Set load limit, Pre paid/post paid, Set metering mode (Import/Export), display setting shall be reconfigure through CMRI and remotely over the air (OTA), and any other support will be provided without any additional cost to BEST till the useful life of the meters.
Meter Dimension in MM	Is not more than 250(Height)*200(Width)*100(Depth)

Software and communication compatibility	The bidder shall supply software required for communication though local (CMRI and BCS software) and remote (AMI) connectivity free of cost and necessary training. For existing meter manufacturer, it should be ensured that all meters (existing non-smart &upcoming smart meters) can be read through one BCS only. The list of OBIS codes for the parameters will be provided at the time of placement of PO in case of not specified in IS 15959. There shall be facility to export the data in Excel/txt/csv/PDF and XML format.
KVAH & KVA calculation	Meter shall be programed as Lag+ Lead configuration i.e. Leading PF shall not be considered as unity
Features	**Minimum requirement of features**
Internal component specification	AS given in the document

Data display facility (auto/manual)

a) The offered meter shall be capable of recording and displaying following readings in Auto mode display. The display shall follow the following sequence as mentioned below in interval of 10 seconds automatically.

b) Minimum 7-digit integers for energy parameters shall be provided.

Sequence	Display
1	Complete LCD Test.
2	Meter Number.
3	Present Time.
4	Present Date.
5	Current kWh.
6	Current kWh for ToD 1
7	Current kWh for ToD 2
8	Current kWh for ToD 3
9	Current kWh for ToD 4
10	Current kWh for ToD 5
11	Current kVAh.
12	Current kVAh for ToD 1
13	Current kVAh for ToD 2
14	Current kVAh for ToD 3

15	Current kVAh for ToD 4
16	Current kVAh for ToD 5
17	Current Total kVARh lag.
18	Current Total kVARh lead.
19	Current Max MD in kVA with date and time for ToD 1
20	Current Max MD in kVA with date and time for ToD 2
21	Current Max MD in kVA with date and time for ToD 3
22	Current Max MD in kVA with date and time for ToD 4
23	Current Max MD in kVA with date and time for ToD 5
24	Instantaneous Power Factor.
25	Instantaneous R ph Voltage.
26	Instantaneous Y ph Voltage.
27	Instantaneous B ph Voltage.
28	Instantaneous R ph Current.
29	Instantaneous Y ph Current.
30	Instantaneous B ph Current.
31	Neutral Current.
32	Instantaneous kW load.
33	Instantaneous kVAr load.
34	Instantaneous KVA load.
35	Instantaneous Frequency.
36	Current MD in kVA with date and time.

After last sequence, the first sequence shall be automatically displayed.

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2 Push Button Mode:-

Following parameters shall be displayed on pressing the buttons (Scroll up & down):-

Sequence	Display
1	Segment Check Display (LCD Test)
2	BEST Meter Serial Number.
3	Real Time
4	Real Date
5	Bill kWh
6	Bill kWh for ToD 1
7	Bill kWh for ToD 2
8	Bill kWh for ToD 3

9	Bill kWh for ToD 4
10	Bill kWh for ToD 5
11	Bill kVAh.
12	Bill kVAh for ToD 1
13	Bill kVAh for ToD 2
14	Bill kVAh for ToD 3
15	Bill kVAh for ToD 4
16	Bill kVAh for ToD 5
17	Bill kVARh–Lag.
18	Bill kVARh–Lead.
19	Bill MD in kVA with date and time for TOD1
20	Bill MD in kVA with date and time for TOD2
21	Bill MD in kVA with date and time for TOD3.
22	Bill MD in kVA with date and time for TOD4
23	Bill MD in kVA with date and time for TOD5.
24	Bill Average Power Factor.
25	Cumulative MD Total.
26	Cumulative MD in kVA with date and time for TOD1
27	Cumulative MD in kVA with date and time for TOD2.
28	Cumulative MD in kVA with date and time for TOD 3
29	Cumulative MD in kVA with date and time for TOD 4
30	Cumulative MD in kVA with date and time for TOD 5.
31	MD Reset Count.
32	Last Magnetic Tamper event date and time.

Meter Display Sequence of NET SMART METER

1 Auto Mode:-

Sequence	Display
1	Complete LCD Test
2	BEST Meter Serial Number.
3	Present Date
4	Present Time
5	Current CKWh Reading (Import)

Sequence	Display
6	Current CKVAh Reading while Active (Import)
7	Current CRKVAh Reading Lag (Import)
8	Current CRKVAh Reading Lead (Import)
9	Current KWh Reading for TOD1 (Import)

10	Current KWh Reading for TOD2 (Import)
11	Current KWh Reading for TOD3 (Import)
12	Current KWh Reading for TOD4 (Import)
13	Current KWh Reading for TOD5 (Import)
14	Current KVAh Reading for TOD1 (Import)
15	Current KVAh Reading for TOD 2 (Import)
16	Current KVAh Reading for TOD 3 (Import)
17	Current KVAh Reading for TOD 4 (Import)
18	Current KVAh Reading for TOD 5 (Import)
19	Current Maximum Demand with date and time in KVA of Billing Period for TOD1 (Import)
20	Current Maximum Demand with date and time in KVA of Billing Period for TOD2(Import)
21	Current Maximum Demand with date and time in KVA of Billing Period for TOD3 (Import)
22	Current Maximum Demand with date and time in KVA of Billing Period for TOD4 (Import)
23	Current Maximum Demand with date and time in KVA of Billing Period for TOD5 (Import)
24	Current CKWh Reading (Export)
25	Current CKVAh Reading while Active (Export)
26	Current CRKVAh Reading Lag (Export).
27	Current CRKVAh Reading Lead (Export).
28	Current KWh Reading for TOD1 (Export)
29	Current KWh Reading for TOD2 (Export)
30	Current KWh Reading for TOD3 (Export)
31	Current KWh Reading for TOD4 (Export)
32	Current KWh Reading for TOD5 (Export)
33	Current KVAh Reading for TOD1 (Export)
34	Current KVAh Reading for TOD 2 (Export)
35	Current KVAh Reading for TOD 3 (Export)
36	Current KVAh Reading for TOD 4 (Export)
37	Current KVAh Reading for TOD 5 (Export)
38	Current Maximum Demand with date and time in KVA of Billing Period for TOD1 (Export)
39	Current Maximum Demand with date and time in KVA of Billing Period for TOD 2(Export)
40	Current Maximum Demand with date and time in KVA of Billing Period for TOD3 (Export)
41	Current Maximum Demand with date and time in KVA of Billing Period for TOD4 (Export)
42	Current Maximum Demand with date and time in KVA of Billing Period for TOD5 (Export)

43	Instantaneous Power Factor
44	Instantaneous R ph Voltage.
Sequence	**Display**
45	Instantaneous Y ph Voltage
46	Instantaneous B ph Voltage.
47	Instantaneous R ph Current.
48	Instantaneous Y ph Current
49	Instantaneous B ph Current.
50	Neutral Current.
51	Instantaneous Active kW load. (Import/Export)
52	Instantaneous Apparent kVA load. (Import/Export)
53	Instantaneous Reactive KVAr load. (Import/Export)
54	Instantaneous Frequency.

Push Button Mode:-

Sequence	Display
1	Complete LCD Test
2	BEST Meter Serial Number.
3	Present Date
4	Present Time
5	Cumulative KWh Reading at Bill Point (Import)
6	Cumulative KVAh Reading at Bill Point (Import)
7	Cumulative RKVAh Reading Lag at Bill Point (Import)
8	Cumulative RKVAh Reading Lead at Bill Point (Import)
9	Cumulative KWh Reading for TOD1 at Bill Point (Import)
10	Cumulative KWh Reading for TOD 2 at Bill Point (Import)
11	Cumulative KWh Reading for TOD 3 at Bill Point (Import)
12	Cumulative KWh Reading for TOD 4 at Bill Point (Import)
13	Cumulative KWh Reading for TOD 5 at Bill Point (Import)
14	Cumulative KVAh Reading for TOD1 at Bill Point (Import)
15	Cumulative KVAh Reading for TOD2 at Bill Point (Import)
16	Cumulative KVAh Reading for TOD3 at Bill Point (Import)
17	Cumulative KVAh Reading for TOD 4 at Bill Point (Import)
18	Cumulative KVAh Reading for TOD 5 at Bill Point (Import)
19	Maximum Demand in KVA with date and time of Billing Period for TOD1 (Import).
20	Maximum Demand in KVA with date and time of Billing Period for TOD2 (Import).
21	Maximum Demand in KVA with date and time of Billing Period for TOD3 (Import).

22	Maximum Demand in KVA with date and time of Billing Period for TOD4 (Import).
23	Maximum Demand in KVA with date and time of Billing Period for TOD5 (Import).
24	Bill Average Power Factor (I).
25	Cumulative KWh Reading at Bill Point (Export).
26	Cumulative KVAh Reading at Bill Point (Export)
27	Cumulative RKVAh Reading Lag at Bill Point (Export)
28	Cumulative RKVAh Reading Lead at Bill Point (Export)
29	Cumulative KWh Reading for TOD1 at Bill Point (Export)
Sequence	**Display**
30	Cumulative KWh Reading for TOD 2 at Bill Point (Export)
31	Cumulative KWh Reading for TOD 3 at Bill Point (Export)
32	Cumulative KWh Reading for TOD 4 at Bill Point (Export)
33	Cumulative KWh Reading for TOD 5 at Bill Point (Export)
34	Cumulative KVAh Reading for TOD1 at Bill Point (Export)
35	Cumulative KVAh Reading for TOD2 at Bill Point (Export)
36	Cumulative KVAh Reading for TOD3 at Bill Point (Export)
37	Cumulative KVAh Reading for TOD 4 at Bill Point (Export)
38	Cumulative KVAh Reading for TOD 5 at Bill Point (Export)
39	Maximum Demand in KVA with date and time of Billing Period for TOD1 (Export).
40	Maximum Demand in KVA with date and time of Billing Period for TOD2 (Export).
41	Maximum Demand in KVA with date and time of Billing Period for TOD3 (Export).
42	Maximum Demand in KVA with date and time of Billing Period for TOD4 (Export).
43	Maximum Demand in KVA with date and time of Billing Period for TOD5 (Export).
44	Bill Average Power Factor (E).
45	MD Reset Count.

1) The Auto mode (default display) shall switch to Push button mode display (On Demand Display Mode) after pressing the push button.

2) The Push Button display mode shall switch over to Auto mode display (default display) if the push button is not operated for 15 seconds.

3) Display of MD (kVA or kW) shall have 3-digit integer and 3 digit decimal and display of cumulative MD shall have 4-digit integer and 3 digit decimal.

4) Instantaneous values of lead Power Factor shall be shown with negative sign while lag PF shall be shown without sign on the display

High Resolution Mode

Following parameters shall be displayed in High Resolution Mode with 3 digit integer +4 digit decimals.

Sequence	Display
1	KWh Reading (Import).
2	RKVAh Reading Lag (Import).
3	RKVAh Reading Lead (Import).
4	KWh Reading (Export).
5	RKVAh Reading Lag (Export).
6	RKVAh Reading Lead (Export).
7	KVAh Reading (Import).
8	KVAh Reading (Export).

i) The Auto mode display (default display) shall switch to High Resolution Display Mode after pressing the push button continuously for 10 seconds.

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ii) The High Resolution Display Mode shall switch over to Auto mode (default display) if the push button is not operated for 60 seconds

Meter display should not go in to sleep mode during Power-On condition in case the push button is notoperated for more than 10 minutes.

TOD Feature:

The meter shall be capable of measuring Cumulative Energy (KWh), KVarh Lag, Kvarh Lead, Kvah and MD (KW, KVA)with time of day (TOD) registers having 5 zones (no. of zones & time slot shall be programmable by CMRI with adequate security level). TOD Slot Configuration shall be as follows-

Slot	Time Slots
TOD 1	22 to 06 Hrs
TOD 2	06 to 09 Hrs
TOD 3	09 to 12 Hrs
TOD 4	12 to 18 Hrs.
TOD 5	18 to 22 Hrs

Immunity against external influencing signals: Magnetic Field:

Meter shall record accurate energy in case of any external influencing signals in line with IS 13779:1999 Cl.11.2 and variation in limits of error (upto 100% Imax) shall be as per the table 13 of IS 14697. Meter shall be immune to magnetic field such that it shall not affect the

normal overall functionality However, in case of abnormal magnetic field as defined below meter shall perform as per the following features:

a) Meter shall log the event in its memory as" MAGNET" with date and time stamp within 30 sec or immediate of application of abnormal magnetic field and shall start recording at 100% Imax and after removal of magnet, back to normal recording within 30 sec or immediate.
b) Meter shall show "Magnet" in the display.

Abnormal Magnetic field is defined as below;

a) Continuous DC magnetic induction: >0.20 Tesla ± 5%(Value of the magneto motive force to be applied shall be generally >10000 ATs, Should be immune up to 0.20Tesla)
b) AC magnetic induction: Immune for 10 milli Tesla (if produced with circular metal core with square cross section as specified in CBIP latest report with 2800 AT
c) Permanent Magnet: Immune up to 0.5T and Event logging >0.5T

Electrostatic Discharge (ESD)

Meter shall be immune up to 50 kV and shall record accurate energy as per IS-13779:1999. Meter shall log the event into memory as 'ESD' with date & time stamp for any ESD greater than 50 kV and shall show 'ESD' in the display.

The shielding around the meter shall be such that it does not get affected by high voltage, high and low energy impulse when comes in contact with meter from any side.

The meter should immune to high/ low frequency Jammer devices. Meter shall log event in its memory as jammer with date and time stamp along with snapshot.

The meter should be immune and log the tamper on application of any other higher magnetic field of any frequency waves, micro waves

Neutral Disturbance

The meter shall log in the memory as 'NEUTRAL DISTURBANCE' with date and time stamp and show 'ND' in the display for Frequency variation below 45 Hz and above 55 Hz with time delay of 2 min and for Pulsating DC and Chopped AC of any value with

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time delay of 2 min.

The meter shall not saturate on passage of direct current, which can cause the meter either to stop recording/ record inaccurately. DC injection shall be tested both in phase and neutral. Measurement by meter shall not get influenced by injection of DC signal/ DC pulse upto 330V and for any value beyond this, the meter shall log the event into memory as 'NEUTRAL DISTURBANCE' with date & time stamp and shall show 'ND 'in the display after time delay of 2 min(occurrences and restoration time).

The meter shall record energy proportional to the current and V Ref when any of the tamper circuits are used to tamper energy using a diode or a variable resistance or a variable capacitance energy saving device. The measurement by meter shall not get influenced by injection of AC Voltages/Chopped signal/DC signal/ DC pulse of low frequency and harmonics. The meter should be immune to such Neutral Disturbance. In case the meter accuracy is disturbed under Neutral Disturbance, it should be able to log the event.

Abnormal and Tamper conditions

The meter shall record forward energy under any abnormal conditions.

All the tamper events i.e. shall be logged in the memory of the meter with date and time stamp of occurrence and restoration along with instantaneous electrical parameter (Voltage, Current (phase and neutral) , energy, PF , frequency)

Meter shall store cumulative count and cumulative durations all the tamper event which have logged by meter from the date of energization till life of meter.

Tamper count shall be incremented only on the occurrence of the any tamper event with date and time
Stamp on FIFO basis. The event which is not restored should not be removed from its meter memory and
FIFO should not applicable for unrestored event.
The cover open tamper detection should be through heavy duty, sturdy micro switch such that it should not
Operate on vibration or impact during handling or testing.
The meter shall register correctly if supply neutral is not available at the meter neutral terminal. The meter shall work in absence of two incoming wires. It shall keep recording correctly in case of unbalance system voltage.

The meter shall keep working accurately irrespective of the phase sequence of the supply.

The meter shall be able to differentiate between actual CT reversals and condition arising out of unbalanced / unhealthy capacitor bank.
During Voltage Failure event, the meter shall record energy proportional to the current and V Ref (240V).
Meter shall have neutral CT for tamper identification and analysis.
The event compartments shall be IS 15959 Part-1 table 9. The size of compartments should be such that all above event are accommodated in the assigned event compartment. i.e. if in case of voltage compartment assigned to 4 number of events then the minimum size of this compartment should be such that it should accommodate sum of all maximum number of events as per below table. Transaction event compartment size shall be minimum 100 events

Persistence time for occurrence and restoration for the events and compartment block size shall be as per table given below

Sr. No.	Tampers/ Failures	Phase wise	Compartment Size	Logic/ Condition other than standard	Persistence time	
					Occ Time (min)	Rec Time (min)
1	Voltage Failure	YES	25	Occ: Voltage <192V: and current > 2% Ib.	5	5
				Res: Vph > 191V (Independent of current)		
2	Voltage unbalance	YES	25	Occ : (Vmax-Vph)>10% Vn and Vphase : 191>Vphase< 216	5	5
				Res : (Vmax-Vph)<10% Vn and Vphase : 191<Vphase> 216		
3	High Voltage	YES	25	Vph > 110% of Vref	30	30

4	CT open	YES	25	Occ: Ir+Iy+Ib+In>10% of Ib(vector Sum) and phase current<10% Ib with all current are positive Res: Ir+Iy+Ib+In<5% of Ib(vector Sum) and phase current>10% Ib with all current are positive	30	30
5	Current unbalance	YES	25	Occ : Imax – Imin > 30% of Iavg Res : Imax – Imin < 30% of Iavg	15	15
6	CT Bypass	YES	25	Occ: Ir+Iy+Ib+In>5% of Ib(vector Sum) and phase current>10% Ib with all current are positive Res: Ir+Iy+Ib+In>2.5% of Ib(vector Sum) and phase current<10% Ib with all current are positive	30	30
7	Current reversal	YES	25	1. Active current negative 2. PF > 0.3	2	2
8	Magnet	NO	25	Whenever meter sense magnetic field it shall record Active and Apparent energy at Imax at UPF	Immediate	Immediate
9	Neutral Disturbance	NO	25	Vph > 150% Vref In case of external signal injection (Chopped DC, Chopped AC and DC injection through diode)	5	5
10	ESD/JAMMER	NO	25	Occ: Immunity upto 50 KV, > 50KV event logged In memory Res: Removal of ESD and Jammer Device	2	2

Sr. No.	Tampers/ Failures	Phase wise	Compartment Size	Logic/ Condition other than standard	Persistence time	
					Occ Time (min)	Rec Time (min)
11	Low PF Tamper	YES	25	OCC: PF < +/- 0.5 and I>1%Ib REC: PF > +/- 0.7 and I>1%Ib	5	5
12	Top Cover open	NO	1	When cover opens by more than 2 to 4 mm.	Immediate	NA

13	Temperature Rise	NO	25	Occ: T >70˚C REC: T <60˚C	2	2
14	NIC card Removed (Immediate)	NO	25	OCC: On removal of card RES: On Inserction card	Immediate	Immediate
15	Power On/Off	NO	25	Occ: Actual voltage OFF	5	5
				Res: Actual voltage ON		

In case of Bi-directional meters current reversal and magnet tamper conditions to be made accordingly.

Anti-tamper features

The meter shall continue recording energy under tamper conditions as defined in IS 15959 Part 2 and would log the event and send alarm at Head End System after detection of the defined tamper features as per IS 15959 Part 2.

Type Tests & Test Certificates

Smart Meter shall be type tested for tests as per relevant parts of IS 16444 (latest versions), and certified by Indian Standard wise list of BIS recognized labs as available at https://bis.gov.in/index.php/laboratorys/list-of-bis-recognized-lab/. The number of sampling for testing of meters and criteria for conformity would be as per IS 16444(as amended up to date). Necessary copies of test certificates shall be submitted as per agreement with the Utility/AMI-IA.

Routine & Acceptance Tests

The Factory Acceptance and Routine tests shall be carried out as per IS 16444 Part 1.

General & Constructional requirements

Meter shall be BIS marked as per IS 16444 Part 1. General & construction requirement shall be as per IS 16444/IS 13779

Meter base & cover - Meter base & cover shall be as per IS 16444 Part1 / IS 13779. The meter Base & cover shall be Encapsulated type with "screwless break to open" design conform to the degree of protection IP 54 against ingress of dust, moisture and vermin. 'Break to open' design. The material for meter base and cover shall be made of high-grade polycarbonate.

The meter Base & cover shall be ultrasonically welded / Chemically welded or other suitable bonding technology and it will not be possible to remove the cover from the base without evidence of damage and necessary sealing provision shall be provided on the both sides of the meter. ***Terminal block & cover*** - As per IS 16444 Part 1/IS 13779

Design

Voltage circuit, sealing arrangement, terminal block, terminal cover and nameplate etc. shall be in accordance with IS-16444 Part 1 (latest version). The meter shall be compact and reliable in design, easy to transport and immune to vibration and shock involved in transportation and handling

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Name plate and marking

The meter should bear a name plate clearly visible, effectively secured against removal and indelibly/distinctly marked in accordance with relevant IS. In addition, "Name of the Utility/AMI- IA", purchase order no. & year/month of manufacturing shall be provided on the meter name plate. The rating plate information shall be as per relevant IS.

Connection diagram: As per IS 16444 Part 1

Fixing arrangements:

The meter shall be mounted type. The Meter should have three fixing holes, one at top and two at the bottom. The Top hole should be such that the holding screw is not accessible to the consumer after fixing the meters. The lower screws should be provided under sealable terminal cover. The requisite fixing screws shall be supplied with each meter.

Sealing arrangement:

Arrangements shall be provided for proper sealing of the meter cover so that access to the working parts shall not be possible without breaking the seal. The sealing arrangement and number of seals shall be as per relevant IS/ requirement of Utility/AMI-IA.

The sealing point shall be as per CEA regulation 2006 with latest amendments. Supplier shall fix tamper evident barcoded holographic seal on left side of the meter. It shall not be possible to remove the seal intact. Details of holographic seals used by supplier shall be provided in hard as well as in soft copy on CD/email as per format given by BEST. Additional seals will be provided by BEST to supplier for putting them on meter body as per requirement.

Packing

- The meters shall be suitably packed for vertical/horizontal support to withstand handling during transportation.
- The meter shall be packed appropriately to ensure safe transportation, handling, identification and storage.
- All packing materials shall be as per environment law in force. The primary packing shall ensure protection against humidity, dust, grease and safeguard the meter's performance until its installation.
- The secondary packing shall provide protection during transportation.
- The packing case shall indicate "Fragile in nature" and direction of placement of box.
- The packing shall indicate marking details like Manufacturer's name, meters #s, quantity, etc.

Transportation

- The meter shall be compact in design. The meter block unit shall be capable of withstanding stresses likely to occur in actual service and rough handling during transportation.
- The meter shall be convenient to transport and immune to shock and vibration during transportation and handling.
- The meter should not be exposed to undue shock and mishandling during transportation.
- The stacking of box inside transport media should be such as to avoid their free movement.
- The packing should also be protected from rain and dust by transport media.
- The AMISP shall be responsible for any damage during transit due to inadequate or improper packing.

Testing and Manufacturing Facilities at Manufacturer's Place

The manufacturer shall have facilities of conducting Acceptance Testing as per IS 16444 Part 1.

Inspection

- The meters shall be sealed as per the mutual agreement of the supplier and the purchaser
- The Utility/AMI-IA/ purchaser may inspect the meter randomly as per sampling plan for acceptance testas per IS 16444 Part 1. The meters shall be tested for acceptance test as per IS 16444 Part 1
- All meters are factory tested at manufacturer's work place and RTR (Routine Test Report) to be submitted to BEST for each meters in soft copy before dispatch of meters.

Tender sample

- Tenderer shall submit 3 sample meters out of which one sample meter shall be without Ultrasonic welding to confirm constructional features and other destructive tests if any.
- After successful passing the tests carried out at BEST laboratory the tenderer shall give the demonstration of the meter offered against the tender to demonstrate the features incorporated in the meter.
- Sample meter submitted against the tender will not be returned to the supplier till the completion of guarantee period.

Guarantee.

- 7.5 years from the date of dispatch or 7 year from date of commissioning, whichever is earlier
- Manufacturer shall undertake a guarantee to replace meter up to a period of 7 Year from the date of supply. The meters which are found defective/inoperative within the guarantee period shall be replaced as per meter service level agreement.

Sr No	Component function	Requirement	Preferable Makes and Origin
1	Measurement or Computing Chips.	The measurement or computing chips used in the meter shall be with the Surface mount type along with Application Specific Integrated Circuits (ASIC).	USA: Analog Devices, Cyrus Logic, Atmel, Philips, Teridian, Dallas, ST, Texas Instruments, Motorola, Maxim, National Semiconductors, Freescale, On semiconductors. Germany: Siemens. South Africa: SAMES. Japan: NEC, Toshiba, Renesas, Hitachi. Austria: AMS. Holland: Philips (NXP).
2	Memory Chips.	The memory chips shall not be affected by external parameters like sparking, high voltage spikes or electrostatic discharges.	USA: Atmel,Teridian, National Semiconductors, Philips, Texas Instruments, ST, Microchip, Spanson (Fujitsu), Ramtron. Japan: Hitachi, Renasas, Oki. Germany: Siemens.
		Meter shall have Non-	
		Volatile Memory (NVM) to store energy meter data.	
		NVM shall be external (Outside ASIC).	
		In case of input power fail	

Sr No	Component function	Requirement	Preferable Makes and Origin
		to Energy Meter it shall record last sampled important data in EEPROM using capacitance tank of power supply. Use of Non- rechargeable battery should only be restricted to minimum absolute power requirement of meter. Non-rechargeable battery shall not be used for this function.	

3	Display Modules.	The display modules shall be well protected from the external Ultra Violet (UV) radiations. The display visibility shall be sufficient to read the meter mounted at height of 0.5 meter as well as at the height of 2 meters. The construction of the modules should be such that the displayed quantity shall not disturbed with the life of display (PIN Type). It shall be trans reflective STN (STN – Super Twisted Nematic (160°) type industrial grade with extended temperature range.	Display Make:- Singapore: E-smart, Bonafied Technologies, Display Tech. Korea: Advantek, Jebon, Union Display Inc. Japan: Hitachi, Sony, L&G. Malaysia: Crystal ClearTechnology. Holland/Korea: Phillips. Hongkong: Genda. China: Tianma, JIA.
4	Optical Port.	Optical port shall be used to transfer the meter data to Common Meter Reading Instrument (CMRI/ DCU). The mechanical construction of the port shall be such to facilitate the data transfer easily.	USA: National Semiconductors, HP, Optonica, ST. Holland/Korea: Phillips. Japan: Hitachi. Taiwan: Ligitek. Osram, Everlight, Liteon, Avego.
5	Electronic Components.	The active and passive components shall be of the surface mount type and are to be handled and soldered by the state of art assembly processes. The Plated Through Hole (PTH) component should be positioned such a way that the leads of the component shall not be under stress and not touching the internal wires.	**USA**: National Semiconductors, Atmel, Philips, Texas Instruments, BC Component, Analog devices, ST, Maxim, Kemet, On semiconductors, Freescale, Intersil, Raltron, Fairchild, Muruta, Agilent, AVX, Abracon, Sipex, Diode Inc., Honeywell, Power Integration, Fox, Roham, Onsemi. **Japan**: Hitachi, Oki, AVZ or Ricoh, Toshiba, Epson, Kemet, Alps, Muruta, TDK, Sanyo, Samsung, Panasonic. **Korea**: Samsung. **India:** Keltron, Incap, VEPL, PEC, RMC, Gujarat Polyavx, Prismatic, MFR Electronic components Pvt. Ltd, Cermet. **Germany:** Vishay, Epcos, Diotech, Kemet.
6	Battery.	Non rechargeable Lithium battery with guaranteed life of about 10 years shall be used. Battery for RTC and for Meter Display in absence of Power shall be Separate.	Varta, Tedirun, Sanyo or National, Panasonic, Tekcell, Vitzrocell, Mitsubishi .

Sr No	Component function	Requirement	Preferable Makes and Origin

7	RTC.	The accuracy of RTC shall be as per relevant IEC/IS standards.	USA: Philips, Dallas Atmel, Motorola, Microchip, Maxell, Renata Japan: NEC or Oki.
8	Measuring Element.	Measuring elements used shall be as per Clause No. 8.11 of the specification.	
9	Power Supply.	The power supply shall be with the capabilities as per the relevant standards.	
		The power supply unit of the meter shall not be affected in case the maximum voltage of the system appears to the terminals due to faults or due to wrong connections.	
		The ratings of Power Supply module and power consumed by various modules and circuits shall be specified.	
		The power supply shall be at least 125% rated than the maximum load on the power supply.	
		In case of capacitive power supply, the voltage rating of series power circuit capacitor shall be adequate to withstand 440V AC applied at meter terminals continuously for 5 minutes without damage.	
		All the electrolytic capacitors shall have preferably low ESR value.	
10	Electrical Components.	The internal electrical component shall be of electrolytic copper & shall be protected from corrosion, rust etc.	
11	Mechanical Parts.	The other mechanical components shall be protected from corrosion etc. by suitable plating/painting methods.	
12	P.C.B.	Glass Epoxy, fire resistance grade FR4 with adequate strength.	
		PCB shall be Bare Board Test (BBT) certified.	
		The meter shall preferably with minimum jumper/wires/connectors.	
		PCB shall be suitably masked with protection coating.	

Sr No	Component function	Requirement	Preferable Makes and Origin
13	Push Button.	Carbon pill and silicon rubber contact / Tactile/ Captive push button type high performance push buttons shall be used.	
14	Magnetic Tamper Detection Sensor.	Hall Effect IC / Inductor Sensor shall be used.	Make-Diode, Allegro etc.
15	Load Switch	Load switch shall be of rating similar to Energy meter rating.	Superior in quality as similar to branded miniature circuit breaker.

Note: The tenderer shall submit soft/hard copy of data/information sheets of all meter parts/components.

i)In case purchase order is placed bills of material shall be shown at pre dispatch inspection at factory works. ii)Manufacturing process should be preferably automated and tenderer shall list out activities wherein human intervention is required for assembling/testing of meters. For such activities tenderer shall declare quality standard adopted for carrying out such skilled job.

OBIS Code for parameters

OBIS CODES-IMPORT MODE			
	Instantaneous Profile Parameters		
		DLMS OBIS	**BEST OBIS**
	Instantaneous Profile	1.0.94.91.0.255	1.0.94.91.0.255
	Instantaneous Scaler	1.0.94.91.3.255	1.0.94.91.3.255
1	Instantaneous R ph Voltage.	1.0.32.7.0.255	1.0.32.7.0.255
2	Instantaneous Y ph Voltage.	1.0.52.7.0.255	1.0.52.7.0.255
3	Instantaneous B ph Voltage.	1.0.72.7.0.255	1.0.72.7.0.255
4	Instantaneous R ph Current.	1.0.31.7.0.255	1.0.31.7.0.255
5	Instantaneous Y ph Current.	1.0.51.7.0.255	1.0.51.7.0.255
6	Instantaneous B ph Current.	1.0.71.7.0.255	1.0.71.7.0.255
7	Instantaneous Power Factor.	1.0.13.7.0.255	1.0.13.7.0.255
8	THD R ph Voltage	1.0.32.7.124.255	1.0.32.7.124.255
9	THD Y ph Voltage	1.0.52.7.124.255	1.0.52.7.124.255
10	THD B ph Voltage	1.0.72.7.124.255	1.0.72.7.124.255
11	THD R ph Current.	1.0.31.7.124.255	1.0.31.7.124.255
12	THD Y ph Current.	1.0.51.7.124.255	1.0.51.7.124.255
13	THD B ph Current.	1.0.71.7.124.255	1.0.71.7.124.255
14	Displacement Power Factor.		Not Specified
15	Instantaneous 3ph kW load (Import).	1.0.1.7.0.255	1.0.1.7.0.255
16	Instantaneous 3ph kVAr load with lag lead indication (Import).	1.0.3.7.0.255	1.0.3.7.0.255

17	Instantaneous 3ph KVA load (Import).	1.0.9.7.0.255	1.0.9.7.0.255
18	THD Active Power R ph	1.0.35.7.124.255	1.0.35.7.124.255
19	THD Active Power Y ph	1.0.55.7.124.255	1.0.55.7.124.255
20	THD Active Power B ph	1.0.75.7.124.255	1.0.75.7.124.255
21	Active Power Total R ph	1.0.21.7.0.255	1.0.21.7.0.255
22	Active Power Total Y ph	1.0.41.7.0.255	1.0.41.7.0.255

Instantaneous Profile 1.0.94.91.0.255 1.0.94.91.0.255

Instantaneous Scaler 1.0.94.91.3.255 1.0.94.91.3.255

23 Active Power Total B ph 1.0.61.7.0.255 1.0.61.7.0.255

24 Active Power Fundamental R ph 1.0.130.7.0.255 1.0.130.7.0.255

25 Active Power Fundamental Y ph 1.0.131.7.0.255 1.0.131.7.0.255

26 Active Power Fundamental B ph 1.0.132.7.0.255 1.0.132.7.0.255

27 Instantaneous Frequency. 1.0.14.7.0.255 1.0.14.7.0.255

28 Real Time Clock – Date and Time 0.0.1.0.0.255 0.0.1.0.0.255

29 Current Cumulative kWh (Import). 1.0.1.8.0.255 1.0.1.8.0.255

30 Current kWh ToD 1 (Import). Not Specified 1.0.1.8.1.255

31 Current kWh ToD 2 (Import). Not Specified 1.0.1.8.2.255

32 Current kWh ToD 3 (Import). Not Specified 1.0.1.8.3.255

33 Current kWh ToD 4 (Import). Not Specified 1.0.1.8.4.255 34 Current kWh ToD 5 (Import). Not Specified 1.0.1.8.5.255

Instantaneous Profile 1.0.94.91.0.255 1.0.94.91.0.255

Instantaneous Scaler 1.0.94.91.3.255 1.0.94.91.3.255

35 Fundamental Energy kWh Not Specified 1.0.1.8.1.255

36 Current Cumulative kVARh Lag (Import). 1.0.5.8.0.255 1.0.5.8.0.255

37 Current kvarh Lag TOD1 (Import). Not Specified 1.0.8.8.1.255

38 Current kvarh Lag TOD2 (Import). Not Specified 1.0.5.8.2.255 39 Current kvarh – Lag TOD3 (Import). Not Specified 1.0.5.8.3.255

40 Current kvarh – Lag TOD4 (Import). Not Specified 1.0.5.8.4.255

41 Current kvarh – Lag TOD5 (Import). Not Specified 1.0.5.8.5.255

42 Current Cumulative kvarh – Lead (Import). 1.0.8.8.0.255 1.0.8.8.0.255 43 Current kvarh – Lead TOD1 (Import). Not Specified 1.0.8.8.1.255

44 Current kvarh – Lead TOD2 (Import). Not Specified 1.0.8.8.2.255

45 Current kvarh – Lead TOD3 (Import). Not Specified 1.0.8.8.3.255

46 Current kvarh – Lead TOD4 (Import). Not Specified 1.0.8.8.4.255

47	Current kvarh – Lead TOD5 (Import). Not Specified 1.0.8.8.5.255 48 Current Cumulative kVAh (Import). 1.0.9.8.0.255			
	1.0.9.8.0.255 49 Current kVAh.TOD1 (Import). Not Specified 1.0.9.8.1.255			
50	Current kVAh.TOD2 (Import).	Not Specified	1.0.9.8.2.255	
51	Current kVAh.TOD3 (Import).	Not Specified	1.0.9.8.3.255	
52	Current kVAh.TOD4 (Import).	Not Specified	1.0.9.8.4.255	
53	Current kVAh.TOD5 (Import).	Not Specified	1.0.9.8.5.255	
54	Current MD in KVA with date & time (Import).	Not Specified	1.0.9.6.0.255	
55	Current MD in kVA with date & time TOD 1 (Import).	Not Specified	1.0.9.6.1.255	
56	Current MD in kVA with date & time TOD 2 (Import).	Not Specified	1.0.9.6.2.255	
57	Current MD in kVA with date & time TOD 3 (Import).	Not Specified	1.0.9.6.3.255	
58	Current MD in KVA with date & timeTOD4 (Import).	Not Specified	1.0.9.6.4.255	

OBIS CODES-IMPORT MODE			
	Instantaneous Profile Parameters		
		DLMS OBIS	**BEST OBIS**
	Instantaneous Profile	1.0.94.91.0.255	1.0.94.91.0.255
	Instantaneous Scaler	1.0.94.91.3.255	1.0.94.91.3.255
59	Current MD in KVA with date & timeTOD5 (Import).	Not Specified	1.0.9.6.5.255
60	MD Reset Count.	Not Specified	0.0.0.1.0.255
61	Cumulative MD Total.	Not Specified	1.0.9.2.0.255
62	Phase Sequence	Not Specified	1.0.96.7.30.255
63	Phase Angle 2	Not Specified	1.0.81.7.1.255
64	Phase Angle 3	Not Specified	1.0.81.7.2.255
65	Last Billing Date	0.0.0.1.2.255	0.0.0.1.2.255
66	Load limit function status	0.0.96.31.0.255	0.0.96.31.0.255
67	Load limit value, in kW	0.0.17.0.0.255	0.0.17.0.0.255
68	RF/ GSM signal Strength in milli db		Not Specified
69	No.of Load switch (connect/disconnect) operations		Not Specified

OBIS CODES -IMPORT MODE			
	Billing Profile Parameters		
		DLMS OBIS	**BEST OBIS**
	Billing Profile	1.0.98.1.0.255	1.0.98.1.0.255
	Billing Scaler	1.0.94.91.6.255	1.0.94.91.6.255
1	Bill Cumulative kWh (Import).	1.0.1.8.0.255	1.0.1.8.0.255
2	Bill kWh ToD1 (Import).	1.0.1.8.1.255	1.0.1.8.1.255
3	Bill kWh ToD2 (Import).	1.0.1.8.2.255	1.0.1.8.2.255
4	Bill kWh ToD3 (Import).	1.0.1.8.3.255	1.0.1.8.3.255
5	Bill kWh ToD4 (Import).	1.0.1.8.4.255	1.0.1.8.4.255
6	Bill kWh ToD5 (Import).	1.0.1.8.5.255	1.0.1.8.5.255
7	Bill Cumulative kVARh–Lag (Import).	1.0.5.8.0.255	1.0.5.8.0.255
8	Bill kVARh–Lag.TOD1 (Import).	Not Specified	1.0.5.8.1.255
9	Bill kVARh–Lag.TOD2 (Import).	Not Specified	1.0.5.8.2.255
10	Bill kVARh–Lag.TOD3 (Import).	Not Specified	1.0.5.8.3.255
11	Bill kVARh–Lag.TOD4 (Import).	Not Specified	1.0.5.8.4.255
12	Bill kVARh–Lag.TOD5 (Import).	Not Specified	1.0.5.8.5.255
13	Bill Cumulative kVARh–Lead (Import).	1.0.8.8.0.255	1.0.8.8.0.255
14	Bill kVARh–Lead.TOD1 (Import).	Not Specified	1.0.8.8.1.255
15	Bill kVARh–Lead.TOD2 (Import).	Not Specified	1.0.8.8.2.255
16	Bill kVARh–Lead.TOD3 (Import).	Not Specified	1.0.8.8.3.255
17	Bill kVARh–Lead.TOD4 (Import).	Not Specified	1.0.8.8.4.255
18	Bill kVARh–Lead.TOD5 (Import).	Not Specified	1.0.8.8.5.255
19	Bill Cumulative kVAh (Import).	1.0.9.8.0.255	1.0.9.8.0.255
20	Bill kVAh TOD1 (Import).	1.0.9.8.1.255	1.0.9.8.1.255
21	Bill kVAh TOD2 (Import).	1.0.9.8.2.255	1.0.9.8.2.255
22	Bill kVAh TOD3 (Import).	1.0.9.8.3.255	1.0.9.8.3.255
23	Bill kVAh TOD4 (Import).	1.0.9.8.4.255	1.0.9.8.4.255
24	Bill kVAh TOD5 (Import).	1.0.9.8.5.255	1.0.9.8.5.255
25	Bill MD in KVA with date & time (Import).	1.0.9.6.0.255	1.0.9.6.0.255
26	Bill MD in kVA with date & time ToD1 (Import).	1.0.9.6.1.255	1.0.9.6.1.255
27	Bill MD in kVA with date & time ToD2 (Import).	1.0.9.6.2.255	1.0.9.6.2.255
28	Bill MD in kVA with date & time ToD3 (Import).	1.0.9.6.3.255	1.0.9.6.3.255
29	Bill MD in kVA with date & time ToD4 (Import).	1.0.9.6.4.255	1.0.9.6.4.255

30	Bill MD in kVA with date & time ToD5 (Import).	1.0.9.6.5.255	1.0.9.6.5.255
31	Bill Power Factor (Import).	1.0.13.0.0.255	1.0.13.0.0.255

OBIS CODES -IMPORT MODE			
Billing Register		**DLMS**	**BEST proposed OBIS Code**
Technical requirements		Profile1.0.98.1.0 .255	1.0.98.1.0.255
		Scaler1.0.94.91. 6.255.	1.0.94.91.6.255
i	Month	0.0.0.1.2.255	0.0.0.1.2.255
ii	ToD wise Cumulative kWh ToD1 (Import).	1.0.1.8.1.255	1.0.1.8.1.255
	ToD2 (Import).	1.0.1.8.2.255	1.0.1.8.2.255
	ToD3 (Import).	1.0.1.8.3.255	1.0.1.8.3.255
	ToD4 (Import).	1.0.1.8.4.255	1.0.1.8.4.255
	ToD5 (Import).	1.0.1.8.5.255	1.0.1.8.5.255
iii	ToD wise Cumulative kVARh Lag ToD1 (Import).	Not Specified	1.0.5.8.1.255
	ToD2 (Import).	Not Specified	1.0.5.8.2.255
	ToD3 (Import).	Not Specified	1.0.5.8.3.255
	ToD4 (Import).	Not Specified	1.0.5.8.4.255
	ToD5 (Import).	Not Specified	1.0.5.8.5.255
iv	ToD wise Cumulative kVARh Lead ToD1 (Import).	Not Specified	1.0.8.8.1.255
	ToD2 (Import).	Not Specified	1.0.8.8.2.255
	ToD3 (Import).	Not Specified	1.0.8.8.3.255
	ToD4 (Import).	Not Specified	1.0.8.8.4.255
	ToD5 (Import).	Not Specified	1.0.8.8.4.255
v	ToD wise Cumulative kVAh ToD1 (Import).	1.0.9.8.1.255	1.0.9.8.1.255
	ToD2 (Import).	1.0.9.8.2.255	1.0.9.8.2.255
	ToD3 (Import).	1.0.9.8.3.255	1.0.9.8.3.255
	ToD4 (Import).	1.0.9.8.4.255	1.0.9.8.4.255
	ToD5 (Import).	1.0.9.8.5.255	1.0.9.8.5.255
vi	ToD wise Power factor ToD1 (Import).	Not Specified	1.0.13.0.1.255
	ToD2 (Import).		1.0.13.0.2.255
	ToD3 (Import).		1.0.13.0.3.255
	ToD4 (Import).		1.0.13.0.4.255

	ToD5 (Import).		1.0.13.0.5.255
vii	ToD wise MD in kVA with date & time ToD1 (Import).	1.0.9.6.1.255	1.0.9.6.1.255
	ToD2 (Import).	1.0.9.6.2.255	1.0.9.6.2.255
	ToD3 (Import).	1.0.9.6.3.255	1.0.9.6.3.255
	ToD4 (Import).	1.0.9.6.4.255	1.0.9.6.4.255
	ToD5 (Import).	1.0.9.6.5.255	1.0.9.6.5.255

OBIS CODES -IMPORT MODE			
Billing Register		**DLMS**	**BEST proposed OBIS Code**
Technical requirements		Profile1.0.98.1.0.255	1.0.98.1.0.255
		Scaler1.0.94.91.6.255	1.0.94.91.6.255
viii	ToD wise MD in kW with date & time ToD1 (Import).	1.0.1.6.1.255	1.0.1.6.1.255
	ToD2 (Import).	1.0.1.6.2.255	1.0.1.6.2.255
	ToD3 (Import).	1.0.1.6.3.255	1.0.1.6.3.255
	ToD4 (Import).	1.0.1.6.4.255	1.0.1.6.4.255
	ToD5 (Import).	1.0.1.6.5.255	1.0.1.6.5.255
ix	Cumulative kWh (Import).	1.0.1.8.0.255	1.0.1.8.0.255
x	Cumulative kVARh – Lag (Import).	1.0.5.8.0.255	1.0.5.8.0.255
xi	Cumulative kVARh – Lead (Import).	1.0.8.8.0.255	1.0.8.8.0.255
xii	Cumulative kVAh (Import).	1.0.9.8.0.255	1.0.9.8.0.255
xiii	Average Power Factor (Import).	1.0.13.0.0.255	1.0.13.0.0.255
xiv	Bill MD in Kva with date and time (Import).	1.0.9.6.0.255	1.0.9.6.0.255
xv	Bill MD in Kw with date and time(Import).	1.0.1.6.0.255	1.0.1.6.0.255
Note	If any additional OBIS/Profile/Scaler code is provided then the tenderers/supplier shall submit the list for the parameters with detailed justification. Based on the detailed justification submitted by tenderers/supplier, BEST reserves right to accept/reject the OBIS/Profile/Scaler code.		

OBIS CODES OF PARAMETERS REQUIRED IN EXPORT MODE			
	Instantaneous Profile Parameters		
		DLMS OBIS	**BEST OBIS**
	Instantaneous Profile	1.0.94.91.0.255	1.0.94.91.0.255
	Instantaneous Scaler	1.0.94.91.3.255	1.0.94.91.3.255
1	Instantaneous 3ph kW load. (Export).	1.0.2.7.0.255	1.0.2.7.0.255
2	Instantaneous 3ph kVAr load with lag lead indication (Export)	1.0.4.7.0.255	1.0.4.7.0.255
3	Instantaneous 3ph KVA load (Export).	1.0.10.7.0.255	1.0.10.7.0.255
4	Current Cumulative kWh (Export).	1.0.2.8.0.255	1.0.2.8.0.255
5	Current kWh ToD 1 (Export).	Not Specified	1.0.2.8.1.255

6	Current kWh ToD 2 (Export).	Not Specified	1.0.2.8.2.255
7	Current kWh ToD 3 (Export).	Not Specified	1.0.2.8.3.255
8	Current kWh ToD 4 (Export).	Not Specified	1.0.2.8.4.255
9	Current kWh ToD 5 (Export).	Not Specified	1.0.2.8.5.255
10	Current Cumulative kVARh Lag (Export).	1.0.7.8.0.255	1.0.7.8.0.255
13	Current kvarh Lag TOD1 (Export).	Not Specified	1.0.7.8.1.255
14	Current kvarh Lag TOD2 (Export).	Not Specified	1.0.7.8.2.255
15	Current kvarh – Lag TOD3 (Export).	Not Specified	1.0.7.8.3.255
16	Current kvarh – Lag TOD4 (Export).	Not Specified	1.0.7.8.4.255
17	Current kvarh – Lag TOD5 (Export).	Not Specified	1.0.7.8.5.255
18	Current Cumulative kvarh – Lead (Export).	1.0.6.8.0.255	1.0.6.8.0.255
19	Current kvarh – Lead TOD1 (Export).	Not Specified	1.0.6.8.1.255
20	Current kvarh – Lead TOD2 (Export).	Not Specified	1.0.6.8.2.255
21	Current kvarh – Lead TOD3 (Export).	Not Specified	1.0.6.8.3.255
22	Current kvarh – Lead TOD4 (Export).	Not Specified	1.0.6.8.4.255
23	Current kvarh – Lead TOD5 (Export).	Not Specified	1.0.6.8.5.255
24	Current Cumulative kVAh (Export).	1.0.10.8.0.255	1.0.10.8.0.255
25	Current kVAh.TOD1 (Export).	Not Specified	1.0.10.8.1.255
26	Current kVAh.TOD2 (Export).	Not Specified	1.0.10.8.2.255
27	Current kVAh.TOD3 (Export).	Not Specified	1.0.10.8.3.255
28	Current kVAh.TOD4 (Export).	Not Specified	1.0.10.8.4.255
29	Current kVAh.TOD5 (Export).	Not Specified	1.0.10.8.5.255
30	Current MD in KVA with date & time (Export).	Not Specified	1.0.10.6.0.255
31	Current MD in kVA with date & time TOD 1(Export).	Not Specified	1.0.10.6.1.255
32	Current MD in kVA with date & time TOD 2(Export).	Not Specified	1.0.10.6.2.255
33	Current MD in kVA with date & time TOD 3 (Export).	Not Specified	1.0.10.6.3.255
34	Current MD in KVA with date & timeTOD4(Export).	Not Specified	1.0.10.6.4.255
35	Current MD in KVA with date & timeTOD5(Export).	Not Specified	1.0.10.6.5.255
27	Current kVAh.TOD3 (Export).	Not Specified	1.0.10.8.3.255
28	Current kVAh.TOD4 (Export).	Not Specified	1.0.10.8.4.255
29	Current kVAh.TOD5 (Export).	Not Specified	1.0.10.8.5.255
30	Current MD in KVA with date & time (Export).	Not Specified	1.0.10.6.0.255
31	Current MD in kVA with date & time TOD1 (Export).	Not Specified	1.0.10.6.1.255

OBIS CODES OF PARAMETERS REQUIRED IN EXPORT MODE			
Billing Register		**DLMS**	**BEST proposed OBIS Code**
Technical requirements		Profile1.0.98.1.0.255	1.0.98.1.0.255
		Scaler1.0.94.91.6.255.	1.0.94.91.6.255
i	Month	0.0.0.1.2.255	0.0.0.1.2.255

ii	ToD wise Cumulative kWh ToD1 (Export).	1.0.2.8.1.255	1.0.2.8.1.255
	ToD2 (Export).	1.0.2.8.2.255	1.0.2.8.2.255
	ToD3 (Export).	1.0.2.8.3.255	1.0.2.8.3.255
	ToD4 (Export).	1.0.2.8.4.255	1.0.2.8.4.255
	ToD5 (Export).	1.0.2.8.5.255	1.0.2.8.5.255
iii	ToD wise Cumulative kVARh Lag ToD1 (Export).	Not Specified	1.0.7.8.1.255
	ToD2 (Export).	Not Specified	1.0.7.8.2.255
	ToD3 (Export).	Not Specified	1.0.7.8.3.255
	ToD4 (Export).	Not Specified	1.0.7.8.4.255
	ToD5 (Export).	Not Specified	1.0.7.8.5.255
iv	ToD wise Cumulative kVARh Lead ToD1 (Export).	Not Specified	1.0.6.8.1.255
	ToD2 (Export).	Not Specified	1.0.6.8.2.255
	ToD3 (Export).	Not Specified	1.0.6.8.3.255
	ToD4 (Export).	Not Specified	1.0.6.8.4.255
	ToD5 (Export).	Not Specified	1.0.6.8.5.255
v	ToD wise Cumulative kVAh ToD1 (Export).	1.0.10.8.1.255	1.0.10.8.1.255
	ToD2 (Export).	1.0.10.8.2.255	1.0.10.8.2.255
	ToD3 (Export).	1.0.10.8.3.255	1.0.10.8.3.255
	ToD4 (Export).	1.0.10.8.4.255	1.0.10.8.4.255
	ToD5 (Export).	1.0.9.8.5.255	1.0.9.8.5.255
vi	ToD wise Power factor ToD1 (Export).	Not Specified	1.0.13.0.1.255
	ToD2 (Export).		1.0.13.0.2.255
	ToD3 (Export).		1.0.13.0.3.255
	ToD4 (Export).		1.0.13.0.4.255
	ToD5 (Export).		1.0.13.0.5.255
vii	ToD wise MD in kVA with date & time ToD1 (Export).	1.0.10.6.1.255	1.0.10.6.1.255
	ToD2 (Export).	1.0.10.6.2.255	1.0.10.6.2.255
	ToD3 (Export).	1.0.10.6.3.255	1.0.10.6.3.255
	ToD4 (Export).	1.0.10.6.4.255	1.0.10.6.4.255
	ToD5 (Export).	1.0.10.6.5.255	1.0.10.6.5.255

OBIS CODES OF PARAMETERS REQUIRED IN EXPORT MODE		
Billing Register	**DLMS**	**BEST proposed OBIS Code**
Technical requirements	Profile1.0.98.1.0.255	1.0.98.1.0.255
	Scaler1.0.94.91.6.255	1.0.94.91.6.255

Vii i	ToD wise MD in kW with date & time ToD1 (Export).	1.0.2.6.1.255	1.0.2.6.1.255
	ToD2 (Export).	1.0.2.6.2.255	1.0.2.6.2.255
	ToD3 (Export).	1.0.2.6.3.255	1.0.2.6.3.255
	ToD4 (Export).	1.0.2.6.4.255	1.0.2.6.4.255
	ToD5 (Export).	1.0.2.6.5.255	1.0.2.6.5.255
ix	Cumulative kWh (Export).	1.0.2.8.0.255	1.0.2.8.0.255
x	Cumulative kVARh – Lag (Export).	1.0.7.8.0.255	1.0.7.8.0.255
xi	Cumulative kVARh – Lead (Export).	1.0.6.8.0.255	1.0.6.8.0.255
xii	Cumulative kVAh (Export).	1.0.10.8.0.255	1.0.10.8.0.255
xiii	Average Power Factor (Export).	1.0.13.0.0.255	1.0.13.0.0.255
xiv	Bill MD in Kva with date and time (Export).	1.0.10.6.0.255	1.0.10.6.0.255
xv	Bill MD in Kw with date and time (Export).	1.0.2.6.0.255	1.0.2.6.0.255
Note	If any additional OBIS/Profile/Scaler code is provided then the tenderers/supplier shall submit the list for the parameters with detailed justification. Based on the detailed justification submitted by tenderers/supplier, BEST reserves right to accept/reject the OBIS/Profile/Scaler code.		

OBIS Codes				
Technical requirements			**DLMS**	**BEST proposed OBIS Code**
i	Low/High Voltage- a)Voltage failure, b) Voltage Unbalance, c) Overvoltage d) Under voltage.	Voltage Tamper Profile	0.0.99.98.0.255	0.0.99.98.0.255
		Voltage Tamper Summary Profile	0.0.21.0.5.255	0.0.21.0.5.255
ii	Current Reversal.	Current Tamper Profile	0.0.99.98.1.255	0.0.99.98.1.255
		Current Tamper Summary Profile	0.0.21.0.6.255	0.0.21.0.6.255
iii	Meter Cover Open.	0.0.99.98.5.255	Event ID 251	Event ID 251
iv	Magnetic Defraud Energy.		Not specified	1.0.1.8.0.255
	Magnetic Tamper Event with Date Time	Tamper Event	Event ID201,202	0.0.96.11.4.255
v	Low Current- a) Current Bypass, b) Current Open, c) Over Current.	Current Tamper Profile	0.0.99.98.1.255	0.0.99.98.1.255
vi	Current Unbalance.	Current Tamper Profile	0.0.99.98.1.255	0.0.99.98.1.255
		Current Tamper Summary	0.0.21.0.6.255	0.0.21.0.6.255

OBIS Codes				
Technical requirements			DLMS	BEST proposed OBIS Code
		Profile		
vii	Low Power Factor	Low Power Factor	Event ID 205,206-Low Power Factor.	Event ID 205,206-Low Power Factor.
viii	Additional points.	Cumulative Tamper Count	0.0.94.91.0.255	0.0.94.91.0.255
		No. of Power failure	0.b.99.98.2.255	0.0.96.7.0.255
		Cumulative Duration of Power failure		0.0.94.91.8.255
		Power ON Duration in minutes (bill to bill)		0.0.94.91.13.255

OBIS Codes			
Technical requirements		DLMS	BEST proposed OBIS Code
Events Profile			
Events.	Voltage Tamper Profile	0.0.99.98.0.255	0.0.99.98.0.255
	Current Tamper Profile	0.0.99.98.1.255	0.0.99.98.1.255
	Power Related Tampers	0.0.99.98.2.255	0.0.99.98.2.255
	Transaction Tamper Profile	0.0.99.98.3.255	0.0.99.98.3.255
	Other Tamper Profiles	0.0.99.98.4.255	0.0.99.98.4.255
	Non Rollover Tamper Profiles	0.0.99.98.5.255	0.0.99.98.5.255
Capture Parameters for Events of Scaler Profile			
Parameters.	Date and Time of event	0.0.1.0.0.255	0.0.1.0.0.255
	Event Code	0.0.96.11.e.255	0.0.96.11.e.255
	Current, IR	1.0.31.7.0.255	1.0.31.7.0.255
	Current, IY	1.0.51.7.0.255	1.0.51.7.0.255
	Current, IB	1.0.71.7.0.255	1.0.71.7.0.255
	Voltage, VRN	1.0.32.7.0.255	1.0.32.7.0.255
	Voltage, VYN	1.0.52.7.0.255	1.0.52.7.0.255
	Voltage, VBN	1.0.72.7.0.255	1.0.72.7.0.255
	Signed power factor, R-Phase	1.0.33.7.0.255	1.0.33.7.0.255
	Signed power factor, Y-Phase	1.0.53.7.0.255	1.0.53.7.0.255
	Signed power factor, B-Phase	1.0.73.7.0.255	1.0.73.7.0.255
	Cumulative Energy kWh	1.0.1.8.0.255	1.0.1.8.0.255
	Cumulative Energy kVAh	1.0.9.8.0.255	1.0.9.8.0.255
Tamper Summary Profile.		Additional Readout profile in IEC62056-62	
1	Voltage Tamper Summary Profile.	0.0.21.0.5.255	0.0.21.0.5.255
2	Current Tamper Summary Profile.	0.0.21.0.6.255	0.0.21.0.6.255
3	Other Tamper Summary Profile.	0.0.21.0.7.255	0.0.21.0.7.255
4	Non Rollover Tamper Summary Profile.	0.0.21.0.8.255	0.0.21.0.8.255

OBIS Codes

OBIS Codes			
Technical requirements		DLMS	BEST proposed OBIS Code
Technical requirements		**DLMS**	**BEST proposed OBIS Code**
Parameters.			
1	Tamper Event ID.	0.0.96.11.e.255	0.0.96.11.e.255
2	Cumulative Tamper Count.	0.0.94.91.0.255	0.0.94.91.0.255
3	Cumulative Tamper Duration.	Not Specified	Not Specified
4	Date & Time of First Occurrence.	1.0.0.9.0.255	1.0.0.9.0.255
5	Date & Time of First restore.	1.0.0.9.1.255	1.0.0.9.1.255
6	Date & Time of Latest Occurrence.	1.0.0.9.2.255	1.0.0.9.2.255
7	Date & Time of Latest Restoration.	1.0.0.9.3.255	1.0.0.9.3.255
ESD.		Event ID 37	Event ID 37
Self Diagnostic Features.	i) RTC Status-BIT 0 (0x01)ii) NVM Status- BIT 1(0x02) iii) RTC Battery-BIT 2(0x04)	Not Specified	1.0.96.5.0.255
General Purpose Parameters:-Profile Code: 0.0.94.91.10.255.			
1	Meter Serial Number.	0.0.96.1.0.255	0.0.96.1.0.255
2	Manufacture Name.	0.0.96.1.1.255	0.0.96.1.1.255
3	Firmware version for meter.	1.0.0.2.0.255	1.0.0.2.0.255
4	Meter Type.	0.0.94.91.9.255	0.0.94.91.9.255
5	Meter year of manufacture.	0.0.96.1.4.255	0.0.96.1.4.255
6	Category.	0.0.94.91.11.255	0.0.94.91.11.255
7	Current Rating.	0.0.94.91.12.255	0.0.94.91.12.255
8	Voltage Rating	1.0.0.6.0.255	1.0.0.6.0.255
9	Accuracy Class	Not Specified	1.0.96.141.0.255
10	Meter Constant	1.0.0.3.0.255	1.0.0.3.0.255
11	Internal CT Ratio.	1.0.0.4.2.255	1.0.0.4.2.255
12	Internal PT Ratio.	1.0.0.4.3.255	1.0.0.4.3.255
Programmable Parameters			
1	Real Time Clock-Date and Time.	0.0.1.0.0.255	0.0.1.0.0.255
2	Demand Integration Period.	1.0.0.8.0.255	1.0.0.8.0.255
3	Profile Capture Period.	1.0.0.8.4.255	1.0.0.8.4.255
4	Single-action Schedule for Billing Dates.	0.0.15.0.0.255	0.0.15.0.0.255
5	Activity Calendar for Time Zones.	0.0.13.0.0.255	0.0.13.0.0.255
6	Image Transfer	0.0.44.0.0.255	0.0.44.0.0.255
7	Load Limit in kW	0.0.17.0.0.255	0.0.17.0.0.255
8	Connect/disconnect	0.0.96.3.10.255	0.0.96.3.10.255
9	Metering Mode	0.0.94.96.19.255	0.0.94.96.19.255
10	Payment Mode	0.0.94.96.20.255	0.0.94.96.20.255
11	Current Association MR (LLS secret change)	0.0.40.0.2.255	0.0.40.0.2.255
12	Current Association US (HLS Key change)	0.0.40.0.3.255	0.0.40.0.3.255

OBIS Codes			
Technical requirements		DLMS	BEST proposed OBIS Code
13	Current Association FW (HLS Key change)	0.0.40.0.5.255	0.0.40.0.5.255
14	Global Key (encryption and authentication)	0.0.43.0.e.255(e=2,3, 4,5)	0.0.43.0.e.255(e=2,3,4,5)
15	Image Activation Single Action Shedule	0.0.15.0.2.255	0.0.15.0.2.255
16	Event Status Word Filter	0.0.94.91.26.255	0.0.94.91.26.255

OBIS Codes			
Technical requirements		DLMS	BEST proposed OBIS Code
Note	If any additional OBIS/Profile/Scaler code is provided then the tenderers/supplier shall submit the list for the parameters with detailed justification. Based on the detailed justification submitted by tenderers/supplier, BEST reserves right to accept/reject the OBIS/Profile/Scaler code.		

OBIS Codes			
Load Survey		DLMS (Load Profile OBIS Codes)	BEST proposed OBIS Code
Technical requirements		Profile 1.0.99.1.0.255	1.0.99.1.0.255
		Scaler 1.0.94.91.4.255	1.0.94.91.4.255
1	Voltage of each phase	VRN 1.0.32.27.0.255	VRN 1.0.32.27.0.255
		VYN1.0.52.27.0.255	VYN 1.0.52.27.0.255
		VBN 1.0.72.27.0.255	VBN 1.0.72.27.0.255
2	Current of each phase	IR 1.0.31.27.0.255	IR 1.0.31.27.0.255
		IY 1.0.51.27.0.255	IY 1.0.51.27.0.255
		IB 1.0.71.27.0.255	IB 1.0.71.27.0.255
3	Kwh	1.0.1.29.0.255	1.0.1.29.0.255
4	kVAh	1.0.9.29.0.255	1.0.9.29.0.255
5	Kw	Not Specified	Need not specify. Derived parameter in BCS.
6	Kva	Not Specified	
7	PF	Not Specified	
8	kVarh(lag)	Not Specified	1.0.5.29.0.255
9	kVarh(lead)	Not Specified	1.0.8.29.0.255
10	Real Time Clock Date and Time	0.0.1.0.0.255	0.0.1.0.0.255
Daily Load Profile Parameters			
Profile		Not Specified	1.0.99.2.0.255
Scaler		Not Specified	1.0.94.91.5.255
1	Real Time Clock	Not Specified	0.0.1.0.0.255
2	Cumulative Energy, kWh	Not Specified	1.0.1.8.0.255
3	Cumulative Energy, kVAh	Not Specified	1.0.9.8.0.255
4	Cumulative Reactive Energy lag	Not Specified	1.0.5.8.0.255
5	Cumulative Reactive Energy kVArh Lead	Not Specified	1.0.8.8.0.255
6	Fundamental Energy kWh	Not Specified	1.0.1.8.1.255
Note	If any additional OBIS/Profile/Scaler code is provided then the tenderers/supplier shall submit the list for the parameters with detailed justification. Based on the detailed justification submitted by tenderers/supplier, BEST reserves right to accept/reject the OBIS/Profile/Scaler code.		

Annexure C Three phase CT operated alternating current Smart Meter of Accuracy Class0.5S (DT Meter, LT-CT Meter, etc.)

General Standards Applicable for Meter

Unless otherwise specified elsewhere in this specification, the performance and testing of the meters shall conform to the following standards and amendments/revisions thereof.

Sl. No.	Standard No.	Title
1	IS 16444: Part 2 with latest amendments	AC Static Transformer Operated Watt-hour and VAR-Hour Smart Meters, class 0.2S, 0.5S and 1S
2	CBIP- Publication 325 with latest amendments	Standardization of AC Static Electrical Energy Meters
3	CBIP Technical report no. 111 with latest amendments	Specification for Common Meter Reading Instrument
4	IS:9000 with latest amendments	Basic Environmental Testing Procedures for Electronic & Electrical Items.
5	IS 12063 with latest amendments	Degrees of protection provided by enclosures of electrical equipment.
6	IS 14451, Part-2: 1999 with latest amendments	Telemetering for consumption and demand. Direct digital transfer of meter values.
7	IS 4905: 1999 with latest amendments	Methods for Random sampling.
8	IS 12346 with latest amendments	Specifications for Testing Equipment for AC Energy meter.
9	IS 15959 Part 3 (as applicable) with latest amendments	Data exchange for electricity meter reading, tariff and load control: Companion specification

Communication

Meter shall have ability to communicate with HES on any one of the technologies mentioned in IS 16444 (RF/Cellular) in a secure manner. The selection of communicationtechnology should be as per the site conditions and as per design requirement of the AMISPto meet the Service Level Agreements (SLAs). In case of cellular based meter, the meter shall accommodate SIM Card / e-SIM of any service provider. The meter shall log the removal of the plug-in type communication module removal /nonresponsive event with snapshot.

Other Specifications

Particulars	Specifications
Applicable Standards	The meters shall comply with IS 16444: Part2 for all requirements except for those parameters which have been specifically mentioned to be otherwise in this specification.
Reference Voltage	[As per relevant IS]
Current Rating	Ib
Starting Current	As per IS 16444: Part2
Accuracy	Class 0.5S as per IS 16444: Part 2
Limits of error	As per IS 16444: Part 2
Operating Temperature range	As per IS 16444: Part 2
Humidity	As per IS 16444: Part 2
Frequency	As per IS 16444: Part 2
Influence Quantities	As per IS 16444: Part 2
Power Consumption of meter excluding communication module	As per I S 16444: Part 2
Current and Voltage circuit	As per IS 16444: Part 2
Running at No Load	As per IS 16444: Part 2
Test output device	As per IS 16444: Part 2
Meter Display	As given in the document

Name Plate & marking Meter Display	Manufacturer's name Type designation Number of phases and wires Serial number (Meter serial number shall be laser printed on name plate instead on sticker). Serial number along with barcode Month and Year of manufacture Unit of measurement Reference voltage ,frequency Ref. temperature Rated basic and maximum Current Meter constant (imp/kWh) 'BIS' Mark Class index of meter Property of BEST Undertaking Purchase Order No. & date Guarantee period. Sign of double square Country of manufacture. Firmware version of meter Symbol of load switch. NIC serial NO (Shall be visible from Communication Module

Particulars	Specifications
	Slot) Compatibility of NIC Card.
Time of Use (In case of net-meter both export & import parameters to be measured)	As given in the document
Parameters to be measured	As per IS 16444: Part 2 / IS 15959: Part 3 (as applicable) RF/ GSM signal Strength in milli db to be available in instantaneous parameters. All energies and demand will be available TOD wise in billing/ LS parameters.
Power Quality Information	As per IS 15959: Part 3 (as applicable)
Maximum Demand	As per IS 15959: Part 3 (as applicable)
Load Survey/Interval Data	DIP: 15 min SIP: 15 min LS Days: 45 days
LED/LCD Indicators	As per IS 16444: Part 2
Tamper/Event recording	As given in the document
Alarm	As per IS 16444 / IS 15959: Part 3 (as applicable)
Measuring Elements	a. Current Transformer shall be provided as measuring element in the phase circuit. b. Additional CT/Shunt shall be provided in the neutral circuit of meter to detect phase CT bypass. Any unbalance current of vector summation of all three phase currents, if not recorded as neutral current, to be treated as tamper event, and also current imbalance to be detected. c. The meter shall have CTs with Magnetic shielding and same shall be tested separately prior to assembly. d. The Current Transformers used shall not saturate with passage of DC current as per IS: 13779:1999 with latest amendments.
Anti-Tamper features	The meter shall continue working under tamper conditions as defined in IS 15959 Part 3 and would log the event and send alarm at HES after logging of the defined tamper features as per IS 15959 Part 3. As given in the document
Programmability	As per IS 16444: Part 2
Communication	As per IS 16444: Part 2
Communication Protocol	As per IS 15959: Part 3 (as applicable)
Real time clock (RTC)	As per IS 16444: Part 2 / IS 15959: Part 3 (as applicable)
Data Retention	As per IS 16444: Part 2
Battery Backup	Meter shall be supplied with separate battery backup for RTC.

Data display facility (manual/Auto)	As given in the document
Remote Firmware Upgrade	As per IS 15959: Part 3 (as applicable)
Calibration	Meters shall be software calibrated at factory and modifications in calibration shall not be possible at site by any means. However parameters like RTC, TOD slots & timings, DIP (billing & load

Particulars	Specifications
	survey), billing date change, Pre paid/post paid, Set metering mode (Import/Export), display setting, shall be reconfigure through CMRI and remotely over the air (OTA), and any other support will be provided without any additional cost to BEST till the useful life of the meters.
Meter Dimension in MM	Is not more than 250L*200W*100H
Software and communication compatibility	The bidder shall supply software required for communication though local (CMRI and BCS software) and remote (AMI) connectivity free of cost and necessary training. For existing meter manufacturer, it should be ensured that all meters (existing non-smart &upcoming smart meters) can be read through one BCS only. The list of OBIS codes for the parameters is provided in the document. There shall be facility to export the data in Excel/txt/csv/PDF and XML format.
KVAH & KVA calculation	Meter shall be programed as Lag+ Lead configuration i.e. Leading PF shall not be considered as unity
Plug-in Communication Module	The Smart Meters shall be have a dedicated sealable slot for accommodating plug-in type bi -directional communication module which shall integrate the respective communication technology (RF Mesh/ Cellular) with the Smart Meters, leading to easy adaptability for network interfaces (WAN/NAN).The Plug-In module shall be field hot swappable/ replaceable. Same NIC shall work with different types of meters of same make (1P, 3P, LTCT, HT etc).
Optical Port	The meter shall have optical port for downloading data. Optical port shall be with a rust resistance coated metal ring to hold magnet of downloading probe. The optical head used for meter reading shall comply with IEC 62056-21 as far as physical construction is concerned. 10 Nos. of optical chords shall be provided for downloading the data from Meter to PC using BCS software in the Lab. The Optical Port provided on meter shall have flap & sealing provision.
Internal component specification	AS given in the document

Data display facility (auto/manual)

Meter shall have at least three display modes for showing display parameters. Auto mode shall be as Default in which parameters will scroll at the interval of 10 seconds. Minimum 7 digit integers for energy parameters shall be provided.

1 Auto Mode:

c) The offered meter shall be capable of recording and displaying following readings in Auto mode display. The display shall follow the following sequence as mentioned below in interval of 10 seconds automatically.

d) Minimum 7-digit integers for energy parameters shall be provided.

Sequence	Display
1	Complete LCD Test.
2	Meter Number.
3	Present Time.
4	Present Date.
5	Current kWh.
6	Current kWh for ToD 1
7	Current kWh for ToD 2
8	Current kWh for ToD 3
9	Current kWh for ToD 4
10	Current kWh for ToD 5
11	Current kVAh.
12	Current kVAh for ToD 1
13	Current kVAh for ToD 2
14	Current kVAh for ToD 3
15	Current kVAh for ToD 4
16	Current kVAh for ToD 5
17	Current Total kVARh lag.
18	Current Total kVARh lead.
19	Current Max MD in kVA with date and time for ToD 1
20	Current Max MD in kVA with date and time for ToD 2
21	Current Max MD in kVA with date and time for ToD 3
22	Current Max MD in kVA with date and time for ToD 4
23	Current Max MD in kVA with date and time for ToD 5
24	Instantaneous Power Factor.
25	Instantaneous R ph Voltage.
26	Instantaneous Y ph Voltage.
27	Instantaneous B ph Voltage.
28	Instantaneous R ph Current.
29	Instantaneous Y ph Current.
30	Instantaneous B ph Current.
31	Neutral Current.
32	Instantaneous kW load.
33	Instantaneous kVAr load.
34	Instantaneous KVA load.
35	Instantaneous Frequency.

After last sequence, the first sequence shall be automatically displayed.

2 Push Button Mode:-

Following parameters shall be displayed on pressing the button. (Scroll up & down) :-

Sequence	Display
1	Segment Check Display (LCD Test)
2	BEST Meter Serial Number.
3	Real Time
4	Real Date
5	Bill kWh
6	Bill kWh for ToD 1
7	Bill kWh for ToD 2
8	Bill kWh for ToD 3
9	Bill kWh for ToD 4
10	Bill kWh for ToD 5

Sequence	Display
11	Bill kVAh.
12	Bill kVAh for ToD 1
13	Bill kVAh for ToD 2
14	Bill kVAh for ToD 3
15	Bill kVAh for ToD 4
16	Bill kVAh for ToD 5
17	Bill kVARh–Lag.
18	Bill kVARh–Lead.
19	Bill MD in kVA with date and time for TOD1
20	Bill MD in kVA with date and time for TOD2
21	Bill MD in kVA with date and time for TOD3.
22	Bill MD in kVA with date and time for TOD4
23	Bill MD in kVA with date and time for TOD5.
24	Bill Average Power Factor.
25	Cumulative MD Total.
26	Cumulative MD in kVA with date and time for TOD1
27	Cumulative MD in kVA with date and time for TOD2.
28	Cumulative MD in kVA with date and time for TOD 3
29	Cumulative MD in kVA with date and time for TOD 4
30	Cumulative MD in kVA with date and time for TOD 5.
31	MD Reset Count.
44	Last Magnetic Tamper event date and time.
45	Current MD in kVA with date and time.

Meter Display Sequence of NET SMART METER

1 Auto Mode:-

Sequence	Display
1	Complete LCD Test
2	BEST Meter Serial Number.
3	Present Date
4	Present Time
5	Current CKWh Reading (Import)
6	Current CKVAh Reading while Active (Import)
7	Current CRKVAh Reading Lag (Import)
8	Current CRKVAh Reading Lead (Import)
9	Current KWh Reading for TOD1 (Import)
10	Current KWh Reading for TOD2 (Import)
11	Current KWh Reading for TOD3 (Import)
12	Current KWh Reading for TOD4 (Import)
13	Current KWh Reading for TOD5 (Import)
14	Current KVAh Reading for TOD1 (Import)
15	Current KVAh Reading for TOD 2 (Import)
16	Current KVAh Reading for TOD 3 (Import)
17	Current KVAh Reading for TOD 4 (Import)
18	Current KVAh Reading for TOD 5 (Import)
19	Current Maximum Demand with date and time in KVA of Billing Period for TOD1 (Import)
20	Current Maximum Demand with date and time in KVA of Billing Period for TOD 2(Import)
21	Current Maximum Demand with date and time in KVA of Billing Period for TOD3 (Import)

Sequence	Display
22	Current Maximum Demand with date and time in KVA of Billing Period for TOD 4 (Import)
23	Current Maximum Demand with date and time in KVA of Billing Period for TOD5 (Import)
24	Current CKWh Reading (Export)
25	Current CKVAh Reading while Active (Export)
26	Current CRKVAh Reading Lag (Export).
27	Current CRKVAh Reading Lead (Export).
28	Current KWh Reading for TOD1 (Export)
29	Current KWh Reading for TOD2 (Export)
30	Current KWh Reading for TOD3 (Export)
31	Current KWh Reading for TOD4 (Export)
32	Current KWh Reading for TOD5 (Export)
33	Current KVAh Reading for TOD1 (Export)
34	Current KVAh Reading for TOD 2 (Export)

35	Current KVAh Reading for TOD 3 (Export)
36	Current KVAh Reading for TOD 4 (Export)
37	Current KVAh Reading for TOD 5 (Export)
38	Current Maximum Demand with date and time in KVA of Billing Period for TOD1 (Export)
39	Current Maximum Demand with date and time in KVA of Billing Period for TOD 2(Export)
40	Current Maximum Demand with date and time in KVA of Billing Period for TOD3 (Export)
41	Current Maximum Demand with date and time in KVA of Billing Period for TOD 4 (Export)
42	Current Maximum Demand with date and time in KVA of Billing Period for TOD5 (Export)
43	Instantaneous Power Factor
44	Instantaneous R ph Voltage.
45	Instantaneous Y ph Voltage
46	Instantaneous B ph Voltage.
47	Instantaneous R ph Current.
48	Instantaneous Y ph Current
49	Instantaneous B ph Current.
50	Neutral Current.
51	Instantaneous Active kW load. (Import/Export)
52	Instantaneous Apparent kVA load. (Import/Export)
53	Instantaneous Reactive KVAr load. (Import/Export)
54	Instantaneous Frequency.

Push Button Mode:-

Sequence	Display
1	Complete LCD Test
2	BEST Meter Serial Number.
3	Present Date
4	Present Time
5	Cumulative KWh Reading at Bill Point (Import)
6	Cumulative KVAh Reading at Bill Point (Import)
7	Cumulative RKVAh Reading Lag at Bill Point (Import)
8	Cumulative RKVAh Reading Lead at Bill Point (Import)

Sequence	Display
9	Cumulative KWh Reading for TOD1 at Bill Point (Import)
10	Cumulative KWh Reading for TOD 2 at Bill Point (Import)
11	Cumulative KWh Reading for TOD 3 at Bill Point (Import)
12	Cumulative KWh Reading for TOD 4 at Bill Point (Import)
13	Cumulative KWh Reading for TOD 5 at Bill Point (Import)

14	Cumulative KVAh Reading for TOD1 at Bill Point (Import)
15	Cumulative KVAh Reading for TOD2 at Bill Point (Import)
16	Cumulative KVAh Reading for TOD3 at Bill Point (Import)
17	Cumulative KVAh Reading for TOD 4 at Bill Point (Import)
18	Cumulative KVAh Reading for TOD 5 at Bill Point (Import)
19	Maximum Demand in KVA with date and time of Billing Period for TOD1 (Import).
20	Maximum Demand in KVA with date and time of Billing Period for TOD2 (Import).
21	Maximum Demand in KVA with date and time of Billing Period for TOD3 (Import).
22	Maximum Demand in KVA with date and time of Billing Period for TOD4 (Import).
23	Maximum Demand in KVA with date and time of Billing Period for TOD5 (Import).
24	Bill Average Power Factor (I).
25	Cumulative KWh Reading at Bill Point (Export).
26	Cumulative KVAh Reading at Bill Point (Export)
27	Cumulative RKVAh Reading Lag at Bill Point (Export)
28	Cumulative RKVAh Reading Lead at Bill Point (Export)
29	Cumulative KWh Reading for TOD1 at Bill Point (Export)
30	Cumulative KWh Reading for TOD 2 at Bill Point (Export)
31	Cumulative KWh Reading for TOD 3 at Bill Point (Export)
32	Cumulative KWh Reading for TOD 4 at Bill Point (Export)
33	Cumulative KWh Reading for TOD 5 at Bill Point (Export)
34	Cumulative KVAh Reading for TOD1 at Bill Point (Export)
35	Cumulative KVAh Reading for TOD2 at Bill Point (Export)
36	Cumulative KVAh Reading for TOD3 at Bill Point (Export)
37	Cumulative KVAh Reading for TOD 4 at Bill Point (Export)
38	Cumulative KVAh Reading for TOD 5 at Bill Point (Export)
39	Maximum Demand in KVA with date and time of Billing Period for TOD1 (Export).
40	Maximum Demand in KVA with date and time of Billing Period for TOD2 (Export).
41	Maximum Demand in KVA with date and time of Billing Period for TOD3 (Export).
42	Maximum Demand in KVA with date and time of Billing Period for TOD4 (Export).
43	Maximum Demand in KVA with date and time of Billing Period for TOD5 (Export).
44	Bill Average Power Factor (E).
45	MD Reset Count.

1) The Auto mode (default display) shall switch to Push button mode display (On Demand Display Mode) after pressing the push button.

2) The Push Button display mode shall switch over to Auto mode display (default display) if the push button is not operated for 15 seconds.

3) Display of MD (kVA or kW) shall have 3-digit integer and 3 digit decimal and display of cumulative MD shall have 4-digit integer and 3 digit decimal.

4) Instantaneous values of lead Power Factor shall be shown with negative sign while lag PF shall be shown without sign on the display

High Resolution Mode

Following parameters shall be displayed in High Resolution Mode with 3 digit integer +4 digit decimals.

Sequence	Display
1	KWh Reading (Import).
2	RKVAh Reading Lag (Import).
3	RKVAh Reading Lead (Import).
4	KWh Reading (Export).
5	RKVAh Reading Lag (Export).
6	RKVAh Reading Lead (Export).
7	KVAh Reading (Import).
8	KVAh Reading (Export).

1) The Auto mode display (default display) shall switch to High Resolution Display Mode after pressing the push button continuously for 10 seconds.

2) The High Resolution Display Mode shall switch over to Auto mode (default display) if the push button is not operated for 60 seconds

Meter display should not go in to sleep mode during Power-On condition in case the push button is notoperated for more than 10 minutes. **TOD Feature:**

The meter shall be capable of measuring Cumulative Energy (KWh), KVarh Lag, Kvarh Lead, Kvah and MD (KW, KVA)with time of day (TOD) registers having 5 zones (no. of zones & time slot shall be programmable by CMRI with adequate security level).

TOD Slot Configuration shall be as follows-

Slot	Time Slots
TOD 1	22 to 06 Hrs
TOD 2	06 to 09 Hrs
TOD 3	09 to 12 Hrs
TOD 4	12 to 18 Hrs.
TOD 5	18 to 22 Hrs

Immunity against external influencing signals:

Magnetic Field:

Meter shall record accurate energy in case of any external influencing signals in line with IS 13779:1999 Cl.11.2 and variation in limits of error (upto 100% Imax) shall be as per the table 13 of IS 14697. Meter shall be immune to magnetic field such that it shall not affect the normal overall functionality However, in case of abnormal magnetic field as defined below meter shall perform as per the following features:

c) Meter shall log the event in its memory as" MAGNET" with date and time stamp within 30 sec or immediate of application of abnormal magnetic field and shall start recording at 100% Imax and after removal of magnet, back to normal recording within 30 sec or immediate.

d) Meter shall show "Magnet" in the display.

Abnormal Magnetic field is defined as below;

d) Continuous DC magnetic induction: >0.20 Tesla ± 5%(Value of the magneto motive force to be applied shall be generally >10000 ATs, Should be immune up to 0.20Tesla)
e) AC magnetic induction: Immune for 10 milli Tesla (if produced with circular metal core with square cross section as specified in CBIP latest report with 2800 AT
f) Permanent Magnet: Immune up to 0.5T and Event logging >0.5T

Electrostatic Discharge (ESD)

Meter shall be immune up to 50 kV and shall record accurate energy as per IS-13779:1999.Meter shall log the event into memory as 'ESD' with date & time stamp for any ESD greater than 50 kV and shall show 'ESD' in the display.
The shielding around the meter shall be such that it does not get affected by high voltage, high and low energy impulse when comes in contact with meter from any side.
The meter should immune to high/ low frequency Jammer devices. Meter shall log event in its memory as jammer with date and time stamp along with snapshot.
The meter should be immune and log the tamper on application of any other higher magnetic field of any frequency waves, micro waves

Neutral Disturbance

The meter shall log in the memory as 'NEUTRAL DISTURBANCE' with date and time stamp and show 'ND' in the display for Frequency variation below 45 Hz and above 55 Hz with time delay of 2 min and for Pulsating DC and Chopped AC of any value with time delay of 2 min.

The meter shall not saturate on passage of direct current, which can cause the meter either to stop recording/ record inaccurately. DC injection shall be tested both in phase and neutral. Measurement by meter shall not get influenced by injection of DC signal/ DC pulse upto 330V and for any value beyond this, the meter shall log the event into memory as 'NEUTRAL DISTURBANCE' with date & time stamp and shall show 'ND 'in the display after time delay of 2 min(occurrences and restoration time).

The meter shall record energy proportional to the current and V Ref when any of the tamper circuits are used to tamper energy using a diode or a variable resistance or a variable capacitance energy saving device. The measurement by meter shall not get influenced by injection of AC Voltages/Chopped signal/DC signal/ DC pulse of low frequency and harmonics. The meter should be immune to such Neutral Disturbance. In case the meter accuracy is disturbed under Neutral Disturbance, it should be able to log the event.

Abnormal and Tamper conditions

The meter shall record forward energy under any abnormal conditions.
All the tamper events i.e. shall be logged in the memory of the meter with date and time stamp of occurrence and restoration along with instantaneous electrical parameter (Voltage, Current (phase and neutral) , energy, PF , frequency)

Meter shall store cumulative count and cumulative durations all the tamper event which have logged by meter from the date of energization till life of meter.

Tamper count shall be incremented only on the occurrence of the any tamper event with date and time Stamp on FIFO basis. The event which is not restored should not be removed from its meter memory and FIFO should not applicable for unrestored event.
The cover open tamper detection should be through heavy duty, sturdy micro switch such that it should not Operate on vibration or impact during handling or testing.
The meter shall register correctly if supply neutral is not available at the meter neutral terminal. The meter shall work in absence of two incoming wires. It shall keep recording correctly in case of unbalance system voltage.

The meter shall keep working accurately irrespective of the phase sequence of the supply.

The meter shall be able to differentiate between actual CT reversals and condition arising out of unbalanced / unhealthy capacitor bank.
During Voltage Failure event, the meter shall record energy proportional to the current and V Ref (240V).
Meter shall have neutral CT for tamper identification and analysis.
The event compartments shall be IS 15959 Part-1 table 9. The size of compartments should be such that all above event are accommodated in the assigned event compartment. i.e. if in case of voltage compartment assigned to 4 number of events then the minimum size of this compartment should be such that it should accommodate sum of all maximum number of events as per below table. Transaction event compartment size shall be minimum 100 events

Persistence time for occurrence and restoration for the events and compartment block size shall be as per table given below

Sr. No.	Tampers/ Failures	Phase wise	Compartment Size	Logic/ Condition other than standard	Persistence time	
					Occ Time (min)	Rec Time (min)
1	Voltage Failure	YES	25	Occ: Voltage <192V: and current > 2% Ib. Res: Vph > 191V (Independent of current)	5	5
2	Voltage unbalance	YES	25	Occ : (Vmax-Vph)>10% Vn and Vphase : 191>Vphase< 216 Res : (Vmax-Vph)<10% Vn and Vphase : 191<Vphase> 216	5	5
3	High Voltage	YES	25	Vph > 110% of Vref	30	30
4	CT open	YES	25	Occ: Ir+Iy+Ib+In>10% of Ib(vector Sum) and phase current<10% Ib with all current are positive Res: Ir+Iy+Ib+In<5% of Ib(vector Sum) and phase current>10% Ib with all current are positive	30	30
5	Current unbalance	YES	25	Occ : Imax – Imin > 30% of Iavg Res : Imax – Imin < 30% of Iavg	15	15
6	CT Bypass	YES	25	Occ: Ir+Iy+Ib+In>5% of Ib(vector Sum) and phase current>10% Ib with all current are positive Res: Ir+Iy+Ib+In>2.5% of Ib(vector Sum) and phase current<10% Ib with all current are positive	30	30

7	Current reversal	YES	25	1. Active current negative 2. PF > 0.3	2	2
8	Magnet	NO	25	Whenever meter sense magnetic field it shall record Active and Apparent energy at Imax at UPF	Immediate	Immediate
9	Neutral Disturbance	NO	25	Vph > 150% Vref	5	5

				In case of external signal injection (Chopped DC, Chopped AC and DC injection through diode)		
10	ESD/JAMMER	NO	25	Occ: Immunity upto 50 KV, > 50KV event logged In memory Res: Removal of ESD and Jammer Device	2	2
11	Low PF Tamper	YES	25	OCC: PF < +/- 0.5 and I>1%Ib REC: PF > +/- 0.7 and I>1%Ib	5	5
12	Top Cover open	NO	1	When cover opens by more than 2 to 4 mm.	Immediate	NA
13	Temperature Rise	NO	25	Occ: T >70˚C REC: T <60˚C	2	2
14	NIC card Removed (Immediate)	NO	25	OCC: On removal of card RES: On Inserction card	Immediate	Immediate
15	Power On/Off	NO	25	Occ: Actual voltage OFF Res: Actual voltage ON	5	5

In case of Bi-directional meters current reversal and magnet tamper conditions to be made accordingly.

Anti-tamper features

The meter shall continue recording energy under tamper conditions as defined in IS 15959 Part 2 and would log the event and send alarm at Head End System after detection of the defined tamper features as per IS 15959 Part 2.

Type Tests & Test Certificates

Smart Meter shall be type tested for tests as per relevant parts of IS 16444 (latest versions), and certified by Indian Standard wise list of BIS recognized labs as available at https://bis.gov.in/index.php/laboratorys/list-of-bis-recognized-lab/. The number of sampling for testing of meters and criteria for conformity would be as per IS 16444(as amended up to date). Necessary copies of test certificates shall be submitted as per agreement with the Utility/AMI-IA.

Routine & Acceptance Tests

The Factory Acceptance and Routine tests shall be carried out as per IS 16444 Part 1.

General & Constructional requirements

Meter shall be BIS marked as per IS 16444 Part 1. General & construction requirement shall be as per IS 16444/IS 13779

Meter base & cover - Meter base & cover shall be as per IS 16444 Part1 / IS 13779. The meter Base & cover shall be Encapsulated type with "screwless break to open" design conform to the degree of protection IP 54 against ingress of dust, moisture and vermin. 'Break to open' design. The material for meter base and cover shall be made of high-grade polycarbonate.

The meter Base & cover shall be ultrasonically welded / Chemically welded or other suitable bonding technology and it will not be possible to remove the cover from the base without evidence of damage and necessary sealing provision shall be provided on the both sides of the meter.

Terminal block & cover - As per IS 16444 Part 1/IS 13779
The terminal cover shall be transparent and short. The terminal cover shall be fully enclosed type. The connection diagram shall be marked on Terminal Block cover.

Design
Voltage circuit, sealing arrangement, terminal block, terminal cover and nameplate etc. shall be in accordance with IS-16444 Part 1 (latest version). The meter shall be compact and reliable in design, easy to transport and immune to vibration and shock involved in transportation and handling

Name plate and marking
The meter should bear a name plate clearly visible, effectively secured against removal and indelibly/distinctly marked in accordance with relevant IS. In addition, "Name of the Utility/AMI- IA", purchase order no. & year/month of manufacturing shall be provided on the meter name plate. The rating plate information shall be as per relevant IS.

Connection diagram: As per IS 16444 Part 1

Fixing arrangements:
The meter shall be mounted type. The Meter should have three fixing holes, one at top and two at the bottom. The Top hole should be such that the holding screw is not accessible to the consumer after fixing the meters. The lower screws should be provided under sealable terminal cover. The requisite fixing screws shall be supplied with each meter.

Sealing arrangement:
Arrangements shall be provided for proper sealing of the meter cover so that access to the working parts shall not be possible without breaking the seal. The sealing arrangement and number of seals shall be as per relevant IS/ requirement of Utility/AMI-IA.
The sealing point shall be as per CEA regulation 2006 with latest amendments. Supplier shall fix tamper evident barcoded holographic seal on left side of the meter. It shall not be possible to remove the seal intact. Details of holographic seals used by supplier shall be provided in hard as well as in soft copy on CD/email as per format given by BEST. Additional seals will be provided by BEST to supplier for putting them on meter body as per requirement.

Meter box:
The Meter Box if required by Utility/AMI-IA/purchaser, would be provided as per requirement of the Utility/AMI-IA/ purchaser and the material of the Meter Box should be such that it does not hamper communications.

Packing
- The meters shall be suitably packed for vertical/horizontal support to withstand handling during transportation.
- The meter shall be packed appropriately to ensure safe transportation, handling, identification and storage.
- All packing materials shall be as per environment law in force. The primary packing shall ensure protection against humidity, dust, grease and safeguard the meter's performance until its installation.
- The secondary packing shall provide protection during transportation.
- The packing case shall indicate "Fragile in nature" and direction of placement of box.
- The packing shall indicate marking details like Manufacturer's name, meters #s, quantity, etc.

Transportation

- The meter shall be compact in design. The meter block unit shall be capable of withstanding stresses likely to occur in actual service and rough handling during transportation.
- The meter shall be convenient to transport and immune to shock and vibration during transportation and handling.

- The meter should not be exposed to undue shock and mishandling during transportation.
- The stacking of box inside transport media should be such as to avoid their free movement.
- The packing should also be protected from rain and dust by transport media.
- The AMISP shall be responsible for any damage during transit due to inadequate or improper packing.

Testing and Manufacturing Facilities at Manufacturer's Place

The manufacturer shall have facilities of conducting Acceptance Testing as per IS 16444 Part 1.

Inspection

- The meters shall be sealed as per the mutual agreement of the supplier and the purchaser
- The Utility/AMI-IA/ purchaser may inspect the meter randomly as per sampling plan for acceptance testas per IS 16444 Part 1. The meters shall be tested for acceptance test as per IS 16444 Part 1
- All meters are factory tested at manufacturer's work place and RTR (Routine Test Report) to be submitted to BEST for each meters in soft copy before dispatch of meters.

Tender sample

- Tenderer shall submit 3 sample meters out of which one sample meter shall be without Ultrasonic welding to confirm constructional features and other destructive tests if any.
- After successful passing the tests carried out at BEST laboratory the tenderer shall give the demonstration of the meter offered against the tender to demonstrate the features incorporated in the meter.
- Sample meter submitted against the tender will not be returned to the supplier till the completion of guarantee period.

Guarantee.

- 7.5 years from the date of dispatch or 7 year from date of commissioning, whichever is earlier
- Manufacturer shall undertake a guarantee to replace meter up to a period of 7 Year from the date of supply. The meters which are found defective/inoperative within the guarantee period shall be replaced as per meter service level agreement.

Internal component specification

Sr No	Component	Requirement	Preferable Makes and Origin
1	Measurement or Computing Chips.	The measurement or computing chips used in the meter shall be with the Surface mount type along with Application Specific Integrated Circuits (ASIC).	USA: Analog Devices, Cyrus Logic, Atmel, Philips, Teridian, Dallas, ST, Texas Instruments, Motorola, Maxim, National Semiconductors, Freescale, On semiconductors. Germany: Siemens. South Africa: SAMES. Japan: NEC, Toshiba, Renasas, Hitachi. Austria: AMS. Holland: Philips (NXP).

Sr No	Component	Requirement	Preferable Makes and Origin
2	Memory Chips.	The memory chips shall not be affected by external parameters like sparking, high voltage spikes or electrostatic discharges.	USA: Atmel,Teridian, National Semiconductors, Philips, Texas Instruments, ST, Microchip, Spanson (Fujitsu), Ramtron. Japan: Hitachi, Renasas, Oki. Germany: Siemens.
		Meter shall have Non-Volatile Memory (NVM) to store energy meter data.	
		NVM shall be external (Outside ASIC).	
		In case of input power fail to Energy Meter it shall record last sampled important data in EEPROM using capacitance tank of power supply. Use of Non- rechargeable battery should only be restricted to minimum absolute power requirement of meter. Non-rechargeable battery shall not be used for this function.	
3	Display Modules.	The display modules shall be well protected from the external Ultra Violet (UV) radiations.	Display Make:- Singapore: E-smart, Bonafied Technologies, Display Tech. Korea: Advantek, Jebon, Union Display Inc. Japan: Hitachi, Sony, L&G. Malaysia: Crystal ClearTechnology Holland/Korea: Phillips. Hongkong: Genda. China: Tianma, JIA.
		The display visibility shall be sufficient to read the meter mounted at height of 0.5 meter as well as at the height of 2 meters.	
		The construction of the modules should be such that the displayed quantity shall not disturbed with the life of display (PIN Type).	
		It shall be trans reflective STN (STN – Super Twisted Nematic (160°) type industrial grade with extended temperature range.	
4	Optical Port.	Optical port shall be used to transfer the meter data to Common Meter Reading Instrument (CMRI/ DCU). The mechanical construction of the port shall be such to facilitate the data transfer easily.	USA: National Semiconductors, HP, Optonica, ST. Holland/Korea: Phillips. Japan: Hitachi. Taiwan: Ligitek. Osram, Everlight, Liteon, Avego.

Sr No	Component	Requirement	Preferable Makes and Origin

5	Electronic Components .	The active and passive components shall be of the surface mount type and are to be handled and soldered by the state of art assembly processes.	USA: National Semiconductors, Atmel, Philips, Texas Instruments, BC Component, Analog devices, ST, Maxim, Kemet, On semiconductors, Freescale, Intersil, Raltron, Fairchild, Muruta, Agilent, AVX, Abracon, Sipex, Diode Inc., Honeywell, Power Integration, Fox, Roham, Onsemi. Japan: Hitachi, Oki, AVZ or Ricoh, Toshiba, Epson, Kemet, Alps, Muruta, TDK, Sanyo, Samsung, Panasonic. Korea: Samsung. India: Keltron, Incap, VEPL, PEC, RMC, Gujarat Polyavx, Prismatic, MFR Electronic components Pvt. Ltd, Cermet. Germany: Vishay, Epcos, Diotech, Kemet.
		The Plated Through Hole (PTH) component should be positioned such a way that the leads of the component shall not be under stress and not touching the internal wires.	
6	Battery.	Non rechargeable Lithium battery with guaranteed life of about 10 years shall be used.	Varta, Tedirun, Sanyo or National, Panasonic, Tekcell, Vitzrocell, Mitsubishi.
		Battery for RTC and for Meter Display in absence of Power shallbe Separate.	
7	RTC.	The accuracy of RTC shall be as per relevant IEC/IS standards.	USA: Philips, Dallas Atmel, Motorola, Microchip, Maxell, Renata Japan: NEC or Oki.
8	Measuring Element.	Measuring elements used shall be as per Clause No. 8.11 of the specification.	
9	Power Supply.	The power supply shall be with the capabilities as per the relevant standards.	
		The power supply unit of the meter shall not be affected in case the maximum voltage of the system appears to the terminals due to faults or due to wrong connections.	
		The ratings of Power Supply module and power consumed by various modules and circuits shall be specified.	
		The power supply shall be at least 125% rated than the maximum load on the power supply.	
		In case of capacitive power supply, the voltage rating of series power circuit capacitor shall be adequate to withstand 440V AC applied at meter terminals continuously for 5 minutes without damage.	
		All the electrolytic capacitors shall have preferably low ESR value.	
10	Electrical Components.	The internal electrical component shall be of electrolytic copper & shall be protected from	
Sr No	**Component**	**Requirement**	**Preferable Makes and Origin**

		corrosion, rust etc.	
11	Mechanical Parts.	The other mechanical components shall be protected from corrosion etc. by suitable plating/painting methods.	
12	P.C.B.	Glass Epoxy, fire resistance grade FR4 with adequate strength.	
		PCB shall be Bare Board Test (BBT) certified.	
		The meter shall preferably with minimum jumper/wires/connectors.	
		PCB shall be suitably masked with protection coating.	
13	Push Button.	Carbon pill and silicon rubber contact / Tactile/ captive push button type high performance push buttons shall be used.	
14	Magnetic Tamper Detection Sensor.	Hall Effect IC/Inductor Sensor shall be used.	Make-Diode, Allegro etc.

Note:

i) The tenderer shall submit soft / hard copy of data / information sheets of all meter parts/ components.
ii) In case purchase order is placed bills of material shall be shown at pre dispatch inspection at factory works. iii)Manufacturing process should be preferably automated and tenderer shall list out activities wherein human intervention is required for assembling/testing of meters. For such activities tenderer shall declare quality standard adopted for carrying out such skilled job.

OBIS Code-

OBIS CODES-IMPORT MODE			
	Instantaneous Profile Parameters		
		DLMS OBIS	BEST OBIS
	Instantaneous Profile	1.0.94.91.0.255	1.0.94.91.0.255
	Instantaneous Scaler	1.0.94.91.3.255	1.0.94.91.3.255
1	Instantaneous R ph Voltage.	1.0.32.7.0.255	1.0.32.7.0.255
2	Instantaneous Y ph Voltage.	1.0.52.7.0.255	1.0.52.7.0.255
3	Instantaneous B ph Voltage.	1.0.72.7.0.255	1.0.72.7.0.255
4	Instantaneous R ph Current.	1.0.31.7.0.255	1.0.31.7.0.255
5	Instantaneous Y ph Current.	1.0.51.7.0.255	1.0.51.7.0.255
6	Instantaneous B ph Current.	1.0.71.7.0.255	1.0.71.7.0.255
7	Instantaneous Power Factor.	1.0.13.7.0.255	1.0.13.7.0.255
8	THD R ph Voltage	1.0.32.7.124.255	1.0.32.7.124.255
9	THD Y ph Voltage	1.0.52.7.124.255	1.0.52.7.124.255
10	THD B ph Voltage	1.0.72.7.124.255	1.0.72.7.124.255
11	THD R ph Current.	1.0.31.7.124.255	1.0.31.7.124.255
12	THD Y ph Current.	1.0.51.7.124.255	1.0.51.7.124.255

13	THD B ph Current.	1.0.71.7.124.255	1.0.71.7.124.255
14	Displacement Power Factor.	Not Specified	Not Specified

	Instantaneous Profile	1.0.94.91.0.255	1.0.94.91.0.255
	Instantaneous Scaler	1.0.94.91.3.255	1.0.94.91.3.255
15	Instantaneous 3ph kW load (Import). 1.0.1.7.0.255	1.0.1.7.0.255	
16	Instantaneous 3ph kVAr load with lag lead indication (Import).	1.0.3.7.0.255	1.0.3.7.0.255
17	Instantaneous 3ph KVA load (Import). 1.0.9.7.0.255	1.0.9.7.0.255	
18	THD Active Power R ph 1.0.35.7.124.255	1.0.35.7.124.255	
19	THD Active Power Y ph 1.0.55.7.124.255	1.0.55.7.124.255	
20	THD Active Power B ph 1.0.75.7.124.255	1.0.75.7.124.255	
21	Active Power Total R ph 1.0.21.7.0.255	1.0.21.7.0.255	
22	Active Power Total Y ph 1.0.41.7.0.255	1.0.41.7.0.255	
23	Active Power Total B ph 1.0.61.7.0.255	1.0.61.7.0.255	
24	Active Power Fundamental R ph 1.0.130.7.0.255	1.0.130.7.0.255	
25	Active Power Fundamental Y ph 1.0.131.7.0.255	1.0.131.7.0.255	
26	Active Power Fundamental B ph 1.0.132.7.0.255	1.0.132.7.0.255	
27	Instantaneous Frequency. 1.0.14.7.0.255	1.0.14.7.0.255	
28	Real Time Clock – Date and Time 0.0.1.0.0.255	0.0.1.0.0.255	
29	Current Cumulative kWh (Import). 1.0.1.8.0.255	1.0.1.8.0.255	
30	Current kWh ToD 1 (Import). Not Specified	1.0.1.8.1.255	
31	Current kWh ToD 2 (Import). Not Specified	1.0.1.8.2.255	
32	Current kWh ToD 3 (Import). Not Specified	1.0.1.8.3.255	
33	Current kWh ToD 4 (Import). Not Specified	1.0.1.8.4.255	34 Current kWh ToD 5 (Import). Not Specified 1.0.1.8.5.255

OBIS CODES -IMPORT MODE

	Instantaneous Profile Parameters	DLMS OBIS	BEST OBIS
	Instantaneous Profile	1.0.94.91.0.255	1.0.94.91.0.255
	Instantaneous Scaler	1.0.94.91.3.255	1.0.94.91.3.255
35	Fundamental Energy kWh. Not Specified	1.0.1.8.1.255	
36	Current Cumulative kVARh Lag (Import).	1.0.5.8.0.255	1.0.5.8.0.255
37	Current kvarh Lag TOD1 (Import). Not Specified	1.0.8.8.1.255	
38	Current kvarh Lag TOD2 (Import). Not Specified	1.0.5.8.2.255	39 Current kvarh – Lag TOD3 (Import). Not Specified 1.0.5.8.3.255
40	Current kvarh – Lag TOD4 (Import). Not Specified	1.0.5.8.4.255	
41	Current kvarh – Lag TOD5 (Import). Not Specified	1.0.5.8.5.255	42 Current Cumulative kvarh – Lead (Import). 1.0.8.8.0.255 1.0.8.8.0.255
43	Current kvarh – Lead TOD1 (Import). Not Specified	1.0.8.8.1.255	
44	Current kvarh – Lead TOD2 (Import). Not Specified	1.0.8.8.2.255	
45	Current kvarh – Lead TOD3 (Import). Not Specified	1.0.8.8.3.255	

46 Current kvarh – Lead TOD4 (Import). Not Specified 1.0.8.8.4.255

47 Current kvarh – Lead TOD5 (Import). Not Specified 1.0.8.8.5.255

48 Current Cumulative kVAh (Import). 1.0.9.8.0.255 1.0.9.8.0.255 49 Current kVAh.TOD1 (Import). Not Specified 1.0.9.8.1.255

Instantaneous Profile Parameters				
			DLMS OBIS	BEST OBIS
	Instantaneous Profile		1.0.94.91.0.255	1.0.94.91.0.255
	Instantaneous Scaler		1.0.94.91.3.255	1.0.94.91.3.255
50	Current kVAh.TOD2 (Import).	Not Specified	1.0.9.8.2.255	
51	Current kVAh.TOD3 (Import).	Not Specified	1.0.9.8.3.255	
52	Current kVAh.TOD4 (Import).	Not Specified	1.0.9.8.4.255	
53	Current kVAh.TOD5 (Import).	Not Specified	1.0.9.8.5.255	
54	Current MD in KVA with date & time (Import).	Not Specified	1.0.9.6.0.255	
55	Current MD in kVA with date & time TOD 1 (Import).	Not Specified	1.0.9.6.1.255	
56	Current MD in kVA with date & time TOD 2 (Import).	Not Specified	1.0.9.6.2.255	
57	Current MD in kVA with date & time TOD 3 (Import).	Not Specified	1.0.9.6.3.255	
58	Current MD in KVA with date & timeTOD4 (Import).	Not Specified	1.0.9.6.4.255	
59	Current MD in KVA with date & timeTOD5 (Import).	Not Specified	1.0.9.6.5.255	
60	MD Reset Count.	Not Specified	0.0.0.1.0.255 61	Cumulative MD Total. Not Specified 1.0.9.2.0.255
62	Phase Sequence	Not Specified	1.0.96.7.30.255	
63	Phase Angle 2	Not Specified	1.0.81.7.1.255	
64	Phase Angle 3	Not Specified	1.0.81.7.2.255	
65	Last Billing Date	0.0.0.1.2.255	0.0.0.1.2.255	
66	RF/ GSM signal Strength in milli db	0.b.96.12.5.255	0.b.96.12.5.255	

OBIS CODES -IMPORT MODE			
	Billing Profile Parameters		
		DLMS OBIS	BEST OBIS
	Billing Profile	1.0.98.1.0.255	1.0.98.1.0.255
	Billing Scaler	1.0.94.91.6.255	1.0.94.91.6.255
1	Bill Cumulative kWh (Import).	1.0.1.8.0.255	1.0.1.8.0.255
2	Bill kWh ToD1 (Import).	1.0.1.8.1.255	1.0.1.8.1.255
3	Bill kWh ToD2 (Import).	1.0.1.8.2.255	1.0.1.8.2.255
4	Bill kWh ToD3 (Import).	1.0.1.8.3.255	1.0.1.8.3.255
5	Bill kWh ToD4 (Import).	1.0.1.8.4.255	1.0.1.8.4.255
6	Bill kWh ToD5 (Import).	1.0.1.8.5.255	1.0.1.8.5.255
7	Bill Cumulative kVARh–Lag (Import).	1.0.5.8.0.255	1.0.5.8.0.255
8	Bill kVARh–Lag.TOD1 (Import).	Not Specified	1.0.5.8.1.255
9	Bill kVARh–Lag.TOD2 (Import).	Not Specified	1.0.5.8.2.255
10	Bill kVARh–Lag.TOD3 (Import).	Not Specified	1.0.5.8.3.255
11	Bill kVARh–Lag.TOD4 (Import).	Not Specified	1.0.5.8.4.255
12	Bill kVARh–Lag.TOD5 (Import).	Not Specified	1.0.5.8.5.255
13	Bill Cumulative kVARh–Lead (Import).	1.0.8.8.0.255	1.0.8.8.0.255
14	Bill kVARh–Lead.TOD1 (Import).	Not Specified	1.0.8.8.1.255
15	Bill kVARh–Lead.TOD2 (Import).	Not Specified	1.0.8.8.2.255
16	Bill kVARh–Lead.TOD3 (Import).	Not Specified	1.0.8.8.3.255
17	Bill kVARh–Lead.TOD4 (Import).	Not Specified	1.0.8.8.4.255
18	Bill kVARh–Lead.TOD5 (Import).	Not Specified	1.0.8.8.5.255
19	Bill Cumulative kVAh (Import).	1.0.9.8.0.255	1.0.9.8.0.255
20	Bill kVAh TOD1 (Import).	1.0.9.8.1.255	1.0.9.8.1.255
21	Bill kVAh TOD2 (Import).	1.0.9.8.2.255	1.0.9.8.2.255
22	Bill kVAh TOD3 (Import).	1.0.9.8.3.255	1.0.9.8.3.255
23	Bill kVAh TOD4 (Import).	1.0.9.8.4.255	1.0.9.8.4.255
24	Bill kVAh TOD5 (Import).	1.0.9.8.5.255	1.0.9.8.5.255
25	Bill MD in KVA with date & time (Import).	1.0.9.6.0.255	1.0.9.6.0.255
26	Bill MD in kVA with date & time ToD1 (Import).	1.0.9.6.1.255	1.0.9.6.1.255
27	Bill MD in kVA with date & time ToD2 (Import).	1.0.9.6.2.255	1.0.9.6.2.255
28	Bill MD in kVA with date & time ToD3 (Import).	1.0.9.6.3.255	1.0.9.6.3.255
29	Bill MD in kVA with date & time ToD4 (Import).	1.0.9.6.4.255	1.0.9.6.4.255
30	Bill MD in kVA with date & time ToD5 (Import).	1.0.9.6.5.255	1.0.9.6.5.255
31	Bill Power Factor (Import).	1.0.13.0.0.255	1.0.13.0.0.255

OBIS CODES -IMPORT MODE			
Billing Register		DLMS	BEST proposed OBIS Code
Technical requirements		Profile1.0.98.1.0.255	1.0.98.1.0.255
		Scaler1.0.94.91.6.255.	1.0.94.91.6.255
i	Month	0.0.0.1.2.255	0.0.0.1.2.255

OBIS CODES -IMPORT MODE			
Billing Register		**DLMS**	**BEST proposed OBIS Code**
ii	ToD wise Cumulative kWh ToD1 (Import).	1.0.1.8.1.255	1.0.1.8.1.255
	ToD2 (Import).	1.0.1.8.2.255	1.0.1.8.2.255
	ToD3 (Import).	1.0.1.8.3.255	1.0.1.8.3.255
	ToD4 (Import).	1.0.1.8.4.255	1.0.1.8.4.255
	ToD5 (Import).	1.0.1.8.5.255	1.0.1.8.5.255
iii	ToD wise Cumulative kVARh Lag ToD1 (Import).	Not Specified	1.0.5.8.1.255
	ToD2 (Import).	Not Specified	1.0.5.8.2.255
	ToD3 (Import).	Not Specified	1.0.5.8.3.255
	ToD4 (Import).	Not Specified	1.0.5.8.4.255
	ToD5 (Import).	Not Specified	1.0.5.8.5.255
iv	ToD wise Cumulative kVARh Lead ToD1 (Import).	Not Specified	1.0.8.8.1.255
	ToD2 (Import).	Not Specified	1.0.8.8.2.255
	ToD3 (Import).	Not Specified	1.0.8.8.3.255
	ToD4 (Import).	Not Specified	1.0.8.8.4.255
	ToD5 (Import).	Not Specified	1.0.8.8.4.255
v	ToD wise Cumulative kVAh ToD1 (Import).	1.0.9.8.1.255	1.0.9.8.1.255
	ToD2 (Import).	1.0.9.8.2.255	1.0.9.8.2.255
	ToD3 (Import).	1.0.9.8.3.255	1.0.9.8.3.255
	ToD4 (Import).	1.0.9.8.4.255	1.0.9.8.4.255
	ToD5 (Import).	1.0.9.8.5.255	1.0.9.8.5.255
vi	ToD wise Power factor ToD1 (Import).	Not Specified	1.0.13.0.1.255
	ToD2 (Import).		1.0.13.0.2.255
	ToD3 (Import).		1.0.13.0.3.255
	ToD4 (Import).		1.0.13.0.4.255
	ToD5 (Import).		1.0.13.0.5.255
vii	ToD wise MD in kVA with date & time ToD1 (Import).	1.0.9.6.1.255	1.0.9.6.1.255
	ToD2 (Import).	1.0.9.6.2.255	1.0.9.6.2.255
	ToD3 (Import).	1.0.9.6.3.255	1.0.9.6.3.255
	ToD4 (Import).	1.0.9.6.4.255	1.0.9.6.4.255
	ToD5 (Import).	1.0.9.6.5.255	1.0.9.6.5.255

OBIS CODES -IMPORT MODE		
Billing Register	**DLMS**	**BEST proposed OBIS Code**

Technical requirements		Profile1.0.98.1.0.255	1.0.98.1.0.255
		Scaler1.0.94.91.6.255	1.0.94.91.6.255
Viii	ToD wise MD in kW with date & time ToD1 (Import).	1.0.1.6.1.255	1.0.1.6.1.255
	ToD2 (Import).	1.0.1.6.2.255	1.0.1.6.2.255
	ToD3 (Import).	1.0.1.6.3.255	1.0.1.6.3.255
	ToD4 (Import).	1.0.1.6.4.255	1.0.1.6.4.255
	ToD5 (Import).	1.0.1.6.5.255	1.0.1.6.5.255
ix	Cumulative kWh (Import).	1.0.1.8.0.255	1.0.1.8.0.255
x	Cumulative kVARh – Lag (Import).	1.0.5.8.0.255	1.0.5.8.0.255
xi	Cumulative kVARh – Lead (Import).	1.0.8.8.0.255	1.0.8.8.0.255
xii	Cumulative kVAh (Import).	1.0.9.8.0.255	1.0.9.8.0.255
xiii	Average Power Factor (Import).	1.0.13.0.0.255	1.0.13.0.0.255
xiv	Bill MD in Kva with date and time (Import).	1.0.9.6.0.255	1.0.9.6.0.255
xv	Bill MD in Kw with date and time(Import).	1.0.1.6.0.255	1.0.1.6.0.255
Note	If any additional OBIS/Profile/Scaler code is provided then the tenderers/supplier shall submit the list for the parameters with detailed justification. Based on the detailed justification submitted by tenderers/supplier, BEST reserves right to accept/reject the OBIS/Profile/Scaler code.		

	OBIS CODES OF PARAMETERS REQUIRED IN EXPORT MODE		
	Instantaneous Profile Parameters		
		DLMS OBIS	**BEST OBIS**
	Instantaneous Profile	1.0.94.91.0.255	1.0.94.91.0.255
	Instantaneous Scaler	1.0.94.91.3.255	1.0.94.91.3.255
1	Instantaneous 3ph kW load. (Export).	1.0.2.7.0.255	1.0.2.7.0.255
2	Instantaneous 3ph kVAr load with lag lead indication(Export).	1.0.4.7.0.255	1.0.4.7.0.255
3	Instantaneous 3ph KVA load (Export).	1.0.10.7.0.255	1.0.10.7.0.255
4	Current Cumulative kWh (Export).	1.0.2.8.0.255	1.0.2.8.0.255
5	Current kWh ToD 1 (Export).	Not Specified	1.0.2.8.1.255
6	Current kWh ToD 2 (Export).	Not Specified	1.0.2.8.2.255
7	Current kWh ToD 3 (Export).	Not Specified	1.0.2.8.3.255
8	Current kWh ToD 4 (Export).	Not Specified	1.0.2.8.4.255
9	Current kWh ToD 5 (Export).	Not Specified	1.0.2.8.5.255
10	Current Cumulative kVARh Lag (Export).	1.0.7.8.0.255	1.0.7.8.0.255
13	Current kvarh Lag TOD1 (Export).	Not Specified	1.0.7.8.1.255
14	Current kvarh Lag TOD2 (Export).	Not Specified	1.0.7.8.2.255
15	Current kvarh – Lag TOD3 (Export).	Not Specified	1.0.7.8.3.255

16	Current kvarh – Lag TOD4 (Export).	Not Specified	1.0.7.8.4.255
17	Current kvarh – Lag TOD5 (Export).	Not Specified	1.0.7.8.5.255
18	Current Cumulative kvarh – Lead (Export).	1.0.6.8.0.255	1.0.6.8.0.255
19	Current kvarh – Lead TOD1 (Export).	Not Specified	1.0.6.8.1.255
20	Current kvarh – Lead TOD2 (Export).	Not Specified	1.0.6.8.2.255
21	Current kvarh – Lead TOD3 (Export).	Not Specified	1.0.6.8.3.255
22	Current kvarh – Lead TOD4 (Export).	Not Specified	1.0.6.8.4.255
23	Current kvarh – Lead TOD5 (Export).	Not Specified	1.0.6.8.5.255
24	Current Cumulative kVAh (Export).	1.0.10.8.0.255	1.0.10.8.0.255
25	Current kVAh.TOD1 (Export).	Not Specified	1.0.10.8.1.255
26	Current kVAh.TOD2 (Export).	Not Specified	1.0.10.8.2.255
27	Current kVAh.TOD3 (Export).	Not Specified	1.0.10.8.3.255
28	Current kVAh.TOD4 (Export).	Not Specified	1.0.10.8.4.255
29	Current kVAh.TOD5 (Export).	Not Specified	1.0.10.8.5.255
30	Current MD in KVA with date & time (Export).	Not Specified	1.0.10.6.0.255
OBIS CODES OF PARAMETERS REQUIRED IN EXPORT MODE			
	Instantaneous Profile Parameters		
		DLMS OBIS	**BEST OBIS**
	Instantaneous Profile	1.0.94.91.0.255	1.0.94.91.0.255
	Instantaneous Scaler	1.0.94.91.3.255	1.0.94.91.3.255
31	Current MD in kVA with date &time TOD 1(Export).	Not Specified	1.0.10.6.1.255
32	Current MD in kVA with date & time TOD 2(Export).	Not Specified	1.0.10.6.2.255
33	Current MD in kVA with date & time TOD 3 (Export).	Not Specified	1.0.10.6.3.255
34	Current MD in KVA with date & timeTOD4(Export).	Not Specified	1.0.10.6.4.255
35	Current MD in KVA with date & timeTOD5(Export).	Not Specified	1.0.10.6.5.255

OBIS CODES OF PARAMETERS REQUIRED IN EXPORT MODE			
Billing Register		**DLMS**	**BEST proposed OBIS Code**
Technical requirements		Profile1.0.98.1.0.255	1.0.98.1.0.255
		Scaler1.0.94.91.6.255	1.0.94.91.6.255
i	Month	0.0.0.1.2.255	0.0.0.1.2.255
ii	ToD wise Cumulative kWh ToD1 (Export).	1.0.2.8.1.255	1.0.2.8.1.255
	ToD2 (Export).	1.0.2.8.2.255	1.0.2.8.2.255
	ToD3 (Export).	1.0.2.8.3.255	1.0.2.8.3.255
	ToD4 (Export).	1.0.2.8.4.255	1.0.2.8.4.255
	ToD5 (Export).	1.0.2.8.5.255	1.0.2.8.5.255
iii	ToD wise Cumulative kVARh Lag ToD1 (Export).	Not Specified	1.0.7.8.1.255
	ToD2 (Export).	Not Specified	1.0.7.8.2.255
	ToD3 (Export).	Not Specified	1.0.7.8.3.255
	ToD4 (Export).	Not Specified	1.0.7.8.4.255
	ToD5 (Export).	Not Specified	1.0.7.8.5.255

iv	ToD wise Cumulative kVARh Lead ToD1 (Export).	Not Specified	1.0.6.8.1.255
	ToD2 (Export).	Not Specified	1.0.6.8.2.255
	ToD3 (Export).	Not Specified	1.0.6.8.3.255
	ToD4 (Export).	Not Specified	1.0.6.8.4.255
	ToD5 (Export).	Not Specified	1.0.6.8.5.255
v	ToD wise Cumulative kVAh ToD1 (Export).	1.0.10.8.1.255	1.0.10.8.1.255
	ToD2 (Export).	1.0.10.8.2.255	1.0.10.8.2.255
	ToD3 (Export).	1.0.10.8.3.255	1.0.10.8.3.255
	ToD4 (Export).	1.0.10.8.4.255	1.0.10.8.4.255
	ToD5 (Export).	1.0.9.8.5.255	1.0.9.8.5.255
vi	ToD wise Power factor ToD1 (Export).	Not Specified	1.0.13.0.1.255
	ToD2 (Export).		1.0.13.0.2.255
	ToD3 (Export).		1.0.13.0.3.255
	ToD4 (Export).		1.0.13.0.4.255
	ToD5 (Export).		1.0.13.0.5.255
vii	ToD wise MD in kVA with date & time ToD1 (Export).	1.0.10.6.1.255	1.0.10.6.1.255
	ToD2 (Export).	1.0.10.6.2.255	1.0.10.6.2.255
	ToD3 (Export).	1.0.10.6.3.255	1.0.10.6.3.255

OBIS CODES OF PARAMETERS REQUIRED IN EXPORT MODE			
Billing Register		**DLMS**	**BEST proposed OBIS Code**
	ToD4 (Export).	1.0.10.6.4.255	1.0.10.6.4.255
	ToD5 (Export).	1.0.10.6.5.255	1.0.10.6.5.255

OBIS CODES OF PARAMETERS REQUIRED IN EXPORT MODE			
Billing Register		**DLMS**	**BEST proposed OBIS Code**
Technical requirements		Profile1.0.98.1.0.255	1.0.98.1.0.255
		Scaler1.0.94.91.6.255	1.0.94.91.6.255
Viii	ToD wise MD in kW with date & time ToD1 (Export).	1.0.2.6.1.255	1.0.2.6.1.255
	ToD2 (Export).	1.0.2.6.2.255	1.0.2.6.2.255
	ToD3 (Export).	1.0.2.6.3.255	1.0.2.6.3.255
	ToD4 (Export).	1.0.2.6.4.255	1.0.2.6.4.255
	ToD5 (Export).	1.0.2.6.5.255	1.0.2.6.5.255
ix	Cumulative kWh (Export).	1.0.2.8.0.255	1.0.2.8.0.255
x	Cumulative kVARh – Lag (Export).	1.0.7.8.0.255	1.0.7.8.0.255

xi	Cumulative kVARh – Lead (Export).	1.0.6.8.0.255	1.0.6.8.0.255
xii	Cumulative kVAh (Export).	1.0.10.8.0.255	1.0.10.8.0.255
xiii	Average Power Factor (Export).	1.0.13.0.0.255	1.0.13.0.0.255
xiv	Bill MD in Kva with date and time (Export).	1.0.10.6.0.255	1.0.10.6.0.255
xv	Bill MD in Kw with date and time (Export).	1.0.2.6.0.255	1.0.2.6.0.255
Note	If any additional OBIS/Profile/Scaler code is provided then the tenderers/supplier shall submit the list for the parameters with detailed justification. Based on the detailed justification submitted by tenderers/supplier, BEST reserves right to accept/reject the OBIS/Profile/Scaler code.		

OBIS Codes				
Technical requirements			**DLMS**	**BEST proposed OBIS Code**
i	Low/High Voltage- a) Voltage failure, b) Voltage Unbalance, c) Overvoltage d) Under voltage.	Voltage Tamper Profile	0.0.99.98.0.255	0.0.99.98.0.255
		Voltage Tamper Summary Profile	0.0.21.0.5.255	0.0.21.0.5.255
ii	Current Reversal.	Current Tamper Profile	0.0.99.98.1.255	0.0.99.98.1.255
		Current Tamper Summary Profile	0.0.21.0.6.255	0.0.21.0.6.255
iii	Meter Cover Open.	0.0.99.98.5.255	Event ID 251	Event ID 251
iv	Magnetic Defraud Energy.		Not specified	1.0.1.8.0.255
	Magnetic Tamper Event with Date Time	Tamper Event	Event ID201,202	0.0.96.11.4.255
v	Low Current- a) Current Bypass, b) Current Open, c) Over Current.	Current Tamper Profile	0.0.99.98.1.255	0.0.99.98.1.255
vi	Current Unbalance.	Current Tamper Profile	0.0.99.98.1.255	0.0.99.98.1.255
		Current Tamper Summary Profile	0.0.21.0.6.255	0.0.21.0.6.255
vii	Low Power Factor	Low Power Factor	Event ID 205,206- Low Power Factor.	Event ID 205,206- Low Power Factor.
vii i	Additional points.	Cumulative Tamper Count	0.0.94.91.0.255	0.0.94.91.0.255
		No. of Power failure	0.b.99.98.2.255	0.0.96.7.0.255
		Cumulative Duration of Power failure		0.0.94.91.8.255
		Power ON Duration in minutes (bill to bill)		0.0.94.91.13.255

OBIS Codes		
Clause No 23.2	**DLMS**	**BEST proposed**

Technical requirements			OBIS Code
Events Profile			
Events.	Voltage Tamper Profile	0.0.99.98.0.255	0.0.99.98.0.255
	Current Tamper Profile	0.0.99.98.1.255	0.0.99.98.1.255
	Power Related Tampers	0.0.99.98.2.255	0.0.99.98.2.255
	Transaction Tamper Profile	0.0.99.98.3.255	0.0.99.98.3.255
	Other Tamper Profiles	0.0.99.98.4.255	0.0.99.98.4.255
	Non Rollover Tamper Profiles	0.0.99.98.5.255	0.0.99.98.5.255
Capture Parameters for Events of Scaler Profile			
Parameters.	Date and Time of event	0.0.1.0.0.255	0.0.1.0.0.255
	Event Code	0.0.96.11.e.255	0.0.96.11.e.255
	Current, IR	1.0.31.7.0.255	1.0.31.7.0.255
	Current, IY	1.0.51.7.0.255	1.0.51.7.0.255
	Current, IB	1.0.71.7.0.255	1.0.71.7.0.255
	Voltage, VRN	1.0.32.7.0.255	1.0.32.7.0.255
	Voltage, VYN	1.0.52.7.0.255	1.0.52.7.0.255
	Voltage, VBN	1.0.72.7.0.255	1.0.72.7.0.255
	Signed power factor, R-Phase	1.0.33.7.0.255	1.0.33.7.0.255
	Signed power factor, Y-Phase	1.0.53.7.0.255	1.0.53.7.0.255
	Signed power factor, B-Phase	1.0.73.7.0.255	1.0.73.7.0.255
	Cumulative Energy kWh	1.0.1.8.0.255	1.0.1.8.0.255
	Cumulative Energy kVAh	1.0.9.8.0.255	1.0.9.8.0.255
Tamper Summary Profile.		Additional Readout profile in IEC62056-62	
1	Voltage Tamper Summary Profile.	0.0.21.0.5.255	0.0.21.0.5.255
2	Current Tamper Summary Profile.	0.0.21.0.6.255	0.0.21.0.6.255
3	Other Tamper Summary Profile.	0.0.21.0.7.255	0.0.21.0.7.255
4	Non Rollover Tamper Summary Profile.	0.0.21.0.8.255	0.0.21.0.8.255

OBIS Codes			
Technical requirements		DLMS	BEST proposed OBIS Code
Parameters.			
1	Tamper Event ID.	0.0.96.11.e.255	0.0.96.11.e.255
2	Cumulative Tamper Count.	0.0.94.91.0.255	0.0.94.91.0.255
3	Cumulative Tamper Duration.	Not Specified	Not Specified
4	Date & Time of First Occurrence.	1.0.0.9.0.255	1.0.0.9.0.255
5	Date & Time of First restore.	1.0.0.9.1.255	1.0.0.9.1.255
6	Date & Time of Latest Occurrence.	1.0.0.9.2.255	1.0.0.9.2.255
7	Date & Time of Latest Restoration.	1.0.0.9.3.255	1.0.0.9.3.255

ESD.			Event ID 37	Event ID 37
Clause No , Self Diagnostic Features.		i) RTC Status-BIT 0 (0x01)ii) NVM Status- BIT 1(0x02) iii) RTC Battery- BIT 2(0x04)	Not Specified	1.0.96.5.0.255
General Purpose Parameters:-Profile Code: 0.0.94.91.10.255.				
1	Meter Serial Number.		0.0.96.1.0.255	0.0.96.1.0.255
2	Manufacture Name.		0.0.96.1.1.255	0.0.96.1.1.255
3	Firmware version for meter.		1.0.0.2.0.255	1.0.0.2.0.255
4	Meter Type.		0.0.94.91.9.255	0.0.94.91.9.255
5	Meter year of manufacture.		0.0.96.1.4.255	0.0.96.1.4.255
6	Category.		0.0.94.91.11.255	0.0.94.91.11.255
7	Current Rating.		0.0.94.91.12.255	0.0.94.91.12.255
8	Voltage Rating		1.0.0.6.0.255	1.0.0.6.0.255
9	Accuracy Class		Not Specified	1.0.96.141.0.255
10	Meter Constant		1.0.0.3.0.255	1.0.0.3.0.255
11	Internal CT Ratio.		1.0.0.4.2.255	1.0.0.4.2.255
12	Internal PT Ratio.		1.0.0.4.3.255	1.0.0.4.3.255
Programmable Parameters				
1	Real Time Clock-Date and Time.		0.0.1.0.0.255	0.0.1.0.0.255
2	Demand Integration Period.		1.0.0.8.0.255	1.0.0.8.0.255
3	Profile Capture Period.		1.0.0.8.4.255	1.0.0.8.4.255
4	Single-action Schedule for Billing Dates.		0.0.15.0.0.255	0.0.15.0.0.255
5	Activity Calendar for Time Zones.		0.0.13.0.0.255	0.0.13.0.0.255
6	Image Transfer		0.0.44.0.0.255	0.0.44.0.0.255
7	Metering Mode		0.0.94.96.19.255	0.0.94.96.19.255
8	Current Association MR (LLS secret change)		0.0.40.0.2.255	0.0.40.0.2.255
9	Current Association US (HLS Key change)		0.0.40.0.3.255	0.0.40.0.3.255
10	Current Association FW (HLS Key change)		0.0.40.0.5.255	0.0.40.0.5.255
11	Global Key (encryption and authentication)		0.0.43.0.e.255 (e=2,3,4,5)	0.0.43.0.e.255 (e=2,3,4,5)
12	Image Activation Single Action Shedule		0.0.15.0.2.255	0.0.15.0.2.255
13	Event Status Word Filter		0.0.94.91.26.255	0.0.94.91.26.255
Note	If any additional OBIS/Profile/Scaler code is provided then the tenderers/supplier shall submit the list for the parameters with detailed justification. Based on the detailed justification submitted by tenderers/supplier, BEST reserves right to accept/reject the OBIS/Profile/Scaler code.			

OBIS Codes			
Clause No , Load Survey		**DLMS (Load Profile OBIS Codes)**	**BEST proposed OBIS Code**
Technical requirements		Profile 1.0.99.1.0.255	1.0.99.1.0.255
		Scaler 1.0.94.91.4.255	1.0.94.91.4.255
1	Voltage of each phase	VRN 1.0.32.27.0.255	VRN 1.0.32.27.0.255
		VYN1.0.52.27.0.255	VYN 1.0.52.27.0.255
		VBN 1.0.72.27.0.255	VBN 1.0.72.27.0.255
2	Current of each phase	IR 1.0.31.27.0.255	IR 1.0.31.27.0.255
		IY 1.0.51.27.0.255	IY 1.0.51.27.0.255
		IB 1.0.71.27.0.255	IB 1.0.71.27.0.255
3	Kwh	1.0.1.29.0.255	1.0.1.29.0.255
4	kVAh	1.0.9.29.0.255	1.0.9.29.0.255
5	Kw	Not Specified	Need not specify. Derived parameter in BCS.
6	Kva	Not Specified	
7	PF	Not Specified	
8	kVarh(lag)	Not Specified	1.0.5.29.0.255
9	kVarh(lead)	Not Specified	1.0.8.29.0.255
10	Real Time Clock Date and Time	0.0.1.0.0.255	0.0.1.0.0.255
Daily Load Profile Parameters			
Profile		Not Specified	1.0.99.2.0.255
Scaler		Not Specified	1.0.94.91.5.255
1	Real Time Clock	Not Specified	0.0.1.0.0.255
2	Cumulative Energy, kWh	Not Specified	1.0.1.8.0.255
3	Cumulative Energy, kVAh	Not Specified	1.0.9.8.0.255
4	Cumulative Reactive Energy lag	Not Specified	1.0.5.8.0.255
5	Cumulative Reactive Energy kVArh Lead	Not Specified	1.0.8.8.0.255
6	Fundamental Energy kWh	Not Specified	1.0.1.8.1.255
Note	If any additional OBIS/Profile/Scaler code is provided then the tenderers/supplier shall submit the list for the parameters with detailed justification. Based on the detailed justification submitted by tenderers/supplier, BEST reserves right to accept/reject the OBIS/Profile/Scaler code.		

ANNEXURE-C1: LT Compact CTs for Three Phase LT CT Meters

Section I-General: - This specification covers manufacture test & supply of LT Current Transformer Bank of class 0.5 accuracy.

These LVCT Banks are required for installation of LVCT operated static energy metering system to measure accurate load current drawn at consumer installation through Current Transformer and further plays important

roll to measure electrical parameters such as kWh, kVARh, kVA Demand and KVAH etc. by static energy meter. The LVCT metering installation will be operated on 415 Volt, 50Hz, 3-phase, 4-wire solidly earthed system.

These LVCT Banks will be integrated part of metering system required to measure the Kwh energy of our L.V. consumers and to be mounted on wall in service position cabin.

If required these LVCT Banks will be connected to LVCTO meters through Adapters.

The metering CT Bank shall be suitable for operation under the following climatologically data of the city of Mumbai.

a) Ambient temperature: Varying from 15^0 C to 45^0 C.

b) Relative humidity: Varying 40% to 100%.

c) Rainfall in a year: Varying 1808mm to 3481.6mm.

Section II: Specification:

The secondary core (inside LVCT Bank) shall be ring type wound core manufactured from the virgin electrolytic grade copper metal of conductivity not less than 99.30%.

LVCTs shall be designed in accordance with IS:2705 (Part I & II) 1992/latest, for measuring C.T. unless specified.

All the LVCT Banks shall be suitably tropicalized and rated for the service conditions on site.

The CT Bank shall be liberally designed and manufactured from the best quality materials for satisfactory operation under onerous conditions without causing any permanent injury, shortening the life. It shall not be unnecessarily bulky and the gross weight shall be specified in the offer by the manufacturers.

Transformation ratio & rated burden: The transformation ratio i.e. rated primary current/rated secondary current for each CT in LVCT Bank shall be as given in Section 3.0 & the rated burden of each CT shall be 2.5 VA.

Instrument Security Factor: The Instrument security factor for each C.T. shall not be more than 5.

Accuracy Class: Each LVCT shall have accuracy class 0.5 and conforms to clause 3 of IS: 2705 (Part I& II) 1992 with latest amendments.

Temperature Rise: Each LVCT shall be suitable for continuous operation at rated primary current and with rated secondary burden. The temperature rise of the winding shall not exceed 40^0C over an ambient temperature 40^0C.

Variation in voltage and/or frequency: Each LVCT shall be designed to give the rated output without loss of accuracy (with temperature rise not exceeding that specified in Section 2.8) at any voltage within +6% of the rated voltage of 415 Volts and with the frequency variation of +6% of 50 Hz.

Insulation: Insulation of the winding shall be non-hygroscopic and shall not soften, lose shape or drain off under temperature variation. The core of the LVCTs and mounting clamps should be coated with epoxy/polyurethane compound.

LVCT Bank shall be properly supported by adequate size of metallic bracket and shall be so placed that it shall be away from live bus bar. The metallic bracket non corrosives Galvanized MS (mounting plate) shall be so placed that it shall bear the weight of LVCT Bank & Adapter and firmly hold the same on metering installation. It shall have high mechanical strength for bearing forces/tension during installation. The mounting plate performance shall be reliable throughout life of LVCT bank.

Secondary Terminals (Stud): Secondary studs shall be of brass nickel plated with high mechanical strength, so that they shall not bend or break during transportation or use. The LVCT operated meter will be mounted on these studs with/without Adapters. Hence, Secondary studs shall be of exact dimensions shown in our drawing.

The secondary current terminals should be half-rounded.

Secondary Terminal shall be suitable to carry 10A current continuously.

Primary bus bar size shall be as per drawing &bus bar shall be fabricated from flat EC (Electrolyte) grade virgin copper metal of conductivity not less than 99.30%.

In the inner side of LVCT the potential wire shall be crimped as well as soldered also.

Nut Bolt: The nut bolts shall be properly fixed in the holes provided on the busbar on P1 & P2. Nut bolt size is as follows:

Ratio of LVCTO	Nut bolt (mm)
150/5	35 x 10 with bimetallic washer.
200/5	35 x 10 with bimetallic washer.
300/5	35 x 10 with bimetallic washer.
400/5	50 x 12 with bimetallic washer.

Terminal Markings: Primary busbar shall have P1 and P2 permanent marking on busbar as well as Epoxy body. The incoming service cable will be terminated on P1 end located at bottom side of LVCT bank. P2 terminal will be outgoing to consumer load.

2.17 Secondary studs shall have markings as follows:

I] Current terminals:

a) R phase: 1S1,1S2
b) Y phase: 2S1,2S2
c) B phase: 3S1,3S2
d) Neutral: NS1, NS2

II] Voltage Terminals:

R, Y, B, N (As per meter manufacturers terminals may vary. Please refer respective drawings)

3.0 **Section III: Sizes of LVCTs:**

3.1 Sizes of LVCTs are as follows:1) 150/5 2) 200/5 3) 300/5 & 600/5

3.2 Colour: Colour of LVCT Banks as per ratios are as follows:

1)150/5: Brick red

2)200/5: Blue

3)300/5: Yellow

4)600/5: Brown

Section IV: Tests:

Type Tests Certificate: The Tenderer shall submit the Type Test Certificate of similar LVCT bank at the time of quoting the Tender. All tests specified under Clause 9 of IS:2705 (Part I) 1992 and Clause7 of IS:2705 (Part II) 1992 shall be carried out. The tenderer shall furnish Type Test certificates in duplicate. The Type Test reports shall not be older than Five (5) years from the opening date of the tender.

Additional tests:

Conductivity Test Certificate given by accredited& approved testing lab for Copper busbar used for primary busbar and copper wire used for secondary core shall be submitted.

Batch Certificate of Epoxy Resin from manufacturer shall be submitted.

In addition to the tests specified in clause 4.1, the purchaser reserves the right of carrying out any inspection on any reasonable test at the manufacturer's works during all stages of manufacturing of the LVCT banks as well as such test in purchaser's testing lab for confirmation of quality and performance of LVCT bank.

Tenderer shall have at least following test facilities at his works:

Ratio & phase angle measurement.

Power Frequency dry withstand test on Primary & Secondary windings.

Over–Voltage inter turn test.

Continuity Test: Manufacturer's shall provide certificate of the continuity between primary and secondary potential terminals.

Tests Reports: The successful Tender shall submit Routine Test Certificate for all LVCT banks as per IS: 2705/1992 after approval of proto type along with supply of the LVCT banks.

Section V: Dispatch Instructions:

Name Plate marking:

Metallic name plate of Anodized Aluminum shall be provided on the L.H.S. side of CT Bank. Each CT Bank shall have the following particulars indelibly marked on it.

Description: L.V. Metering LVCT Bank.

a) Manufacturer's Name.

b) Manufacturer's Serial Number/Year of manufacture (Height of the Serial Number shall be 7 mm). c)CT Ratios.
d) Rated Burden in Volt Ampere/Phase: VA.
e) Class of Accuracy.
f) Instrument Security Factor.
g) Rated Voltage &System Symbol.
h) Insulation Level.
i) Frequency.
j) Indian Standard (IS) No.
k) Property of BEST Undertaking.
l) P.O. Number.

In addition to above "Property of BEST Undertaking" shall be permanently engraved on epoxy body of CT bank.

Drawings: The tenderer shall refer our Drawings for all dimensional details (attached in Annexure-II) for our last procured CT Banks for various ratios & various meter manufacturers.

Tenderer shall manufacture LVCT Banks as per jointly approved drawings by representative of Tenderer and BEST Undertaking. The drawing contains overall dimension, spacing between phase & neutral busbar, dimensions of phase & neutral busbar, spacing between secondary current & potential studs and their dimensions, etc.

Tenderer shall prepare the drawing as per dummy meters available with Meters Department and mention all dimensional details in mm in the drawings for the offer. (The representative of the Tenderer may visit Meters Department before prior appointment to get the necessary details and physical check of the energy meters). The drawing shall be to scale and fully detailed. Tenderers shall submit the dimensional drawings in duplicate with the offer. All-important dimensions shall be given and the material of each component shall be indicated. Any deviations from the undertakings approved drawings shall clearly mention on the submitted drawings.

The successful tenderer shall submit the drawings in duplicate within 15 days from the receipt of Purchase Order and get the same approved from Divisional Engineer, Meters Department, B.E.S.&T. Undertaking, 2nd Floor, TTC Building inside Wadala Bus Depot, opp Dr. Ambedkar collage Dadar(East), Mumbai 400 008 during office working hours (i.e. 9.00 hrs to 17.00 hrs) on any working day (i.e. Monday to Friday).

Section VI: Special Instructions:

The tenderer shall physically inspect the existing LVCT banks of different ratios, LVCTO meters and adapters available with BEST prior to participating in the tender process at our office of the Divisional Engineer, Meters Department, B.E.S.&T. Undertaking, 2nd Floor, TTC Building inside Wadala Bus Depot, opp Dr. Ambedkar collage Dadar(East), Mumbai 400 008 during office working hours (i.e. 9.00 hrs to 17.00 hrs) on any working day (i.e. Monday to Friday).

Proto-type: Successful tenderer before going for full production of LVCT Bank, shall submit the proto-type for our approval within 4 weeks from the date of from the date of approval of drawing. After the approval for proto- type LVCT Bank is obtained from us, the successful tenderer shall start manufacturing LVCT Banks and deliver the same, as per delivery schedule.

Proto-type shall submit to MTS Department for the necessary testing and physical verification of dimensions.

In case, if the proto-type is failed at the first instance, one more chance will be given for submitting revised proto-type. If the proto-type fails second time, then the order will be cancelled and same will be transferred to other supplier as per rules & regulations of the Undertaking. This condition is applicable to all tenderers i.e.

regular supplier, semi-regular supplier and new supplier.

List of orders executed for the same shall be furnished giving details such as P.O. No & date, quantity supplied, client details etc. for the period of last 5 years.

The successful tenderer shall depute technical representative for discussion if required during the drawing approval stage so as to avoid delay.

Section VII: Inspection:

All the acceptance test shall be carried out at tenderers works or the testing lab of purchaser undertaking which may be required by the purchaser.

Cost of lot/proto-type inspection shall be borne by the tenderer.

Two officers of the undertaking shall be deputed for inspection & witnessing the tests.

Section VIII: Delivery Schedule:

Delivery schedule shall be intimated to successful tenderer at the time of placement of Purchase Order. Undertaking reserves the right to revise the delivery schedule.

Section IX: Guarantee:

LVCT banks shall be guaranteed for 24 months from the date of Acceptance of LVCT banks for manufacturing defects or bad workmanship by manufacturer. The tenderer will collect the damaged LVCT bank from our Kussara store at his own cost and will deliver the replaced LVCT bank with test report at our Kussara store.

10.0 Schedule of Guaranteed Technical Particulars (GTP)& Dimensional details shall be furnished as per Table below

11.0 For any clarification other than commercial terms, tenderer may contact Divisional Engineer, High Value Consumers Department, B.E.S.&T. Undertaking, 4th Floor, Tardeo Bus Station Complex, R.S. Nimkar Marg, Mumbai 400 008 during office working hours (i.e. 9.00 hrs to 17.00 hrs) on any working day (i.e. Monday to Friday).

12.0 **Packing & Delivery**

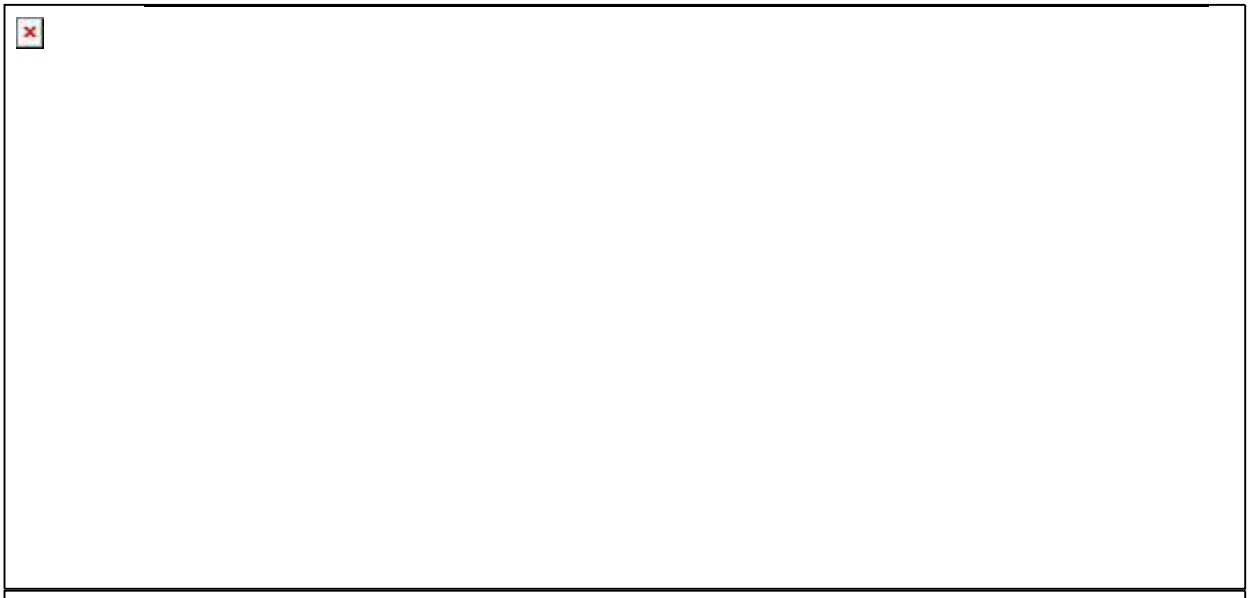
The supply of CT Bank shall be made by serially packed and starting to end serial numbers. Each CT Bank shall be packed in separate box/carton.

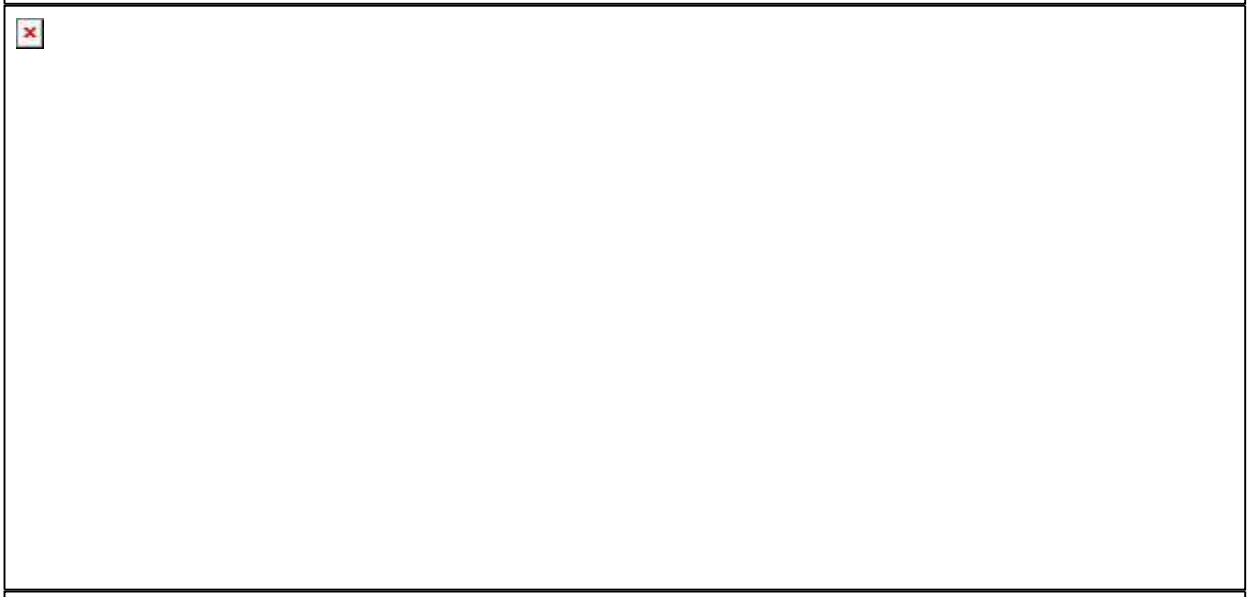
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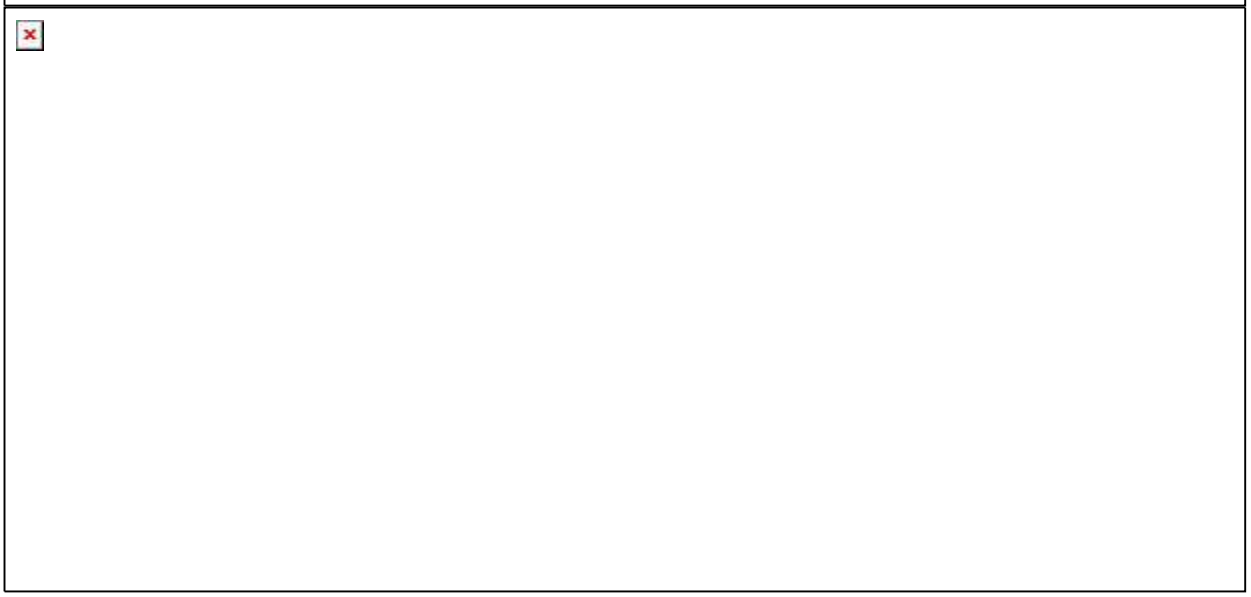
Supply of LV metering CT bank (LVCT): Schedule of Guaranteed Technical Particular (GTP).

Sr. No.	Description.	Specified Value.
1	Manufactures Name & Place of manufacturing.	
2	Brand Name.	
3	Applicable Standards.	IS: 2705/1992.
4	Accuracy Class.	0.5.

5	Frequency in Hz.	50 Hz.
6	Highest System Voltage.	660V.
7	Rated Voltage.	415V.
8	Primary Current.	150, 200, 300 & 600A
9	Second Current.	5A.
10	Rated Burden.	2.5VA.
11	Instrument Security Factor (ISF).	5 Max.
12	Insulation Level.	3Kv.
13	Temperature rise of winding above ambient temperature of 45°. At rated primary current at rated secondary burden.	40 max.
14	Class of Insulation.	Class B.
15	Insulation Type.	Epoxy Resin Cast.
16		
	5% of Rated Current.	1.5.
	20% of Rated Current.	0.75.
	100% of Rated Current.	0.5.
	120% of Rated Current.	0.5.
17		
	5% of Rated Current.	90.
	20% of Rated Current.	45.
	100% of Rated Current.	30.
	120% of Rated Current.	30.
18	Power Frequency withstand voltage kV.	3kV for 1 Sec.
19	Short Time withstand current kA/sec.	10kA for 1 Sec.
20	Core Material.	CRGO Silicon Steel M4 Grade.
21	Copper wire material.	Super Enameled Copper Wire.
22	Cross Section of Primary Bus bar.	Drawings provided below.
23	Cross Section of Secondary Winding.	1.6sq.mm.
24	Dimensional Drawing submitted.	Yes/No.
25	Type Test Certificate as per IS 2705:1992 submitted in complete from NABL accredited lab.	Yes/No
26	Tenderer shall agree to Specification Clause No 6.0, 7.0, 8.0 & 9.0.	Yes/No



















TECHNICAL SPECIFICATION FOR LT CT for DT Meters

GENERAL

This specification covers manufacture, test, & supply of LT Current transformers of class 0.5 accuracy.

The CTs shall be suitable for metering purpose.

TYPE:

The CTs shall be of ring type or window type (bar type or bus-bar type CT's shall not be accepted).

The secondary leads shall be terminated with Tinned Cooper rose contact terminals with arrangements for sealing purposes.

Polarity (both for primary and second leads) shall be marked.

The CTs shall be varnished, fiberglass tape insulated or cast resin, air-cooled type. Only super enameled electrolytic grade copper wires shall be used.

The CTs shall conform to IS 2705:Part-I & II/IEC:185 with latest amendments.

TECHNICAL DETAILS:

Technical details shall be as given below:

1.	Class of Accuracy	0.5s
2.	Rated Burden	5.00 VA
3.	Power Frequency Withstand Voltage	3KV
4.	Highest System Voltage	433 V
5.	Nominal System Voltage	400 V
6.	Frequency	50 Hz
7.	Supply System	3 Ph. Solidly grounded Neutral System

Transformation ratio shall be specified from the following standard ratings as per requirement :

Ratio	**1000/5**	**1500/5**

(Secondary with 1 A may be specified by the utility incase the same is desired.)

Bore diameter of the CT shall not be less than 60 mm. Ring type CTs shall have suitable clamp to fix the CT to panel Board, wherever required.

The limits of current error and phase angle displacement as per IS:2705 at several defined percentage of rated current are:

Accuracy Class	% Ratio error at % of rated current				Phase displacement in minutes at % of rated current			
	5	20	100	120	5	20	100	120
0.5	1.5	0.75	0.5	0.5	90	45	30	30

Note : Current error and phase displacement at rated frequency is required to be as above when the secondary burden from 25% to 100% of the rated burden i.e. 50 V A.

Rated extended primary current shall be 120% of rated primary Current in accordance with IS:2705 Pt-II.

Rated ISF (Instrument Security Factor) shall be declared by the manufacturer & marked on the CT.

CT's shall be made with good engineering practices. Core winding shall evenly spread stress & avoid stress concentration at any one point. Cast resin CT's sha;; be processed by hot curing method under controlled vacuum conditions.

The base shall be of hot dip galvanised steel.

4.0 TESTS:

4.1. TYPE TESTS:

4.1.1 Copies of all type tests as per IS.2705 Part-I and II including short time current & temperature rise tests in NABL accredited laboratory shall be submitted and got approved before commencement of supply.

ROUTINE TESTS:

4.2.1 The supplier shall conduct all the routine tests such as Ratio test, phase angle error test for 0.5 accuracy class as per IS 2705 Part I & II.

COMMISSIONING TEST :

In accordance with IS:2705, Power frequency test on primary winding shall be carried out after erection on site on sample basis.

MARKING :

The CTs shall have marking and nameplate as per IS 2705 in addition to class of insulation & ISF. The markings shall be indellible. The nameplate shall be securely fixed to the body of the CT.

PACKING:

Each CT shall be securely packed so as to withstand rough handling during transit and storage.

QUALITY ASSURANCE PLAN:

The requirements of clause 29.0 of Section – I of main specification for Energy Meters shall apply.

Annexure D Three phase CT/PT operated alternating current Smart Meter of Accuracy Class0.5S/ 0.2S (as required) –Feeder Meter, Boundary Meter, HT Consumers, etc.

General Standards Applicable for Meter

Unless otherwise specified elsewhere in this specification, the performance and testing of the meters shall conform to the following standards and amendments/revisions thereof.

Sl. No.	Standard No.	Title
1	IS 16444: Part 2 with latest amendments	AC Static Transformer Operated Watt-hour and VAR-Hour Smart Meters, class 0.2S, 0.5S and 1S
2	CBIP- Publication 325 with latest amendments	Standardization of AC Static Electrical Energy Meters
3	CBIP Technical report no. 111 with latest amendments	Specification for Common Meter Reading Instrument
4	IS:9000 with latest amendments	Basic Environmental Testing Procedures for Electronic & Electrical Items.
5	IS 12063 with latest amendments	Degrees of protection provided by enclosures of electrical equipment.
6	IS 14451, Part-2: 1999 with latest amendments	Telemetering for consumption and demand. Direct digital transfer of meter values.
7	IS 4905: 1999 with latest amendments	Methods for Random sampling.
8	IS 12346 with latest amendments	Specifications for Testing Equipment for AC Energy meter.
9	IS 15959 Part 3 (as applicable) with latest amendments	Data exchange for electricity meter reading, tariff and load control: Companion specification

Communication

Meter shall have ability to communicate with HES on any one of the technologies mentioned in IS 16444 (RF/Cellular) in a secure manner. The selection of communicationtechnology should be as per the site conditions and as per design requirement of the AMISPto meet the Service Level Agreements (SLAs). In case of cellular based meter, the meter shall accommodate SIM Card / e-SIM of any service provider. The meter shall log the removal of the plug-in type communication module removal /nonresponsive event with snapshot.

Other Specifications

Particulars	Specifications
Applicable Standards	The meters shall comply with IS 16444: Part2 for all requirements except for those parameters which havebeen specifically mentioned to be otherwise in this specification.
Reference Voltage	[As per relevant IS]
Current Rating	Ib 5A Imax 10A
Starting Current	As per IS 16444: Part2
Accuracy	Class 0.2S as per IS 16444: Part 2
Limits of error	As per IS 16444: Part 2
Operating Temperaturerange	As per IS 16444: Part 2
Humidity	As per IS 16444: Part 2
Frequency	As per IS 16444: Part 2
Influence Quantities	As per IS 16444: Part 2
Power Consumption ofmeter excluding communication module	As per I S 16444: Part 2
Current and Voltage circuit	As per IS 16444: Part 2
Running at No Load	As per IS 16444: Part 2
Test output device	As per IS 16444: Part 2
Meter Display	As given in the document

Name Plate & marking Meter Display	Manufacturer's name Type designation Number of phases and wires Serial number (Meter serial number shall be laser printed on name plate instead on sticker). Serial number along with barcode Month and Year of manufacture Unit of measurement Reference voltage ,frequency Ref. temperature Rated basic and maximum Current Meter constant (imp/kWh) 'BIS' Mark Class index of meter

Particulars	Specifications
	Property of BEST Undertaking Purchase Order No. & date Guarantee period. Sign of double square Country of manufacture. Firmware version of meter Symbol of load switch. NIC serial NO (Shall be visible from Communication Module Slot) Compatibility of NIC Card.
Time of Use (In case of net-meter both export & import parameters to be measured)	As given in the document
Parameters to be measured	As per IS 16444: Part 2 / IS 15959: Part 3 (as applicable) RF/ GSM signal Strength in milli db to be available in instantaneous parameters. All energies and demand will be available TOD wise in billing/ LS parameters.
Power Quality Information	As per IS 15959: Part 3 (as applicable)
Maximum Demand	As per IS 15959: Part 3 (as applicable)
Load Survey/Interval Data	DIP: 15 min SIP: 15 min LS Days: 45 days
LED/LCD Indicators	As per IS 16444: Part 2
Tamper/Event recording	As given in the document

Alarm	As per IS 16444 / IS 15959: Part 3 (as applicable)
Measuring Elements	a. Current Transformer shall be provided as measuring element in the phase circuit. b. Additional CT/Shunt shall be provided in the neutral circuit of meter to detect phase CT bypass. Any unbalance current of vector summation of all three phase currents, if not recorded as neutral current, to be treated as tamper event, and also current imbalance to be detected. c. The meter shall have CTs with Magnetic shielding and same shall be tested separately prior to assembly. d. The Current Transformers used shall not saturate with passage of DC current as per IS: 13779:1999 with latest amendments.
Anti-Tamper features	The meter shall continue working under tamper conditions as defined in IS 15959 Part 3 and would log the event and send alarm at HES after logging of the defined tamper features as per IS 15959 Part 3. As given in the document
Programmability	As per IS 16444: Part 2
Communication	As per IS 16444: Part 2

Particulars	Specifications
Communication Protocol	As per IS 15959: Part 3 (as applicable)
Real time clock (RTC)	As per IS 16444: Part 2 / IS 15959: Part 3 (as applicable)
Data Retention	As per IS 16444: Part 2
Battery Backup	Meter shall be supplied with separate battery backup for RTC.
Data display facility (manual/Auto)	As given in the document
Remote Firmware Upgrade	As per IS 15959: Part 3 (as applicable)
Calibration	Meters shall be software calibrated at factory and modifications in calibration shall not be possible at site by any means. However parameters like RTC, TOD slots & timings, DIP (billing & load survey), billing date change, Pre paid/post paid, Set metering mode (Import/Export), display setting, shall be reconfigure through CMRI and remotely over the air (OTA), and any other support will be provided without any additional cost to BEST till the useful life of the meters.
Meter Dimension in MM	Is not more than 250L*200W*100H

Software and communication compatibility	The bidder shall supply software required for communication though local (CMRI and BCS software) and remote (AMI) connectivity free of cost and necessary training. For existing meter manufacturer, it should be ensured that all meters (existing non- smart & upcoming smart meters) can be read through one BCS only. The list of OBIS codes for the parameters is provided in the document. There shall be facility to export the data in Excel/txt/csv/PDF and XML format.
KVAH & KVA calculation	Meter shall be programed as Lag+ Lead configuration i.e. Leading PF shall not be considered as unity
Plug-in Communication Module	The Smart Meters shall be have a dedicated sealable slot for accommodating plug-in type bi -directional communication module which shall integrate the respective communication technology (RF Mesh/ Cellular) with the Smart Meters, leading to easy adaptability for network interfaces (WAN/NAN).The Plug-In module shall be field hot swappable/ replaceable. Same NIC shall work with different types of meters of same make (1P, 3P, LTCT, HT etc).
Optical Port	The meter shall have optical port for downloading data. Optical port shall be with a rust resistance coated metal ring to hold magnet of downloading probe. The optical head used for meter reading shall comply with IEC 62056-21 as far as physical construction is concerned. 10 Nos. of optical chords shall be provided for downloading the data from Meter to PC using BCS software in the Lab. The Optical Port provided on meter shall have flap & sealing provision.
Internal component specification	AS given in the document

Data display facility (auto/manual)

As given in the annexure of the document
Meter display should not go in to sleep mode during Power-On condition in case the push button is notoperated for more than 10 minutes.

TOD Feature:

The meter shall be capable of measuring Cumulative Energy (KWh), KVarh Lag, Kvarh Lead, Kvah and MD (KW, KVA)with time of day (TOD) registers having 5 zones (no. of zones & time slot shall be programmable by CMRI with adequate security level). TOD Slot Configuration shall be as follows-

Slot	Time Slots
TOD 1	22 to 06 Hrs
TOD 2	06 to 09 Hrs

TOD 3	09 to 12 Hrs
TOD 4	12 to 18 Hrs.
TOD 5	18 to 22 Hrs

Immunity against external influencing signals: Magnetic Field:

Meter shall record accurate energy in case of any external influencing signals in line with IS 13779:1999 Cl.11.2 and variation in limits of error (upto 100% Imax) shall be as per the table 13 of IS 14697. Meter shall be immune to magnetic field such that it shall not affect the normal overall functionality However, in case of abnormal magnetic field as defined below meter shall perform as per the following features:

a) Meter shall log the event in its memory as" MAGNET" with date and time stamp within 30 sec or immediate of application of abnormal magnetic field and shall start recording at 100% Imax and after removal of magnet, back to normal recording within 30 sec or immediate.
b) Meter shall show "Magnet" in the display.

Abnormal Magnetic field is defined as below;

a) Continuous DC magnetic induction: >0.20 Tesla ± 5%(Value of the magneto motive force to be applied shall be generally >10000 ATs, Should be immune up to 0.20Tesla)
b) AC magnetic induction: Immune for 10 milli Tesla (if produced with circular metal core with square cross section as specified in CBIP latest report with 2800 AT
c) Permanent Magnet: Immune up to 0.5T and Event logging >0.5T

Electrostatic Discharge (ESD)

Meter shall be immune up to 50 kV and shall record accurate energy as per IS-13779:1999.Meter shall log the event into memory as 'ESD' with date & time stamp for any ESD greater than 50 kV and shall show 'ESD' in the display.

The shielding around the meter shall be such that it does not get affected by high voltage, high and low energy impulse when comes in contact with meter from any side.

The meter should immune to high/ low frequency Jammer devices. Meter shall log event in its memory as jammer with date and time stamp along with snapshot.

The meter should be immune and log the tamper on application of any other higher magnetic field of any frequency waves, micro waves

Neutral Disturbance

The meter shall log in the memory as 'NEUTRAL DISTURBANCE' with date and time stamp and show 'ND' in the display for Frequency variation below 45 Hz and above 55 Hz with time delay of 2 min and for Pulsating DC and Chopped AC of any value with time delay of 2 min.

The meter shall not saturate on passage of direct current, which can cause the meter either to stop recording/ record inaccurately. DC injection shall be tested both in phase and

neutral. Measurement by meter shall not get influenced by injection of DC signal/ DC pulse upto 330V and for any value beyond this, the meter shall log the event into memory as 'NEUTRAL DISTURBANCE' with date & time stamp and shall show 'ND 'in the display after time delay of 2 min(occurrences and restoration time).

The meter shall record energy proportional to the current and V Ref when any of the tamper circuits are used to tamper energy using a diode or a variable resistance or a variable capacitance energy saving device. The measurement by meter shall not get influenced by injection of AC Voltages/Chopped signal/DC signal/ DC pulse of low frequency and harmonics. The meter should be immune to such Neutral Disturbance. In case the meter accuracy is disturbed under Neutral Disturbance, it should be able to log the event.

Abnormal and Tamper conditions

The meter shall record forward energy under any abnormal conditions.
All the tamper events i.e. shall be logged in the memory of the meter with date and time stamp of occurrence and restoration along with instantaneous electrical parameter (Voltage, Current (phase and neutral) , energy, PF , frequency)

Meter shall store cumulative count and cumulative durations all the tamper event which have logged by meter from the date of energization till life of meter.

Tamper count shall be incremented only on the occurrence of the any tamper event with date and time
Stamp on FIFO basis. The event which is not restored should not be removed from its meter memory and
FIFO should not applicable for unrestored event.
The cover open tamper detection should be through heavy duty, sturdy micro switch such that it should not
Operate on vibration or impact during handling or testing.
The meter shall register correctly if supply neutral is not available at the meter neutral terminal. The meter shall work in absence of two incoming wires. It shall keep recording correctly in case of unbalance system voltage.

The meter shall keep working accurately irrespective of the phase sequence of the supply.

The meter shall be able to differentiate between actual CT reversals and condition arising out of unbalanced / unhealthy capacitor bank.

During Voltage Failure event, the meter shall record energy proportional to the current and V Ref (240V).
Meter shall have neutral CT for tamper identification and analysis.
The event compartments shall be IS 15959 Part-1 table 9. The size of compartments should be such that all above event are accommodated in the assigned event compartment.
i.e. if in case of voltage compartment assigned to 4 number of events then the minimum size of this compartment should be such that it should accommodate sum of all maximum number of events as per below table. Transaction event compartment size shall be minimum 100 events

Sr. No.	Tampers/ Failures	Phase wise	Compartment Size	Logic/ Condition other than standard	Persistence time	
					Occ Time (min)	Rec Time (min)
1	Voltage Failure	YES	25	Occ: Voltage <50 V: and current > 2% Ib. Res: Vph ≥50 V (Independent of current)	5	5
2	Voltage unbalance	NO	25	Occ : (Vmax-Vph)>10% Vn and Vphase : 50 V<Vphase> 69 V Res : (Vmax-Vph)<10% Vn and Vphase : 50 V<Vphase> 69 V	5	5
3	High Voltage	YES	25	Vph > 110% of Vref	30	30
4	CT open	YES	25	Occ: Iph < 1%Ib, >5% Ib in any of the other two phases (Ex: if Rph <1% of Ib, Y or B should be > 5% Ib) Res: Iph > 1% Ib in tampered phase	30	30
5	Current unbalance	NO	25	Occ : Imax – Imin > 30% of Iavg Res : Imax – Imin < 30% of Iavg	15	15
6	CT Bypass	YES	25	Occ: Iph < 1%Ib Res: Iph > 2% Ib	30	30
7	Current reversal	YES	25	1. Active current negative 2. PF > 0.3	2	2

Sr. No.	Tampers/ Failures	Phase wise	Compartment Size	Logic/ Condition other than standard	Persistence time	
					Occ Time (min)	Rec Time (min)

8	Magnet	NO	25	Whenever meter sense magnetic field it shall record Active and Apparent energy at Imax at UPF	Immediate	Immediate
9	Neutral Disturbance	NO	25	Vph > 150% Vref In case of external signal injection (Chopped DC, Chopped AC and DC injection through diode)	5	5
10	ESD/JAMMER	NO	25	Occ: Immunity upto 50 KV, > 50KV event logged In memory Res: Removal of ESD and Jammer Device	2	2
11	Low PF Tamper	YES	25	PF < +/- 0.5	5	5
12	Top Cover open	NO	5	When cover opens by more than 2 to 4 mm.	Immediate	NA
13	Invalid Phase Association	NO	5	IF invalid phase association	5	5
14	NIC card Removed (Immediate)	NO	25	OCC: On removal of card RES: On Inserction card	Immediate	Immediate
15	Power On/Off	NO	25	Occ: Actual voltage OFF Res: Actual voltage ON	5	5

In case of Bi-directional meters current reversal and magnet tamper conditions to be made accordingly.

Anti-tamper features

The meter shall continue recording energy under tamper conditions as defined in IS 15959 Part 2 and would log the event and send alarm at Head End System after detection of the defined tamper features as per IS 15959 Part 2.

Type Tests & Test Certificates

Smart Meter shall be type tested for tests as per relevant parts of IS 16444

(latest versions), and certified by Indian Standard wise list of BIS recognized labs as available at https://bis.gov.in/index.php/laboratorys/list-of-bis-recognized-lab/. The number of sampling for testing of meters and criteria for conformity would be as per IS 16444(as amended up to date). Necessary copies of test certificates shall be submitted as per agreement with the Utility/AMI-IA.

Routine & Acceptance Tests

The Factory Acceptance and Routine tests shall be carried out as per IS 16444 Part 1.

General & Constructional requirements

Meter shall be BIS marked as per IS 16444 Part 1. General & construction requirement shall be as per IS 16444/IS 13779

Meter base & cover - Meter base & cover shall be as per IS 16444 Part1 / IS 13779. The meter Base& cover shall be 'Break to open' design. The material for meter base and cover shall be made of high-grade polycarbonate.

The meter Base & cover shall be ultrasonically welded / Chemically welded or other suitable bonding technology and it will not be possible to remove the cover from the base without evidenceof damage

Terminal block & cover - As per IS 16444 Part 1/IS 13779

The terminal cover shall be transparent and short. The terminal cover shall be fully enclosed type.

The connection diagram shall be marked on Terminal Block cover.

Design

Voltage circuit, sealing arrangement, terminal block, terminal cover and nameplate etc. shall be in accordance with IS-16444 Part 1 (latest version). The meter shall be compact and reliable in design,easy to transport and immune to vibration and shock involved in transportation and handling

Name plate and marking

The meter should bear a name plate clearly visible, effectively secured against removal and indelibly/distinctly marked in accordance with relevant IS. In addition, "Name of the Utility/AMI-IA", purchase order no. & year/month of manufacturing shall be provided on the meter name plate. The rating plate information shall be as per relevant IS.

Connection diagram: As per IS 16444 Part 1

Fixing arrangements:

The meter shall be mounted type. The Meter should have three fixing holes, one at top and two at the bottom. The Top hole should be such that the holding screw is not accessible to the consumer after fixing the meters. The lower screws should be provided under sealable terminal cover. The requisite fixing screws shall be supplied with each meter.

Sealing arrangement:

Arrangements shall be provided for proper sealing of the meter cover so that access to the working parts shall not be possible without breaking the seal. The sealing arrangement and number of seals shall be as per relevant IS/ requirement of

Utility/AMI-IA.

The sealing point shall be as per CEA regulation 2006 with latest amendments. Supplier shall fix tamper evident barcoded holographic seal on left side of the meter. It shall not be possible to remove the seal intact. Details of holographic seals used by supplier shall be provided in hard as well as in soft copy on CD/email as per format given by BEST. Additional seals will be provided by BEST to supplier for putting them on meter body as per requirement.

Meter box:

The Meter Box if required by Utility/AMI-IA/purchaser, would be provided as per requirement of the Utility/AMI-IA/ purchaser and the material of the Meter Box should be such that it does not hamper communications.

Packing

- The meters shall be suitably packed for vertical/horizontal support to withstand handling duringtransportation.
- The meter shall be packed appropriately to ensure safe transportation, handling, identificationand storage.
- All packing materials shall be as per environment law in force. The primary packing shall ensure protection against humidity, dust, grease and safeguard the meter's performance until its installation.
- The secondary packing shall provide protection during transportation.
- The packing case shall indicate "Fragile in nature" and direction of placement of box.
- The packing shall indicate marking details like Manufacturer's name, meters #s, quantity, etc.

Transportation

- The meter shall be compact in design. The meter block unit shall be capable of withstandingstresses likely to occur in actual service and rough handling during transportation.
- The meter shall be convenient to transport and immune to shock and vibration duringtransportation and handling.
- The meter should not be exposed to undue shock and mishandling during transportation.

- The stacking of box inside transport media should be such as to avoid their free movement.

- The packing should also be protected from rain and dust by transport media.
- The AMISP shall be responsible for any damage during transit due to inadequate or improperpacking.

Testing and Manufacturing Facilities at Manufacturer's Place

The manufacturer shall have facilities of conducting Acceptance Testing as per IS 16444Part 1.

Inspection

- The meters shall be sealed as per the mutual agreement of the supplier and the purchaser
- The Utility/AMI-IA/ purchaser may inspect the meter randomly as per sampling plan for acceptance testas per IS 16444 Part 1. The meters shall be tested for acceptance test as per IS 16444 Part 1
- All meters are factory tested at manufacturer's work place and RTR (Routine Test Report) to be submitted to BEST for each meters in soft copy before dispatch of meters.

Tender sample

- Tenderer shall submit 3 sample meters out of which one sample meter shall be without Ultrasonic welding to confirm constructional features and other destructive tests if any.
- After successful passing the tests carried out at BEST laboratory the tenderer shall give the demonstration of the meter offered against the tender to demonstrate the features incorporated in the meter.
- Sample meter submitted against the tender will not be returned to the supplier till the completion of guarantee period.

Guarantee.

- 7.5 years from the date of dispatch or 7 year from date of commissioning, whichever is earlier
- Manufacturer shall undertake a guarantee to replace meter up to a period of 7 Year from the date of supply. The meters which are found defective/inoperative within the guarantee period shall be replaced as per meter service level agreement.

Internal component specification

Sr No	Component function	Requirement	Preferable Makes and Origin

1	Measurement or Computing Chips.	The measurement or Computing chips used in the meter shall be with the Surface mount type along with Application Specific Integrated Circuits (ASIC).	USA: Analog Devices, Cyrus, Logic, Atmel, Philips, Teridian, Dallas, ST, Texas Instruments, Motorola, Maxim, National Semiconductors, Freescale, On semiconductors. Germany: Siemens. South Africa: SAMES. Japan: NEC, Toshiba, Renasas, Hitachi. Austria: AMS. Holland: Philips (NXP).
2	Memory Chips.	The memory chips shall not be affected by external parameters like sparking, high voltage spikes or electrostatic discharges.	USA: Atmel,Teridian, National Semiconductors, Philips Texas Instruments, ST, Microchip, Spanson (Fujitsu), Ramtron. Japan: Hitachi, Renasas, Oki. Germany: Siemens.
		Meter shall have Non-Volatile Memory (NVM) to store energy meter data.	
		NVM shall be external (Outside ASIC).	
		In case of input power fail to Energy Meter it shall record last sampled important data in EEPROM using capacitance tank of power supply. Use of Non-rechargeable battery should only be restricted to minimum absolute power requirement of meter. Non-rechargeable battery shall not be used for this function.	
3	Display Modules.	The display modules shall be well protected from the external Ultra Violet (UV) radiations.	Display Make:- Singapore: E-smart, Bonafied Technologies, Display Tech. Korea: Advantek, Jebon, Union Display Inc. Japan: Hitachi, Sony, L&G. Malaysia: Crystal ClearTechnology. Holland/Korea: Phillips. Hongkong: Genda. China: Tianma, JIA.
		The display visibility shall be sufficient to read the meter mounted at height of 0.5 meter as well as at the height of 2 meters.	

Sr No	Component function	Requirement	Preferable Makes and Origin

		The construction of the modules should be such that the displayed quantity shall not disturbed with the life of display (PIN Type).	
		It shall be trans reflective STN (STN – Super Twisted Nematic (160°) type industrial grade with extended temperature range.	
4	Optical Port.	Optical port shall be used to transfer the meter data to Common Meter Reading Instrument (CMRI/ DCU). The mechanical construction of the port shall be such to facilitate the data transfer easily.	USA: National Semiconductors, HP, Optonica, ST. Holland/Korea: Phillips. Japan: Hitachi. Taiwan: Ligitek. Osram, Everlight, Liteon, Avego.
5	Electronic Components.	The active and passive components shall be of the surface mount type and are to be handled and soldered by the state of art assembly processes. The Plated Through Hole (PTH) component should be positioned such a way that the leads of the component shall not be under stress and not touching the internal wires.	USA: National Semiconductors, Atmel, Philips, Texas Instruments, BC Component, Analog devices, ST, Maxim, Kemet, On semiconductors, Freescale, Intersil, Raltron, Fairchild, Muruta, Agilent, AVX, Abracon, Sipex, Diode Inc., Honeywell, Power Integration, Fox, Roham, Onsemi. Japan: Hitachi, Oki, AVZ or Ricoh, Toshiba, Epson, Kemet, Alps, Muruta, TDK, Sanyo, Samsung, Panasonic. Korea: Samsung. India: Keltron, Incap, VEPL, PEC, RMC, Gujarat Polyavx, Prismatic, MFR Electronic components Pvt. Ltd, Cermet. Germany: Vishay, Epcos, Diotech, Kemet.
6	Battery.	Non rechargeable Lithium battery with guaranteed life of about 10 years shall be used.	Varta, Tedirun, Sanyo or National, Panasonic, Tekcell, Vitzrocell, Mitsubishi.
		Battery for RTC and for Meter Display in absence of Power shall be Separate.	
7	RTC.	The accuracy of RTC shall be as per relevant IEC/IS standards.	USA: Philips, Dallas Atmel, Motorola, Microchip, Maxell, Renata Japan: NEC or Oki.

Sr No	Component function	Requirement	Preferable Makes and Origin

8	Measuring Element.	Measuring elements used shall be as per Clause No. 8.11 of the specification.	
9	Power Supply.	The power supply shall be with the capabilities as per the relevant standards.	
		The power supply unit of the meter shall not be affected in case the maximum voltage of the system appears to the terminals due to faults or due to wrong connections.	
		The ratings of Power Supply module and power consumed by various modules and circuits shall be specified.	
		The power supply shall be at least 125% rated than the maximum load on the power supply.	
		In case of capacitive power supply, the voltage rating of series power circuit capacitor shall be adequate to withstand 440V AC applied at meter terminals continuously for 5 minutes without damage.	
		All the electrolytic capacitors shall have preferably low ESR value.	
10	Electrical Components.	The internal electrical component shall be of electrolytic copper & shall be protected from corrosion, rust etc.	
11	Mechanical Parts.	The other mechanical components shall be protected from corrosion etc. by suitable plating/painting methods.	
12	P.C.B.	Glass Epoxy, fire resistance grade FR4 with adequate strength.	
		PCB shall be Bare Board Test (BBT) certified.	
		The meter shall preferably with minimum jumper/wires/connectors.	

Sr No	Component function	Requirement	Preferable Makes and Origin
		PCB shall be suitably Masked with protection coating.	
13	Push Button.	Carbon pill and silicon rubber contact / Tactile/ Captive Push button type high performance push buttons shall be used.	
14	Magnetic Tamper Detection Sensor.	Hall Effect IC/Inductor Sensor shall be used.	Make-Diode, Allegro etc.

DISPLAY PARAMETERS

Meter Display Sequence of HT CTPTO SMART METER

Meter shall have at least three display modes for showing display parameters. Auto mode shall be as Default in which parameters will scroll at the interval of 10 seconds. Minimum 7 digit integers for energy parameters shall be provided.

1 Auto Mode:

The offered meter shall be capable of recording and displaying following readings in Auto mode display. The display shall follow the following sequence as mentioned below in interval of 10 seconds automatically.

Minimum 7-digit integers for energy parameters shall be provided.

Sequence	Display
1	Complete LCD Test.
2	Meter Number.
3	Present Time.
4	Present Date.
5	Current kWh.
6	Current kWh for ToD 1
7	Current kWh for ToD 2
8	Current kWh for ToD 3
9	Current kWh for ToD 4
10	Current kWh for ToD 5
11	Current kVAh.
12	Current kVAh for ToD 1
13	Current kVAh for ToD 2
14	Current kVAh for ToD 3
15	Current kVAh for ToD 4
16	Current kVAh for ToD 5
17	Current Total kVARh lag.
18	Current Total kVARh lead.
19	Current Max MD in kVA with date and time for ToD 1
20	Current Max MD in kVA with date and time for ToD 2
21	Current Max MD in kVA with date and time for ToD 3
22	Current Max MD in kVA with date and time for ToD 4
23	Current Max MD in kVA with date and time for ToD 5
24	Instantaneous Power Factor.
25	Instantaneous R ph Voltage.
26	Instantaneous Y ph Voltage.
27	Instantaneous B ph Voltage.

28	Instantaneous R ph Current.
29	Instantaneous Y ph Current.
30	Instantaneous B ph Current.
31	Neutral Current.
32	Instantaneous kW load.
33	Instantaneous kVAr load.
34	Instantaneous KVA load.
35	Instantaneous Frequency.

After last sequence, the first sequence shall be automatically displayed.

2 Push Button Mode:-

Following parameters shall be displayed on pressing the buttons (Scroll up & down):-

Sequence	Display
1	Segment Check Display (LCD Test)
2	BEST Meter Serial Number.
3	Real Time
4	Real Date
5	Bill kWh
6	Bill kWh for ToD 1
7	Bill kWh for ToD 2
8	Bill kWh for ToD 3
9	Bill kWh for ToD 4
10	Bill kWh for ToD 5
11	Bill kVAh.
12	Bill kVAh for ToD 1
13	Bill kVAh for ToD 2
14	Bill kVAh for ToD 3
15	Bill kVAh for ToD 4
16	Bill kVAh for ToD 5
17	Bill kVARh–Lag.
18	Bill kVARh–Lead.
19	Bill MD in kVA with date and time for TOD1
20	Bill MD in kVA with date and time for TOD2
21	Bill MD in kVA with date and time for TOD3.
22	Bill MD in kVA with date and time for TOD4
23	Bill MD in kVA with date and time for TOD5.
24	Bill Average Power Factor.
25	Cumulative MD Total.
26	Cumulative MD in kVA with date and time for TOD1
27	Cumulative MD in kVA with date and time for TOD2.

28	Cumulative MD in kVA with date and time for TOD 3
29	Cumulative MD in kVA with date and time for TOD 4
30	Cumulative MD in kVA with date and time for TOD 5.
31	MD Reset Count.
44	Last Magnetic Tamper event date and time.
45	Current MD in kVA with date and time.

Meter Display Sequence of NET SMART METER

1 Auto Mode:-

Sequence	Display
1	Complete LCD Test
2	BEST Meter Serial Number.
3	Present Date
4	Present Time
5	Current CKWh Reading (Import)
6	Current CKVAh Reading while Active (Import)
7	Current CRKVAh Reading Lag (Import)
8	Current CRKVAh Reading Lead (Import)
9	Current KWh Reading for TOD1 (Import)
10	Current KWh Reading for TOD2 (Import)
11	Current KWh Reading for TOD3 (Import)
12	Current KWh Reading for TOD4 (Import)
13	Current KWh Reading for TOD5 (Import)
14	Current KVAh Reading for TOD1 (Import)
15	Current KVAh Reading for TOD 2 (Import)
16	Current KVAh Reading for TOD 3 (Import)
17	Current KVAh Reading for TOD 4 (Import)
18	Current KVAh Reading for TOD 5 (Import)
19	Current Maximum Demand with date and time in KVA of Billing Period for TOD1 (Import)
20	Current Maximum Demand with date and time in KVA of Billing Period for TOD2 (Import)
21	Current Maximum Demand with date and time in KVA of Billing Period for TOD3 (Import)
22	Current Maximum Demand with date and time in KVA of Billing Period for TOD4 (Import)
23	Current Maximum Demand with date and time in KVA of Billing Period for TOD5 (Import)
24	Current CKWh Reading (Export)
25	Current CKVAh Reading while Active (Export)

26	Current CRKVAh Reading Lag (Export).
27	Current CRKVAh Reading Lead (Export).
28	Current KWh Reading for TOD1 (Export)
29	Current KWh Reading for TOD2 (Export)
30	Current KWh Reading for TOD3 (Export)
31	Current KWh Reading for TOD4 (Export)
32	Current KWh Reading for TOD5 (Export)
33	Current KVAh Reading for TOD1 (Export)
34	Current KVAh Reading for TOD 2 (Export)
35	Current KVAh Reading for TOD 3 (Export)
36	Current KVAh Reading for TOD 4 (Export)
37	Current KVAh Reading for TOD 5 (Export)
38	Current Maximum Demand with date and time in KVA of Billing Period for TOD1 (Export)
39	Current Maximum Demand with date and time in KVA of Billing Period for TOD2 (Export)
40	Current Maximum Demand with date and time in KVA of Billing

Sequence	Display
	Period for TOD3 (Export)
41	Current Maximum Demand with date and time in KVA of Billing Period for TOD4 (Export)
42	Current Maximum Demand with date and time in KVA of Billing Period for TOD5 (Export)
43	Instantaneous Power Factor
44	Instantaneous R ph Voltage.
45	Instantaneous Y ph Voltage
46	Instantaneous B ph Voltage.
47	Instantaneous R ph Current.
48	Instantaneous Y ph Current
49	Instantaneous B ph Current.
50	Neutral Current.
51	Instantaneous Active kW load. (Import/Export)
52	Instantaneous Apparent kVA load. (Import/Export)
53	Instantaneous Reactive KVAr load. (Import/Export)
54	Instantaneous Frequency.

Push Button Mode:-

Sequence	Display
1	Complete LCD Test
2	BEST Meter Serial Number.
3	Present Date

4	Present Time
5	Cumulative KWh Reading at Bill Point (Import)
6	Cumulative KVAh Reading at Bill Point (Import)
7	Cumulative RKVAh Reading Lag at Bill Point (Import)
8	Cumulative RKVAh Reading Lead at Bill Point (Import)
9	Cumulative KWh Reading for TOD1 at Bill Point (Import)
10	Cumulative KWh Reading for TOD 2 at Bill Point (Import)
11	Cumulative KWh Reading for TOD 3 at Bill Point (Import)
12	Cumulative KWh Reading for TOD 4 at Bill Point (Import)
13	Cumulative KWh Reading for TOD 5 at Bill Point (Import)
14	Cumulative KVAh Reading for TOD1 at Bill Point (Import)
15	Cumulative KVAh Reading for TOD2 at Bill Point (Import)
16	Cumulative KVAh Reading for TOD3 at Bill Point (Import)
17	Cumulative KVAh Reading for TOD 4 at Bill Point (Import)
18	Cumulative KVAh Reading for TOD 5 at Bill Point (Import)
19	Maximum Demand in KVA with date and time of Billing Period for TOD1 (Import).
20	Maximum Demand in KVA with date and time of Billing Period for TOD2 (Import).
21	Maximum Demand in KVA with date and time of Billing Period for TOD3 (Import).
22	Maximum Demand in KVA with date and time of Billing Period for TOD4 (Import).
23	Maximum Demand in KVA with date and time of Billing Period for TOD5 (Import).
24	Bill Average Power Factor (I).
25	Cumulative KWh Reading at Bill Point (Export).

Sequence	Display
26	Cumulative KVAh Reading at Bill Point (Export)
27	Cumulative RKVAh Reading Lag at Bill Point (Export)
28	Cumulative RKVAh Reading Lead at Bill Point (Export)
29	Cumulative KWh Reading for TOD1 at Bill Point (Export)
30	Cumulative KWh Reading for TOD 2 at Bill Point (Export)
31	Cumulative KWh Reading for TOD 3 at Bill Point (Export)
32	Cumulative KWh Reading for TOD 4 at Bill Point (Export)
33	Cumulative KWh Reading for TOD 5 at Bill Point (Export)
34	Cumulative KVAh Reading for TOD1 at Bill Point (Export)
35	Cumulative KVAh Reading for TOD2 at Bill Point (Export)
36	Cumulative KVAh Reading for TOD3 at Bill Point (Export)
37	Cumulative KVAh Reading for TOD 4 at Bill Point (Export)
38	Cumulative KVAh Reading for TOD 5 at Bill Point (Export)
39	Maximum Demand in KVA with date and time of Billing Period for TOD1 (Export).
40	Maximum Demand in KVA with date and time of Billing Period for TOD2 (Export).
41	Maximum Demand in KVA with date and time of Billing Period for TOD3 (Export).
42	Maximum Demand in KVA with date and time of Billing Period for TOD4 (Export).
43	Maximum Demand in KVA with date and time of Billing Period for TOD5 (Export).
44	Bill Average Power Factor (E).
45	MD Reset Count.
	*Bill point Reading means Reading on First Day of the month at 00.00 hrs and Billing period means for period of last month.

The Auto mode (default display) shall switch to Push button mode display (On Demand Display Mode) after pressing the push button.
The Push Button display mode shall switch over to Auto mode display (default display) if the push button is not operated for 15 seconds.
Display of MD (kVA or kW) shall have 3-digit integer and 3 digit decimal and display of cumulative MD shall have 5 digit integer and 2 digit decimal.

Instantaneous values of lead Power Factor shall be shown with negative sign while lag PF shall be shown without sign on the display
High Resolution Mode
Following parameters shall be displayed in High Resolution Mode with 3 digit integer +4 digit decimals.

Sequence	Display
1	KWh Reading (Import).
2	RKVAh Reading Lag (Import).
3	RKVAh Reading Lead (Import).
4	KWh Reading (Export).

5	RKVAh Reading Lag (Export).
6	RKVAh Reading Lead (Export).
7	KVAh Reading (Import).
8	KVAh Reading (Export).

The Auto mode display (default display) shall switch to High Resolution Display Mode after pressing the push button continuously for 10 seconds.

The High Resolution Display Mode shall switch over to Auto mode (default display) if the push button is not operated for 60 seconds

ANNEXURE-B4

OBIS CODES-IMPORT MODE			
	Instantaneous Profile Parameters		
		DLMS OBIS	BEST OBIS
	Instantaneous Profile	1.0.94.91.0.255	1.0.94.91.0.255
	Instantaneous Scaler	1.0.94.91.3.255	1.0.94.91.3.255
1	Instantaneous R ph Voltage.	1.0.32.7.0.255	1.0.32.7.0.255
2	Instantaneous Y ph Voltage.	1.0.52.7.0.255	1.0.52.7.0.255
3	Instantaneous B ph Voltage.	1.0.72.7.0.255	1.0.72.7.0.255
4	Instantaneous R ph Current.	1.0.31.7.0.255	1.0.31.7.0.255
5	Instantaneous Y ph Current.	1.0.51.7.0.255	1.0.51.7.0.255
6	Instantaneous B ph Current.	1.0.71.7.0.255	1.0.71.7.0.255
7	Instantaneous Power Factor.	1.0.13.7.0.255	1.0.13.7.0.255
8	THD R ph Voltage	1.0.32.7.124.255	1.0.32.7.124.255
9	THD Y ph Voltage	1.0.52.7.124.255	1.0.52.7.124.255
10	THD B ph Voltage	1.0.72.7.124.255	1.0.72.7.124.255
11	THD R ph Current.	1.0.31.7.124.255	1.0.31.7.124.255
12	THD Y ph Current.	1.0.51.7.124.255	1.0.51.7.124.255
13	THD B ph Current.	1.0.71.7.124.255	1.0.71.7.124.255
14	Displacement Power Factor.	Not Specified	Not Specified
15	Instantaneous 3ph kW load (Import).	1.0.1.7.0.255	1.0.1.7.0.255
16	Instantaneous 3ph kVAr load with lag lead indication (Import).	1.0.3.7.0.255	1.0.3.7.0.255
17	Instantaneous 3ph KVA load (Import).	1.0.9.7.0.255	1.0.9.7.0.255
18	THD Active Power R ph	1.0.35.7.124.255	1.0.35.7.124.255
19	THD Active Power Y ph	1.0.55.7.124.255	1.0.55.7.124.255
20	THD Active Power B ph	1.0.75.7.124.255	1.0.75.7.124.255
21	Active Power Total R ph	1.0.21.7.0.255	1.0.21.7.0.255
22	Active Power Total Y ph	1.0.41.7.0.255	1.0.41.7.0.255
23	Active Power Total B ph	1.0.61.7.0.255	1.0.61.7.0.255
24	Active Power Fundamental R ph	1.0.130.7.0.255	1.0.130.7.0.255
25	Active Power Fundamental Y ph	1.0.131.7.0.255	1.0.131.7.0.255

26	Active Power Fundamental B ph	1.0.132.7.0.255	1.0.132.7.0.255
27	Instantaneous Frequency.	1.0.14.7.0.255	1.0.14.7.0.255
28	Real Time Clock – Date and Time	0.0.1.0.0.255	0.0.1.0.0.255
29	Current Cumulative kWh (Import).	1.0.1.8.0.255	1.0.1.8.0.255
30	Current kWh ToD 1 (Import).	Not Specified	1.0.1.8.1.255
31	Current kWh ToD 2 (Import).	Not Specified	1.0.1.8.2.255
32	Current kWh ToD 3 (Import).	Not Specified	1.0.1.8.3.255
33	Current kWh ToD 4 (Import).	Not Specified	1.0.1.8.4.255
34	Current kWh ToD 5 (Import).	Not Specified	1.0.1.8.5.255

OBIS CODES -IMPORT MODE			
	Instantaneous Profile Parameters		
		DLMS OBIS	**BEST OBIS**
	Instantaneous Profile	1.0.94.91.0.255	1.0.94.91.0.255
	Instantaneous Scaler	1.0.94.91.3.255	1.0.94.91.3.255
35	Fundamental Energy kWh.	Not Specified	1.0.1.8.1.255
36	Current Cumulative kVARh Lag (Import).	1.0.5.8.0.255	1.0.5.8.0.255
37	Current kvarh Lag TOD1 (Import).	Not Specified	1.0.8.8.1.255
38	Current kvarh Lag TOD2 (Import).	Not Specified	1.0.5.8.2.255
39	Current kvarh – Lag TOD3 (Import).	Not Specified	1.0.5.8.3.255
40	Current kvarh – Lag TOD4 (Import).	Not Specified	1.0.5.8.4.255
41	Current kvarh – Lag TOD5 (Import).	Not Specified	1.0.5.8.5.255
42	Current Cumulative kvarh – Lead (Import).	1.0.8.8.0.255	1.0.8.8.0.255
43	Current kvarh – Lead TOD1 (Import).	Not Specified	1.0.8.8.1.255
44	Current kvarh – Lead TOD2 (Import).	Not Specified	1.0.8.8.2.255
45	Current kvarh – Lead TOD3 (Import).	Not Specified	1.0.8.8.3.255
46	Current kvarh – Lead TOD4 (Import).	Not Specified	1.0.8.8.4.255
47	Current kvarh – Lead TOD5 (Import).	Not Specified	1.0.8.8.5.255
48	Current Cumulative kVAh (Import).	1.0.9.8.0.255	1.0.9.8.0.255
49	Current kVAh.TOD1 (Import).	Not Specified	1.0.9.8.1.255
50	Current kVAh.TOD2 (Import).	Not Specified	1.0.9.8.2.255
51	Current kVAh.TOD3 (Import).	Not Specified	1.0.9.8.3.255
52	Current kVAh.TOD4 (Import).	Not Specified	1.0.9.8.4.255
53	Current kVAh.TOD5 (Import).	Not Specified	1.0.9.8.5.255
54	Current MD in KVA with date & time (Import).	Not Specified	1.0.9.6.0.255
55	Current MD in kVA with date & time TOD 1 (Import).	Not Specified	1.0.9.6.1.255
56	Current MD in kVA with date & time TOD 2 (Import).	Not Specified	1.0.9.6.2.255
57	Current MD in kVA with date & time TOD 3 (Import).	Not Specified	1.0.9.6.3.255
58	Current MD in KVA with date & timeTOD4 (Import).	Not Specified	1.0.9.6.4.255

59	Current MD in KVA with date & timeTOD5 (Import).	Not Specified	1.0.9.6.5.255
60	MD Reset Count.	Not Specified	0.0.0.1.0.255
61	Cumulative MD Total.	Not Specified	1.0.9.2.0.255
62	Phase Sequence	Not Specified	1.0.96.7.30.255
63	Phase Angle 2	Not Specified	1.0.81.7.1.255
64	Phase Angle 3	Not Specified	1.0.81.7.2.255
65	Last Billing Date	0.0.0.1.2.255	0.0.0.1.2.255
66	RF/ GSM signal Strength in milli db	0.b.96.12.5.255	0.b.96.12.5.255

OBIS CODES - IMPORT MODE			
Billing Register		**DLMS**	**BEST proposed**
Technical requirements		Profile1.0.98.1.0.255	1.0.98.1.0.255
		Scaler1.0.94.91.6.255.	1.0.94.91.6.255
i	Month	0.0.0.1.2.255	0.0.0.1.2.255
ii	ToD wise Cumulative kWh ToD1 (Import).	1.0.1.8.1.255	1.0.1.8.1.255
	ToD2 (Import).	1.0.1.8.2.255	1.0.1.8.2.255
	ToD3 (Import).	1.0.1.8.3.255	1.0.1.8.3.255
	ToD4 (Import).	1.0.1.8.4.255	1.0.1.8.4.255
	ToD5 (Import).	1.0.1.8.5.255	1.0.1.8.5.255
iii	ToD wise Cumulative kVARh Lag ToD1 (Import).	Not Specified	1.0.5.8.1.255
	ToD2 (Import).	Not Specified	1.0.5.8.2.255
	ToD3 (Import).	Not Specified	1.0.5.8.3.255
	ToD4 (Import).	Not Specified	1.0.5.8.4.255
	ToD5 (Import).	Not Specified	1.0.5.8.5.255
iv	ToD wise Cumulative kVARh Lead ToD1 (Import).	Not Specified	1.0.8.8.1.255
	ToD2 (Import).	Not Specified	1.0.8.8.2.255
	ToD3 (Import).	Not Specified	1.0.8.8.3.255
	ToD4 (Import).	Not Specified	1.0.8.8.4.255
	ToD5 (Import).	Not Specified	1.0.8.8.4.255
v	ToD wise Cumulative kVAh ToD1 (Import).	1.0.9.8.1.255	1.0.9.8.1.255
	ToD2 (Import).	1.0.9.8.2.255	1.0.9.8.2.255
	ToD3 (Import).	1.0.9.8.3.255	1.0.9.8.3.255
	ToD4 (Import).	1.0.9.8.4.255	1.0.9.8.4.255
	ToD5 (Import).	1.0.9.8.5.255	1.0.9.8.5.255
vi	ToD wise Power factor ToD1 (Import).	Not Specified	1.0.13.0.1.255
	ToD2 (Import).		1.0.13.0.2.255
	ToD3 (Import).		1.0.13.0.3.255
	ToD4 (Import).		1.0.13.0.4.255
	ToD5 (Import).		1.0.13.0.5.255
vii	ToD wise MD in kVA with date & time ToD1 (Import).	1.0.9.6.1.255	1.0.9.6.1.255
	ToD2 (Import).	1.0.9.6.2.255	1.0.9.6.2.255
	ToD3 (Import).	1.0.9.6.3.255	1.0.9.6.3.255
	ToD4 (Import).	1.0.9.6.4.255	1.0.9.6.4.255
	ToD5 (Import).	1.0.9.6.5.255	1.0.9.6.5.255
viii	ToD wise MD in kW with date & time ToD1 (Import).	1.0.1.6.1.255	1.0.1.6.1.255
	ToD2 (Import).	1.0.1.6.2.255	1.0.1.6.2.255
	ToD3 (Import).	1.0.1.6.3.255	1.0.1.6.3.255
	ToD4 (Import).	1.0.1.6.4.255	1.0.1.6.4.255
	ToD5 (Import).	1.0.1.6.5.255	1.0.1.6.5.255
ix	Cumulative kWh (Import).	1.0.1.8.0.255	1.0.1.8.0.255

x	Cumulative kVARh – Lag (Import).	1.0.5.8.0.255	1.0.5.8.0.255
xi	Cumulative kVARh – Lead (Import).	1.0.8.8.0.255	1.0.8.8.0.255
xii	Cumulative kVAh (Import).	1.0.9.8.0.255	1.0.9.8.0.255
xiii	Average Power Factor (Import).	1.0.13.0.0.255	1.0.13.0.0.255
xiv	Bill MD in Kva with date and time (Import).	1.0.9.6.0.255	1.0.9.6.0.255
xv	Bill MD in Kw with date and time(Import).	1.0.1.6.0.255	1.0.1.6.0.255

Note : If any additional OBIS/Profile/Scaler code is provided then the tenderers/supplier shall submit the list for the parameters with detailed justification. Based on the detailed justification submitted by tenderers/supplier, BEST reserves right to accept/reject the OBIS/Profile/Scaler code.

OBIS CODES -IMPORT MODE			
Billing Register		**DLMS**	**BEST proposed OBIS Code**
Technical requirements		Profile1.0.98.1.0.255	1.0.98.1.0.255
		Scaler1.0.94.91.6.255	1.0.94.91.6.255
viii	ToD wise MD in kW with date & time ToD1 (Import).	1.0.1.6.1.255	1.0.1.6.1.255
	ToD2 (Import).	1.0.1.6.2.255	1.0.1.6.2.255
	ToD3 (Import).	1.0.1.6.3.255	1.0.1.6.3.255
	ToD4 (Import).	1.0.1.6.4.255	1.0.1.6.4.255
	ToD5 (Import).	1.0.1.6.5.255	1.0.1.6.5.255
ix	Cumulative kWh (Import).	1.0.1.8.0.255	1.0.1.8.0.255
x	Cumulative kVARh – Lag (Import).	1.0.5.8.0.255	1.0.5.8.0.255
xi	Cumulative kVARh – Lead (Import).	1.0.8.8.0.255	1.0.8.8.0.255
xii	Cumulative kVAh (Import).	1.0.9.8.0.255	1.0.9.8.0.255
xiii	Average Power Factor (Import).	1.0.13.0.0.255	1.0.13.0.0.255
xiv	Bill MD in Kva with date and time (Import).	1.0.9.6.0.255	1.0.9.6.0.255
xv	Bill MD in Kw with date and time(Import).	1.0.1.6.0.255	1.0.1.6.0.255
Note			

OBIS CODES OF PARAMETERS REQUIRED IN EXPORT MODE			
	Instantaneous Profile Parameters		
		DLMS OBIS	BEST OBIS
	Instantaneous Profile	1.0.94.91.0.255	1.0.94.91.0.255
	Instantaneous Scaler	1.0.94.91.3.255	1.0.94.91.3.255
1	Instantaneous 3ph kW load. (Export).	1.0.2.7.0.255	1.0.2.7.0.255
2	Instantaneous 3ph kVAr load with lag lead indication (Export).	1.0.4.7.0.255	1.0.4.7.0.255
3	Instantaneous 3ph KVA load (Export).	1.0.10.7.0.255	1.0.10.7.0.255
4	Current Cumulative kWh (Export).	1.0.2.8.0.255	1.0.2.8.0.255
5	Current kWh ToD 1 (Export).	Not Specified	1.0.2.8.1.255
6	Current kWh ToD 2 (Export).	Not Specified	1.0.2.8.2.255

7	Current kWh ToD 3 (Export).	Not Specified	1.0.2.8.3.255
8	Current kWh ToD 4 (Export).	Not Specified	1.0.2.8.4.255
9	Current kWh ToD 5 (Export).	Not Specified	1.0.2.8.5.255
10	Current Cumulative kVARh Lag (Export).	1.0.7.8.0.255	1.0.7.8.0.255
13	Current kvarh Lag TOD1 (Export).	Not Specified	1.0.7.8.1.255
14	Current kvarh Lag TOD2 (Export).	Not Specified	1.0.7.8.2.255
15	Current kvarh – Lag TOD3 (Export).	Not Specified	1.0.7.8.3.255
16	Current kvarh – Lag TOD4 (Export).	Not Specified	1.0.7.8.4.255
17	Current kvarh – Lag TOD5 (Export).	Not Specified	1.0.7.8.5.255
18	Current Cumulative kvarh – Lead (Export).	1.0.6.8.0.255	1.0.6.8.0.255
19	Current kvarh – Lead TOD1 (Export).	Not Specified	1.0.6.8.1.255
20	Current kvarh – Lead TOD2 (Export).	Not Specified	1.0.6.8.2.255
21	Current kvarh – Lead TOD3 (Export).	Not Specified	1.0.6.8.3.255
22	Current kvarh – Lead TOD4 (Export).	Not Specified	1.0.6.8.4.255
23	Current kvarh – Lead TOD5 (Export).	Not Specified	1.0.6.8.5.255
24	Current Cumulative kVAh (Export).	1.0.10.8.0.255	1.0.10.8.0.255
25	Current kVAh.TOD1 (Export).	Not Specified	1.0.10.8.1.255
26	Current kVAh.TOD2 (Export).	Not Specified	1.0.10.8.2.255

OBIS CODES OF PARAMETERS REQUIRED IN EXPORT MODE			
	Instantaneous Profile Parameters		
		DLMS OBIS	BEST OBIS
	Instantaneous Profile	1.0.94.91.0.255	1.0.94.91.0.255
	Instantaneous Scaler	1.0.94.91.3.255	1.0.94.91.3.255
	Instantaneous Profile Parameters		
		DLMS OBIS	BEST OBIS
	Instantaneous Profile	1.0.94.91.0.255	1.0.94.91.0.255
	Instantaneous Scaler	1.0.94.91.3.255	1.0.94.91.3.255
27	Current kVAh.TOD3 (Export).	Not Specified	1.0.10.8.3.255
28	Current kVAh.TOD4 (Export).	Not Specified	1.0.10.8.4.255
29	Current kVAh.TOD5 (Export).	Not Specified	1.0.10.8.5.255
30	Current MD in KVA with date & time (Export).	Not Specified	1.0.10.6.0.255
31	Current MD in kVA with date & time TOD 1(Export).	Not Specified	1.0.10.6.1.255
32	Current MD in kVA with date & time TOD 2(Export).	Not Specified	1.0.10.6.2.255
33	Current MD in kVA with date & time TOD 3 (Export).	Not Specified	1.0.10.6.3.255
34	Current MD in KVA with date & timeTOD4(Export).	Not Specified	1.0.10.6.4.255

OBIS CODES OF PARAMETERS REQUIRED IN EXPORT MODE			
	Billing Profile Parameters		
		DLMS OBIS	BEST OBIS
	Billing Profile	1.0.98.1.0.255	1.0.98.1.0.255
	Billing Scaler	1.0.94.91.6.255	1.0.94.91.6.255
1	Bill Cumulative kWh (Export).	1.0.2.8.0.255	1.0.2.8.0.255
2	Bill kWh ToD1 (Export).	1.0.2.8.1.255	1.0.2.8.1.255
3	Bill kWh ToD2 (Export).	1.0.2.8.2.255	1.0.2.8.2.255
4	Bill kWh ToD3 (Export).	1.0.2.8.3.255	1.0.2.8.3.255
5	Bill kWh ToD4 (Export).	1.0.2.8.4.255	1.0.2.8.4.255
6	Bill kWh ToD5 (Export).	1.0.2.8.5.255	1.0.2.8.5.255
7	Bill Cumulative kVARh–Lag (Export).	1.0.7.8.0.255	1.0.7.8.0.255
8	Bill kVARh–Lag.TOD1 (Export).	Not Specified	1.0.7.8.1.255
9	Bill kVARh–Lag.TOD2 (Export).	Not Specified	1.0.7.8.2.255
10	Bill kVARh–Lag.TOD3 (Export).	Not Specified	1.0.7.8.3.255
11	Bill kVARh–Lag.TOD4 (Export).	Not Specified	1.0.7.8.4.255
12	Bill kVARh–Lag.TOD5 (Export).	Not Specified	1.0.7.8.5.255
13	Bill Cumulative kVARh–Lead (Export).	1.0.6.8.0.255	1.0.6.8.0.255
14	Bill kVARh–Lead.TOD1 (Export).	Not Specified	1.0.6.8.1.255
15	Bill kVARh–Lead.TOD2 (Export).	Not Specified	1.0.6.8.2.255
16	Bill kVARh–Lead.TOD3 (Export).	Not Specified	1.0.6.8.3.255
17	Bill kVARh–Lead.TOD4 (Export).	Not Specified	1.0.6.8.4.255
18	Bill kVARh–Lead.TOD5 (Export).	Not Specified	1.0.6.8.5.255
19	Bill Cumulative kVAh (Export).	1.0.10.8.0.255	1.0.10.8.0.255
20	Bill kVAh TOD1 (Export).	1.0.10.8.1.255	1.0.10.8.1.255
21	Bill kVAh TOD2 (Export).	1.0.10.8.2.255	1.0.10.8.2.255
22	Bill kVAh TOD3 (Export).	1.0.10.8.3.255	1.0.10.8.3.255
23	Bill kVAh TOD4 (Export).	1.0.10.8.4.255	1.0.10.8.4.255
24	Bill kVAh TOD5 (Export).	1.0.10.8.5.255	1.0.10.8.5.255
25	Bill MD in KVA with date & time (Export).	1.0.10.6.0.255	1.0.10.6.0.255
26	Bill MD in kVA with date & time ToD1 (Export).	1.0.10.6.1.255	1.0.10.6.1.255

27	Bill MD in kVA with date & time ToD2 (Export).	1.0.10.6.2.255	1.0.10.6.2.255
28	Bill MD in kVA with date & time ToD3 (Export).	1.0.10.6.3.255	1.0.10.6.3.255
29	Bill MD in kVA with date & time ToD4 (Export).	1.0.10.6.4.255	1.0.10.6.4.255
30	Bill MD in kVA with date & time ToD5 (Export).	1.0.10.6.5.255	1.0.10.6.5.255
31	Bill Power Factor (Export).	1.0.13.0.0.255	1.0.13.0.0.255

OBIS CODES OF PARAMETERS REQUIRED IN EXPORT MODE			
Billing Register		DLMS	BEST proposed
Technical requirements		Profile1.0.98.1.0.255	1.0.98.1.0.255
		Scaler1.0.94.91.6.255.	1.0.94.91.6.255
i	Month	0.0.0.1.2.255	0.0.0.1.2.255
ii	ToD wise Cumulative kWh ToD1 (Export).	1.0.2.8.1.255	1.0.2.8.1.255
	ToD2 (Export).	1.0.2.8.2.255	1.0.2.8.2.255
	ToD3 (Export).	1.0.2.8.3.255	1.0.2.8.3.255
	ToD4 (Export).	1.0.2.8.4.255	1.0.2.8.4.255
	ToD5 (Export).	1.0.2.8.5.255	1.0.2.8.5.255
iii	ToD wise Cumulative kVARh Lag ToD1 (Export).	Not Specified	1.0.7.8.1.255
	ToD2 (Export).	Not Specified	1.0.7.8.2.255
	ToD3 (Export).	Not Specified	1.0.7.8.3.255
	ToD4 (Export).	Not Specified	1.0.7.8.4.255
	ToD5 (Export).	Not Specified	1.0.7.8.5.255
iv	ToD wise Cumulative kVARh Lead ToD1 (Export).	Not Specified	1.0.6.8.1.255
	ToD2 (Export).	Not Specified	1.0.6.8.2.255
	ToD3 (Export).	Not Specified	1.0.6.8.3.255
	ToD4 (Export).	Not Specified	1.0.6.8.4.255
	ToD5 (Export).	Not Specified	1.0.6.8.5.255
v	ToD wise Cumulative kVAh ToD1 (Export).	1.0.10.8.1.255	1.0.10.8.1.255
	ToD2 (Export).	1.0.10.8.2.255	1.0.10.8.2.255
	ToD3 (Export).	1.0.10.8.3.255	1.0.10.8.3.255
	ToD4 (Export).	1.0.10.8.4.255	1.0.10.8.4.255
	ToD5 (Export).	1.0.9.8.5.255	1.0.9.8.5.255
vi	ToD wise Power factor ToD1 (Export).	Not Specified	1.0.13.0.1.255
	ToD2 (Export).		1.0.13.0.2.255
	ToD3 (Export).		1.0.13.0.3.255
	ToD4 (Export).		1.0.13.0.4.255

	ToD5 (Export).		1.0.13.0.5.255
vii	ToD wise MD in kVA with date & time ToD1 (Export).	1.0.10.6.1.255	1.0.10.6.1.255
	ToD2 (Export).	1.0.10.6.2.255	1.0.10.6.2.255
	ToD3 (Export).	1.0.10.6.3.255	1.0.10.6.3.255
	ToD4 (Export).	1.0.10.6.4.255	1.0.10.6.4.255
	ToD5 (Export).	1.0.10.6.5.255	1.0.10.6.5.255
viii	ToD wise MD in kW with date & time ToD1 (Export).	1.0.2.6.1.255	1.0.2.6.1.255
	ToD2 (Export).	1.0.2.6.2.255	1.0.2.6.2.255
	ToD3 (Export).	1.0.2.6.3.255	1.0.2.6.3.255
	ToD4 (Export).	1.0.2.6.4.255	1.0.2.6.4.255
	ToD5 (Export).	1.0.2.6.5.255	1.0.2.6.5.255
ix	Cumulative kWh (Export).	1.0.2.8.0.255	1.0.2.8.0.255
x	Cumulative kVARh – Lag (Export).	1.0.7.8.0.255	1.0.7.8.0.255
xi	Cumulative kVARh – Lead (Export).	1.0.6.8.0.255	1.0.6.8.0.255
xii	Cumulative kVAh (Export).	1.0.10.8.0.255	1.0.10.8.0.255
xiii	Average Power Factor (Export).	1.0.13.0.0.255	1.0.13.0.0.255
xiv	Bill MD in Kva with date and time (Export).	1.0.10.6.0.255	1.0.10.6.0.255
xv	Bill MD in Kw with date and time (Export).	1.0.2.6.0.255	1.0.2.6.0.255

Note : If any additional OBIS/Profile/Scaler code is provided then the tenderers/supplier shall submit the list for the parameters with detailed justification. Based on the detailed justification submitted by tenderers/supplier, BEST reserves right to accept/reject the OBIS/Profile/Scaler code.

OBIS Codes				
Technical requirements			DLMS	BEST proposed OBIS Code
i	Low/High Voltage- a)Voltage failure, b) Voltage Unbalance, c) Overvoltage d) Under voltage.	Voltage Tamper Profile	0.0.99.98.0.255	0.0.99.98.0.255
		Voltage Tamper Summary Profile	0.0.21.0.5.255	0.0.21.0.5.255
ii	Current Reversal.	Current Tamper Profile	0.0.99.98.1.255	0.0.99.98.1.255
		Current Tamper Summary Profile	0.0.21.0.6.255	0.0.21.0.6.255
iii	Meter Cover Open.	0.0.99.98.5.255	Event ID 251	Event ID 251
iv	Magnetic Defraud Energy.		Not specified	1.0.1.8.0.255
	Magnetic Tamper Event with Date Time	Tamper Event	Event ID201,202	0.0.96.11.4.255

v	Low Current- a) Current Bypass, b) Current Open, c) Over Current.	Current Tamper Profile	0.0.99.98.1.255	0.0.99.98.1.255
vi	Current Unbalance.	Current Tamper Profile	0.0.99.98.1.255	0.0.99.98.1.255
		Current Tamper Summary Profile	0.0.21.0.6.255	0.0.21.0.6.255
vii	Low Power Factor	Low Power Factor	Event ID 205,206-Low Power Factor.	Event ID 205,206-Low Power Factor.
viii	Additional points.	Cumulative Tamper Count	0.0.94.91.0.255	0.0.94.91.0.255
		No. of Power failure	0.b.99.98.2.255	0.0.96.7.0.255
		Cumulative Duration of Power failure		0.0.94.91.8.255
		Power ON Duration in minutes (bill to bill)		0.0.94.91.13.255

OBIS Codes			
Technical requirements		**DLMS**	**BEST proposed OBIS Code**
Events Profile			
Events.	Voltage Tamper Profile	0.0.99.98.0.255	0.0.99.98.0.255
	Current Tamper Profile	0.0.99.98.1.255	0.0.99.98.1.255
	Power Related Tampers	0.0.99.98.2.255	0.0.99.98.2.255
	Transaction Tamper Profile	0.0.99.98.3.255	0.0.99.98.3.255
	Other Tamper Profiles	0.0.99.98.4.255	0.0.99.98.4.255
	Non Rollover Tamper Profiles	0.0.99.98.5.255	0.0.99.98.5.255
Capture Parameters for Events of Scaler Profile			
Parameters.	Date and Time of event	0.0.1.0.0.255	0.0.1.0.0.255
	Event Code	0.0.96.11.e.255	0.0.96.11.e.255
	Current, IR	1.0.31.7.0.255	1.0.31.7.0.255
	Current, IY	1.0.51.7.0.255	1.0.51.7.0.255
	Current, IB	1.0.71.7.0.255	1.0.71.7.0.255
	Voltage, VRN	1.0.32.7.0.255	1.0.32.7.0.255

OBIS Codes			
Technical requirements		**DLMS**	**BEST proposed OBIS Code**
	Voltage, VYN	1.0.52.7.0.255	1.0.52.7.0.255
	Voltage, VBN	1.0.72.7.0.255	1.0.72.7.0.255
	Signed power factor, R-Phase	1.0.33.7.0.255	1.0.33.7.0.255
	Signed power factor, Y-Phase	1.0.53.7.0.255	1.0.53.7.0.255
	Signed power factor, B-Phase	1.0.73.7.0.255	1.0.73.7.0.255

	Cumulative Energy kWh	1.0.1.8.0.255	1.0.1.8.0.255
	Cumulative Energy kVAh	1.0.9.8.0.255	1.0.9.8.0.255
Tamper Summary Profile.		Additional Readout profile in IEC62056-62	
1	Voltage Tamper Summary Profile.	0.0.21.0.5.255	0.0.21.0.5.255
2	Current Tamper Summary Profile.	0.0.21.0.6.255	0.0.21.0.6.255
3	Other Tamper Summary Profile.	0.0.21.0.7.255	0.0.21.0.7.255
4	Non Rollover Tamper Summary Profile.	0.0.21.0.8.255	0.0.21.0.8.255

OBIS Codes			
Technical requirements		DLMS	BEST proposed OBIS Code
Parameters.			
1	Tamper Event ID.	0.0.96.11.e.255	0.0.96.11.e.255
2	Cumulative Tamper Count.	0.0.94.91.0.255	0.0.94.91.0.255
3	Cumulative Tamper Duration.	Not Specified	Not Specified
4	Date & Time of First Occurrence.	1.0.0.9.0.255	1.0.0.9.0.255
5	Date & Time of First restore.	1.0.0.9.1.255	1.0.0.9.1.255
6	Date & Time of Latest Occurrence.	1.0.0.9.2.255	1.0.0.9.2.255
7	Date & Time of Latest Restoration.	1.0.0.9.3.255	1.0.0.9.3.255
ESD.		Event ID 37	Event ID 37
Clause No, Self Diagnostic Features.	i)RTC Status-BIT 0 (0x01) ii)NVM Status- BIT 1(0x02) iii)RTC Battery- BIT 2(0x04)	Not Specified	1.0.96.5.0.255
General Purpose Parameters:-Profile Code: 0.0.94.91.10.255.			
1	Meter Serial Number.	0.0.96.1.0.255	0.0.96.1.0.255
2	Manufacture Name.	0.0.96.1.1.255	0.0.96.1.1.255
3	Firmware version for meter.	1.0.0.2.0.255	1.0.0.2.0.255
4	Meter Type.	0.0.94.91.9.255	0.0.94.91.9.255
5	Meter year of manufacture.	0.0.96.1.4.255	0.0.96.1.4.255
6	Category.	0.0.94.91.11.255	0.0.94.91.11.255
7	Current Rating.	0.0.94.91.12.255	0.0.94.91.12.255
8	Voltage Rating	1.0.0.6.0.255	1.0.0.6.0.255
9	Accuracy Class	Not Specified	1.0.96.141.0.255
10	Meter Constant	1.0.0.3.0.255	1.0.0.3.0.255
11	Internal CT Ratio.	1.0.0.4.2.255	1.0.0.4.2.255
12	Internal PT Ratio.	1.0.0.4.3.255	1.0.0.4.3.255
Programmable Parameters			
1	Real Time Clock-Date and Time.	0.0.1.0.0.255	0.0.1.0.0.255
2	Demand Integration Period.	1.0.0.8.0.255	1.0.0.8.0.255
3	Profile Capture Period.	1.0.0.8.4.255	1.0.0.8.4.255
4	Single-action Schedule for Billing Dates.	0.0.15.0.0.255	0.0.15.0.0.255

5	Activity Calendar for Time Zones.	0.0.13.0.0.255	0.0.13.0.0.255

OBIS Codes			
Technical requirements		DLMS	BEST proposed OBIS Code
6	Image Transfer	0.0.44.0.0.255	0.0.44.0.0.255
7	Metering Mode	0.0.94.96.19.255	0.0.94.96.19.255
8	Current Association MR (LLS secret change)	0.0.40.0.2.255	0.0.40.0.2.255
9	Current Association US (HLS Key change)	0.0.40.0.3.255	0.0.40.0.3.255
10	Current Association FW (HLS Key change)	0.0.40.0.5.255	0.0.40.0.5.255
11	Global Key (encryption and authentication)	0.0.43.0.e.255(e=2,3,4,5)	0.0.43.0.e.255 (e=2,3,4,5)
12	Image Activation Single Action Shedule	0.0.15.0.2.255	0.0.15.0.2.255
13	Event Status Word Filter	0.0.94.91.26.255	0.0.94.91.26.255
Note	If any additional OBIS/Profile/Scaler code is provided then the tenderers/supplier shall submit the list for the parameters with detailed justification. Based on the detailed justification submitted by tenderers/supplier, BEST reserves right to accept/reject the OBIS/Profile/Scaler code.		

OBIS Codes			
Clause No , Load Survey		DLMS (Load Profile OBIS Codes)	BEST proposed OBIS Code
Technical requirements		Profile 1.0.99.1.0.255	1.0.99.1.0.255
		Scaler 1.0.94.91.4.255	1.0.94.91.4.255
1	Voltage of each phase	VRN 1.0.32.27.0.255	VRN 1.0.32.27.0.255
		VYN1.0.52.27.0.255	VYN 1.0.52.27.0.255
		VBN 1.0.72.27.0.255	VBN 1.0.72.27.0.255
2	Current of each phase	IR 1.0.31.27.0.255	IR 1.0.31.27.0.255
		IY 1.0.51.27.0.255	IY 1.0.51.27.0.255
		IB 1.0.71.27.0.255	IB 1.0.71.27.0.255
3	Kwh	1.0.1.29.0.255	1.0.1.29.0.255
4	kVAh	1.0.9.29.0.255	1.0.9.29.0.255
5	Kw	Not Specified	Need not specify. Derived parameter in BCS.
6	Kva	Not Specified	
7	PF	Not Specified	
8	kVarh(lag)	Not Specified	1.0.5.29.0.255
9	kVarh(lead)	Not Specified	1.0.8.29.0.255
10	Real Time Clock Date and Time	0.0.1.0.0.255	0.0.1.0.0.255

Technical Specification for Availability Based Tariff (ABT) Meter**ANNEXURE D1: AC POLY PHASE -/1A,-/5A, (-/110)V CTPTO ABT METER**

WITH DLMS PROTOCOL AND ETHERNET PORT

I. INTRODUCTION

BEST Undertaking (BEST) distributes electricity in the island city of Mumbai. Its area of distribution lies from South Mumbai to Sion in the East and to Mahim in the West. BEST undertaking distributes power to an area spread over about 69 sq.km and provides power supply to more than 10 Lakh consumers connected to its distribution network, comprising residential, commercial and industrial consumers depending on the purpose of use of electricity. The organization is also providing public transport service in Mumbai city, Suburbs and its nearby regions. BEST receive the electricity from M/s TATA at 116 Interface points at 63 different locations called as RSS.

II. BACKGROUND

Availability Based Tariff and Deviation Settlement Mechanism will be implemented in BEST Undertaking from 1st April 2020 considering the settlement period as 5-min. Presently there are 116 Availability Based Tariff (ABT) Meters are to be installed at various interface points situated in RSS of BEST Undertaking and implement the Automated Meter Reading and Meter Data Processing System. The above is also in line with the recommendations of the Report on Scheduling, Accounting, Metering and Settlement of Transactions in Electricity (SAMAST) that was endorsed by the Forum of Regulators on 15th July 2016.

III. TECHNICAL SPECIFICATION

1. Scope

The project envisages to install Availability Based Tariff (ABT) Meters (5 min block interval Interface meters). The project also envisages putting in place a system of Remote Meter Data Reading (RMR) / Meter Data Processing (MDP) software along with the associated hardware for meter data collection, validation and processing before forwarding the meter data for energy accounting. The MDP may be part of MDM or standalone, capable of integrating with main MDM. The successful bidder shall be responsible for supply of ABT Meters.

The technical specifications cover the design, manufacturing, testing, supply and delivery of AC 3 ph., 4 wires Availability Based Tariff (ABT) Meter. The meter shall incorporate suitable communication features to communicate with DCU (Data Concentrator Unit) installed at the RSS. The DCU shall communicate with Cloud based Server for data transfer to BEST, as per the user defined schedule.

The Bill of Quantities shall be developed separately.

The execution of the project shall be planned in such a manner to cover all interface points zone wise for energy accounting system. The ABT Meters shall record data at 5 minute interval. This data shall be collected and archived at Power Management Department of BEST Undertaking. However the settlement period for data processing and energy accounting shall be defined by the user as per the STU regulations. For instance, if the STU chooses the settlement period to be 15 min, then the archived data shall be of 15 min interval so as to be compatible with the existing software for meter data processing and energy accounting at SLDC. The format of the 15-min processed

data reports shall be exactly same as that of the existing 15-min processed data reports in text files for compatibility at SLDC end.

The energy metering system specified herein shall be used for tariff metering for bulk, inter-Utility/AMI- IA power flows, in different States of India. Projection mounted type, Static composite meter shall be installed at interface points as a self-contained device for measurement of Voltage (V), Frequency (f), Active (Wh) and Reactive (VArh) energy exchanged in each successive 5/15 min time block.

The meters shall be suitable for communication with external device like DCU, which will communicate with Cloud Server for remote data transfer. The meter shall compulsorily have one optical port for taking reading through Laptop and one Ethernet port for transferring the data to DCU.

2. Applicable Standards

The meter shall conform to IS:14697-1999 with latest amendments, CBIP Publication No. 325 and CEA Regulation 2006 with latest amendments and IS 15959 Part-1,IS 15959 Part-3 with latest amendments.

The meters shall fully comply with all stipulations in IS 14697 except those specifically modified by this specification.

3. Rating

Voltage rating - Rated Voltage shall be 3-phase, 4 wire, 110 Volts (LL) and 63.5 Volts (LN). The operating voltage range shall be +20% to -30% of the rated voltage.

Current rating- Current rating shall be configurable as per requirement.

Basic Current (Ib) - 1 Amp. Maximum Current (Imax) - 1.2 Amp.

Basic Current (Ib) – 5 Amp. Maximum Current (Imax) - 6 Amp.

Frequency- The reference frequency shall be 50Hz.

4. Electrical Requirements

Auxiliary Supply to ABT Meter- The meters shall normally operate with the power drawn from AC/DC auxiliary power supply (110VAC/110VDC) to reduce the Voltage Transformer (VT) burden. In addition, there shall be provision to operate the meter from the Voltage Transformer (VT) secondary circuit having a rated secondary line-to- line voltage of 110V, and current transformers (CTs) having a rated secondary current of 1 A or 5A. Any further transformers/ transactions/ transducers required for their functioning shall be in-built in the meters. Necessary isolation and/or suppression shall also be built-in, for protecting the meters from surges and voltage spikes that occur in the VT and CT circuits of extra high voltage switchgears.

Also, the meter shall have suitable of ±15% tolerance for DC supply.

The meters shall safely withstand the usual fluctuations arising during faults etc. In particular, VT secondary voltages 115% of Vref applied continuously and 190% of Vref for 3.0 seconds, and CT secondary current 150% of Iref applied continuously and 30 times of Iref applied for 0.5 seconds shall not cause any damage to or mal operation of the meters.

The meters shall continue to function for the remaining healthy phase(s), in case one or two phases of VT supply fails. In case of a complete VT supply failure, the computation of average frequency shall be done only for the period during which the VT supply was available in the 5-minute block. Any time block contraction or elongation for clock correction shall also be duly accounted for.

The active and apparent power consumption in each voltage circuit including power supply of meter shall be as per Clause No. 9.1.1 of IS: 14697:1999 with latest amendments.

The apparent power taken by current circuit shall be as per Clause No. 9.1.2 of IS: 14697:1999 with latest amendments.

The meter shall be compliant to the various Influence Quantities as per Clause No. 9.2 to 9.4 of IS:14697:1999 with latest amendments.

5. Climatic Conditions

The standard reference temperature for performance shall be 45°C and relative humidity in monsoon shall be 95%. Climate: Hot, humid and dusty.

6. Electromagnetic Compatibility (EMC) and Electromagnetic Interference (EMI) and harmonics

The meter shall comply with EMC and EMI as per IS: 14697:1999/CBIP Publication No. 325 (clause no 5.5) with latest amendments. The necessary test certificates shall be submitted.

The meter shall comply with harmonic test requirements as per clause no. 11.2 Table 13 Influence Quantities of IS 14697:1999 with latest amendment) /clause no. 4.6.5/4.6.3.4 of CBIP Publication No 325.The necessary test certificates shall be submitted.

7. Accuracy Requirement

Accuracy Class of Meter shall be 0.2S. The accuracy shall not drift with time.

Limits of variation in percentage error due to variation of current shall be as per Clause No. 11.1 of IS: 14697:1999 with latest amendments.

Limits of variation in percentage error due to change of influence quantities shall be as per Clause No. 11.2 of IS: 14697:1999 with latest amendments.

Starting Current shall be 0.1% of Ib.

Meter shall be compliant with test of No load condition as per Clause no. 12.12 of IS.

The meter shall be fully functional within 5 seconds after the rated voltage is applied to the meter terminals.

8. Exception Management

The three line-to-neutral voltage shall be continuously monitored and in case any of these falls below defined threshold (70% of Vref), meter shall have suitable indication on LED/ LCD.

The meter shall also have provision for low voltage event logging in meter memory in case of any phase voltage going below a defined threshold. The time blocks in which such a voltage failure occurs/persists shall also be recorded in the meter's memory with a symbol "*".

If 3 Phase RMS voltage applied to the ABT Meter is in between 5% to 70% of Vref and if Voltage is less than 5% of Vref, meter should record Zero voltage symbol "**Z**".

There shall also be a provision to generate error log in case of VT supply failure

9. Time Accuracy

Each meter shall have a built-in calendar and clock, having an accuracy of 10 seconds per month or better.

The calendar and clock shall be correctly set at the manufacturer's works.

The date (year-month-day) and time (hour-min.-sec.) shall be displayed on the meter front on demand.

Meter shall have the intelligence to synchronize the time with GPS (Local GPS/Remote GPS) signal and remotely from PC using web based software.

Limited time synchronization through meter communication port shall be possible at site. When an advance or retard command is given, twelve subsequent time blocks shall be contracted or elongated by five seconds each.

Time advance and retard command should be limited to one command/week.

All clock corrections shall be registered in the meter's memory and suitably shown on print out of collected data.

10. Standard raw data format

The whole system shall be such as to provide a print out (both from the local PC, and from remote central computer) of the following format:

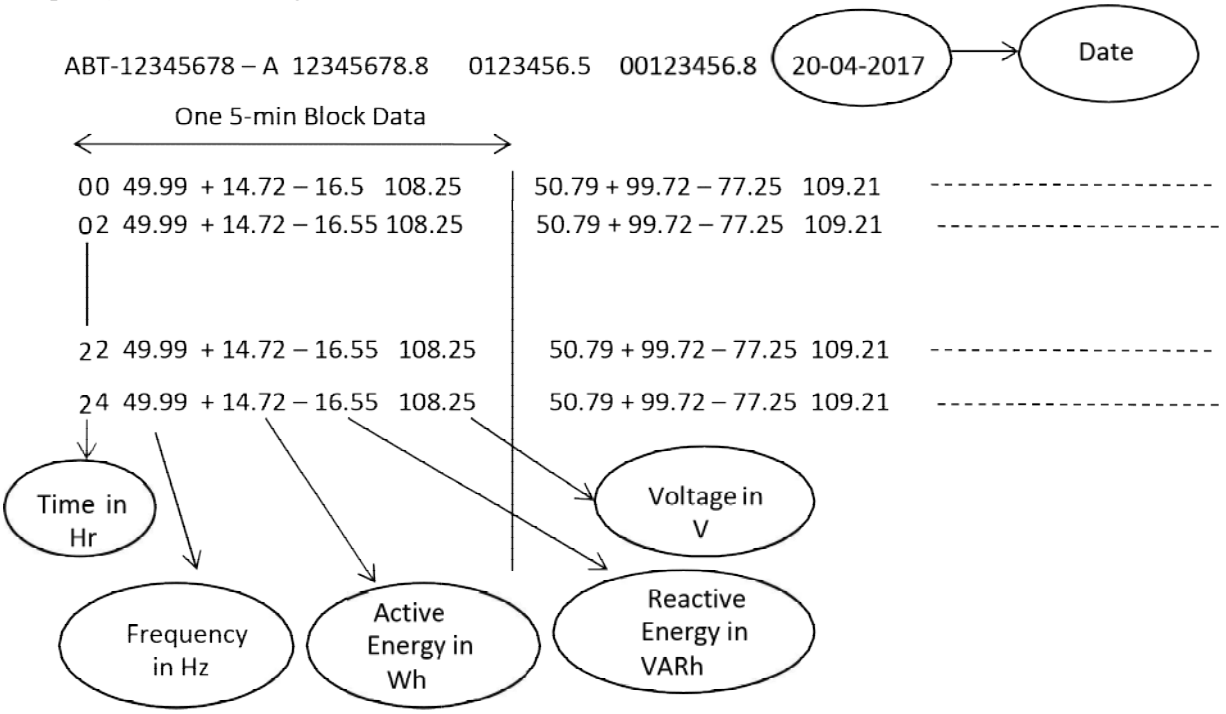


Figure 1 – Standard raw data format for ABT Meter

There are 4 values in one 5 min time block. The first row shall contain the meter data for 2 hours, i.e. 24 time blocks, 00 hrs to 02:00 hrs. Similarly the 2nd row shall contain the data for the next 2 hours and henceforth.

The above data shall be available in text file format (file extension as per IEEE standard/.txt) exportable to Excel. Indication of time retard or advance to be provided without disturbing the proposed format. Each 5-min block data consists of Frequency (in HZ), Active energy (in Wh), Reactive energy (in VARh) and Voltage (in V). All 5 minute Wh and VARh figures in .NPC/output report shall be rounded off upto third decimal. Active and Reactive energy for High and Low voltage condition are to be in the order of 7+1 digits.

11. Measuring Elements.

Current Transformer shall be provided as measuring element in the phase circuit.

Additional CT/Shunt shall be provided in the neutral circuit of meter.

The meter shall have CTs with Magnetic shielding.

The Current Transformers used shall not saturate with passage of DC current as per IS: 14697:1999 with latest amendments.

12. Constructional Requirements.

The meters shall be supplied housed in compact and sturdy, metallic or high grade fire resistant polycarbonate molded cases of non-rusting construction and/or finish.

The supplier shall submit relevant type test certificate as per relevant IS/ISO/IEC for the material used for the meter case.

The cases shall be designed for simple mounting on a plane, vertical surface such as a control/relay panel front.

All terminals for CT and VT connections shall be arranged in a row along the meter's lower side.

The Current, potential Terminal shall be of brass or copper with flat headed brass screws. All components shall be duly plated.

Terminals shall have a suitable construction with barriers and cover, to provide a secure and safe connection of CTs and VTs leads through stranded copper conductors of 4 sq. mm. and 2.5 sq. mm. size respectively.

Connection of internal terminals shall be as per IS: 14697:1999 with latest amendments.

All meters of the same model shall be totally identical in all respects except for their unique identification codes.

They shall also be properly sealed and tamper evident, with no possibility of any adjustment at site, except for transactions allowed in IS 15959.

The meters shall safely withstand, without any damage or mal operation, reasonable mechanical shocks, earthquake forces, ambient temperature variations, relative humidity etc. in accordance with IS-14697.

The meters shall have an IP51 category dust-tight construction but without suction in the meter and shall be capable of satisfactory operation in an indoor, non-air conditioned installation & outdoor installation in a panel.

The Terminal Block shall be made of Polycarbonate or equivalent grade and shall form integral part of the meter base.

The supplier shall submit relevant type test certificate as per relevant IS/ISO/IEC for the material used for the meter terminal block.

The supplier shall submit type test certificate for Resistance to Heat and Fire test as per Clause No. 12.4 of the IS: 14697:1999 with latest amendments.

13. Pulse Output

Each meter shall have a test output device (visual), as per clause 6.11 of IS 14697.1999, for checking the accuracy of active energy (Wh) measurement.

Separate flashing Wh (Watt hour) and VARh (VAR hour) LED indications on the front of the meter shall be provided.

The preferred pulsing rate is twenty (20) per Wh for CT sec-1A and four (4) per Wh for CT sec –5A. However, bidder may decide on their own.

It shall be possible to couple this device to suitable testing equipment also.

14. Internal Battery

An automatic backup for continued operation of the meter's calendar clock, and for retaining all data stored in its memory, shall be provided through a long- life non rechargeable batteries, which shall be capable of supplying the required power for at least 10 years.

The meters shall be supplied duly fitted with the batteries, which shall not require to be changed for at least 10 years, as long as total VT supply interruption does not exceed two years.

The battery mounting shall be designed to facilitate easy battery replacement without affecting PCB of the meter.

Battery for RTC and battery for backup shall be separate.

15. Marking of Meters.

The meter shall have clearly visible and indelible nameplate in accordance with the Clause No. 7.1 of IS: 14697:1999 with latest amendment.

"BEST UNDERTAKING PROPERTY" shall be marked on the nameplate of the meter.

Terminal markings shall have sequence as per Standard Connection Diagram shown in IS: 14697:1999 / CBIP Publication No. 325 with latest amendments.

Meter name plate shall have standard bar code containing information of meter number given by BEST.

Bar coded information of Meter Number shall be printed on the meter name plate and it shall be easily readable by universal bar code scanner.

The connection diagram shall be marked on Terminal Block cover.

The offered meter shall be with ISI mark. Tenderer shall furnish valid BIS certification along with the offer.

16. Meter Number

Meter number will be provided to successful tenderer after placing Purchase Order.

16.2. Meter serial number provided by BEST and Maker number of the meter shall match with each other so that meter ID shall be treated as meter number in Base Computer System (BCS).

17. Sealing Arrangement

The sealing points shall be as per CEA Regulations 2006 with latest amendments.

The supplier shall fix tamper evident, Bar Coded Holographic Seal on the left hand side of the meter. It shall not be possible to remove the seal intact.

18. Self-diagnostic Features

The meter should be capable of performing complete self-diagnostic check to monitor integrity of data in memory location at all time.

The meter shall have indication of unsatisfactory/non-functioning/malfunction of the followings on the display as well in BCS:

a. Real Time Clock (RTC) status.
b. RTC Battery status.
c. Non-volatile Memory (NVM) status.

19. Measurement

The active energy (Wh) measurement shall be carried out on 3-phase, 4-wire principle, with an accuracy as per class **0.2S** (IS 14697).

The meter shall compute the net active energy (Wh) sent out from the substation bus bars during each successive 5 min block, and store it in its memory up to fourth decimal with plus sign if there is net Wh import and with a minus sign if there is net Wh export. Further Wh data in .NPC/output report shall be rounded up to third decimal.

The meter shall count the number of cycles in VT output during each successive 5 min block, and divide the same by 300 (60 sec/min x 5min) to arrive at the average frequency. The least count of the frequency data shall be 0.001 Hz. The frequency data shall be stored in the meter's memory in Hertz up to third decimal. Further Wh data in .NPC/output report shall be rounded upto second decimal.

The meter shall continuously compute the average of the RMS values of the three line- to-neutral VT secondary voltages as a percentage of 63.51 V, and display the same on demand. The accuracy of the voltage measurement/computation shall be at least 0.5%, a better accuracy such as 0.2% in the 95% -105% range being desirable. The voltage data shall be stored in the meter's memory in volts up to third decimal. Further Wh data in .NPC/output report shall be rounded up to second decimal.

The Reactive energy (VARh) measurement shall be carried out on 3-phase, 4- wire principle, with an accuracy of 0.2S as specified in IS 14697.

The meter shall compute the net Reactive energy (Net VARh=(VARh Import - VARh Export)) received at RSS bus bars during each successive 5 min block, and store it in its memory up to fourth decimal with plus sign if there is net VARh import and with a minus sign if there is net VARh export.

It shall also display on demand the net VARh received during the previous 5 min block. Further Wh data in .NPC/output report shall be rounded up to third decimal.

The meter shall also integrate the reactive energy (VARh) algebraically into two separate registers, one for the period for which the average RMS voltage is above 103.0%, and the other for the period for which the average RMS voltage is below 97.0%.

The current reactive power (VAR), with a minus sign if negative, and cumulative reactive energy (VARh) readings of the two registers (>103% and <97%) shall be displayed on demand.

The readings of the two registers at each midnight shall also be stored in the meter's memory.

When reactive power is being received at RSS bus bars, VAR display shall have a plus sign or no sign and VARh registers shall move forward. When reactive power flow is in the reverse direction, VAR display shall have negative sign and VARh registers shall move backwards.

Meter shall continuously integrate and display on demand the net cumulative active energy received at RSS bus bars up to that time. The cumulative net Wh reading at each midnight shall be stored in the meter's memory. The register shall move backwards when active power flows back to substation bus bars.

Errors for different power factors shall be as defined in IS14697.

For reactive power (VAR) and reactive energy (VARh) measurements, IS14697 shall be complied with. The accuracy of measurement of reactive energy shall be as per class 0.2S.

The meter shall be capable of measuring fundamental energy as well as total energy i.e. fundamental plus Harmonics energy. The total energy & fundamental energy shall be stored in separate registers of the meter memory and shall be capable of downloading through Laptop and remotely through HES. Data security shall be ensured as per IS 15959 (three layers of security).

20. Memory/ Storage

Each meter shall have a non-volatile memory in which the following shall be automatically stored.

Average frequency for each successive 5 min block, in Hertz up to third decimals.

Net Wh transmittal during each successive 5 min block, up to fourth decimal, with plus sign if there is net Wh import and with a minus sign if there is net Wh export.

Net VARh transmittal during each successive 5 min block, up to fourth decimal, with plus sign if there is net VARh import and with a minus sign if there is net VARh export.

Cumulative Wh transmittal at each midnight, in eight digits including one decimal.

Cumulative VARh transmittal for voltage high condition, at each midnight in eight digits including one decimal.

Cumulative VARh transmittal for voltage low condition, at each midnight, in eight digits including one decimal.

Average RMS voltage for each successive 5min block.

Date and time blocks of failure of VT supply on any phase, as a star (*)/ (Z) mark as defined above.

The meters shall store all the above listed data in their memories for a period of minimum thirty five (35) days.

21. Energy Registers

All import & export energies and respective cumulative energies shall be stored in separate tariff registers.

Leading and Lagging reactive energies shall be stored in separate registers.

VAh shall be derived from lag and lead reactive components. Energy Meter shall not register less VAh units than Wh units in any case. At UPF, VAh shall be equal to Wh.

22. Billing Registers.

The meter shall store cumulative value of Wh, VAh, VARh (lag) and VARh (lead) energies in Import as well as export mode.

Billing parameters shall be generated at the end of each billing cycle and stored in memory.

Last twelve (12) months billing history shall be available in memory of meter in FIFO basis and shall be viewed on BCS after data downloading.

23. Demand Registers

The meter shall register 5/15 Min Demand/Maximum Demand in VA/W based on derived VAh/Wh accurately for power factor range of Zero Lag-Unity–Zero Lead.

All import & export demands and respective cumulative demands shall be stored in separate tariff registers with date and time stamping, since last reset.

23.3. The option of selection of MD in VA or W shall be available. Default MD shall be in VA.

23.4 VA MD calculation shall be based on lag and lead components of VAR.

Integration period for maximum demand calculation shall be 5/15 minutes. The MD shall be block window type such as 00.00 to 00.05/00.00 to 00.15 etc.

Default MD resetting shall be automatic on 1st of every month at 00.00 hours. Manual MD resetting shall be disabled.

MD shall be displayed in 4 digit integer and 4 digit decimal. Cumulative MD shall be displayed in 5 digit integer and 3 digit decimal.

24. Parameters Required in ABT Meters

Instantaneous Parameters

Instantaneous Parameters and their OBIS codes and interface class/Attribute shall be as per Clause17 Table A14 Category-D4 of IS15959 PART-3

Billing Parameters

Billing Parameters and their OBIS codes and interface class/Attribute shall be as per Clause 20 Table A17 Category-D4 of IS15959 PART-3

Daily energies

The meter shall record the energy snapshots on daily basis at 24:00 Hrs. for 35 days.

Daily load profile parameters and their OBIS codes and interface class/Attribute shall be as per clause 19 Table A 16 Category-D4 of IS15959 PART-3.

Load Survey

The meter shall be provided with load survey of parameters with date and time stamping for a period of at least 35 days.

Block Load profile parameters shall be as per clause 18 Table A15 Category-D4 of IS15959 PART-3 Daily, weekly and monthly report shall be available by giving complete details in 5/15 minutes interval.

It shall be viewed on BCS after data downloading in analytical/tabular as well as graphical format for the daily/weekly/monthly basis.

There shall be facility to export the data in Excel/ASCII/PDF/XML and .NPC format. The load survey data shall be only for "Power ON" days.

Phasor Representation

Meter shall support parameters required to develop phasors of current and voltage at HES.

Additional Parameters

Additional Parameters and OBIS codes required are as follows.

1) Fundamental Energy Wh (1.0.1.8.1.255) (Required in block Load profile)
2) Previous Interval Net VARh Q1 Q4 (Required in block Load profile)
3) Previous Interval Net VARh Q2 Q3 (Required in block Load profile)
4) VARh Q1Q4(Voltage between 97% – 103%) (Required in block Load profile) 5) VARh Q2Q3(Voltage between 97% – 103%) (Required in block Load profile)
6) VARh Q1Q4(Voltage > 103%) (Required in block Load profile)
7) VARh Q2Q3(Voltage > 103%) (Required in block Load profile)
8) VARh Q1Q4(Voltage < 97%) (Required in block Load profile)
9) VARh Q2Q3(Voltage < 97%) (Required in block Load profile)
10) R - Phase Instantaneous W (1.0.21.7.0.255)
11) Y - Phase Instantaneous W (1.0.41.7.0.255)
12) B - Phase Instantaneous W (1.0.61.7.0.255)
13) R - Phase Instantaneous VA
14) Y - Phase Instantaneous VA
15) B - Phase Instantaneous VA
16) R - Phase Instantaneous VAR (1.0.23.7.0.255)
17) Y - Phase Instantaneous VAR (1.0.43.7.0.255)
18) B - Phase Instantaneous VAR (1.0.63.7.0.255)
19) System Error / Warnings
20) Firmware Version

25. Display

The meter shall have high contrast evenly distributed permanent backlit LCD display. The backlit colour shall be Green OR Milky White.

The LCD display shall withstand a temperature of 70°C under normal operating conditions. The supplier shall provide necessary certification/data sheet for the same.

The LCD display shall not be affected by the external electrical and magnetic disturbances.

The display modules shall be well protected from the external Ultra Violet (UV) radiations.

The display visibility shall be sufficient to read the meter mounted at height of 0.5 meter as well as at the height of 2 meters.

Meter shall have 7 segment LCD display. The segment size shall be minimum 9mm x 5mm.

Meter shall display alphanumeric meter serial number.

The display shall be trans reflective STN (STN–Super Twisted Nematic) (160°) type industrial grade with extended temperature range.

Display scrolling time shall be ten (10) seconds.

Minimum 7-digit integers and 1 digit decimal for energy parameters shall be provided.

Meter shall display 7 digit meter number which shall have all numeric numbers.

Display sequence

i) Meter serial no. 1234567

ii) Date (year month day /yyyy mm dd) : 20160311 d iii) Time (hour

min sec /hh mm ss) : 195527 t iv) Cumulative Wh reading : 1234567.8 C

v) Average frequency of the previous block : 49.895 F vi)

Net Wh transmittal during the previous block: - 28.75 E vii)

Net VARh transmittal during the previous block: - 18.75 R

viii) Average % Voltage : 99.2 U ix) Reactive power (VAR) :

106.5 r

x)Voltage - high VARh register reading : 1234567.5 H

xi)Voltage - low VARh register reading : 1234567.4 L

xii)Low battery indication

xiii) The three line-to-neutral voltages shall be continuously monitored and in case any of these falls below 70 %, then preferably, the corresponding flashing LED provided on meter's front shall become steady. They all shall go off if all three voltages fall below 70 %. The LED shall automatically resume flashing when all VT secondary voltages are healthy again.

xiv) The two VARh registers (x and xi) shall remain stay-put while VT supply is unhealthy.

Any other better or more informative mechanism to display the above shall be preferred. The above shall be mutually agreed between the BEST and vendor.

A touch key or push button shall be provided on the meter front for switching on the display and for changing from one indication to the next.

Preferably the display shall switch off automatically about one minute after the last operation of touch key/push button. When the display is switched on, the parameter last displayed shall be displayed again, duly updated.

26. Communication

The Communication Protocol shall be as per IS: 15959-3/DLMS-Indian Standard.

The supplier shall submit certificate from CPRI/ any other Government approved NABL accredited Laboratory for meters conforming to IS:15959/DLMS- Indian Companion Standard.

OBIS codes shall be as per Category-D4 of IS15959 PART-3.

If any additional OBIS/Profile/Scaler code is provided then the tenderers/supplier shall submit the list for the parameters with detailed justification. Based on the detailed justification submitted by tenderers/supplier, BEST reserves right to accept/reject the OBIS/Profile/Scaler code.

Each meter must have an optical port on its front for tapping all data stored in its memory through Laptop.

In addition to the above each meter shall also be provided with a

a) RS-485 port

b) Ethernet port

c) USB/RS-232 port.

All the data stored in the meter's memory shall be transferred to DCU by LAN connectivity and further this data shall be transferred to cloud based server on 4G LTE or 4G with 3G and 2G fallback at scheduled time.

RS 485 and USB ports shall be used for local computer and external storage. The overall intention is to tap the data stored in the meter's memories at a scheduled time from any of the above mentioned ports or any other means and transmit the same to a remote central computer using suitable means of communication.

It shall be possible to securely download the ABT Meters data through an USB/RS-232 port via external storage thereby removing the requirement of a MRI. It shall be ensured that data transfer through USB/RS- 232 shall be unidirectional only i.e. from Meter to external storage device in an authentication process.

Meter data shall be tamper-proof.

All meters shall be compatible with Optical port, RS-485 port, Ethernet port and USB/RS-232 all together at a time and communicate independently.

Data collection from any local laptop shall be possible by installing data collection software.

27. Laptop as a Meter Reading Instrument

One Laptop with BCS software for downloading of meter data shall be provided free of cost. One Optical to USB cable shall be provided.

28. Software

The Bidder shall provide the necessary web based software which would enable Remote workstations to:

Accept the data from the Ethernet/WAN and store it in its memory in user defined formats (text, csv, xls, etc.) in a user-defined file name.

Polling feature along with a task scheduler to run the data downloading software at a pre-designated date and time repeatedly or by manually selecting a meter. File naming for such downloaded data should also be in user-defined format. A detailed activity log shall also be available for each downloading operation.

Upload/Import meter data (binary files) in the software for further processing. While uploading, there shall be provision to upload all selected files automatically and with single key-stroke when uploaded manually.

The file conversion of binary file(s) to text file(s) shall be automatic. If done manually in some case then there should be provision to select multiple files based on filename, convert all selected files with single key-stroke and store the text files in the same location where binary files are stored.

Display the collected data on PC's screen in text format, with forward/backward rolling.

Print out in text format the data collected from one or more meters, starting from a certain date and time, as per operator's instructions.

Transmit the collected data, in binary format, through an appropriate communication link to the central computer, starting from a certain date and time, as per operator's instructions.

Store the collected data in binary format on Pen Drive. In addition to above, in general the software shall be able to convert ABT Meters data to existing format as well as in tabular (.csv) format as applicable.

The above software shall further ensure that absolutely no tampering (except erasing of complete data with password protection) of the collected metering data is possible during its handling by the PC. The web based software shall be suitable for the commonly available PCs (Window based) at the various RSS.

The bidder shall ensure data integrity checks on all metered data received fromdata collection systems.

The web based software provided will manage all functionalities of collection of data through DCUs, validate the data, store the data in a database, and manage the complete system. Software will also have a scheduler for scheduling the task of collection of data periodically. The periodicity of data collection shall be user defined.

29. Quality Assurance

The quality control procedure to be adopted during manufacturing of the specified equipment shall be mutually discussed and finalized in due course, generally based on the established and proven practices of the manufacturer.

The web based software shall be user friendly which can be easily installed in any PC/Laptop irrespective of operating system of the PC/Laptop, and shall be certified for ensuring data handling capabilities. The same shall be demonstrated by the party during technical evaluation.

During demonstration tenderer shall bring standard meter. Thereafter software shall be offered for technical compatibility before taking up further necessary action in the procurement process.

30. Testing

All equipment, after final assembly and before dispatch from manufacturer's works, shall be duly tested to verify that it is suitable for dispatch. Routine and acceptance tests shall be carried out on the meters in line with IS 14697.

Any meter which fails to fully comply with the specification requirements shall be liable to be rejected by the BEST Undertaking.

Acceptance Tests for PC Software and data down loading using meter communication ports-All ABT Meters after final assembly and before dispatch from Bidder's/Manufacturer's works shall be duly tested to verify that they are suitable for downloading data using meter communication ports shall be subjected to the following acceptance test.

Downloading Meter Data from the Meter(s) to Laptop via optical port with Optical to USB cord.

Downloading meter data through USB/RS-232 port.

Downloading meter data to DCU through Ethernet port.

Down loading the meter data from remote PC through web based software.

Compatibility with PC Software.

Functioning of Time synchronization, advance and retard time commands.

Meter downloading time verification.

Copy of Test certificate shall be submitted to BEST Undertaking.

31. Type Test

Meter shall be Type tested as per IS: 14697:1999 with latest amendments and CBIP Publication No 325 wherever applicable.

The type test report submitted shall be of the same type and design of the meter offered.

Test Certificate from CPRI/Government approved NABL Accredited Laboratory for meters conforming to IS: 15959/ DLMS- Indian Companion Standard shall be submitted along with the offer.

Type test shall be carried out from laboratories which are accredited by NABL of Government India.

In case of supplier having own NABL accredited lab, the type test certificate furnished with tender from such lab shall not be accepted (i.e. Type test certificate from own NABL Lab). In such case the tenderer shall furnish the type test certificate from other NABL accredited lab.

The Type test certificates shall not be more than 36 months old on date of opening of bid.

A copy of the Type test results shall be enclosed with the offer.

Type test report shall clearly indicate the constructional features of the type tested meter. **32.Other**

Acceptance Test

The meter shall pass following additional acceptance test in addition to the acceptance test specified in IS: 14697:1999.

Power consumptions

Verification of downloaded data.

Impulse Voltage: The meter shall withstand impulse voltage of 10kV Peak without any damage in line with Clause No. 12.7.6.2 of IS: 14697:1999. The necessary test certificates to be submitted.
All meters supplied in subsequent lot shall be confirming to all the features and design of approved tender sample meter.

33. BIS Certificate

Tenderers shall furnish valid BIS certification along with the offer.

34. Minimum Testing Facilities

Manufacturer should possess fully computerized meter test bench system for carrying out routine and acceptance tests as per IS: 14697:1999 and CBIP Publication No. 325.In addition, this facility should produce test reports for each and every meter.

The Manufacturer should have the necessary minimum testing facilities for carrying out the following tests. i) AC Voltage Test. ii) Insulation Resistance Test. iii) Test Limits of Errors. iv) Test on Meter Constants.

v) Test of Starting Condition.
vi) Test of No-load Condition.
vii) Repeatability of Error Test.
viii) Test of Power Consumption.
ix) Vibration Test. x) Shock Test.
xi) The manufacturer should have duly calibrated reference standard meter of class 0.02 or higher accuracy. xii) 10kV Impulse Voltage Test facility. xiii) Test for Influence Quantity.
xiv) AC & DC Magnetic Influence Test.
xv) 35kV Test.

35. Pre-Dispatch Inspection at factory works

The undertaking reserves the right to inspect/test each lot of meter at the supplier's works.

The supplier shall offer every lot for inspection prior to dispatch by our inspecting officers at their works.

The intimation regarding inspection of the lot shall be given 15 days in advance.

All tests and inspection shall be carried out as per IS: 14697:1999 and CBIP Publication No. 325 with latest amendments if any and BEST requirements.

Prototype Inspection:-The Prototype inspection is applicable for this particular tender and the Undertaking's officers shall visit the firm's factory premises to inspect quality of Prototype produced and the Undertaking shall bear the expenditure of to and fro travelling, lodging and boarding of the Undertaking's two inspecting officers. The Prototype meters will be carefully preserved by BEST Undertaking for the guarantee period of five years. If any deviation is observed in the meter supplied by the Tenderer in subsequent lot, the meter(s) with deviation will be liable to be rejected.

Lot Inspection:-The Lot Inspection is applicable for one Lot preferably first for this particular tender and the Undertaking's officers shall visit the firm's factory premises to inspect the quality of Lot produced and the Undertaking will bear the expenditure of to and fro travelling, lodging and boarding of the Undertaking's two inspecting officers. For subsequent visits required, if any, the Undertaking will bear the expenditure.

36. Inspection and Testing after receipt of meters at Stores

Each meter supplied will be tested as per this specification at meter testing laboratory at BEST Undertaking. The meter is liable to be rejected if fails in acceptance test as per IS: 14697:1999 with latest amendment and Specification of BEST Undertaking.

37. Test Reports.

Each meter shall be tested against the RSM having the traceability with NABL or its associated bodies. Each meter factory test report shall be supplied in soft copy on CD in the format given by BEST.

38. Tender Sample

Tenderer shall submit 2 sample meters.

After successful passing the tests carried out at BEST laboratory the tenderer shall give the demonstration of the meter offered against the tender to demonstrate the features incorporated in the meter.

Sample meter submitted against the tender by successful tenderer will not be returned to the supplier till the completion of guarantee period.

The tender sample meters will not be considered in the ordered quantity.

39. Guarantee

Guarantee of 7.5 years from the date of dispatch or 7 years from date of commissioning, whichever is earlier Manufacturer shall undertake a guarantee to replace meter up to a period of 7 Year from the date of supply. The meters which are found defective/inoperative within the guarantee period shall be replaced as per meter service level agreement.

The defective Meters shall be collected by the successful tenderer from H V C d e p t . a nd then deliver either by replacement or after repairing.

40. Packing

Carton Number, Purchase Order Number, BEST meter numbers, manufacturer serial numbers and quantity of meters shall be mentioned on each packing box/cartoon.

The meters shall be serially packed and starting to end serial numbers shall be mentioned on each box/carton.

41. Technical Support

The tenderer shall depute their engineers at free of cost for technical support needed during analysis of defective meter cases, meter tampering cases etc. whenever called upon. The supplier shall submit their analysis report within 15 days period.

The tenderer shall depute their engineers for necessary software requirements, BEST MRI configuration with the meter, ASCII billing etc.to our user department.

42. Documents to be uploaded along with the offer

The List of documents / Certificates to be submitted / uploaded in soft format along with the offer as per various Clauses of BEST Specification No. MR/SMART-SPEC/PP-/1A,-/5A,(-/110)V CTPTO ABT/1/2019-20 is described in Annexure A-1.

43. Guaranteed Technical Particulars

The tenderer shall furnish the particulars giving specific required details of Meter in Annexure A-2 attached. The offers without the details in stands rejected.

44. General

The meter shall be supplied with latest/compatible software (shall be compatible with old & new meters data download handling). Any new software as required to be installed within warranty period are to be done by party or through remote support to client.

The total arrangement shall be such that one (1) operation (click on “data download from meter” button on

software) can carry out the whole operation in about five (5) minutes per meter or preferably faster.

The layout of software front end / user interface has to be approved by BEST during technical evaluation / demonstration. However a standard template sheet will be provided along with bid for reference.

Above specification is minimum only, any higher standard required for the purpose intended (meter data handling) would be assessed by vendor and would be supplied accordingly. The detailed architecture shall be approved during drawing approval stage.

Meter shall be accommodated in existing C&R panel of standard size (Alstom / ER / ABB / Siemens) or C&R panel with door closed.If required before bidding, bidder may collect necessary data or else the scope is deemed to be included.

Step by Step procedure (on screen shot type and desktop video capture) shall be provided for Installation / Re-installation of Database handling software in to Laptop / PC

Meter maintenance / site-testing procedure as per relevant IS/IEC standard.

Procedure for data downloading from Meter by Laptop / Desktop PC.

As on date of delivery, the supplied meters shall comply with all statutory regulation as required under CERC / CEA / IEGC as applicable and the same should be declared by the vendor during delivery along with warranty certificate.

Annexure-K

Smart Meters DPR																					
Sr. No.	DPR Description	Proposed Capital Cost (Rs.Cr)	Capex (Rs.Cr)	Capitalization (Rs.Cr)	CWIP (Rs.Cr)	Capex Plan (Rs.Cr)									Capitalization Plan (Rs.Cr)								
						FY 23-24	FY 24-25	FY 25-26	FY26-27	FY 27-28	FY 28-29	FY 29-30	FY 30-31	FY31-32	FY 23-24	FY 24-25	FY 25-26	FY26-27	FY 27-28	FY 28-29	FY 29-30	FY 30-31	FY31-32
1	Prepaid Smat Meter	1303.16	1204.28	1204.28	0.00	47.51	136.48	160.57	160.57	160.57	160.57	160.57	113.06	104.38	47.51	136.48	160.57	160.57	160.57	160.57	160.57	113.06	104.38
	Total	1303.16	1204.28	1204.28	0.00	47.51	136.48	160.57	160.57	160.57	160.57	160.57	113.06	104.38	47.51	136.48	160.57	160.57	160.57	160.57	160.57	113.06	104.38

Tariff Impact - Unapproved DPRs

Scheme Name	Capital Expenditure & Capitalisation								
	FY 23-24	FY 24-25	FY 25-26	FY26-27	FY 27-28	FY 28-29	FY 29-30	FY 30-31	FY31-32
Phasing of approved DPR	47.51	136.48	160.57	160.57	160.57	160.57	160.57	113.06	104.38
IDC	-	-	-	-	-	-	-	-	-
Total capitalisation (incl. IDC)	47.51	136.48	160.57	160.57	160.57	160.57	160.57	113.06	104.38
GFA statement									
Opening balance	-	47.51	183.99	344.56	505.13	665.70	826.27	986.84	1,099.90
Addition	47.51	136.48	160.57	160.57	160.57	160.57	160.57	113.06	104.38
Closing balance	47.51	183.99	344.56	505.13	665.70	826.27	986.84	1,099.90	1,204.28
Equity statement									
Opening balance	-	14.25	55.20	103.37	151.54	199.71	247.88	296.05	329.97
Addition	14.25	40.94	48.17	48.17	48.17	48.17	48.17	33.92	31.31
Closing balance	14.25	55.20	103.37	151.54	199.71	247.88	296.05	329.97	361.28
Revenue expenses									
Interest on debt	1.68	8.06	17.92	27.81	26.34	25.32	24.30	21.60	20.28
Return on Equity	1.10	6.08	13.87	22.30	30.73	39.16	47.59	54.78	60.48
Depreciation (Avg. rate of 9%)	2.14	10.42	23.78	38.24	52.69	67.14	81.59	93.90	103.69
Running Expenses (@2.97% of av GFA)	0.71	3.44	7.85	12.62	17.39	22.16	26.92	30.99	34.22
Income Tax (@ 0% on grossed up RoE)	-	-	-	-	-	-	-	-	-
Total (Rs. Cr)	**5.63**	**27.99**	**63.43**	**100.97**	**127.15**	**153.78**	**180.41**	**201.27**	**218.67**
Projected Sales (MU)	4,756.54	4,780.33	4,804.23	4,828.25	4,852.39	4,876.65	4,901.04	4,925.54	4,950.17
Total Impact per unit of sales (Rs./unit)	**0.012**	**0.059**	**0.132**	**0.209**	**0.262**	**0.315**	**0.368**	**0.409**	**0.442**

OPEX SCHEME									
Total Impact per unit of sales (Rs./unit)	**0.100**	**0.286**	**0.334**	**0.333**	**0.331**	**0.329**	**0.328**	**0.230**	**0.211**

IDC and Interest - Unapproved DPRs

IDC Calculation

Particulars	FY 23-24	FY 24-25	FY 25-26	FY26-27	FY 27-28	FY 28-29	FY 29-30	FY 30-31	FY31-32
Opening CWIP	0.00	-	-	-	-	-	-	-	-
Fresh capex	47.51	136.48	160.57	160.57	160.57	160.57	160.57	113.06	104.38
Capitalisation	47.51	136.48	160.57	160.57	160.57	160.57	160.57	113.06	104.38
Closing CWIP	-	-	-	-	-	-	-	-	-

Normative debt utilisation statement

Particulars	FY 23-24	FY 24-25	FY 25-26	FY26-27	FY 27-28	FY 28-29	FY 29-30	FY 30-31	FY31-32
Opening balance	-	-	-	-	-	-	-	-	-
Drawal towards capex	33.26	95.54	112.40	112.40	112.40	112.40	112.40	79.14	73.07
Utilised for asset capitalisation	33.26	95.54	112.40	112.40	112.40	112.40	112.40	79.14	73.07
Normative debt lying in CWIP	-	-	-	-	-	-	-	-	-
Interest Rate for Normative Debt	10.50%	10.50%	10.50%	10.50%	10.50%	10.50%	10.50%	10.50%	10.50%

	Computation of IDC (first charge method) - Normative debt	FY 23-24	FY 24-25	FY 25-26	FY26-27	FY 27-28	FY 28-29	FY 29-30	FY 30-31	FY31-32
Stream 1	Opening balance	-								
	Drawl	-								
	Capitalised	-								
	Closing balance	-								
	Interest chargeable to IDC - to be capitalised	-								
	Opening balance	-								
	Drawl	33.26								
	Capitalised	33.26								
	Closing balance	-								
	Interest chargeable to IDC - to remain in CWIP	0.00								
	Opening balance	0.00								
	Drawl	-								
	Capitalised	0.00								
	Closing balance	-								
	Interest chargeable to IDC - to remain in CWIP	0.00								
Stream 1: Total interest to be capitalised		-								
Stream 2	Opening balance		-							
	Drawl		-							
	Capitalised		-							
	Closing balance		-							
	Interest chargeable to IDC - to be capitalised		-							
	Opening balance		-							
	Drawl		95.54							
	Capitalised		95.54							
	Closing balance		-							
	Interest chargeable to IDC - to be capitalised		-							
	Opening balance		-							
	Drawl		-							
	Capitalised		-							
	Closing balance		-							
	Interest chargeable to IDC - to remain in CWIP		-							
Stream 2: Total interest to be capitalised			-							
Stream 3	Opening balance			-						
	Drawl			-						
	Capitalised			-						
	Closing balance			-						
	Interest chargeable to IDC - to be capitalised			-						
	Opening balance			-						
	Drawl			112.40						
	Capitalised			112.40						
	Closing balance			-						
	Interest chargeable to IDC - to be capitalised			-						
	Opening balance			-						
	Drawl			-						
	Capitalised			-						
	Closing balance			-						
	Interest chargeable to IDC - to remain in CWIP			-						
Stream 3: Total interest to be capitalised				-						
Stream 4	Opening balance				-	-	-	-	-	-
	Drawl				-	-	-	-	-	-

	Capitalised				-	-	-	-	-	-
	Closing balance				-	-	-	-	-	-
	Interest chargeable to IDC - to be capitalised				-	-	-	-	-	-
	Opening balance				-	-	-	-	-	-
	Drawl				112.40	112.40	112.40	112.40	79.14	73.07
	Capitalised				112.40	112.40	112.40	112.40	79.14	73.07
	Closing balance				-	-	-	-	-	-
	Interest chargeable to IDC - to be capitalised				-	-	-	-	-	-
	Opening balance				-	-	-	-	-	-
	Drawl				-	-	-	-	-	-
	Capitalised				-	-	-	-	-	-
	Closing balance				-	-	-	-	-	-
	Interest chargeable to IDC - to remain in CWIP				-	-	-	-	-	-
Stream 4: Total interest to be capitalised					-	-	-	-	-	-

Computation to interest chargeable to revenue account for normative debt, considering avg. depreciation as repayment

	Particulars	FY 23-24	FY 24-25	FY 25-26	FY26-27	FY 27-28	FY 28-29	FY 29-30	FY 30-31	FY31-32
Stream 1	Opening balance	-	32.00	29.49	26.99	24.48	21.97	19.46	16.95	14.44
	Drawl	33.26	-	-	-	-	-	-	-	-
	Repayment	1.25	2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51
	Closing balance	32.00	29.49	26.99	24.48	21.97	19.46	16.95	14.44	11.93
	Interest	**1.68**	**3.23**	**2.97**	**2.70**	**2.44**	**2.18**	**1.91**	**1.65**	**1.38**
Stream 2	Opening balance		-	91.93	84.73	77.52	70.31	63.11	55.90	48.70
	Drawl		95.54	-	-	-	-	-	-	-
	Repayment		3.60	7.21	7.21	7.21	7.21	7.21	7.21	7.21
	Closing balance		91.93	84.73	77.52	70.31	63.11	55.90	48.70	41.49
	Interest		**4.83**	**9.27**	**8.52**	**7.76**	**7.00**	**6.25**	**5.49**	**4.73**
Stream 3	Opening balance			-	108.16	99.68	99.68	99.68	99.68	99.68
	Drawl			112.40	-	-	-	-	-	-
	Repayment			4.24	8.48	-	-	-	-	-
	Closing balance			108.16	99.68	99.68	99.68	99.68	99.68	99.68
	Interest			**5.68**	**10.91**	**10.47**	**10.47**	**10.47**	**10.47**	**10.47**
Stream 4	Opening balance				-	-	-	-	-	-
	Drawl				112.40	112.40	112.40	112.40	79.14	73.07
	Repayment				4.24	4.24	4.24	4.24	2.98	2.76
	Closing balance				108.16	108.16	108.16	108.16	76.16	70.31
	Interest				**5.68**	**5.68**	**5.68**	**5.68**	**4.00**	**3.69**

Borrowing for IDC and cost of funding thereon (normative borrowing for IDC considering avg. depreciation as repayment

	Particulars	FY 23-24	FY 24-25	FY 25-26	FY26-27	FY 27-28	FY 28-29	FY 29-30	FY 30-31	FY31-32
Stream 1	Opening balance	-	-	-	-	-	-	-	-	-
	Drawl	-		-	-	-	-	-	-	-
	Repayment	-	-	-	-	-	-	-	-	-
	Closing balance	-	-	-	-	-	-	-	-	-
	Interest	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Stream 2	Opening balance		-	-	-	-	-	-	-	-
	Drawl		-	-	-	-	-	-	-	-
	Repayment		-	-	-	-	-	-	-	-
	Closing balance		-	-	-	-	-	-	-	-
	Interest		**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Stream 3	Opening balance			-	-	-	-	-	-	-
	Drawl			-	-	-	-	-	-	-
	Repayment			-	-	-	-	-	-	-
	Closing balance			-	-	-	-	-	-	-
	Interest			**-**	**-**	**-**	**-**	**-**	**-**	**-**
Stream 4	Opening balance				-	-	-	-	-	-
	Drawl				-	-	-	-	-	-
	Repayment				-	-	-	-	-	-
	Closing balance				-	-	-	-	-	-
	Interest				**-**	**-**	**-**	**-**	**-**	**-**
	Total Interest	**1.68**	**8.06**	**17.92**	**27.81**	**26.34**	**25.32**	**24.30**	**21.60**	**20.28**

Cost Benefit Analysis (CBA) of Smart Meters:

For benefits of the Smart Meters kindly refer Para 7 & 8.

Further to this, there are wide benefits of Smart Meters to customers, the state, and utilities and same are as as follows:

1. BEST undertaking has authorized the M/s. Adani Transmission Ltd. (ATL) to replace about 10.80 Lakh conventional / static customer meters with Smart Meters in order to give consumers greater control over their energy use. Smart Meters enable a utility to provide customers with detailed information about their energy usage at different times of the day, which in turn enables customers to manage their energy use more proactively.

2. Allows for faster outage detection and restoration of service by a utility when an outage occurs and therefore, less disruption to a customer's home or business.

3. Provides customers with greater control over their electricity use when coupled with time-based rates, increasing the range of different pricing plans available to customers and giving them more choice in managing their electricity consumption and bills.

4. Smart Meters enable a utility to measure a customer's electricity usage in hourly increments.

5. If a customer elects to participate in time-based rates offered by the utility, they have the opportunity to lower their electricity demand during "peak" periods (the peak period for most utilities are summer afternoons) and potentially save money on their monthly electric bill.

6. Allows customers to make informed decisions by providing highly detailed information about electricity usage and costs. Armed with a better understanding of their energy use, consumers can make informed decisions on how to optimize their electricity consumption and reduce their bills.

7. In the near future, by installing an in-home display device that communicates wirelessly with a Smart Meter, a customer could monitor their electricity usage and costs in real-time, allowing them to adjust their usage instantaneously in response to changes in prices or system reliability events, for example by delaying the use of a high-energy appliance or shutting it off. This could be done manually or automatically by pre-programming the device or appliance.

8. Helps the environment by reducing the need to build power plants, or avoiding the use of older, less efficient power plants as customers lower their electric demand.

9. This is beneficial for all utility customers because the costs of building new power plants or relying on older, less-efficient power plants are eventually passed on to customers in retail rates.

10. Building power plants that are necessary only for occasional peak demand is very expensive. A more economical approach is to enable customers to reduce their demand through time-based rates or other incentive programs.

11. Increases privacy because electricity usage information can be relayed automatically to the utility for billing purposes without on-site visits by a utility to check the meter. This also results in lower operational costs for the utility, which means savings for customers as utility rates reflect the utility's cost to operate. In addition, as technology improves and changes over time, customers can receive the benefit of those changes without the utility having to replace the meter itself.

Annexure-M

Annexure - 'G'

Proje. Department
Inw. No. 533
Date 21/3/12

BRIHANMUMBAI ELECTRIC SUPPLY & TRANSPORT UNDERTAKING
(OF THE BRIHANMUMBAI MAHANAGARPALIKA)

-ACCOUNTS DEPARTMENT-

DEPARTMENTAL CIRCULAR

Ref No. Dy.CAO(Sr.)/ 47 /2012 Date : 14.03.2012

Sub : Depreciation procedure in respect of calculating and charging as per MERC(Multi Year Tariff) Regulations, 2011

The Straight Line Method of depreciation on Undertaking's assets was approved vide BCR No. 470 dated 13.09.1968 and CR No. 659 dated 10.10.1968 and accordingly procedure was laid down for calculation and charging of depreciation. Under the Straight Line Method of depreciation, rates for complete years are taken into account. Life of the asset as provided in Income Tax Act is generally adopted for working out the depreciation provision in respect of assets in the Undertaking pertaining to the General Administration and Transport Division. Earlier, in case of Electric Supply Division, the life of the assets is considered as per the provisions of Electric Supply Act 1948 and thereafter due to promulgation of Electricity Act 2003, it is considered as per the MERC's (Terms & Conditions of Tariff) Regulations 2005. The depreciation is provided from the year in which asset is acquired and therefore, the depreciation is provided for the full financial year in which the asset is acquired irrespective of date or the month in which the asset is acquired. Thus, the Depreciation is provided uniformly at every financial year right from the year of the purchase till the life of asset is completed. The depreciation is provided on the acquisition/purchase cost of the assets after taking into consideration residual value of the asset which is estimated at 10% of the

acquisition/purchase cost. As such in any case Undertaking do not provide depreciation more than 90% of the book value of the asset.

The above procedure is now changed due to MERC (Multi Year Tariff) Regulations, 2011

1) Due to introduction of MERC (Multi Year Tariff) Regulations, 2011, the rate of depreciation in case of Electric Supply Division assets is changed in many of the assets. As per Depreciation schedule appended to MERC (Multi Year Tariff) Regulations, 2011, the life of most of the assets has been reduced and to that extent the rate of depreciation is increased. The details of rate of depreciation and life of each asset is shown in Annexure (Enclosed). Further, as 50% of assets under the General Administration are allotted to Electric Supply Division and hence it is decided by the Administration to adopt the new depreciation rate also for General Administration Department. In case of Bus Division assets, there is no change in the existing rate of Depreciation.

2) Further, as per the of MERC (Multi Year Tariff) Regulations, 2011, the new rate of depreciation is applicable for those existing assets where such assets are depreciated to the extent of 70% and remaining 20% shall be spreadover for the balance useful life of the asset.

3) As per the existing policy, the depreciation is provided for the asset procured during the financial year, irrespective of date or month in which assets are acquired / capitalized. Further, MERC is also allowing the depreciation on the Opening Gross Fixed Assets only. As such, it is decided by the Administration that from F.Y. 2011-12, the depreciation will be charged on the Opening Gross Fixed Assets only for all three Divisions viz General Administration, Electric Supply and Buses.

In view of the above, the Administration has decided to adopt the following procedure for calculation and charging of Depreciation provision from F.Y. 2011-12 :-

a) From F.Y. 2011-12, no depreciation provision will be provided for assets which are purchased during the financial year for all three Divisions, viz., General Administration, Electric Supply and Buses.

b) To apply new depreciation rate for the assets which are capitalized / purchased from FY 2011-12 onwards for Supply & General Administrative Division.

c) New depreciation rates are applicable for providing depreciation provision only and not for scrapping of assets.

d) There is no change in the existing rate of depreciation in case of Bus Division.

e) The assets capitalized / purchased prior to F.Y. 2011-12, new rates of depreciation are applicable only on those assets of Electric Supply and General Administration Division where 70% asset value is depreciated.

This issues with the approval of the General Manager.

Encl : Annexure

S. J. Darme
Dy.C.A.O.(Sr.)

TO : ALL HEADS OF DEPARTMENTS / BRANCHES

Sh(dep pro(1)

Annexure I

DEPRECIATION SCHEDULE

For Assets of Supply & General Administration Division

	Description of Assets Depreciation	As per Regulation 2005	Life	Depreciation (Straight line) 2011	Life
A.	Land owned under full title	-			
		-			
B.	Land held under lease	-			
a)	for investment in the land	-		3.34	27
b)	for cost of clearing the site	-		3.34	27
c)	Land for reservoir in case of Hydro Generating Station	-		3.34	27
C.	Assets Purchased New:				
a.	Plant and machinery in Generating Stations including plant foundations				
	i) Hydro-electric	2.57	35	5.28	19
	ii) Steam electric	3.60	25	5.28	19
	NHRS &Waste Heat Recovery Boilers/Plants				
	iii) Diesel-electric and gas plant	6.00	15	5.28	19
b.	Cooling towers and circulating water systems	3.60	25	5.28	19
c.	Hydraulic works forming part of Hydro-electric systems including:-				
	i) Dams, Spillways, weirs, canals, reinforced concrete Flumes and siphons	1.80	50	5.28	19
	ii) Reinforced concrete pipelines and surge tanks, steel pipelines, sluice gates, steel surge (tanks) hydraulic control valves and other hydraulic works	2.57	35	5.28	19
d.	Building & civil engineering works of permanent character				
	i) Offices & showrooms	1.80	50	3.34	27
	ii) Containing thermo-electric generating plant	3.60	25	3.34	27
	iii) Containing hydro-electric generating plant	2.57	35	3.34	27
	iv) Temporary erection such as wooden structures	18.00	5	100	0.9
	v) Roads other than kutcha roads	1.80	50	3.34	27
	vi) Others	1.80	50	3.60	25

		Description of Assets Depreciation	As per Regulation 2005	Life	Depreciation (Straight line) 2011	Life
e.		Transformers, transformer (Kiosk) sub-station equipment & other fixed apparatus (including plant foundations)				
	i)	Transformers (including foundations) having a rating of 100 kilo volt amperes and over	3.60	25	5.28	17
	ii)	Others	3.60	25	5.28	17
f.		Switchgear including cable connections	3.60	25	5.28	17
g.		Lightning arrestors				
	i)	Station type	3.60	25	5.28	17
	ii)	Pole type	6.00	15	5.28	17
	iii)	Synchronous condensor	2.57	35	5.28	17
h.		Batteries	18.00	5	5.28	17
	i)	Underground Cable including joint boxes and disconnected boxes	3.60	25	5.28	17
	ii)	Cable duct system	1.80	50	5.28	17
i.		Overhead lines including supports:				
	i)	Lines on fabricated steel operating at nominal voltages higher than 66 kV	2.57	35	5.28	17
	ii)	Lines on steel supports operating at nominal voltages higher than 13.2 kilovolts but not exceeding 66 kilovolts	3.60	25	5.28	17
	iii)	Lines on steel or reinforced concrete supports	3.60	25	5.28	17
	iv)	Lines on treated wood supports	3.60	25	5.28	17
j.		Meters	6.00	15	5.28	17
k.		Self propelled vehicles	18.00	5	9.50	9.47
l.		Air conditioning plants:				
	i)	Static	6.00	15	5.28	17
	ii)	portable	18.00	5	9.50	9.47
m.						
	i)	Office furniture and fittings	6.00	15	6.33	14
	ii)	Office equipments	6.00	15	6.33	14
	iii)	Internal wiring including fittings and apparatus	6.00	15	6.33	14
	iv)	Street light fittings	6.00	15	5.28	17
n.		Apparatus let on hire				
	i)	Other than motors	18.00	5	9.50	9.47
	ii)	Motors	6.00	15	6.33	14
o.		Communication equipment:				
	i)	Radio and high frequency carrier system	6.00	15	6.33	14
	ii)	Telephone lines and telephones	6.00	15	6.33	14
p.		I.T. equipments	No change	6	15	6
q.		Assets purchased second hand and assets not otherwise provided for in the Schedule	No change	17	5.28	17

THE BRIHANMUMBAI ELECTRIC SUPPLY AND TRANSPORT UNDERTAKING
(OF THE MUNICIPAL CORPORATION OF GREATER MUMBAI)

ACCOUNTS DEPARTMENT

Life in years adopted for working out depreciation provision/depreciated value on assets of the Gen. Administration / Transport / Electric Supply Division

			PROPOSED LIFE FROM 2012 - 13	
	SCH. 'A'		SCH. 'B'	
GENERAL ADMINISTRATION	Life in year old	Rates % as per BEST	life as per MERC	Rates % as per MERC
BUILDING (fr.1977-78 onward dep. Cal. As per sch.B))	45	2%	27	3.34%
STATIC ROOM A.C. (seperated from building)	15	6%	17	5.28%
MOTOR VEHICLES	8	11.25%	8	11.25%
TOOLS & EQUIPMENT (fr.1998-99 onward dep. Cal. As per sch.B)	18	5%	17	5.28%
FURNITURE & OFFICE EQUIP. (fr.1998-99 dep. Cal. As per sch.B)	18	5%	14	6.33%
PORTABLE A.C. (seperated fr. off. Equip) (fr.2007-08 dep. Cal. As per sch.B)	7	12.86%	9	9.50%
PLANT & MACHINERY (stores dept)	22	4.09%	17	5.28%
PLANT & MACHINERY (In House Computer)	10	9%	17	5.28%
PLANT & MACHINERY (In House Computer) from 2005-06	6	15%	17	5.28%
PLANT & MACHINERY (In House Computer) from 2008-09	--	--	17	5.28%
PERSONAL COMPUTER / PRINTER/ UPS	7	12.86%	6	15%
PERSONAL COMPUTER / PRINTER/ UPS (From 2005-06)	6	15%	6	15%
ELECTRONIC EQUIPMENT (Seperated from office Equipment) (fr. 2003-04 onward dep. Cal. as per sch.B)	12	7.50%	6	15%
CYCLOSTYLE MACHINE / XEROX MACHINE (fr.2005-06 onward dep. Cal. as per sch.B)	10	9%	6	15%
SECURITY EQUIPMENT (fr.1992-93 onward dep.cal. As per sch.B)	100	0.90%	17	5.28%
FAX MACHINE	7	12.86%	6	15%

BUSES	Life in year old	Rates % as per BEST
BUILDING	45	2%
BUS CHOWKIES & BUS 'Q' SHELTERS	20	4.50%
STATIC A.C. (Sepereated from building)	15	6%
BUSES (fr.2005 - 06 onward)	12	7.50%
M.O.H. OF BUSES	4	25%
MOTOR VEHICLES	8	11.25%
M.O.H. OF MOTOR VEHICLES	4	25%
TOOLS & EQUIPMENTS	18	5%
FURNITURE & OFFICE EQUIPMENT	18	5%
PORTABLE ROOM A.C (Seperated from office equipment)	7	12.86%
ELECTRONIC EQUIPMENT (seperated from office equipment)	12	7.50%
PLANT & MACHINERY & EQUIPMENTS	22	4.09%
PERSONAL COMPUTER / PRINTER/ UPS (Prior to 2005-06)	7	12.86%
P.C. (Seperated from office equipments) from 2005-06	6	15%
P.C. (Seperated from office equipments) from 2006-07	5	18%
HAND PAGING MACHINE	5	18%
NUMBERING BOXES	8	11.25%
XEROX MACHINE	10	9%
FAX MACHINE	7	12.86%
ELECTRONIC EQUIPMENT (seperated from Machine Tools)	12	7.50%

ELECTRIC SUPPLY	SCH. 'A'		PROPOSED LIFE FROM 2012 - 13 SCH. 'B'	
	Life in year old	Rates % as per BEST	life as per MERC	Rates % as per MERC
BUILDING	50	1.80%	27	3.34%
BUILDING (from 1993-94) (fr 1973-74 onward as per sch B)	45	2%	27	3.34%
BILL COLLECTION CHOWKEY	20	4.50%	--	--
STATIC A.C. (seperated from bldg.)	15	6%	17	5.28%
CABLES & MAINS	40	2.25%	17	5.28%
CABLES & MAINS (from 1994-95) (fr. 1981-82 onward as per sch. B)	35	2.57%	17	5.28%
CAPACITORS (fr.2005-06 onward as per sch.B)	10	9%	17	5.28%
STRET LAMPS (fr. 2001-02 onward as per sch.B)	15	6%	17	5.28%
SCADA (fro 2003-04 onward as per sch.B)	12	7.50%	6	15%
METERS & INSTALLATION (Conventional)	15	6%	17	5.28%
METERS & INSTALLATION (Static & Electronics) (fr. 2001-02 onward as per sch.B)	15	6%	8	11.25%
SWITCHGEAR & MACHINERY	20	4.50%	17	5.28%
SWITCHGEAR & MACHINERY (fr.1994-95)(fr.1994-95 onward as per sch B)	25	3.60%	17	5.28%
BATTERIES	10	9%	17	5.28%
BATTERIES (fr 1994-95) (fr.2009-10 onward as per sch.B)	5	18%	17	5.28%
DISTRIBUTION PILLARS (fr 1997-98 onward as per sch.B)	20	4.50%	17	5.28%
TRANSFORMERS	35	2.57%	17	5.28%
TRANSFORMERS (fr 1994-95) (fr.1985-86 onward as per sch.B)	25	3.60%	17	5.28%
D.E.A. ON HIRE (fr.2011-12 onward as per sch.B)	7	12.86%	17	5.28%
MOTOR VEHICLES	7	12.86%	--	--
MOTOR VEHICLES (fr 1993-94)	8	11.25%	8	11.25%
MACHINE TOOLS	20	4.50%	--	--
MACHINE TOOLS (fr.1993-94) (fr.1998-99 onward as per sch.B)	18	5%	17	5.28%
ELECTRONIC EQUIPMENTS (seperated fr Machine Tools) (fr.2003-04 onward as per scl .B)	12	7.50%	6	15%
FURNITURE	20	4.50%	14	6.33%
FURNITURE (fr 1993-94) (fr.1997-98 onward as per sch.B)	18	5%	14	6.33%
OFFICE EQUIPMENTS (prior to 1993-94)	10	9%	14	6.33%
OFFICE EQUIPMENTS (fr 1993-94) (fr.1998-99 onward as per sch.B)	18	5%	14	6.33%
PORTABLE A.C. (seperated fr. Office equipments)	7	12.86%	9	9.50%
PORTABLE A.C. (seperated fr. Office equipments 1993-94) (fr.2009-10 onward as per sch.B)	5	18%	9	9.50%
P.C. (seperated from office equip.)	7	12.86%	6	15%
P.C. (seperated from office equip.2005-06)	6	18%	6	15%
CYCLOSTYLE CUM PHOTO COPIER MACHINE (seperated from off. Equip) (fr.2005-06 onward as per sch.B)	10	9%	6	15%
ELECTRONIC EQUIPMENTS (seperated fr.Off. Equip.) (fr.2003-04 onward as per sch.B)	12	7.50%	6	15%
FAX MACHINE	7	12.86%	6	15%
BPAP (business Process Automation Project)	--	--	6	15%
HAND CART	--	--	5	18%
Assets Purchases Second hand & Assets Not otherwise provided for in the schedule	17	5.28%	17	5.28%

Annexure-N

-ACCOUNTS DEPARTMENT-

DEPARTMENTAL CIRCULAR

Ref.No:Dy.CAO(Sr.)/ 5870 /2015 Date: 28-1-2015

Sub: Movable assets - Procedure for scrapping unserviceable assets, disposal of scrap and Writing off the loss of cash due to Fire / Riot /.Flood / Assault etc – Book value thereof.

Ref : B.C.R. No.311 dtd.15-12-2014

The Government of Maharashtra vide G.R.No.46 dtd. 04-08-2012 amended the M.M.C. Act 1888 in various sections and same is noted by the BEST Committee vide BCR No.141 dated 14-8-2014. These amendments were also circulated vide note No.GM/13/128/2014 dated 12-9-2014 by then G.M. The section 460 (Q) pertains to powers to dispose off movable property not exceeding Rs.2,000/- . Prior to this, BEST Committee have formulated the procedure as regards disposal of movable property, vide BCR No. 420 dated 22.7.1955. In addition to this, while discussing the item No.42 dated 13-6-2014, one of the Committee Member suggested to delegate the power to the G.M. for writing of shortage of loss of revenue due to Fire/ Flood /Riot / Assault etc., to the extent of Rs.10,000/-. The said proposal was approved by the BEST Committee vide B.C.R. No.311 dated 15-12-2014. Accordingly the revised procedure is required to be followed by all Departments with immediate effect.

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a) Scrapping of movable assets – When any movable asset is considered to be unserviceable or unwanted, the Departmental Head will put up a proposal for scrapping duly certified by the Internal Audit. If the depreciated value of such asset in each instance does not exceed Rs.10,000/- , the proposal to be submitted to the General Manager for sanction and if exceed Rs.10,000/- the sanction of the committee to be obtained.

b) Writing off the loss of cash – To write off shortage amount for loss of cash due to Fire/ Flood /Riot / Assault etc., the Departmental Head will put up a proposal for writing off duly certified by the Internal Audit. If the writing off amount for loss of cash due to Fire/ Flood /Riot / Assault etc., in each instance does not exceed Rs.10,000/-, the proposal to be submitted to the General Manager for sanction and if exceed Rs.10,000/- the sanction of the committee to be obtained.

All the Heads of Branches / Departments are requested to bring the above mentioned procedure to the notice of staff working under them and give wide publicity to this Circular.

This circular is issued with the approval of the General Manager.

28/01/15

(A.A. Kantharia)
Dy.Chief Accounts Officer(Sr.)

To : All Heads of Branches / Departments

28/1/15 CA

kadam/movable assets

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Book value / Estimate Life (x unexpired Life) 3/6

THE BRIHANMUMBAI ELECTRIC SUPPLY AND TRANSPORT UNDERTAKING
(OF THE MUNICIPAL CORPORATION OF GREATER MUMBAI)

ACCOUNTS DEPARTMENT

Life in years adopted for working out depreciation provision/depreciated value on assets of the Gen. Administration / Transport / Electric Supply Division.

Proposed life from 2012-13

GENERAL ADMINISTRATION	Life in year	Rates % as per BEST	life as per MERC	Rates % as per MERC
Building	45	2%	27	3.34%
Static Room A.C. (seperated from Building)	15	6%	17	5.28%
Motor Vehicles	8	11.25%	8	11.25%
Tools & Equipment	18	5%	17	5.28%
Furniture & Office Equipment	18	5%	14	6.33%
Portable A/c / (seperated from office Equipment)	7	12.86%	9	9.50%
Plant & Machinery (Stores Dept)	22	4.09%	17	5.28%
Plant & Machinery (In house Computer)	10	9%	17	5.28%
Plant & Machinery (In house Computer) from 2005-06	6	15%	17	5.28%
Personal Computer / Printer / UPS	7	12.86%	6	15%
Personal Computer / Printer / UPS (from 2005-06)	6	15%	6	15%
Electronic Equipment Seperated from Office Equipment	12	7.50%	6	15%
Cyclostyle Machine / Xerox Machine	10	9%	6	15%
Security Equipment	100	0.90%	17	5.28%
Fax Machine	7	12.86%	6	15%

BUSES	Life in year	Rates % as per BEST
Building	45	2%
Bus Chowkies & Bus 'Q' Shelters	20	4.50%
Static A.C. (Seperated from Building)	15	6%
Buses	12	7.50%
M.O.H. of Buses	4	25%
Motor Vehicles	8	11.25%
M.O.H. of Motor Vehicles	4	25%
Tools & Equipments	18	5%
Furniture & Office Equipments	18	5%
Portable Room A.C. (Seperated from Office Equipment)	7	12.86%
Electronic Equipment (Seperated from Office Equipment)	12	7.50%
Plant & Machinery & Equipments	22	4.09%
Personal Computer / Printer / UPS prior to 2005-06	7	12.86%
P.C. (Seperated from Office Equipments) from 2005-06	6	15%
P.C. (Seperated from Office Equipments) from 2006-07	5	18%
Hand Paging Machine	5	18%
Numbering Boxes	8	11.25%
Xerox Machine	10	9.00%
Fax Machine	7	12.86%
Electronic Equipment (Seperated from Machine Tools)	12	7.50%

Proposed life from 2012-13

ELECTRIC SUPPLY	Life in year	Rates % as per BEST	life as per MERC	Rates % as per MERC
Building	50	1.80%	27	3.34%
Building (from 1993-1994)	45	2.00%	27	3.34%
Bill Collection Chowkey	20	4.50%		
Static A.C. (Seperated from Bldg)	15	6%	17	5.28%
Cables & Mains	40	2.25%	17	5.28%
Cables & Mains (from 1994-1995)	35	2.57%	17	5.28%
Capacitors	10	9%	17	5.28%
Street Lamps	15	6%	17	5.28%
SCADA	12	7.50%	6	15%
Meters and Installation (Conventional)	15	6%	17	5.28%
Meters and Installation (Static and Electronic)	15	6%	8	11.25%
Switchgear & Machinery	20	4.50%	17	5.28%
Switchgear & Machinery (from 1994-1995)	25	3.60%	17	5.28%
Batteries	10	9%	17	5.28%
Batteries (from 1994-1995)	5	18%	17	5.28%
Distribution Pillars	20	4.50%	17	5.28%
Transformers	35	2.57%	17	5.28%
Transformers (from 1994-1995)	25	3.60%	17	5.28%
D.E.A. on hire	7	12.86%	17	5.28%
Motor Vehicles	7	12.86%		
Motor Vehicles (from 1993-1994)	8	11.25%	8	11.25%
Machine Tools	20	4.50%		
Machine Tools (from 1993-1994)	18	5%	17	5.28%
Electronic Equipment (Seperated from Machine Tools)	12	7.50%	6	15%
Furniture	20	4.50%	14	6.33%
Furniture (from 1993-1994)	18	5%	14	6.33%
Office Equipments (prior to 1993-94)	10	9%	14	6.33%
Office Equipments (from 1993-1994)	18	5%	14	6.33%
Portable A.C. (Seperated from office equipments)	7	12.86%	9	9.50%
Portable A.C. (Seperated from office equipments 1993-94)	5	18%	9	9.50%
P.C. (Seperated from office equipments)	7	12.86%	6	15%
P.C. (Seperated from office equipments 2005-2006)	6	15%	6	15%
Cyclostyle cum Photo Copier Machine (Seperated frm Office Equipments)	10	9%	6	15%
Electronic Equipment (Seperated from Office Equipments)	12	7.50%	6	15%
Fax Machine	7	12.86%	6	15%
BPAP (Business Process Automation Project)			6	15%
Hand Cart			5	18%

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ANNEXURE-31

Anil Diggikar I.A.S.
General Manager

BRIHAN - MUMBAI ELECTRIC SUPPLY
& TRANSPORT UNDERTAKING
BEST Bhavan, BEST Marg, Colaba,
Mumbai - 400 001.
Tel. : 022-22873961, 022-22873962
E-mail : gm@bestundertaking.com
Website: www.bestundertaking.com

Ref.No.DO/GM/AGM(ES)/ 19634 /2024

Date: 22.10.2024

Sub: Installation / replacement of SMART meters
for commercial category of consumers.

Dear Aabha,

The BEST Undertaking has taken up execution of SMART Metering Project, under the Revamped Distribution Sector Scheme (RDSS) with approval from Government of Maharashtra, as well as Ministry of Power and financial assistance through Power Finance Corporation of India (PFC).

Apart from works under loss reduction, above scheme include installation of System Metering on EHV/HV feeders, Distribution Transformers and replacement of existing consumer meters with the SMART meters. Till date, BEST Undertaking has replaced 2.65 lakh consumer meters with SMART meters. Also 3,375 System meters have been installed.

BEST has taken updrive for awareness of consumers about benefits of installation of SMART meters. The billing complaints of SMART meters were resolved by passing on necessary credit/debit in the monthly electricity bills towards estimated billing. Also considering the apprehensions about SMART Meters, BEST has taken up activity of testing of SMART meters and installation of check meters to demonstrate the accuracy of SMART meters.

During the last Monsoon Assembly Session, Hon'ble MLA/MLCs had raised LAQ objecting to installation of SMART Meters. Considering the reply of Hon'ble Dy.CM in the house to these LAQ's, BEST has suspended replacement of residential consumer meters by SMART meters. BEST has continued work of installation of System meters and replacement of meters other than residential consumers by SMART meters.

Scanned with CamScanner

In this regard, the public representatives are resisting for replacement activity of Smart meters for commercial category of consumers also, quoting that, the Hon'ble Dy.CM has passed directives to suspend replacement of all consumer meters with SMART meters and install only System meters.

It is, therefore, requested to edify the directives issued by Hon'ble Dy.CM as regards installation / replacement of SMART meters for commercial category of consumers.

Yours Sincerely,

(Anil Diggikar)

Smt. Abha Shukla, IAS
Additional Chief Secretary (Energy)
Industries, Energy & Labour Dept.
Government of Maharashtra,
3rd Floor, Main Building,
Mantralaya
Mumbai- 400 032.

मुख्यमंत्री सचिवालय कक्ष, मंत्रालय
क्र. ४१८१ दिनांक 23/10/20

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ANNEXURE-32

Rate/meter

1-ph	**11011.83**	**122.3536667**	**9923993338**
3-ph	**16441.31**	**182.6812222**	**2769028989**
LT-CTO	**20249.63**	**224.9958889**	**122571010.4**
HT- Consumer	**40499.49**	**449.9943333**	**8342894.94**
DT Meter	**20249.63**	**224.9958889**	**68808242.74**
Feeder	**40499.49**	**449.9943333**	**50826859.95**
ABT	**104141.49**	**1157.127667**	**13850818.17**
Total cost of meter			**12957422153**

	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30
feeder meter cost	509393.5853	4535042.891	6385419.59	6776914.66	6776914.66	6776914.66	6776914.66
Rs. In Cr.	0.05	0.45	0.64	0.68	0.68	0.68	0.68
DT meter	0.009697323	0.665447841	0.917443237	0.917443237	0.917443237	0.917443237	0.917443237

FY wise payment	**FY 2023-24**	**FY 2024-25**	**FY 2025-26**	**FY 2026-27**	**FY 2027-28**	**FY 2028-29**	**FY 2029-30**	**FY 2030-31**	**FY 2031-32**	**FY 2032-33**
Amount	34336983.23	456797919.5	1340577570	1727656287	1727656287	1727656287	1727656287	1727656287	1723715860	763712385.1
Amount (Rs. Cr.)		**49.11**	**134.06**	**172.77**	**172.77**	**172.77**	**172.77**	**172.77**	**172.37**	**76.37**

Smart meter Installation phasing wise details

			No. of meters								Total cost meter month wise							
Meter Type			**1-ph**	**3-ph**	**LT-CTO**	**Consumer**	**DT Meter**	**Feeder**	**ABT**	**Total**	**1-ph**	**3-ph**	**LT-CTO**	**HT- Consumer**	**DT Meter**	**Feeder**	**ABT**	**Total**
Rate per meter		No. of meter	**901212**	**168419**	**6053**	**206**	**3398**	**1255**	**133**	**1080676**								
Rate per meter per month																		
	Dec-23		**15328**	**0**	**0**	**0**	**0**	**0**	**0**	**15328**	1875437.00	0.00	0.00	0.00	0.00	0.00	**0.00**	1875437.00
	Jan-24		**18304**	**0**	**0**	**0**	**0**	**198**	**0**	**18502**	4114998.52	0.00	0.00	0.00	0.00	89098.88	**0.00**	4204097.40
	Feb-24		**52184**	**389**	**0**	**0**	**50**	**24**	**0**	**52647**	10499902.26	71063.00	0.00	0.00	11249.79	99898.74	**0.00**	10682113.79
	Mar-24		**50419**	**2350**	**0**	**0**	**331**	**490**	**0**	**53590**	16668851.78	500363.87	0.00	0.00	85723.43	320395.97	**0.00**	17575335.05
	Apr-24		53218	7815	30	1	407	63	6	**61540**	23180269.21	1928017.62	6749.88	449.99	177296.76	348745.61	**6942.77**	25648471.84
	May-24		37869	9104	19	8	471	35	52	**47558**	27813680.21	3591147.47	11024.80	4049.95	283269.82	364495.41	**67113.40**	32134781.07
	Jun-24		4645	4975	73	36	352	18	29	**10128**	28382013.00	4499986.55	27449.50	20249.75	362468.38	372595.31	**100670.11**	33765432.58
	Jul-24		0	0	68	44	311	7	0	**430**	28382013.00	4499986.55	42749.22	40049.50	432442.10	375745.27	**100670.11**	33873655.73
	Aug-24		2714	528	104	39	350	0	0	**3735**	28714080.85	4596442.23	66148.79	57599.27	511190.66	375745.27	**100670.11**	34421877.18
	Sep-24		2716	1054	105	36	109	0	0	**4020**	29046393.41	4788988.24	89773.36	73799.07	535715.21	375745.27	**100670.11**	35011084.66
	Oct-24		0	750	400	20	324	0	0	**1494**	29046393.41	4925999.16	179771.72	82798.96	608613.88	375745.27	**100670.11**	35319992.49
	Nov-24		0	800	400	20	350	0	10	**1580**	29046393.41	5072144.14	269770.07	91798.84	687362.44	375745.27	**112241.38**	35655455.55
	Dec-24		0	2000	600	2	334	0	10	**2946**	29046393.41	5437506.58	404767.60	92698.83	762511.07	375745.27	**123812.66**	36243435.42
	Jan-25		44254	9100	1500	0	9	0	10	**54873**	34461032.57	7099905.70	742261.44	92698.83	764536.03	375745.27	**135383.94**	43671563.78
	Feb-25		44254	11750	1300	0	0	50	10	**57364**	39875671.74	9246410.06	1034756.09	92698.83	764536.03	398244.99	**146955.21**	51559272.95
FY 2024-25	Mar-25		44254	11837	1454	0	0	50	6	**57601**	45290310.90	11408807.69	1361900.12	92698.83	764536.03	420744.70	**153897.98**	59492896.25
	Apr-25		44254	25000	0	0	0	50	0	**69304**	50704950.06	15975838.25	1361900.12	92698.83	764536.03	443244.42	**153897.98**	69497065.69
	May-25		44254	27967	0	0	0	50	0	**72271**	56119589.23	21084883.99	1361900.12	92698.83	764536.03	465744.14	**153897.98**	80043250.31
	Jun-25		44254	26500	0	0	0	50	0	**70804**	61534228.39	25925936.38	1361900.12	92698.83	764536.03	488243.85	**153897.98**	90321441.58
	Jul-25		44254	26500	0	0	0	50	0	**70804**	66948867.56	30766988.77	1361900.12	92698.83	764536.03	510743.57	**153897.98**	100599632.85
	Aug-25		44254	0	0	0	0	50	0	**44304**	72363506.72	30766988.77	1361900.12	92698.83	764536.03	533243.29	**153897.98**	106036771.73
	Sep-25		44254	0	0	0	0	50	0	**44304**	77778145.89	30766988.77	1361900.12	92698.83	764536.03	555743.00	**153897.98**	111473910.61
	Oct-25		44254	0	0	0	0	20	0	**44274**	83192785.05	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	116897549.66
	Nov-25		44254	0	0	0	0	0	0	**44254**	88607424.22	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	122312188.83
	Dec-25		44254	0	0	0	0	0	0	**44254**	94022063.38	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	127726827.99
	Jan-26		44254	0	0	0	0	0	0	**44254**	99436702.55	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	133141467.16
	Feb-26		44254	0	0	0	0	0	0	**44254**	104851341.71	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	138556106.32
FY 2025-26	Mar-26		44259	0	0	0	0	0	0	**44259**	110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Apr-26										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	May-26										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Jun-26										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Jul-26										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Aug-26										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Sep-26										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Oct-26										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Nov-26										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Dec-26										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Jan-27										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Feb-27										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
FY 2026-27	Mar-27										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Apr-27										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	May-27										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Jun-27										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Jul-27										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Aug-27										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Sep-27										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Oct-27										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Nov-27										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Dec-27										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Jan-28										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Feb-28										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
FY 2027-28	Mar-28										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Apr-28										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26

	Meter Type		1-ph	3-ph	LT-CTO	Consumer	DT Meter	Feeder	ABT	Total		1-ph	3-ph	LT-CTO	HT- Consumer	DT Meter	Feeder	ABT	Total
	May-28											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Jun-28											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Jul-28											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Aug-28											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Sep-28											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Oct-28											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Nov-28											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Dec-28											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Jan-29											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Feb-29											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
FY 2028-29	Mar-29											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Apr-29											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	May-29											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Jun-29											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Jul-29											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Aug-29											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Sep-29											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Oct-29											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Nov-29											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Dec-29											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Jan-30											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Feb-30											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
FY 2029-30	Mar-30											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Apr-30											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	May-30											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Jun-30											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Jul-30											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Aug-30											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Sep-30											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Oct-30											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Nov-30											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Dec-30											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Jan-31											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Feb-31											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
FY 2030-31	Mar-31											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Apr-31											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	May-31											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Jun-31											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Jul-31											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Aug-31											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Sep-31											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Oct-31											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Nov-31											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Dec-31											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Jan-32											110266592.64	30766988.77	1361900.12	92698.83	129372.64	429744.59	**135383.94**	143182681.52
	Feb-32											110266592.64	30766988.77	1361900.12	0.00	0.00	0.00	**0.00**	142395481.52
FY 3031-32	Mar-32											110266592.64	30766988.77	1361900.12	0.00	0.00	0.00	**0.00**	142395481.52
	Apr-32											110266592.64	30766988.77	1361900.12	0.00	0.00	0.00	**0.00**	142395481.52
	May-32											110266592.64	30766988.77	1361900.12	0.00	0.00	0.00	**0.00**	142395481.52
	Jun-32											110266592.64	30766988.77	1210477.88					142244059.29
	Jul-32											110266592.64	30766988.77						141033581.41
FY 3032-33	Aug-32											172462264.96	23181516.38						195643781.33
											Total	**9923993337.96**	**2769028988.89**	**122571010.39**	**8342894.94**	**68808242.74**	**50826859.95**	**13850818.17**	**12957422153.04**

REC Power Development and Consultancy Limited
(Formerly Known as REC Power Distribution Company Limited
A wholly owned subsidiary of REC Limited, a 'Navratna CPSE'
under Ministry of Power. Govt. of India)

REC Power Development

Notice Inviting Tender (NIT)

(Invited through e-Tendering mode only)

For

Appointment of Advanced Metering Infrastructure (AMI) Service Provider for Implementing Prepaid Smart Metering Project in The Brihanmumbai Electric Supply & Transport Undertaking (BEST) on DBFOOT basis

No. RECPDCL/BD /e-Tender/2022-2023/73759 Dated: 06.05.2022

REC Power Development & Consultancy Limited (RECPDCL)
(A wholly owned subsidiary of REC Ltd., a 'Navaratna CPSE'Under Ministry of Power, Govt. of India) CIN No. of RECPDCL: U40101DL2007GOI165779

Corporate office
REC Power Development & Consultancy Limited Plot Number 1-4, REC World Headquarters, D-Block Sector-29, Gurugram – 122001, Haryana
Website: www.recpdcl.in

Important Dates	
Date of Release of NIT / Tender	06.05.2022
Last date for queries/ seeking clarification	25.05.2022 at 17:00 Hours
Pre Bid Meeting	27.05.2022 at 11:00 Hours
Last date of submission of Bid	06.06.2022 at 17:00 Hours
Date of Opening of Bids	08.06.2022 at 10:00 Hours

Note: Online registration has to be done at e-tendering website i.e. mahatenders.gov.in in general; activation of registration may take about maximum 24 hours subject to the submission of all requisite documents required in the process.

-Sd- (S.C.Garg)
Addl. C.E.O.

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Tender Information

Tender Reference No.	RECPDCL/BD /e-Tender/2022-2023/73759 Dated: 06.05.2022
Work Item Title/ Description	Appointment of Advanced Metering Infrastructure (AMI) Service Provider for Implementing Prepaid Smart Metering Project in The Brihanmumbai Electric Supply & Transport Undertaking (BEST) on DBFOOT basis
Mode of Tendering	Open (e-Tendering)
Tender Release Date	06.05.2022
Date of Pre-Bid Meeting	27.05.2022 at 11:00 Hours (IST) To join the video meeting, click this link: Will be provided later.
Last Bid Submission date	06.06.2022 at 17:00 Hours
Date of Opening of Bid	08.06.2022 at 10:00 Hours
Location of Bid submission/ Opening	Plot Number I-4, REC World Headquarters, D-Block, Sector-29, Gurugram – 122001, Haryana
Tender Category	Services
EMD Fee	75.36 Lacs
Performance Security	The Performance Security amount is 3% of Contract Price
Duration of Assignment	10 Years (2.5 Years Implementation Period + 7.5 Years O&M Period)
Address of Correspondence/ for Bid Submission	Mr. S.C.Garg Additional CEO, REC Power Development and Consultancy Limited Plot Number 1-4, REC World Headquarters, D-Block, Sector-29, Gurugram – 122001, Haryana e-mail: bd.delhi@recpdcl.in
Contact Person from BEST	Shri Suresh P. Makwana CEPL, BEST Email: cepl@bestundertaking.com, Contact No: 9869205357
Contact Person from RECPDCL	Shri Swapn Piyoosh Dy. Manager (Tech.) Email: swapn.piyoosh@recpdcl.in Contact No: +91 8527730111
	Shri Pratik Adarsh Dy. Manager (Tech.) Email: pratik.adarsh@recpdcl.in Contact No: +91 9457072000

AMISP TENDER & BIDDER DETAILS

Sr. No	Tender ID	Tender Ref No	Tender Value	Work Description	NIT Date	Bid Submission End Date	Pre Bid Meeting Date	Bid Opending Date	Bidder Name	Technical Bid Opening Date	Awarded to
1	2022_BEST_816964_2	DMM(SB-I)/06/TCU/73759/22-23/A	708.55 Cr	Appointment of AMISP for Implementing Prepaid Smart Metering Project in The Brihanmumbai Electric Supply and Transport Undertaking (BEST) on DBFOOT basis	14-7-2022	19-7-2022		21-7-2022	1) Adani Transmission Limited 2) Ashoka Buildon Ltd 3) Genus Power infrastructure Ltd. 4) Fluint Grid Ltd. 5) Intellismart Infrastructure Pvt Ltd 6) Monte Corlo Ltd	21-7-2022	L1 - Adani Transmission Ltd. @ 1303.16 Cr Dt. 06/09/2022 LOA - 30/09/2022

THE BRIHAN MUMBAI ELECTRIC SUPPLY & TRANSPORT UNDERTAKING
(OF THE BRIHAN MUMBAI MAHANAGARPALIKA)

☎ : 2377 5544, 2374 3933
Mob.: 9867830770
E_MAIL: mypednekar@bestmmd.net

ADD: MATERIALS MANAGEMENT DEPT.
Bijlee Bhavan, 2nd Floor, Mazagaon,
Kussara Bunder Road, Mumbai–400 010.

Ref.: DMM/SB/06/T-TA73759/4494/2022-23

Date: 30.09.2022

ADANI TRANSMISSION LIMITED
Adani Corporate House, Shantigram,
Near Vaishnodevi Circle,
S. G. Highway,
AHMEDABAD – 382 421

Kind attn.: Shri. Vaibhav Tandon
(Asst. Vice President)

E-mail: tandon.vaibhav@adani.com

Dear Sirs,

Sub: Letter of Award for Appointment of Advanced Metering Infrastructure (AMI) Service Provider for Implementing Prepaid Smart Metering Project in the Brihan-Mumbai Electric Supply & Transport Undertaking (BEST) on Design, Built, Finance, Own, Operate & Transfer (DBFOOT) basis

Ref.: 1. Tender No. DMM(SB)I/06/TCU/73759/2022-23/Advt., opened under Reverse Auctioning mechanism with Techno-commercial bids opened on 21.07.2022 & Price bids opened & Reverse Auction carried out on 06.09.2022
2. A. R. No. 97 dtd. 29.09.2022

This is in reference to your proposal in relation to the Request for Proposal (RFP). Pursuant to the evaluation of the bid, your bid has been found to be most suited. Vide A. R. No. 97 dtd. 29.09.2022, the Administrator (BEST Committee) has approved the proposal to enter into contract with the firm viz. Adani Transmission Limited for Appointment of Advanced Metering Infrastructure (AMI) Service Provider for Implementing Prepaid Smart Metering Project in the Brihan-Mumbai Electric Supply & Transport (BEST) Undertaking on Design, Built, Finance, Own, Operate & Transfer (DBFOOT) basis.

We are, therefore, pleased to inform you that the BEST Undertaking has accepted your offer, the details of which are as shown below:

Description	Basic Rate Rs.P.	Gross Rate Rs.P.	Approx. Total Cost Rs.P.
Appointment of Advanced Metering Infrastructure (AMI) Service Provider for Implementing Prepaid Smart Metering Project in the Brihan-Mumbai Electric Supply & Transport Undertaking (BEST) on DBFOOT basis as per the Undertaking's Technical Specifications	11,04,37,55,237.00	13,03,16,31,179.89	**13,03,16,31,179.89**

You are, therefore, requested to please take steps for incorporation of the SPV in terms of the RFP for execution of the AMISP contract. The execution of the AMISP contract shall happen only after you have furnished the Performance Security in terms of the RFP.

TERMS & CONDITIONS:

a)	**PRICES**	:	Unconditionally 'Firm' throughout the contractual period. The detailed price breakup is as per attached Annexure-A.
b)	**TAXES & STATUTORY LEVIES**	:	SGST @ 9% & CGST @ 9%. However, those applicable at the time of supply will be charged.
c)	**TERMS OF PAYMENT (CONTRACT PRICE & PAYMENT)**	:	As per the attached Annexure-B.
d)	**SCOPE OF WORK**	:	As per the attached Annexure-C.
e)	**WARRANTY CLAUSE**	:	i) The AMISP warrants that all the Goods that would be used as part of Solution would be new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the contract. ii) The AMISP further warrants that the Goods shall be free from defects arising from any act or omission of the AMISP or arising from design, materials, and workmanship, under normal use in the conditions prevailing in the country of final destination iii) The warranty of the AMI system including field and remote Hardwares, software and meters shall remain valid till expiryof the contract Period. iv) The AMISP shall be responsible for comprehensive maintenance of all the equipment and systems supplied & installed under this contract during the Operational Period. There may be some variation during detailed engineering. AMISP will have to make their own assessment of the systems and deploy manpower accordingly. However, it is to be ensured that specified manpower of requisitequalification is deployed. v) The maintenance of the system supplied & installed by the AMISP shall be comprehensive. The AMISP shall be responsible for providing all the spares as may be required. The spares shall be maintained by the AMISP at no extra cost to the Utility/AMI-IA. vi) At the end of the contract or at the time of transfer in case of termination, the meters shall have a warranty of 5 years from their installation.

f)	**PERFORMANCE SECURITY**	:	i) The AMISP shall furnish Performance Security in the form of an irrevocable bank guarantee valid up to a period of 6 (six) months beyond the end of the contract Period or extended thereafter, for the amount indicated in Special Conditions of contract (SCC) on the prescribed format. However, in case of delay in Installation Milestone, the validity of the initial Performance Security shall be extended by the period of such delay. In the event delay is solely due to acts and/ or omission of the AMI-IA cost of extending the validity of Performance Security shall be reimbursed to the AMISP by the AMI-IA. ii) Upon achievement of Installation Milestone, the value of the Performance Security shall be reduced by AMISP, to the extent indicated in SCC as determined in accordance with numbers of meters considered for Installation Milestone. iii) Any payments shall be made to the AMISP only after receipt of the initial Performance Security by AMI-IA. iv) Upon Termination of the contract due to AMI-IA Event of default or expiry of the contract Period, the separate Performance Security shall be discharged by AMI-IA without any interest and returned to the AMISP not later than 14 (fourteen) working days following the date of Termination of the contract. Upon Termination of the contract due to AMISP Event of default, the Performance Security shall be forfeited by AMI-IA. v) In case of any delay by the AMISP in performing the activities of the scope of work with respect to the Project Implementation Schedule, then upon AMI-IA's request, the AMISP shall extend the validity of the separate Performance Security for the period for which the contract is extended. In the event delay is solely due to acts and/ or omission of the AMI-IA cost of extending the validity of separate Performance Security shall be reimbursed to the AMISP by the AMI-IA.
g)	**LIQUIDATED DAMAGES, PENALTY & INCENTIVES CLAUSE**	:	i) Except in case of Force Majeure or where the delay in delivery of the Solution is caused due to any delay or default of AMI-IA if the Installation Milestone is delayed by more

			than 30 (thirty) months from the date of execution of the contract the AMISP shall be liable to pay liquidated damages as per the specified rates. ii) Except in case of Force Majeure or where the delay in delivery of the Solution is caused due to any delay or default of AMI-IA if the delivery, site installation, integration and operationalization of 100% of Feeder Meters each with related hardware, software and equipment is delayed by more than 9 (nine) months from the date of execution of the contract the AMISP shall be liable to pay liquidated damages as per the specified rates. iii) AMI-IA shall without prejudice to all its other remedies under the contract, deduct from the amount due to be paid, as liquidated damages, 50% of AMISP Service Charge for each delayed meter for each completed month of delay for a maximum period of 12 (twelve) months. An illustrative example for arriving at the deductions is given in SCC. iv) If the AMISP achieves milestone of "Installation Milestone atleast one month in advance than the timelines specified in the contract, AMI-IA shall provide an incentive as specified in SCC. v) Upon achieving Installation Milestone, AMISP shall be entitled to raise a supplementary invoice for the amount indicated therein. The Supplementary invoice shall be paid along with the amount due to be paid for AMISP Service Charges for the immediately succeeding month.
h)	**QUANTITY VARIATION CLAUSE**	:	AMI-IA reserves the right to increase or decrease the number of items under the AMI-SP contract subject to the limit of -20% (twenty percent) upto +30% (thirty percent) of the existing no. of items, covered under the AMI-SP contract, without any change in the unit prices or other terms and conditions of the AMI-SP contract and the Bid.
i)	**CONTRACT VALIDITY PERIOD (EFFECTIVENESS & TERM)**	:	i) This contract shall come into force and effect on the date of execution of the contract by the Parties; ii) Unless terminated earlier by either Party or extended by the AMI-IA in accordance with the terms of this contract, this contract shall continue in full force and effect until the earlier of (a) 10 (ten) years from the date of execution of the

			contract or (b) As soon as the "Meter-Months" exceeds "Total Meter- months" ("Term of the contract"). iii) The AMI-IA, at its own discretion, may extend the operation and maintenance period of the AMI system at terms mutuallyagreed upon with the AMISP.
j)	**PROTOTYPE & LOT INSPECTION**	:	i) Prototype Inspection: The Prototype inspection is applicable for this particular tender and the Undertaking's officers shall visit the firm's factory premises to inspect quality of Prototype produced and the Undertaking shall bear the expenditure of to and fro travelling, lodging and boarding of the Undertaking's two inspecting officers. The Prototype meters will be carefully preserved by BEST Undertaking for the guarantee period of five years. If any deviation is observed in the meter supplied by the Tenderer in subsequent lot, the meter(s) with deviation will be liable to be rejected. ii) Lot Inspection: The Lot Inspection is applicable for one Lot preferably first for this particular tender and the Undertaking's officers shall visit the firm's factory premises to inspect the quality of Lot produced and the Undertaking will bear the expenditure of to and fro travelling, lodging and boarding of the Undertaking's two inspecting officers. For subsequent visits required, if any, the Undertaking will bear the expenditure.
k)	**OTHER CONDITIONS**	:	In case any upfront payment is made by the Undertaking, then the monthly payable amount shall be reduced based on the then calculated Net Present Value (NPV).

You will be required to furnish Performance Security for the amount equivalent to Rs.39,09,48,936.00 in the form of Bank Guarantee valid for the period of 126 months from the date of release of this Letter of Award. For scrutiny of Bank Guarantee, you will have to pay Administrative Charges of Rs. 2,000/- + GST @ 18% in our Cash Department at Colaba or Dadar.

Further, this Letter of Award is also subject to other terms and conditions which are incorporated in the tender document and there shall be no change whatsoever in the Terms & Conditions as set out in the Draft contract. After receipt of Performance Security and signing of AMISP Contract Agreement, the Purchase Order will be released. Till that time, for all purposes, this Letter of Award shall be treated as Purchase Order.

The terms & conditions as set out in this Letter of Award shall stand valid until execution of AMISP contract. Please acknowledge the receipt and return the duplicate copy of this Letter of Award after signing & stamping it in all the pages to the undersigned as a token of acceptance.

Encl.: 1. Annexure-A
2. Annexure-B
3. Annexure-C

Yours faithfully,

MANGESH YESHWANT PEDNEKAR

Digitally signed by MANGESH YESHWANT PEDNEKAR
DN: c=IN, o=BEST UNDERTAKING, ou=MATERIAL MANAGEMENT, postalCode=400001, st=MAHARASHTRA, serialNumber=69788d2054117e45eaac033fe85d0c13bbbf9fe7154932f4ee2fdf454bf3d9d3062, cn=MANGESH YESHWANT PEDNEKAR
Date: 2022.09.30 17:15:44 +05'30'

(M. Y. Pednekar)
DY. MATERIALS MANAGER (SB)I

ANNEXURE-B

CONTRACT PRICE & PAYMENT

1.	**Contract Price:**
1.1	The Contract Price is as indicated in Special Conditions of Contract (SCC).
1.2	In the event any approval required for imports and/ or use of imported equipment is denied in accordance with all applicable laws including those in relation to testing issued by Ministry of Power (Order No No.9/16/2016-Trans-Part (2) dated 18 November 2020, as amended and/ or modified from time to time), the same shall neither entitle revision of Contract Price nor shall result in revision of the Project Implementation Plan as specified in Article 2.2 of this Contract.
2.	**Payment Mechanism:**
2.1	The payment shall be made to the AMISP in Indian Rupees (INR) only.
2.2	The payment to the AMISP shall commence only one month after Operational Go-Live as defined in Section 6;
2.3	The payments due to the AMISP from the AMI-IA shall be paid on monthly basis as per the payment structure specified in SCC.
2.4	Except in case of Change Order in accordance with Article 14 of this Contract, the sum total of all payments made to the AMISP shall not exceed the Contract Price quoted in Article 1.1.
2.5	The actual payment shall be net of any applicable liquidated damages and/or penalty due to noncompliance of SLAs by the AMISP.
2.6	AMISP will raise and deliver the invoice and the Deliverables mentioned above to the AMI-IA for the monthly payments within first 5 (five) working days of every month. AMISP shall also raise a supplementary invoice for the agreed amount towards software change requests/new requirements completed in the previous month, in accordance with Article 14.2 of this Contract. AMI-IA will review the AMISP invoice raised by the AMISP and the Deliverables including the SLA performance report, in accordance with Article 8, within 5 (five) working days from the invoice and SLA performance report delivered by the AMISP. AMI-IA may dispute the amount payable and shall pay the undisputed amount of the payment due via direct debit facility (as specified in Article 5.2.7) from the 11th (Eleventh) working day of every month till the 10th (tenth) working day of succeeding month. The disputed amount, (related to actual number of meters installed, integrated and operationalized, penalty imposed due to non-compliance of SLAs, and liquidated damages), shall be dealt as per Article 13 of this Contract.
2.7	The AMI-IA shall, within 90 (ninety) days from the date of execution of Contract, establish a Direct Debit Facility for the entire online consumer payments to ensure recovery of the

	amount due to be paid to the AMISP including amount due to be paid towards supplementary invoice. In this regard, the AMI-IA shall create a separate facility compatible with all online payment options such as Net Banking, Credit/ Debit Card, Mobile Wallets, UPIs, etc. This facility shall be configurable for direct debit of 100% (hundred percent) of the monthly payment due to the AMISP from all recharges and bill payments by Consumers. For the avoidance of doubt, it is expressly acknowledged that the Direct Debit Facility shall not be restricted to the area where the AMISP is providing services but for the entire area of supply of the AMI-IA.
2.8	The Direct Debit Facility would include a bucket filling approach whereby all consumer recharges and bill payments from the 11th (eleventh) working day of every month up to 10th (tenth) working day of the immediately succeeding month will be routed directly to the AMISP's bank account till such time the undisputed amount of the payment due including amount due towards with supplementary invoice issued by AMISP is recovered in its entirety. Once the entire undisputed amount of the payment due including amount due towards with supplementary invoice is recovered, the Direct Debit Facility shall no longer transfer any money to the AMISP. In the event the overall monthly amount due to the AMISP (i.e. 100% of undisputed amount due to be paid including any amount due to be paid towards supplementary invoice issued by AMISP) as the sum of the consumer payments is not reached till 10th working day of the next month, the shortfall/ deficit amount shall be paid along with the undisputed amount due to be paid including any amount to be paid towards supplementary invoice issued by AMISP for the immediately succeeding month. An illustration of the aforementioned Direct Debit Facility is provided in with Article 5.2 of this Contract.
2.9	In the event the AMISP fails to meet a particular performance criterion as mentioned under the Service Level Agreement (SLA) specified in Clause 7.7 of Section 6 for cumulatively 3 (three) months in past 6 (six) months, resulting in the maximum penalty for the particular performance criterion, AMI-IA may issue a SLA Default Notice to the AMISP directing it to take steps within 90 days to comply with the performance criterion specified in the SLA (For example, in the event AMISP fails to meet the norm specified for "Availability of AMI System per month" for cumulatively 3 (three) months in past 6 (six) months leading to levy of maximum penalty thereof.
2.10	In the event a Smart Meter supplied and installed by the AMISP is damaged for reasons not attributable to the AMISP such as theft, vandalism, burning, etc. or as a result of Force Majeure Event, the AMISP shall not be liable for such damage. In such cases, upon receipt of Notice from the AMI-IA, the AMISP shall repair or replace the damaged Smart Meters. AMISP shall be required to replace the Smart Meter no later than 15 days of notification by the AMI-IA. Upon replacing the Smart Meter, AMISP shall be entitled to raise a

	supplementary invoice for the amount mutually agreed between AMISP and the AMI-IA. The Supplementary Bill shall be paid along with the amount due to be paid towards AMISP Service Charges, for the immediately succeeding month. For the avoidance of doubt: (i) a damaged meter(s) shall be excluded from the total numbers installed and operational smart meters while conducting the SLA audit of the AMI system in accordance with Article 8; and (ii) in the event, AMISP replaces the Meterwithin 15 days of request by the AMI-IA or AMI-IA directs to continue operations without replacing the damaged Meter, theAMISP Service Charge qua such meter(s) shall be paid as if such damaged meter complies with the SLA prescribed in thisAMISP Contract.
2.11	operations for direct payment to AMISP through consumer payments has been illustrated in SCC.
3.	**Taxes & Duties:**
3.1	For Goods whether supplied from or outside India, the AMISP shall be entirely responsible for all taxes, duties, stamp duties, license fees, and other such levies imposed outside India.
3.2	Any statutory increase or decrease in the taxes and duties including GST and Cess as applicable or in the event of introduction of new tax/cess or cessation of existing tax/cess subsequent to the AMISP's offer on the goods and services explicitly mentioned in financial bid shall be dealt with in accordance with provisions of Change in Law.
3.3	Notwithstanding anything above or elsewhere in the Contract, in the event that the input tax credit of the GST charged by theAMISP is denied by the tax authorities to the AMI-IA for reasonsattributable to the AMISP, the AMI-IA shall be entitled to recover such amount from the AMISP by way of adjustment from any of the subsequent invoices submitted by the AMISPto the AMI-IA.

MANGESH YESHWANT PEDNEKAR

Digitally signed by MANGESH YESHWANT PEDNEKAR
DN: c=IN, o=BEST UNDERTAKING, ou=MATERIAL MANAGEMENT, postalCode=400001, st=MAHARASHTRA, serialNumber=e697882058111b45eaac03b6f5d0113bbfd9e745893318ee2f8f454bf3d9d3b62, cn=MANGESH YESHWANT PEDNEKAR
Date: 2022.09.30 17:16:53 +05'30'

ANNEXURE-34

RDSS PHASE II:- System Strengthning work under Modernization Work

Sl. No.	Targeted interventions for system strengthening	Units	Total	Per Unit Rate (In Crs.)	Estimated outlay In Crs.
	New/ Aug/ Remodelling of Receiving Sub-Station (RSS)				
1	New Receiving Substation (Excluding Land cost) 5 MVA -2 PTR with 33KV RMU	Nos.	1	13.95	13.95
2	New Receiving Substation (Excluding Land cost) 8 MVA - 1 PTR with 33KV Switchgear	Nos	3	12.10	36.30
3	New Receiving Substation (Excluding Land cost) 8 MVA - 2 PTR with 33 KV & 11KV Switchgear	Nos	3	23.50	70.49
4	New Receiving Substation (Excluding Land cost) 8 MVA 1 PTR with 33 KV RMU	Nos	3	12.97	38.91
6	Additional of 16 MVA Power Tansformer	Nos.	2	3.77	7.55
9	Replacement of 16 MVA Power Tansformer	Nos.	8	3.67	29.39
10	Replacement of 16 MVA (Dual ratio Power Tansformer at Mahim Causway)	Nos	2	3.72	7.45
8	Replacement of 45 MVA Power Tansformer (Nariman Point)	Nos.	2	11.88	23.77
7	Replacement of 100 MVA Power Tansformer	Nos.	3	15.05	45.14
	Replacement of Gas Insulated Switchgear (GIS)				
11	Replacement of 36 kV Gas Insulated Switchgear (GIS): 3 nos. GIS at Dharavi comprising of ICOG 2-panel (BOQ enclosed)	Nos.	3	1.72	5.15
12	Replacement of 36 kV Gas Insulated Switchgear (GIS): 2 nos. GIS at Backway each 9 panels comprising of- 1 no. Transformer Bay, 6 nos. Outgoing feeder bays, 1 no. Bus Transfer panel and 1 no. Busbar VT Bay with 2 nos of Busbar VTs)- (BOQ enclosed)	Nos.	2	7.58	15.16
13	Replacement of 145 kV Gas Insulated Switchgear (GIS): 1 no. GIS at Backway comprising of full unit of GIS (BOQ enclosed)	Nos.	1	16.71	16.71
14	Replacement of 145KV Gas Insulated Switchgear (GIS): 2 nos. at Nariman point 110 kV RSS each ... panels comprising of-..... (BOQ enclosed)	Nos.	2	4.36	8.72
	Control Panles				
15	Control Panles addition and CARP for transformers (BW 11, NP 2, Exsiting 11)	Nos.	24	0.55	13.18
	Repalcement / New of 33KV cable for RSS				
16	Repalcement / Additional of 33KV, 3cx 300 sq.mm Cu. XLPE Cables to improve the quality of supply	Kms	20	2.02	40.31
	Installtion of various items at RSS				
18	Installation of Power Quality Meters for Transformers (33KV/11 KV)	Nos.	172	0.05	8.60
19	Installation of Co2/ Water mist type Automatic Fire fighting System	Nos.	9	1.72	15.45
20	Online Monitoring System for various RSS	Nos.	27	1.83	49.38
	Replacement of various items at RSS				
21	Replacement of Battery chargers (No. given of RSS)	Nos.	24	0.08	1.90
22	Replacement of Battery Sets (No. given of RSS)	Nos.	44	0.06	2.53
					450.05
	New/ Aug/ Remodelling of Distribution Sub-Station (DSS)				
25	Commissioning of DSS (Excluding land Cost and Including civil cost)	Nos.	100	2.77	276.76
26	Augmentation of substations (additional / replacement of Distribution transformer)	Nos.	270	0.39	104.73
27	Remodelling of Distribution Sub-stations	Nos.	60	1.30	78.25
	Replacement of old Switchgears at DSS				
28	Replacement of 11 kV OCB Switchgears by VCB Switchgears at DSS	Nos.	120	0.37	44.49
29	Replacement of Oil Ring Main Unit by SF6 Ring Main Unit at DSS (No. given of RMU)	Nos.	13	0.14	1.78
	Renovation & Augmentation of LV & HV cable for DSS				
30	Replacement of HV weaK/Old cable (11KV & 22KV) to improve the quality of supply	Kms	76	0.95	71.83
31	Replacement of LV weaK/Old cable (1.1 KV) to improve the quality of supply	Kms	200	0.75	149.39
	Replacement & Revamping of ADP & Earthing for DSS				
32	Replacement of Auxillary Distribution Pillar (ADP)	Nos.	200	0.42	84.28
33	Turnkey contract for Revamping Earthing Electodes at Existing DSS (No. given of electrodes)	Nos.	4000	0.05	188.48
					1000.00

ANNEXURE-35

Work commissioned status of Loss Reduction works under RDSS Project

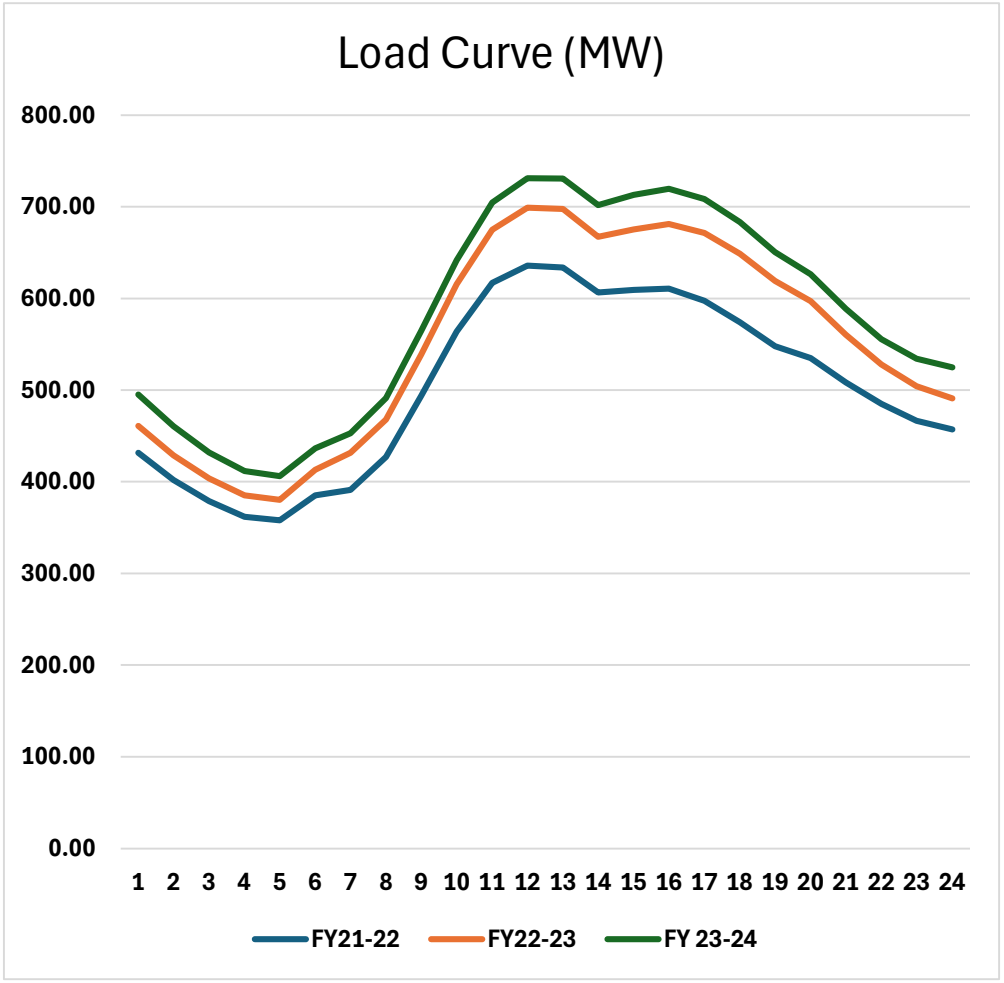
Value are in Cr.

Sr.No	Package	Work Activity	Scope	UoM	Qty of Work Commissioned in FY-24	Amt of Work Commissioned in FY-24		Qty of Work Commissioned in FY-25	Amt of Work Commissioned in FY-25		Qty of Work planned to be Commissioned in FY-25	Amt of Work planned to be Commissioned in FY-25 (As per PERT Chart submitted)		Balance Qty of Work planned to be Commissioned in FY-26	Amt of Work planned to be Commissioned in FY-26	
						As per Sanctioned Cost	As per Award Cost		As per Sanctioned Cost	As per Award Cost		As per Sanctioned Cost	As per Award Cost		As per Sanctioned Cost	As per Award Cost
1	RSS	Repl. of 33 KV, Switchgears	19	Nos.	0	0.00	0.00	3	0.52	0.78	8	1.39	2.08	8	1.39	2.08
2		Repl. of 11 kV, Switchgears	32	Nos.	0	0.00	0.00	5	3.15	5.95	9	5.68	10.71	18	11.35	21.42
3		Add./ Repl. of 33KV UG Cables	120.0	Kms.	2.5	3.32	3.79	3.328	4.42	5.04	0	0.00	0.00	114.17	151.48	172.88
4		Add./ Repl. of Power Transformer	20	Nos.	0	0.00	0.00	0	0	0	5	12.56	13.90	15	37.67	41.70
5	DSS	Repl. of oil 11 kV VCB Compact & Normal Type	396	Set	0	0.00	0.00	2	0.43	0.49	124	26.54	30.38	270	57.78	66.15
6		Repl. of 11 kV RMU	95	Nos.	0	0.00	0.00	0	0	0	33	2.72	3.33	62	5.10	6.26
7		New11 kV RMU	104	Nos.	0	0.00	0.00	0	0	0	35	2.88	3.85	69	5.69	7.59
8		Aug. of DSS	666	Nos.	0	0.00	0.00	0	0	0	106	30.69	33.50	560	162.12	176.96
9		Repl. of HV cable	203.0	Kms.	0	0.00	0.00	0.876	0.55	0.34	77	48.69	30.03	125.12	79.13	48.80
10		Repl. of LV cable	50.0	Kms.	0	0.00	0.00	0.72	0.37	0.19	30	15.26	7.80	19.28	9.81	5.01
11	Aux Equipment	Auxilary Component for Meter	523357	Nos.	34216	4.74	5.36	37024	5.13	5.80	100000	13.86	15.68	352117.00	48.80	55.20
12	ADMS	ADMS	1	Nos.	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	1	143.72	185.15
13	IT/OT	IT/OT	1	Nos.	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	1	75.98	235.93
		Total				8.06	9.15		14.57	18.59		160.25	151.25		790.01	1025.13

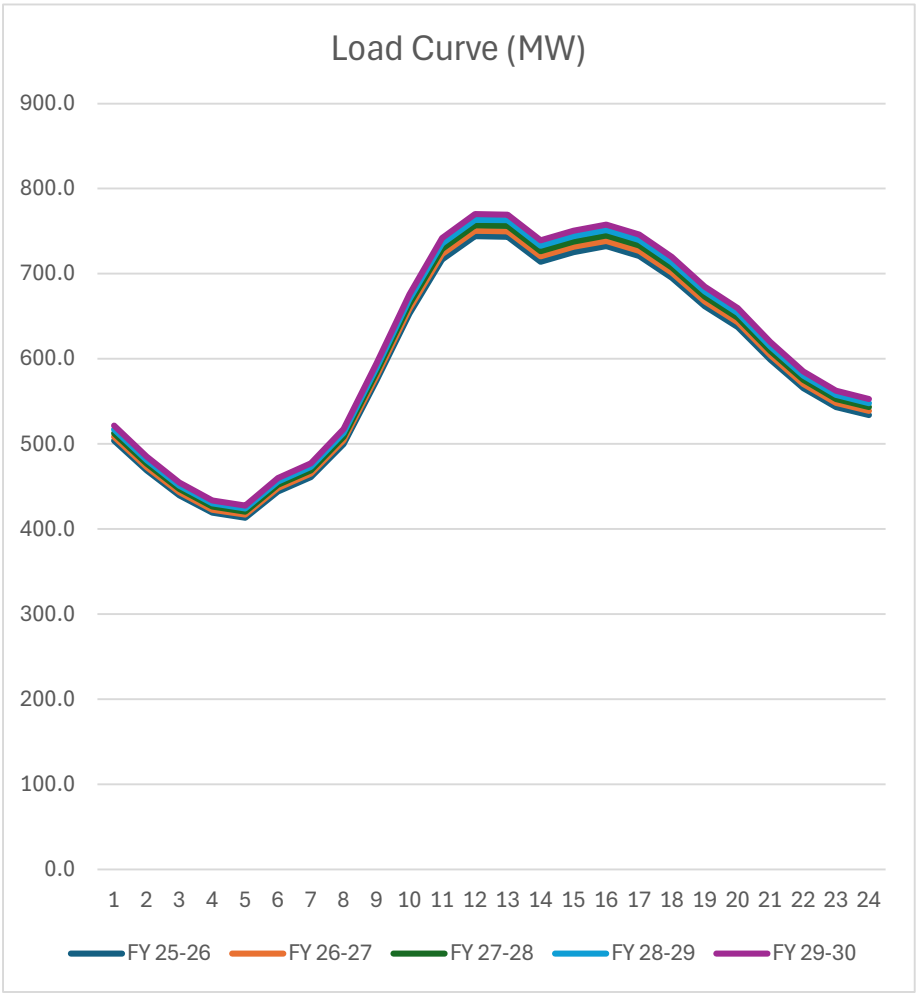
Note: Till date total payment done to agency Rs 94.46 Cr (From TSA Rs 58.38 Cr and from BEST dedicated account Rs 36.08 Cr)

ANNEXURE-36

	FY21-22	FY22-23	FY 23-24
1	431.43	460.93	495.22
2	401.90	428.73	460.70
3	379.02	403.81	431.81
4	361.85	385.23	411.86
5	358.00	380.55	406.31
6	385.17	413.01	436.54
7	391.27	431.60	453.05
8	427.14	467.87	491.23
9	493.62	538.81	564.53
10	564.06	615.41	641.84
11	616.88	674.90	704.51
12	635.85	699.27	731.37
13	633.79	697.50	730.69
14	606.37	667.10	701.93
15	609.38	675.29	712.93
16	610.53	681.38	719.72
17	597.39	671.58	708.43
18	574.08	648.68	683.43
19	547.81	618.95	650.34
20	535.08	597.18	626.40
21	508.46	560.54	588.64
22	485.06	528.07	555.69
23	466.56	504.28	534.16
24	457.23	490.92	524.92



	FY 25-26	FY 26-27	FY 27-28	FY 28-29	FY 29-30
1	503.8	508.1	512.5	516.9	521.3
2	468.7	472.7	476.7	480.8	485.0
3	439.3	443.1	446.9	450.7	454.6
4	419.0	422.6	426.2	429.9	433.6
5	413.3	416.9	420.5	424.1	427.7
6	444.1	447.9	451.8	455.6	459.6
7	460.9	464.8	468.8	472.9	476.9
8	499.7	504.0	508.4	512.7	517.1
9	574.3	579.2	584.2	589.2	594.3
10	652.9	658.5	664.2	669.9	675.7
11	716.7	722.8	729.1	735.3	741.7
12	744.0	750.4	756.9	763.4	769.9
13	743.3	749.7	756.2	762.7	769.2
14	714.1	720.2	726.4	732.6	738.9
15	725.2	731.5	737.8	744.1	750.5
16	732.2	738.5	744.8	751.2	757.7
17	720.7	726.9	733.1	739.4	745.8
18	695.2	701.2	707.2	713.3	719.5
19	661.6	667.3	673.0	678.8	684.6
20	637.2	642.7	648.2	653.8	659.4
21	598.8	604.0	609.2	614.4	619.7
22	565.3	570.1	575.1	580.0	585.0
23	543.4	548.1	552.8	557.5	562.3
24	534.0	538.6	543.2	547.9	552.6



ANNEXURE-37

Inventory of Writing Off Items for the Period 31/03/2023

Dept	B.D	Activity	Regn.No	Date	Description	Qty	Amount	DR.DEP PROV 100/423	DR. (REVENUE) 100/922/026	Ref.No.
					SUPPLY DIVISION					
					PC'S PRINTER,UPS ETC.					
CEPL	104	6102	R-548697	22.03.2013	Personal computer	**2**	72888.00	65599.20	7288.80	CAD/ADM-6/S&P-ESB/68/2019 DT: 16.09.2019 (CR.NOTE 756093 DT.9.12.2022
CEPL	104	6102	R-735523	18.10.2013	Printer	**1**	10867.56	9780.80	1086.76	CAD/ADM-6/S&P-ESB/68/2019 DT: 16.09.2019 (CR.NOTE 756094 DT.9.12.2022
							83755.56	**75380.00**	**8375.56**	
CER'S Office	105	6102	R 19270	01.03.2017	H.P. Office Jet Pro 6230 Printer	1	10441.00	9396.90	1044.10	CER/ADM.7/28/2019 DT: 16.04.2019
CER'S Office	105		R 156925	01.02.2012	H.P. Office Jet Printer	1	5906.00	5315.40	590.60	CER/ADM-7/49/2016 DT:17.03.2016
							16347.00	**14712.30**	**1634.70**	
DCE(REVIEW)	106	6102	R-678521	14.03.2013	Personal Computer (Review Committee-II	1	36444.00	32799.60	3644.40	CAD/ADM-6/S&P-ESB/68/2019 DT:16.09.2019(CR.NOTE 756095 DT:09.12.2022
							36444.00	**32799.60**	**3644.40**	
DCE(HR&S)	114	6102	R-85265	01.10.2009	Personal Computer(Brand Datamini)	2	66468.00	59821.20	6646.80	CAD/ADM-6/S&P-ESB/137/137/2016 DT:14.10.2016(CR-818060 DT:05.01.2023)
			R-85242	01.10.2009	H.P.OFFICE Jet A-4 Printer)	1	10350.00	9315.00	1035.00	CAD/ADM-6/S&P-ESB/137/137/2016 DT:14.10.2016(CR-818061 DT:05.01.2023)
							76818.00	**69136.20**	**7681.80**	
DCER	115	6102	R-668853	22.05.2013	Personal Computer(SUPDT.II,III& OFFICE)	3	109332.00	98398.80	10933.20	CAD/ADM-6/S&P ESB/68/2019 DT:16.09.2019 E-83701 (CR.NOTE 886424)
							109332.00	**98398.80**	**10933.20**	
DEPM	119	6102	R-156917	24.08.2011	Personal computer	4	159558.00	143602.20	15955.80	CAD/ADM-6/S&P-ESB/68/2017 DT:16.06.2017
			R-156953	20.03.2013	Personal computer	1	36444.00	32799.60	3644.40	CAD/ADM-6/S&P-ESB/68/2017 DT:16.09.2019 E-83701
							196002.00	**176401.80**	**19600.20**	
VIGI.(N) DEPT.	121	6102	R 870441	13.05.2013	Personal computer	2	72888.00	65599.20	7288.80	CAD/ADM-6/S&P-ESB/68/2019 DT: 16.09.2019 E-83701(CR.No. 52303 dtd 13.1022
			R-85860	28.05.2013	Personal computer	1	36444.00	32799.60	3644.40	CAD/ADM-6/S&P-ESB/68/2019 DT: 16.09.2019 E-83701(CR.No. 52303 dtd 13.1022
			R-697249	4.12.2013	H.P.Laserjet Printer H.P.- P1566	1	10868.00	9781.20	1086.80	CAD/ADM-6/S&P-ESB/68/2019 DT: 16.09.2019 E-83701(CR.No. 52307 dtd 13.1022
			R-593212	01.11.2009	H.P.Laserjet Printer H.P- P1007	2	15392.00	13852.80	1539.20	VIG/ADM-8/515/2017 DT. 4.08.2017(CR.NO.925539 DT:13.05.2019
			R-593239	15.07.2010	H.P.Office Jet Pro 8500 (All in one Printer)	1	19000.00	17100.00	1900.00	VIG/ADM-8/515/2017 DT. 4.08.2017(CR.NO.925539 DT:13.05.2019
							154592.00	**139132.80**	**15459.20**	
DEPRO(PROJECT	122	6102	R-745931	01.12.2013	Plotter H.P. Design Jet T-790	1	222075.00	199867.50	22207.50	CR.NO. 79106 DT: 13.03.2020
							222075.00	**199867.50**	**22207.50**	
DECA	126	6102	R-621364	26.03.2013	PERSONAL COMPUTER THYMUS	1	36444.00	32799.60	3644.40	CAD/ADM-6/S&P-ESB/68/2019 DT: 16.09.2019
							36444.00	**32799.60**	**3644.40**	
ERECTION NORTI	128	6102	R-416847	07.01.2006	MS OFFICE PROFESSIONAL SOFTWARE	1	1650.00	1485.00	165.00	CAD/ADM-6/S&P-ESB/40/2015 DT. 16.02.2015
			R-416847	07.01.2006	NORTON ANTIVIRUS	1	12700.00	11430.00	1270.00	CAD/ADM-6/S&P-ESB/40/2015 DT. 16.02.2015
			R-416847	07.01.2006	PERSONAL COMPUTER	1	52556.00	47300.40	5255.60	CAD/ADM-6/S&P-ESB/40/2015 DT. 16.02.2015
			R-487979	06.01.2009	PERSONAL COMPUTER DATAMINI	8	265872.00	239284.80	26587.20	CAD/ADM-6/S&P-ESB/40/2015 DT. 16.02.2015
							332778.00	**299500.20**	**33277.80**	
ERECTION(C)128	129	6102	R-487979	01.06.2009	PERSONAL COMPUTER DATAMINI	1	33234.00	29910.60	3323.40	CAD/ADM-6/S&P-ESB/40/2015 DT. 16.02.2015
							33234.00	**29910.60**	**3323.40**	
DECC('C' WARD)	133	6102	R-728123	09.05.2013	Personal Computer - Brand Thymus	5	182220.00	163998.00	18222.00	CAD/ADM-6/S&P-ESB/68/2019 DT: 16.09.2019(C.R.NOTE 59914 DT:2.12.2022
			R-645774	22.03.2012	Emerson UPS 600 V.A.Line model Libera BX-600	13	52196.00	46976.40	5219.60	CAD/ADM-6/S&P-ESB/68/2019 DT: 16.09.2019(C.R.NOTE 59921 DT:2.12.2022
			R-645705	12.08.2011	H.P. Laserjet-P3015 dn printer	2	119700.00	107730.00	11970.00	CAD/ADM-6/S&P-ESB/68/2019 DT: 16.09.2019(C.R.NOTE 59915 DT:2.12.2022
			R-115507	17.01.2011	Data Mini- Festiva M.G.- Series PC	13	637399.18	573659.26	63739.92	CC-C/EST.ADM27B/E-119701/1279/2022 DT:07.03.2022 (C.R. NO.59914)
							991515.18	**892363.66**	**99151.52**	
DECC('E' WARD)	135	6102	R-582083	10.10.2009	PERSONAL COMPUTERS, BRAND - DATAMINI	4	132935.88	119642.29	13293.59	CAD/ADM-6/S&P-ESB/68/2019,DTD.16.09.2019(E-83701)
			R-618318	28.09.2010	PERSONAL COMPUTERS, - DATAMINI FESTIVA	16	745294.00	670764.60	74529.40	CAD/ADM-6/S&P-ESB/68/2019,DTD.16.09.2019(E-83701)
			R-535345	04.05.2012	PERSONAL COMPUTERS, FOR 'E' WARD	12	575586.81	518028.13	57558.68	CAD/ADM-6/S&P-ESB/68/2019,DTD.16.09.2019(E-83701)
			R-712088	19.03.2013	PERSONAL COMPUTERS, 'E' WARD	7	255108.00	229597.20	25510.80	CAD/ADM-6/S&P-ESB/68/2019,DTD.16.09.2019(E-83701)
			R-761012	21.01.2014	PRINTER HP LTP-1566A FOR 'E' WARD	1	10867.62	9780.86	1086.76	CAD/ADM-6/S&P-ESB/68/2019,DTD.16.09.2019(E-83701)
			R-761085	03.04.2014	PERSONAL COMPUTERS PO B/10687/707	8	291552.00	262396.80	29155.20	CAD/ADM-6/S&P-ESB/68/2019,DTD.16.09.2019(E-83701)
							2011344.31	**1810209.88**	**201134.43**	
PLANNING	142	6102	R-526015	23.04.2012	Personal Computer	1	62750.00	56475.00	6275.00	CAD/ADM-6/S&P-ESB/68/2017 DT:16.06.2017
(NETWORK)			R-526008	01.11.2011	Emerson UPS 600VA	1	1890.00	1701.00	189.00	CAD/ADM-6/S&P-ESB/68/2017 DT:16.06.2017
							64640.00	**58176.00**	**6464.00**	
O&M(NE)	150	6102	R 107616	14.05.2009	Other accessories	1	33433.00	30089.70	3343.30	CAD/ADM-6/S&P-ESB/137/2016 DT: 14.10.2016
			R 107616	14.05.2009	Server	1	147368.00	132631.20	14736.80	CAD/ADM-6/S&P-ESB/137/2016 DT: 14.10.2016
			R-680167	16.05.2013	Personal Computers	3	109332.00	98398.80	10933.20	CAD/ADM-6/S&P-ESB/68/2019 DT: 16.09.2019
			R-563784	12.09.2011	EMERSON UPS 600 VA	4	7560.00	6804.00	756.00	CAD/ADM-6/S&P-ESB/68/2017 DT: 16.06.2017
			R-563784	12.09.2011	WORKSTATION PC	4	149800.00	134820.00	14980.00	CAD/ADM-6/S&P-ESB/68/2017 DT: 16.06.2017
							447493.00	**402743.70**	**44749.30**	
DETIE	156	6102	R-756819	13.07.2010	PERSONAL COMPUTER FOR TIE DEPT	1	46137.00	41523.30	4613.70	CAD/ADM-6/S&P-ESB/68/2017 DT: 16.06.2017 (CR.NO. 69283S DT:05.01.2023
			R-756841	03.4.202013	PERSONAL COMPUTER	3	109332.00	98398.80	10933.20	CAD/ADM-6/S&P-ESB/68/2019 DT: 16.09.2019 E-83701 (C.R.NO. 692828 DT:05.01.2
							155469.00	**139922.10**	**15546.90**	
					TOTAL OF ACT 6102		**4968283.05**	**4471454.75**	**496828.31**	
					OTHER O.E.					
DCE(HR&S)	114	6105	R -85275	01.12.2009	Photo Smart Premium Tax(Printer)	1	20450.00	18405.00	2045.00	(HR&S/ADM-06/46/2023 DT:06.4.2023(CR. NOTE 818061 DT.05.01.2023)
							20450.00	**18405.00**	**2045.00**	
DIV(VIG NORTH)	121	6105	R-870402	01.11.2011	Sony Make Digital Camera	2	25758.00	23182.20	2575.80	VIG(N)/ADM-07/863/2017 DT: 22.12.2017 (CR.NO. 925535 DT: 13.05.2019
							25758.00	**23182.20**	**2575.80**	
					TOTAL OF ACT 6105		**46208.00**	**41587.20**	**4620.80**	
					MACHINE TOOLS					
ERECTION NORTH	128	6103	R-416565	07.01.2005	ROTARY HAMMER WITH CARRY BOX MAKE DEMA	1	93775.50	84397.95	9377.55	EN/STORE-19/1103/2018 DT. 19.12.2018
			R-666236	01.04.1997	HYUDRAUULIC CRIMPING MACHINE	1	13515.00	12163.50	1351.50	EN//STORE-19/15/2019 DT. 09.01.2019
							107290.50	**96561.45**	**10729.05**	
O&M(CS)	148	6103	R-466794	01.08.2008	10KV INSULATION RESISTANCE TESTER	1	350,999.00	315899.10	35099.90	E OFFICE NO 102989 DT. 13.01.2021 (C.R.NO. 41446 DT. 14.11.2022)
							350,999.00	**315899.10**	**35099.90**	
					LOOSE TOOLS					
ERECTION NORTH	128	6103	R-46710	07.01.1991	MANNUAL CRIMPING TOOLS	2	17820	16038.00	1782.00	EN/STORE-19/15/2019 DT. 09.01.2019
							17820.00	**16038.00**	**1782.00**	
					TOTAL OF ACT 6103		**476109.50**	**428498.55**	**47610.95**	
					ROOM COOLER					
DCE(WORK'S)	109	6107	R-845650	26.08.2008	2 TR WINDOW AC-SAMSUNG RC NO. 976	1	19940.50	17946.45	1994.05	DCEW/GEN.10/149/2022 DT:24.11.2022(CR.NOTE 67835 DT:04.09.2019
							19940.50	**17946.45**	**1994.05**	
DCER	115	6107	J-2066	01.03.2003	FAB OF RC NO. 746,	1	24635.85	22172.27	2463.59	DCER/ADM-6/180/2020 DT: 22.09.2020(CR.NO.67864 DT:29.09.2021
			J-2066	01.03.2003	FAB OF RC NO. 747	1	24635.85	22172.27	2463.59	DCER/ADM-6/180/2020 DT: 22.09.2020(CR.NO.67864 DT:29.09.2021
			J-2066	01.03.2003	FAB OF RC NO. 748	1	21141.52	19027.37	2114.15	DCER/ADM-6/180/2020 DT: 22.09.2020(CR.NO.67864 DT:29.09.2021
			J-12207	01.03.2005	FAB OF RC. No.849(DCER CABIB)	1	25874.19	23286.77	2587.42	DCER/ADM-6/180/2020 DT: 22.09.2020(CR.NO.67864 DT:29.09.2021
							96287.41	**86658.67**	**9628.74**	
DEPRO(PROJECT	122	6107	V-348	01.03.1987	FAB OF R.C. 346 DEPRO'S CABIN	1	14040.71	12636.64	1404.07	CR.NO.60735 DT:29.09.2016
							14040.71	**12636.64**	**1404.07**	
PLANNING	142	6107	R-2371	01.03.1998	FAB OF AC NO.529		22756.24	**20480.62**	**2275.62**	PL/DIGI/AC/117941/2021 DT:17.12.2021
(NETWORK)			R-845614	28.01.2008	A.C.Window 2 TR Samsung RC. 933 & 936	2	40800	36720.00	4080.00	PL/DIGI/AC/117941/2021 DT:17.12.2021
							63556.24	**57200.62**	**6355.62**	
PLANNING	143	6107	R-845708	01.01.2009	Air Conditioner 1.5 TR-R.C. NO.990	**1**	23999.99	21599.99	2400.00	CAS/PROP-C/249/2022 DT:19.7.2022 (C.R.NO. 86306 DT: 10.1.2023)
							23999.99	**21599.99**	**2400.00**	
DEMCS	146	6107	R-12531	03.01.2000	FAB OF RC NO. 657	1	16669.77	15002.79	1666.98	MCS/Adm.7/1990/E-115319/2021 dtd.11/10/2021(CR.NO.75883 DT.11/05/22)
			R-12531	01.03.2000	FAB OF RC NO. 658	1	16685.08	15016.57	1668.51	MCS/Adm.7/1990/E-115319/2021 dtd.11/10/2021(CR.NO.709853 DT.26/08/22)
							33354.85	**30019.37**	**3335.49**	
DEMCS	148	6107	J-2392	01.03.1996	FAB OF R.C. 502	1	39470.86	35523.77	3947.09	MCS/ADM-7/2788/2018 DT. 6.12.2018 (C.R. NO. 75886 DT. 11.05.2022
					FAB OF R.C. 503	1	37479.18	33731.26	3747.92	MCS/ADM-7/2788/2018 DT. 6.12.2018 (C.R. NO. 75886 DT. 11.05.2022
					FAB OF R.C. 504	1	35948.98	32354.08	3594.90	MCS/ADM-7/2788/2018 DT. 6.12.2018 (C.R. NO. 75886 DT. 11.05.2022
					FAB OF R.C. 505	1	37479.18	33731.26	3747.92	MCS/ADM-7/2788/2018 DT. 6.12.2018 (C.R. NO. 75886 DT. 11.05.2022
							150378.20	**135340.38**	**15037.82**	
DETIE	156	6107	J-2370	01.05.1994	FAB OF RC NO. 474	1	21489.55	19340.60	2148.96	TIE/ADM-11/1193/2022 DT: 15.12.2022 (C.R.NO. 60750 DT: 12.09.2017)
			J-2392	01.04.1995	FAB OF RC NO. 501	1	32782.36	29504.12	3278.24	TIE/ADM-11/1193/2022 DT: 15.12.2022 (C.R.NO. 60781 DT: 17.01.2018)
							54271.91	**48844.72**	**5427.19**	
					TOTAL OF ACT 6107		**455829.81**	**410246.83**	**45582.98**	
					TOTAL		**5946430.36**	**5351787.32**	**594643.04**	

S/S SWITCHGEAR	9915	8945068.20	8050561.38	894506.82
DSS TRANSFORMERS	9930	3635664.47	3272098.023	363566.447
RSS SWITCHGEAR	9904	0.00	0.00	0.00
RSS TRANSFORMER	9903	0.00	0.00	0.00
HV/LV CAPACITOR	9906	283833.15	255449.84	28383.32
RSS EQUIPMENT (BATTERY/BATTERY CHARGER)	9907	0.00	0.00	0.00
H V MAINS	9911	4631081.50	4167973.35	463108.15
L V MAINS	9935	4631081.50	4167973.35	463108.15
DIST. PILLARS	9932	0.00	0.00	0.00
METERS -ELECTRONIC	6181	77285533.93	68654401.30	8631132.63
METERS - CONVENTIONAL	6180	18328250.47	16495425.42	1832825.05
MOTOR VEHICLE	6100	15989559.37	14390603.43	1598955.94
CASH COLLECTION CENTRE	9111			0.00
DIVISION TOTAL		**139676502.95**	**124806273.42**	**14870229.53**

THE STATEMENT SHOWING ASSETS TO BE WRITTERN OF FOR THE YEAR 2022-23

Description of Assets	Year	Life consumed (In Years)	Book Value	Life of Assets	Debit Provision for Depreciation	Trf. To Revenue A/C	Remarks
S/S SWITCHGEAR							
ARYADHARMA	16/07/1972	20	15299.35	20	13769.42	1529.94	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
ARYADHARMA	16/07/1972	20	17000.00	20	15300.00	1700.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
ARYADHARMA	16/07/1972	20	17000.00	20	15300.00	1700.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
ARYADHARMA	16/07/1972	20	17000.00	20	15300.00	1700.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
CLARIDGE	18/03/1980	20	13366.18	20	12029.56	1336.62	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
CLARIDGE	18/03/1980	20	14500.00	20	13050.00	1450.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
CLARIDGE	18/03/1980	20	14500.00	20	13050.00	1450.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
DIAGNOSTIC CENTER	06/02/1990	20	88600.00	20	79740.00	8860.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
DIAGNOSTIC CENTER	06/02/1990	20	52400.00	20	47160.00	5240.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
DIAGNOSTIC CENTER	06/02/1990	20	88600.00	20	79740.00	8860.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
DIAGNOSTIC CENTER	06/02/1990	20	88600.00	20	79740.00	8860.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
BDD CHAWL	20/10/1990	20	55000.00	20	49500.00	5500.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
BDD CHAWL	20/10/1990	20	55000.00	20	49500.00	5500.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
BDD CHAWL	20/10/1990	20	52979.98	20	47681.98	5298.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
BDD CHAWL	20/10/1990	20	55000.00	20	49500.00	5500.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
MANDAVI STATIC	27/03/1993	20	57600.00	20	51840.00	5760.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
MANDAVI STATIC	27/03/1993	20	97500.00	20	87750.00	9750.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
MANDAVI STATIC	27/03/1993	20	97500.00	20	87750.00	9750.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
NEPEANSEA ROAD	18/07/1994	25	136300.00	20	122670.00	13630.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
SOMAYYA TRUST	27/07/1994	25	100000.00	25	90000.00	10000.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
SOMAYYA TRUST	27/07/1994	25	100000.00	25	90000.00	10000.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
SOMAYYA TRUST	27/07/1994	25	80621.15	25	72559.04	8062.12	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
SOMAYYA TRUST	27/07/1994	25	100000.00	25	90000.00	10000.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
SOMAYYA TRUST	27/07/1994	25	100000.00	25	90000.00	10000.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
SOMAYYA TRUST	27/07/1994	25	80621.14	25	72559.03	8062.11	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
KEDDY CO-OP	24/08/1995	25	126143.19	25	113528.87	12614.32	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
N.M.JOSHI MARG	19/07/1997	25	100000.00	25	90000.00	10000.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
N.M.JOSHI MARG	19/07/1997	25	89148.80	25	80233.92	8914.88	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
N.M.JOSHI MARG	19/07/1997	25	100000.00	25	90000.00	10000.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
N.M.JOSHI MARG	19/07/1997	25	100000.00	25	90000.00	10000.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
BURMAH SHELL	16/12/1997	25	144000.00	25	129600.00	14400.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
BURMAH SHELL	16/12/1997	25	130640.32	25	117576.29	13064.03	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
BURMAH SHELL	16/12/1997	25	144000.00	25	129600.00	14400.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
BURMAH SHELL	16/12/1997	25	140000.00	25	126000.00	14000.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
BURMAH SHELL	16/12/1997	25	140000.00	25	126000.00	14000.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
BURMAH SHELL	16/12/1997	25	144000.00	25	129600.00	14400.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
BURMAH SHELL	16/12/1997	25	144000.00	25	129600.00	14400.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
CARDIAC INSTITUTE	16/10/1998	25	130291.44	25	117262.30	13029.14	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
CARDIAC INSTITUTE	16/10/1998	25	175000.00	25	157500.00	17500.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
CARDIAC INSTITUTE	16/10/1998	25	160000.00	25	144000.00	16000.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
CARDIAC INSTITUTE	16/10/1998	25	175000.00	25	157500.00	17500.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
CARDIAC INSTITUTE	16/10/1998	25	175000.00	25	157500.00	17500.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
SOUTER STREET	23/12/1998	25	115000.00	25	103500.00	11500.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
SOUTER STREET	23/12/1998	25	115000.00	25	103500.00	11500.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
SOUTER STREET	23/12/1998	25	115000.00	25	103500.00	11500.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
SOUTER STREET	23/12/1998	25	87926.12	25	79133.51	8792.61	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
DUNCON ROAD	02/05/1999	25	155000.00	25	139500.00	15500.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
DUNCON ROAD	02/05/1999	25	155000.00	25	139500.00	15500.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
DUNCON ROAD	02/05/1999	25	155000.00	25	139500.00	15500.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
DUNCON ROAD	02/05/1999	25	153151.21	25	137836.09	15315.12	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
SEWREE KOLIWADA ROAD	30/01/1999	25	176569.29	25	158912.36	17656.93	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
SEWREE KOLIWADA ROAD	30/01/1999	25	190000.00	25	171000.00	19000.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
SEWREE KOLIWADA ROAD	30/01/1999	25	190000.00	25	171000.00	19000.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
DLB	16/06/1998	25	210000.00	25	189000.00	21000.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
DLB	16/06/1998	25	210000.00	25	189000.00	21000.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
DLB	16/06/1998	25	210000.00	25	189000.00	21000.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
DLB	16/06/1998	25	210000.00	25	189000.00	21000.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
DLB	16/06/1998	25	188638.00	25	169774.20	18863.80	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
SINDH SEVS SAMITI ANNEX	15/03/2001	25	22000.00	25	19800.00	2200.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
SINDH SEVS SAMITI ANNEX	15/03/2001	25	22000.00	25	19800.00	2200.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
SINDH SEVS SAMITI ANNEX	15/03/2001	25	22000.00	25	19800.00	2200.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
SINDH SEVS SAMITI ANNEX	15/03/2001	25	22000.00	25	19800.00	2200.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
SINDH SEVS SAMITI ANNEX	15/03/2001	25	17041.58	25	15337.42	1704.16	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
POLICE COURT LANE	25/05/1991	20	84806.00	20	76325.40	8480.60	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
BHANDAR GULLY EAST	03/07/1994	20	105500.00	20	94950.00	10550.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
ARCHIS	27/101994	25	35925.06	25	32332.55	3592.51	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
NEW CONBHOY	22/101997	25	1098340.92	25	98406.83	109834.09	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
CHEMO PHARMA	25/02/1999	25	351300.00	25	316170.00	35130.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
SANKALI STREET	23/12/1997	25	615658.47	25	554092.62	61565.85	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
			8945068.20		**7160461.38**	**894506.82**	
TRANSFORMER DSS							
MANGALORE SREET	30/11/1967	35	21337.13	35	19203.42	2133.71	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
PIEM HOTEL	19/07/1972	35	19400.00	35	17460.00	1940.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
CADELL SCHOOL	3/9/1984	35	93700.00	35	84330.00	9370.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
C.P.TANK NORTH	20/10/1984	35	142852.72	35	128567.45	14285.27	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
PINJARI STREET	18/08/1988	35	251000.00	35	225900.00	25100.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
NAIGAON HOSTEL	27/081996	25	746100.00	25	671490.00	74610.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
MOTILAL	22/06/1996	25	528417.31	25	475575.58	52841.73	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
NANA CHOWK	29/06/1996	25	321004.78	25	288904.30	32100.48	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
VEER SAVARKAR MARG	10/5/1995	25	596900.00	25	537210.00	59690.00	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
PAREL NAKA	13/03/1997	25	514319.24	25	462887.32	51431.92	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
NEW SIRI ROAD	8/5/1996	25	400633.29	25	360569.96	40063.33	EN/STORES-19(PART IV)/494/2022 DT.25/05/2022.
TOTAL			**3635664.47**		**3272098.02**	**363566.45**	
L V CAPACITOR							
CUFFE PAREDE (S)	1990-05-07	10	30300.00	10	27270.00	3030.00	EN/STORES-19 (PART IX)/165/2022,DT.23/02/2022.
CHAMPAKLAL	1990	10	18892.37	10	17003.13	1889.24	EN/STORES-19 (PART IX)/165/2022,DT.23/02/2022.
SION RAILWAY	1990	10	16100.00	10	14490.00	1610.00	EN/STORES-19 (PART IX)/165/2022,DT.23/02/2022.
TARDEO	1997	10	11575.00	10	10417.50	1157.50	EN/STORES-19 (PART IX)/165/2022,DT.23/02/2022.
TARDEO	1998	10	11578.00	10	10420.20	1157.80	EN/STORES-19 (PART IX)/165/2022,DT.23/02/2022.
VENUS CO-OP	2003	10	22700.00	10	20430.00	2270.00	EN/STORES-19 (PART IX)/165/2022,DT.23/02/2022.
CATERING INSTITUTE	2002	10	3880.00	10	3492.00	388.00	EN/STORES-19 (PART IX)/165/2022,DT.23/02/2022.
CATERING INSTITUTE	1996	10	4338.07	10	3904.26	433.81	EN/STORES-19 (PART IX)/165/2022,DT.23/02/2022.
DELISE ROAD CHAWL	1996	10	30100.00	10	27090.00	3010.00	EN/STORES-19 (PART IX)/165/2022,DT.23/02/2022.
SION HOSPITAL	1988	10	2783.58	10	2505.22	278.36	EN/STORES-19 (PART IX)/165/2022,DT.23/02/2022.
WILINGTON	1996	10	8086.13	10	7277.52	808.61	EN/STORES-19 (PART IX)/165/2022,DT.23/02/2022.
DLB	1998	10	58800.00	10	52920.00	5880.00	EN/STORES-19 (PART IX)/165/2022,DT.23/02/2022.
VJTI	1996	10	30100.00	10	27090.00	3010.00	EN/STORES-19 (PART IX)/165/2022,DT.23/02/2022.
SION KOLIWADA	1988	10	11900.00	10	10710.00	1190.00	EN/STORES-19 (PART IX)/165/2022,DT.23/02/2022.
J V DALAL ROAD	1991	10	22700.00	10	20430.00	2270.00	EN/STORES-19 (PART IX)/165/2022,DT.23/02/2022.
			283833.15		**255449.84**	**28383.32**	
GRAND TOTAL			**12864565.82**		**10688009.24**	**1286456.58**	

SUMMARY OF ITEMS WRITTEN OFF DURING 22.23

ASSETS HEAD			BOOK VALUE		DEP.PROV.	REVENUE
S/S.SWITCHGEAR :			8945068.20		7160461.38	894506.82
DSS TRANSFORMERS			3635664.47		3272098.02	363566.45
RSS SWITCHGEARS:			0.00		0.00	0.00
RSS TRANSFORMERS:			0.00		0.00	0.00
H V & L V CAPACITOR			283833.15		255449.84	28383.32
RSS EQUIPMENTS:			0.00		0.00	0.00
SCADA EQUIPMENT			0.00		0.00	0.00
TOTAL			**12864565.82**		**10688009.24**	**1286456.58**

BATCHES OF SCRAPPED METERS (CONVENTIONAL METERS)
FOR THE YEAR 2022-23
COMMERCIAL SECTION

BATCH NO.	NO. OF METERS	TYPE	BOOK VALUE	DEP. FUND 90%	Rev.10%
3864	400	SINGLE	303691.91	273322.72	30369.19
3865	400	SINGLE	291862.21	262675.99	29186.22
3866	400	SINGLE	266374.36	239736.92	26637.44
3867	400	SINGLE	299839.38	269855.44	29983.94
3868	400	SINGLE	367114.25	330402.83	36711.43
3869	400	SINGLE	296630.84	266967.76	29663.08
3870	400	SINGLE	244520.42	220068.38	24452.04
3871	400	SINGLE	293704.16	264333.74	29370.42
3872	400	SINGLE	254966.24	229469.62	25496.62
3873	400	SINGLE	267781.72	241003.55	26778.17
3874	400	SINGLE	305934.46	275341.01	30593.45
3875	400	SINGLE	255775.44	230197.90	25577.54
3876	400	SINGLE	287197.98	258478.18	28719.80
3877	400	SINGLE	290140.23	261126.21	29014.02
3878	400	SINGLE	267098.21	240388.39	26709.82
3879	400	SINGLE	354934.32	319440.89	35493.43
3880	400	SINGLE	354053.15	318647.84	35405.32
3881	400	SINGLE	245230.26	220707.23	24523.03
3882	400	SINGLE	295519.76	265967.78	29551.98
3883	400	SINGLE	288950.15	260055.14	28895.02
3884	400	SINGLE	328085.61	295277.05	32808.56
3885	400	SINGLE	279878.46	251890.61	27987.85
3886	400	SINGLE	269878.09	242890.28	26987.81
3887	400	SINGLE	291721.02	262548.92	29172.10
3888	400	SINGLE	308478.44	277630.60	30847.84
3889	400	SINGLE	227480.91	204732.82	22748.09
3890	400	SINGLE	297690.28	267921.25	29769.03
3891	400	SINGLE	325406.20	292865.58	32540.62
3892	320	SINGLE	294499.55	265049.60	29449.96
3893	400	SINGLE	303584.75	273226.28	30358.48
3894	400	SINGLE	285076.97	256569.27	28507.70
3895	400	SINGLE	302902.00	272611.80	30290.20
3896	400	SINGLE	286980.41	258282.37	28698.04
3897	400	SINGLE	239003.25	215102.93	23900.33
3898	400	SINGLE	260249.69	234224.72	26024.97
3899	400	SINGLE	275971.26	248374.13	27597.13
3900	400	SINGLE	301395.13	271255.62	30139.51
3901	400	SINGLE	239641.96	215677.76	23964.20
3902	400	SINGLE	289015.43	260113.89	28901.54
3903	400	SINGLE	289459.67	260513.70	28945.97
3904	400	SINGLE	228578.14	205720.33	22857.81
3905	104	THREE	41918.80	37726.92	4191.88
3906	80	SINGLE	73653.75	66288.38	7365.38
3907	400	SINGLE	256320.22	230688.20	25632.02
3908	400	SINGLE	324327.95	291895.16	32432.80
3909	400	SINGLE	267163.29	240446.96	26716.33
3910	400	SINGLE	233076.55	209768.90	23307.66
3911	400	SINGLE	299214.91	269293.42	29921.49
3912	400	SINGLE	284636.68	256173.01	28463.67
3913	300	SINGLE	166051.46	149446.31	16605.15
3914	400	SINGLE	295919.84	266327.86	29591.98
3915	400	SINGLE	257081.41	231373.27	25708.14
3916	400	SINGLE	253855.68	228470.11	25385.57
3917	400	SINGLE	273929.43	246536.49	27392.94
3918	400	SINGLE	272074.96	244867.46	27207.50
3919	400	SINGLE	274843.09	247358.78	27484.31
3920	400	SINGLE	312962.98	281666.68	31296.30
3921	400	SINGLE	238505.91	214655.32	23850.59
3922	400	SINGLE	272339.75	245105.78	27233.98
3923	400	SINGLE	306956.63	276260.97	30695.66
3924	400	SINGLE	305777.56	275199.80	30577.76
3925	200	SINGLE	184423.00	165980.70	18442.30
3926	400	SINGLE	265785.85	239207.27	26578.59
3927	400	SINGLE	293211.33	263890.20	29321.13
3928	400	SINGLE	255968.99	230372.09	25596.90
3929	400	SINGLE	306933.10	276239.79	30693.31
3930	400	SINGLE	255020.68	229518.61	25502.07
TOTAL			**18328250.47**	**16495425.42**	**1832825.05**

Accounts Department

Book Value Year Wise Meter Summary 2022-23 (Electronic Meter)

Accounts Department

Book Value Year Wise Meter Summary 2022-23 (Electronic Meter)

Sr. No.	Batch No.	Upto 1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	TOTAL
1	166		1342.31									33833.00	20676.00	193564.00	54635.00		44093.50	38802.28	25087.04	3345.00	15387.00	31895.40				**462660.53**
2	167										19458.69	49891.30	19123.00	34342.00	1561.00		82013.91	31551.52	44686.29	8697.00	30774.00	12508	22599.36			**357206.07**
3	168										839.28	289787.00	139745.00	167027.00												**597398.28**
4	169										22628.58	46997.82		382445.00	117075.00											**569146.40**
5	170											317736.00	117680.00	162344.00												**597760.00**
6	171										69254.73	232576.39	64724.00	118636.00	10927.00											**496118.12**
7	172		2330.16	277281.31	92881.62			17302.00	115634.00		68472.74	110784.78	112375.00	160482.30	139345.00		40455.00									**1158343.91**
8	173										839.28	107383.00	55898.00	349664.00	99904.00											**613688.28**
9	174										7739.82	11375.64		184198.00	82733.00	7936.83	106706.27	41447.89	25087.04							**467224.49**
10	175		551092.05	11665.08	131038.95	20640.36		38067.65	56492.98	23442.12	53035.68	47342.18	17980.00	125283.26	31465.00		22475.00	34124.76	105393.78				2701.00			**1272239.86**
11	176			69981.40	112186.54	82561.44		26181.00	94768.52		89229.28	140597.45	94395.00	112904.32	161820.00		80910.00									**1065534.95**
12	177		12374.27	80227.88	132798.79	61921.08			115664.90		111750.60	99564.56	44950.00	315604.49	71920.00		53940.00									**1100716.57**
13	178										1709.61	70877.66	25007.00	64001.00	1561.00		98769.44	77212.96	69773.33		669.00					**409581.00**
14	179										3357.12	283903.00	119151.00	190442.00												**596852.12**
15	180													460307.00	167027.00											**627334.00**
16	181		301855.32	310640.78	309605.40				51695.38		47302.15	52983.02	94395.00	141426.04	89900.00		44950.00	2803.53								**1447556.62**
17	182		91874.80	115131.27	30960.54			8765.00	72431.60		111999.28	73103.78	53940.00	282745.93	76415.00		26970.00	37581.4	20880.82	7207.56	3719.5	3157.68	3898.00			**1020782.16**
18	183										36553.86	262303.14	108854.00	128002.00												**535713.00**
19	184										16256.82	87144.27	39717.00	218540.00	73367.00		12346.18	12248.28	5487.79	8697.00	18732.00	8130.20	5947.20	594.72		**507208.46**
20	185										11221.14	46287.28	10297.00	254443.00	73367.00		62612.77	12248.28	31358.8	669.00	3345.00	625.40				**506474.67**
21	186		185195.44	379240.96	258004.50			17416.00	75692.13		52953.62	84923.96	35960.00	201642.40	40455.00		62930.00									**1334414.01**
22	187		230337.28	156504.90	30960.54			5860.53	20000.00		194285.78	58562.40	13485.00	488620.91	26970.00		8990.00									**1234577.34**
23	188											283903.00	130919.00	184198.00												**599020.00**
24	189										18059.58	71416.98	48543.00	293468.00	78050.00		7054.96	7936.83	7055.73	2676.00	8697.00	3127.00	4757.76	594.72		**551437.56**
25	190	183697.35	69990.48	247356.15	82561.44			23442.12	177546.82	11721.06	94630.82	52853.07	89900.00	174718.95	80910.00		35960.00									**1325288.26**
26	191										1740.66	6754.33	1471.00	1561.00		881.87	171082.78	64376.51	87020.67	1338.00	5352.00	1250.80				**342829.62**
27	192	12630.72	58316.32	83380.33	20640.36			17530.00	48804.10		47523.06	88245.12	35960.00	108631.65	26970.00		17980.00	45338.88	57929.24	30658.72	12175.52	30460.00	17568.00	7796.00		**768538.92**
28	193		217407.86	199000.04	61921.08				59692.13		100588.74	108324.54	58435.00	263782.64	98890.00		35960.00									**1203972.13**
29	194										839.28	270664.00	148571.00	177954.00												**598028.28**
30	195																116406.84	134926.11	89372.58		669.00					**341374.53**
31	196		115232.20	246293.04	92881.62			8765.00	63692.13		63621.60	94814.31	80910.00	202478.71	130355.00		76415.00									**1175458.61**
32	197										4351.65	35781.97	4413.00	6244.00		5291.22	211648.80	46739.11	47822.17							**362291.92**
33	198													477666.00	146734.00											**624400.00**
34	199			256631.76	28784647	227043.96				96739.47	79333.86	77353.29	40455.00	213354.35	13485.00		89900.00									**1382143.16**
35	200	254278.40	177177.78	80899.52	16229.92							2942.00	4413.00													**535940.62**
36	201				46170.90																					**46170.90**
37	202		12246.49	33576.64	70332.29			8651.00	52000.00	4300	47660.66	33431.49	22475.00	129480.58	8990.00		17980.00	52202.05	92512.59	19838.28	5860.16	19657.82	31491.00	25337.00		**688023.05**
38	203										14764.56	107676.92	38246.00	349664.00	78050.00											**588401.48**
39	204										2610.99	70816.31	19123.00	76489.00	7805.00	2645.61	134044.24	31649.42	25087.04	4014.00	12711.00	16260.40	2973.60			**406229.61**
40	205			1341.12							4289.55	40795.64	20594.00	128002.00	17171.00	881.87	22928.62	46739.11	25087.04	13380.00	42147.00	23765.20	11299.68	2378.88		**400800.71**
41	206										13863.18	206503.58	64724.00	263809.00	31220.00											**580119.76**
42	207	44975.51	160201.80	186614.04	215877.92	72241.26		20372.06	100678.09		99868.24	50162.60	62930.00	177653.92	80910.00		44950.00	2803.53	3818.44	1578.84	9017.84					**1334654.09**
43	208										58624.47	95994.53	30891.00	138929.00	32781.00	1763.74	102296.92									**461280.66**
44	209										7832.97	123919.27	39717.00	190442.00	28098.00		54675.94	37920.41	21167.19							**503772.78**
45	210		318408.74	291527.12	127031.49	72241.26		20372.06	47938.62	17581.59	159052.75	87404.32	53940.00	196803.17	26970.00		26970.00									**1446241.12**
46	211			244966.68	229715.60	288965.04			4000.00		57997.90	53682.20	49445.00	218397.29	98890.00		71920.00	22428.24	2803.53							**1343211.48**
47	212										26700.78	130158.54	44130.00	231028.00	88977.00		1763.74	21164.88	2351.91	669.00						**546943.85**
48	213		46660.32	71150.42	123842.16			14625.53	136739.47		26159.33	50762.56	103385.00	112375.00	170810.00		76415.00	25231.77	9425.50	6190.54	4281.32	11613.70	5847.00			**995514.62**
49	214	220436.82	231864.84	278617.13	61921.08			8765.00	95200.12		85150.70	77353.29	62930.00	161679.48	80910.00		53940.00									**1418768.46**
50	215		198306.36	174107.62	92881.62				131692.13		41871.59	114205.16	98890.00	180320.01	58435.00		76415.00									**1167124.49**
51	216		198306.36	174380.71	134162.34			8651.00	115877.24		64007.88	86383.78	62930.00	231259.00	80910.00		71920.00									**1228788.31**
52	217											241244.00	100028.00	192003.00	14049.00		31747.32									**579071.32**
53	218										6962.64	94290.96	42659.00	332493.00	64001.00		35274.80									**575681.40**
54	219										29156.52	104342.56	30891.00	154539.00	17171.00	2645.61	130516.76									**469262.45**
55	220															2645.61	73195.21	129634.89	98780.22	22746.00	4014.00	625.40				**331641.33**
56	221		11665.08	253794.56	362241.68	227043.96			16000.00		58963.60	51821.92	62930.00	215340.42	130355.00		26970.00									**1417126.22**
57	222										23312.61	128270.92	42659.00	307517.00	67123.00		5291.22	881.87								**575055.62**
58	223										6092.31	27225.63	5884.00	26537.00	4683.00	881.87	40566.02	82308.38	95644.34	31443.00	12711.00	8130.20	1784.16	594.72		**344485.63**
59	224											136803.00	70608.00	324688.00	79611.00											**611710.00**
60	225		3157.68	116641.72	71423.13	30960.54			40000.00		31589.89	77353.29	26970.00	72440.01	22475.00		62930.00	42897.15	81298.94	18358.38	7439.00	11051.88	18293.00	23388.00		**758667.61**
61	226										9542.58	65949.60	23536.00	220101.00	48391.00	3527.48	126989.28									**498036.94**
62	227		12246.49	139953.72	228897.85	237364.14		11721.06	83938.62		73710.16	101154.33	67425.00	192448.69	58435.00		49445.00	11214.12	2803.53							**1270757.71**
63	228			128315.88	205040.05	154802.70		8765.00	100000.00		62849.04	76524.16	112375.00	189319.32	85405.00		58435.00									**1181831.15**
64	229		16983.01	116641.72	187071.33	113521.98		17530.00	52000.00		78754.44	132296.87	58435.00	155448.67	76415.00		44950.00	3818.44	15273.76	5628.72	5298.34	7894.20	5847			**1093808.48**
65	230										20639.52	129410.91	58840.00	104587.00	3122.00	881.87	37920.41	52912.20	26654.98	14049.00	5352.00	625.40				**454995.29**
66	231										8579.10	75229.31	29420.00	121758.00	12488.00		23810.49	30767.55	17247.34	11373.00	37464.00	21263.60	17246.88	5947.20		**412594.47**
67	232		42011.57	125496.84	143419.79	61921.08		11721.06	47076.39		21142.82	43521.34	35960.00	81959.33	49445.00		44950.00	25593.57	62956.17	52468.76	18597.50	11051.88	15592.00	7796.00		**902681.10**
68	233		11665.08	209971.44	328910.32	72241.26			102152.78		83798.72	116066.50	71920.00	152830.00	76415.00		31465.00									**1257436.10**
69	234										8579.10	75106.61	17652.00	159222.00	39025.00	881.87	93478.22	24496.56	45470.26							**463911.62**
70	235											152984.00	63253.00	305956.00	88977.00											**611170.00**
71	236										20453.22	122178.61	44130.00	79611.00	6244.00		177255.87									**449872.70**
72	237			221636.52	328336.79	72241.26		8765.00	108185.11		83798.72	53042.80	107880.00	149375.02	62930.00		85405.00									**1263596.22**
73	238										18028.53	183776.56	83847.00	226345.00	23415.00		21164.88									**556576.97**
74	239										3481.32	19870.63	5884.00	45269.00	14049.00		119934.32	54675.94	65069.51	26091.00	10704.00					**365028.72**
75	240		24492.98	78836.52	299002.12	113521.98		17302.00	168431.60		31424.52	36121.96	76415.00	144889.33	134850.00		22475.00	39249.42	2803.53							**1189815.96**
76	241										17034.00	113291.26	30891.00	327810.00	65562.00		13228.05	5291.22								**573107.53**
77	242										5221.98	125843.98	60311.00	256004.00	32781.00		70549.60									**550711.56**
78	243		110218.41	221591.12	214418.52	92881.62		11721.06	88985.96		128097.82	22941.18	49445.00	299361.17	58435.00		49445.00									**1347541.86**
79	244										4351.65	98372.95	45601.00	196686.00	45269.00	2645.61	115524.97	881.87		669.00						**510002.05**
80	245										17034.00	23560.26		39025.00	7805.00		72313.34	101219.25	83100.82	9366.00	5352.00					**358775.67**
81	246			113831.76	124905.27	92881.62			117115.22		111337.80	63442.60	26970.00	181739.52	49445.00		49445.00	22910.64	61095.04	9473.04						**1024592.51**
82	247										3357.12	8826.00	2942.00	62440.00	7805.00		70549.60	89068.87	63501.57	11373.00	15387.00	11882.60	8920.80	4163.04		**360216.60**
83	248		12246.49	104976.64	273912.94	196083.42					36855.08	3952.53	62930.00	116024.38	58435.00		35960.00	24337.46	11334.72	5863.16	31683.42	7894.20	1949.00	23388.00		**1120316.42**
84	249										9356.28	70276.99	14710.00	73367.00	15610.00		23810.49	65258.38	26654.98	25422.00	32112.00	5003.20	19625.76	6541.92		**387749.00**
85	250		32679.28	58335.40	112976.56	61921.08		18971.18	32000.00		52567.34	46612.27	71920.00	69514.35	44950.00		35960.00	28517.70	52104.79	21953.08	42885.22	6315.36	23193.00	13647.00		**827013.59**
86	251										3419.22	5283.33	4413.00	18732.00	1561.00		35274.80	51247.9	19442.56	3345.00	8697.00	4377.80	594.72	1189.44		**332559.77**
87	252										4351.65	170513.30	82376.00	170149.00	35903.00		76722.69									**540015.64**
88	253										10443.96	40672.94	25007.00	199808.00	43708.00		156099.99	881.87	1567.94							**478180.70**
89	254			163311.12	276463.18	237364.14		10320.18	111076.39		52567.34	107865.14	62930.00	153879.33	80910.00		35960.00									**1292646.82**
90	255		12246.49	244966.68	225953.12	165122.88		17302.00	87630.75		42092.50	107135.23	80910.00	134023.00	98890.00		80910.00									**1297182.65**
91	256			23330.16	141510.82			8651.00	27938.62		15712.26	9030.49	31465.00	33925.03	35960.00			302781.24	94908.11	7894.20						**732206.93**
92	257										7832.97	52892.23	4413.00	174832.00	53074.00		97005.70	1763.74								**511530.64**
93	258											36775.00	13239.00	121758.00	12488.00	1763.74	61730.90	61730.90	58013.78	26760.00	1338.00	12508.00	1189.44			**409294.76**
94	259										23779.29	85489.22	41188.00	248199.00	51513.00	881.87	8818.70	22046.75	10191.61	1338.00	5352.00	1876.20	7136.64	2973.60		**510783.68**
95	260	19070.88	41611.61	1341.12								2942.00	4413.00	10927.00	1561.00		46739.11	26456.10	19599.25	2007.00	12042.00	625.40	25599.36	12489.12		**224423.95**
96	261		36739.47	68571.88	30687.83	20640.36			12000.00		36855.08	14640.60	4495.00	52565.06	4495.00		26970.00	28517.70	380418.21	28856.12	8456.02	10034.86	10497.00	3898.01		**779338.20**
97	262			208561.92	328036.35	61921.08			103384.26		62849.04	107135.23	89900.00	121894.32	134850.00		31465.00									**1250117.00**
98	263										5221.98	91287.61	36775.00	181076.00	59318.00		128753.02									**502431.61**
99	264										4351.65	196390.63	73550.00	206052.00	18732.00		55557.81									**554634.09**
100	265										10381.86	13512.91	22065.00	252882.00	45269.00	1763.74	95241.96	1763.74	3135.88	1338.00	1338.00		594.72			**509286.81**
101	266		146957.88	253767.32	251692.16	113521.98			128871.98		128705.01	73963.64	40455.00	215349.73	44950.00		22475.00		1909.22							**1422618.92**
102	267			186614.04	276435.45	165122.88		14511.53	51076.39		57997.90	35651.95	107880.00	181053.04	49445.00		53940.00	1909.22	12567.02	5628.72	5298.34	6315.36	11694.00			**1222140.84**
TOTAL		**318324.79**	**2164529.85**	**6266587.16**	**8493648.79**	**4509918.66**	**0.00**	**402047.02**	**3283336.88**	**57044.77**	**3572637.00**	**9080268.17**	**4977204.00**	**17679905.12**	**5124566.00**	**37920.41**	**5161401.44**	**2162512.39**	**2387738.61**	**452400.10**	**445058.18**	**289927.14**	**275840.08**	**142717.37**	**0.00**	**77285533.93**
Trf to Dep. Fund		**286492.31**	**1948076.87**	**5639928.44**	**7644283.91**	**4058926.79**	**0.00**	**361842.32**	**2955003.19**	**51340.29**	**3215373.30**	**8172241.35**	**4479483.60**	**15911914.61**	**4612109.40**	**34128.37**	**4645261.30**	**1946261.15**	**1880344.16**	**305370.07**	**250345.23**	**130467.21**	**93096.03**	**32111.41**	**0.00**	**69654401.30**
Trf to Revenue		**31832.48**	**216452.99**	**626658.72**	**849364.88**	**450991.87**	**0.00**	**40204.70**	**328333.69**	**5704.48**	**357263.70**	**908026.82**	**497720.40**	**1767990.51**	**512456.60**	**3792.04**	**516140.14**	**216251.24**	**507394.45**	**147030.03**	**194712.95**	**159459.93**	**182744.05**	**110605.96**	**0.00**	**8631132.63**

Dep. Fund in % of Book Value & No. of Years	90% 25 (6%x14+ 11.25%x11)	90% 24 (6%x13+ 11.25%x11)	90% 23 (6%x12+ 11.25%x11)	90% 22 (6%x11+ 11.25%x11)	90% 21 (6%x10+ 11.25%x11)	90.00% 20 (6%x9+ 11.25%x11)	90.00% 19 (6%x8+ 11.25%x11)	90.00% 18 (6%x7+ 11.25%x11)	90.00% 17 (6%x6+ 11.25%x11)	90.00% 16 (6%x5+ 11.25%x11)	90.00% 15 (6%x4+ 11.25%x11)	90.00% 14 (6%x3+ 11.25%x11)	90.00% 13 (6%x2+ 11.25%x11)	90.00% 11 11.25%x11	90.00% 10 11.25%x10	90.00% 9 11.25%x9	90.00% 8 11.25%x8	78.75% 7 11.25%x7	67.50% 6 11.25%x6	56.25% 5 11.25%x5	45.00% 4 11.25%x4	33.75% 3 11.25%x3	22.50% 2 11.25%x2	11.25% 1 11.25%x1	
		286492	1948077	5639928	7644284	4058927	0	361842	2955003	51340	3215373	8172241	4479484	15911915	4612109	34128	4645261	1946261	1880344	305370	250345	130467	93096		0	68622290
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32111

ACCOUNTS DEPARTMENT

STATEMENT SHOWING THE COST OF ASSETS (CABLE/MAINS) & PILLARS TO BE WRITTEN OFF DURING THE YEAR 2022-2023

DESCRIPTION OF ASSETS	BOOK VALUE	LESS: CASH RECEIVED OR RECOVERED	DEP. PROVIDED	10% DEP.TRF. TO REV.A/C.	E.S. CONTGENCY RES.FUND ACT.100/107	REMARK
H.V. MAINS	4631081.50	0.00	4167973.35	463108.15	0.00	AGM(S) SANCTIONED DATED 22.08.90 REF NO. : PL/STORE/ 3 ; DTD.18.07.90
L.V. MAINS	4631081.50	0.00	4167973.35	463108.15	0.00	
DISTRIBUTION PILLARS	0.00	0.00	0.00	0.00	0.00	DETAILS ATTACHED
TOTAL:	9262163.00	0.00	8335946.70	926216.30	0.00	

PREPARED BY : *ANAND*

CHECKED BY : *SUBHASH GAIKWAD*

ANNEXURE-38

Inventory of Writing Off Items for the Period 31/03/2024

Dept	B.D	Activity	Reqn.No	Date	Description	Qty	Amount	DR.DEP PROV 100/423	DR. (REVENUE) 100/922/026	Ref.No.
					SUPPLY DIVISION					
					PC'S PRINTER,UPS ETC.					
DCEPL'S OFFICE	110	6117	R-602328	03.04.2013	Personal Computer	1	36444.00	32799.60	3644.40	(CR.NO.706985 DT.17.05.2023)
							36444.00	**32799.60**	**3644.40**	
DCE(REG.CELL-I)'S OFFICE	115	6117	R-668866	18.10.2013	H.P.Laserjet Printer	3	32602.69	29342.42	3260.27	CAD/ADM-6/S&P-ESB/68/2019 DT:16.09.2019(CR-886428)
							32602.69	**29342.42**	**3260.27**	
DCER	116	6118	R-104594	08.04.2013	Personal Computer	**6**	218664.00	196797.60	21866.40	CAD/ADM-6/S&P-ESB/68/2019 DT:16.09.2019(CR-864106 DT:11.05.2023)
			R-91210	03.02.2024	H.P.Laserjet Printer H.P- P1566	**3**	32602.5	29342.25	3260.25	CAD/ADM-6/S&P-ESB/68/2019 DT:16.09.2019(CR-864109 DT:11.05.2023)
							251266.50	**226139.85**	**25126.65**	
CGRF DEPT.	118	6118	R-668853	22.05.2013	Personal Computer	3	109332.00	98398.80	10933.20	(CR-886429 DT:11.05.2023)
			R668866	18.10.2013	H.P.Laserjet Printer	3	32602.70	29342.43	3260.27	(CR-886430 DT:11.05.2023)
							141934.70	**127741.23**	**14193.47**	
VIGI.(S) DEPT.	120	6118	R-870373	01.06.2005	H.P.OFFICE JET PRINTER-MODEL 2608	1	17500.00	15750.00	1750.00	CR.NO.886051 DT.05.07.2017
			R-870373	01.06.2005	PERSONAL COMPUTER BRAND-IBM	1	48000.00	43200.00	4800.00	CR.NO.886049 DT.05.07.2017
			R-459589	04.01.2011	PERSONAL COMPUTER	2	95931.16	86338.04	9593.12	CAD/ADM-6/S&P-ESB/68/2017 DT. 16.06.17 CR.NO.886060 & 886061 DT.09.03.2022
							161431.16	**145288.04**	**16143.12**	
CUSTOMER CARE 'SIMHA'	140	6118	R-535344	04.05.2012	UPS BATTERY-B.VALUE	8	32120.66	28908.59	3212.07	(CR-1688 DT:10.05.2022)
			R-591476	22.11.2010	PERSONAL COMPUTER-DATAMINI	8	372647.20	335382.48	37264.72	(CR-1689 DT:10.05.2022)
							0.00	0.00	0.00	
							404767.86	**364291.07**	**40476.79**	
PLANNING (NETWORK)	142	6117	R-526027	04.04.2023	PERSONAL COMPUTER	3	109332.00	98398.80	10933.20	(CR-706985 DT:17.05.2023)
			R-442684	01.02.2009	20 KVA UPS SYSTEM	2	1159740.00	1043766.00	115974.00	(CR-706976 DT:17.05.2023)
			R-96408	01.05.2009	SOFTWARE FOR DIGITALISATION	1	13092895.00	11783605.50	1309289.50	(CR-706972) DT. 17.05.2023
			R-96407	01.06.2009	DATABASE REPLICATOR SERVER & OTHER ACCESSORI	1	854777.00	769299.30	85477.70	(CR-706972)
			R-96409	01.06.2009	COLOUR LASERJET A3 PRINTER 5550 DN	4	889476.00	800528.40	88947.60	(CR-706975) DT.17.05.2023
					DATABASE REPLICATION SERVER	1	186387.00	167748.30	18638.70	(CR-706972)
					DESIGN JET T-1100 PLUS AO COLOUR PLOTTER	2	725752.00	653176.80	72575.20	(CR-706974) DT.17.05.2023
					LATEST NORTAN ANTIVIRUS SOFTWARE	1	13260.00	11934.00	1326.00	
					MS OFFICE 2003	1	18023.00	16220.70	1802.30	
					WINDOWS 2003 SERVER WITH 50 USER	1	90162.00	81145.80	9016.20	(CR-706972)
					WORKSTATIONS FOR DESIGNER/DATA EDITING SOFTWARE	9	569608.00	512647.20	56960.80	(CR-706987) DT.18.05.2023
					WORKSTATIONS FOR VIEWER WITH SOFTWARE	35	2132770.00	1919493.00	213277.00	(CR-706987)
			R-96410	19.06.2009	A3 COLOUR SCANNER	1	78000.00	70200.00	7800.00	(CR-706973)
					AO COLOUR SCANNER	1	829976.00	746978.40	82997.60	(CR-706973)
							0.00	0.00	0.00	
							20750158.00	**18675142.20**	**2075015.80**	
O&M(NE) DEPT.	150	6117	R-649325	01.01.2014	PRINTER WIPRO LQ-DSI 5235	1	23783.00	21404.70	2378.30	CAD/ADM-6/S&P-ESB/24/2021 DT.25.08.2021
							23783.00	**21404.70**	**2378.30**	
STREET LIGHTING (CON.) DEPT.	157	6117	R-900439	02.11.2015	DOT MATRIX PRINTER EPSON LQ-1310	6	60196.81	54177.13	6019.68	(CR.NO.62904 DT.29.12.2023)
			R-900435	01.09.2015	Personal Computer	8	362367.28	326130.55	36236.73	(CR.NO.62901 DT.29.12.2023)
							0.00	0.00	0.00	
							422564.09	**380307.68**	**42256.41**	
MATERIAL MANAGEMENT KUSSARA	161	6119	R-94709	05.02.2015	Personal Computer	5	226480.00	203832.00	22648.00	DMM/SB/ES/90100/SNW-PC&LAPTOP/20-21 DT.16.02.2021
			R-665641	26.02.2015	Personal Computer	1	45296.00	40766.40	4529.60	DMM/SB/ES/90100/SNW-PC&LAPTOP/20-21 DT.16.02.2022
			R-94712	19.03.2015	LAPTOP	3	147900.00	133110.00	14790.00	DMM/SB/ES/90100/SNW-PC&LAPTOP/20-21 DT.16.02.2023
			R-665690	07.05.2015	LAPTOP	1	49300.00	44370.00	4930.00	DMM/SB/PA/90100/SNW/21-22 DT.15.12.2021
			R-652014	01.03.2013	Personal Computer	18	655992.00	590392.80	65599.20	DMM/SB/PA/90100/SNW/19-20 DT.13.08.2019
			R-427020	25.03.2011	Personal Computer	1	46581.00	41922.90	4658.10	AAM(M)/PMT/42/40201/681/2017 DT.27.06.2017
			R-407739	02.08.2011	Personal Computer	5	234285.00	210856.50	23428.50	AAM(M)/PMT/42/40201/681/2017 DT.27.06.2018
			R-520010	12.07.2016	Personal Computer	10	378150.00	340335.00	37815.00	DMM/SB/ES/90100/4796A/22-23 DT.13.12.2022
			R-520011	11.07.2016	Personal Computer	3	113445.00	102100.50	11344.50	DMM/SB/ES/90100/4796A/22-23 DT.13.12.2023
			R-94714	05.06.2015	LAPTOP	2	99000.00	89100.00	9900.00	DMM/SB/PA/90100/SNW/21-22 DT.15.12.2021
							0.00	0.00	0.00	
					TOTAL OF ACT 6117, 6118, 6119		**1996429.00**	**1796786.10**	**199642.90**	
							24221381.00	**21799242.90**	**2422138.10**	
					OTHER O.E.					
VIGI.(N) DEPT.	121	6121	R-73398	22.07.2011	Digital Camera Sony Make Cybershot	2	29178.00	26260.20	2917.80	VIG(N)/ADM-07/863/2017 DT.22.12.2017 (VIG/CAM/10/2011) SANCTIONED & VIG/CAM/09/2011 (CR.NO.52302)
					TOTAL OF ACT 6121		**29178.00**	**26260.20**	**2917.80**	
							29178.00	**26260.20**	**2917.80**	
					MACHINE TOOLS					
MTS DEPT.	123	6103	R-884206	15.09.2016	DIGITAL MULTI METER	2	25256.00	22730.40	2525.60	(CR-866339 DT:02.08.2023)
							25,256.00	**22730.40**	**2525.60**	
ERECTION(N)	128	6103	R-175521	01.11.2000	ELECTRIC COMPRESSOR	1	120599.00	108539.10	12059.90	(CR-924105 DT:09.05.2022)
			R-497026	01.09.1990	HAND CART WOODEN	1	2093.50	1884.15	209.35	(CR-81679 DT:09.05.2022)
							122,692.50	**110423.25**	**12269.25**	
O&M(NE) DEPT.	150	6103	R-534752	01.11.2008	PORTABLE ELECTRICALLY OP SUBMERSIBLE SUMP-PU	3	64803.39	54020.10	10783.29	MNE/ADM-7/150/2013 DT.18.04.2013 CR.NO.11169 DT.30.12.2014
							64,803.39	**54020.10**	**10783.29**	
KUSSARA WORK SHOP	159	6103	R-712790	01.08.1994	ISOLATOR MAKE-CROMTON	2	178288.88	160459.99	17828.89	EN/STORES-19/111/2018 DT. 08.02.2018
							178,288.88	**160459.99**	**17828.89**	
					LOOSE TOOLS					
MTS DEPT.	123	6103	R-379461	01.03.1973	WEIGHING MACHINE 30K.G.	1	2570.00	2313.00	257.00	(CR-866338 DT:02.08.2023)
			R-60254	01.03.1992	SINGLE PHASE TRANSFORMER	1	2495.00	2245.50	249.50	(CR-866341 DT:02.08.2023)
			R-60255	01.03.1992	SINGLE PHASE TRANSFORMER	1	2495.00	2245.50	249.50	(CR-866341 DT:02.08.2023)
					TOTAL OF ACT 6103		**7560.00**	**6804.00**	**756.00**	
							398600.77	**354437.74**	**44163.03**	
					ROOM COOLER					
CGRF DEPT.	118	6127	J-12207	01.03.2005	FAB OF AC RC NO.845	1	19408.10	17467.29	1940.81	(CR-75874 DT:21.04.2022)
			J-12207	01.03.2005	FAB OF AC RC NO.846	1	18602.91	16742.62	1860.29	(CR-75874 DT:21.04.2022)
			J-12207	01.03.2005	FAB OF AC RC NO.847	1	25973.39	23376.05	2597.34	(CR-75874 DT:21.04.2022)
			J-12207	01.03.2005	FAB OF AC RC NO.848	1	25879.89	23291.90	2587.99	(CR-75874 DT:21.04.2022)
							89864.29	**80877.86**	**8986.43**	
Power Management Dept.	119	6127	R-845722	01.01.2009	Air Conditioner 2.0 TR RC NO.997	1	20500.00	18450.00	2050.00	(CR-75881 DT:11.05.2022)
							20500.00	**18450.00**	**2050.00**	
VIGI.(S) DEPT.	120	6127	J-11972	01.02.2002	FAB OF 2.0 TR AC RC NO.730	1	19182.90	17264.61	1918.29	CR.NO.67894 DT.29.03.2022
			R-845763	01.06.2009	AIR CONDITIONER 2.0 TR RC NO.1007	1	20499.66	18449.69	2049.97	CR.NO.67894 DT.29.03.2022
			R-845764	01.06.2009	AIR CONDITIONER 2.0 TR RC NO.1008	1	20499.66	18449.69	2049.97	CR.NO.67894 DT.29.03.2022
					TOTAL OF ACT 6127		**60182.22**	**54164.00**	**6018.22**	
							170546.51	**153491.86**	**17054.65**	
					TOTAL		**24819706.28**	**22333432.70**	**2486273.58**	

THE BRIHANMUMBAI ELECTRIC SUPPLY AND TRANSPORT UNDERTAKING
(OF THE BRIHANMUMBAI MAHANAGARPALIKA)

DISTRIBUTION PILLAR SHELLS (ADP) WRITTEN OFF DURING THE YEAR 2023-24

SR. NO.	SLP/ZP/ADP NO.	WAYS OF TYPE	LOACTION WHERE INSTALLED	DATE OF INSTALLED	LIFE	BOOK VALUE	DEP. PROV. FUND	10% DEP. TRF TO REV. A/C	REMARKS
1	A4646	6 WAY/ MS	OPP NATRAJ HOTEL	10.10.2006	20	28700.00	25830.00	2870.00	EN/STORE-19 (PARTVII)/504/2023 DT 20.05.2023
2	A4645	6 WAY/ MS	MARINE PLAZA	10.10.2006	20	28700.00	25830.00	2870.00	EN/STORE-19 (PARTVII)/504/2023 DT 20.05.2023
3	Serv.Pillar C	6 WAY/ MS	MARINE DRIVE	13.10.2006	20	28700.00	25830.00	2870.00	EN/STORE-19 (PARTVII)/504/2023 DT 20.05.2023
4	Serv.Pillar E	6 WAY/ MS	MARINE DRIVE	06.10.2006	20	28700.00	25830.00	2870.00	EN/STORE-19 (PARTVII)/504/2023 DT 20.05.2023
5	MP0458	FRP	KMP=4/5	01.08.2008	20	10800.00	8787.00	2013.00	EN/STORE-19 (PARTVII)/504/2023 DT 20.05.2023
6	MP0471	MS	SUR-27/6	30.04.2008	20	10800.00	8787.00	2013.00	EN/STORE-19 (PARTVII)/504/2023 DT 20.05.2023
7	MP0489	MS	ANR-23	11.08.2008	20	10800.00	8787.00	2013.00	EN/STORE-19 (PARTVII)/504/2023 DT 20.05.2023
8	MP0428	MS	SMB-7	09.07.2008	20	10800.00	8787.00	2013.00	EN/STORE-19 (PARTVII)/504/2023 DT 20.05.2023
9	MP0460	MS	GRN -40	16.11.2008	20	10800.00	8787.00	2013.00	EN/STORE-19 (PARTVII)/504/2023 DT 20.05.2023
10	MPS1033	MS	MFC-.25	2008	20	10800.00	8787.00	2013.00	EN/STORE-19 (PARTVII)/504/2023 DT 20.05.2023
11	MP0472	MS	C.G.S. COLLANY	10.08.2008	20	10800.00	8787.00	2013.00	EN/STORE-19 (PARTVII)/504/2023 DT 20.05.2023
12	MPS0110	MS	PANCHSHEEL NAGAR SION	07.10.2011	17	11900.00	7540.00	4360.00	EN/STORE-19 (PARTVII)/504/2023 DT 20.05.2023
13	AS554	6 WAY/ MS	BPT BUS STOP	17.05.2007	20	28900.00	24814.00	4086.00	EN/STORE-19 (PARTVII)/504/2023 DT 20.05.2023
14	MP0555	MS	BPT BUS STOP	24.11.2009	20	19100.00	14680.00	4420.00	EN/STORE-19 (PARTVII)/504/2023 DT 20.05.2023
15	MMP0569	MS	WSE-19	09.01.2010	20	19100.00	14680.00	4420.00	EN/STORE-19 (PARTVII)/504/2023 DT 20.05.2023
16	MP0580	MS	SVS-241	26.02.2010	20	19100.00	14680.00	4420.00	EN/STORE-19 (PARTVII)/504/2023 DT 20.05.2023
17	MP1147	MS	GFR 33	2009	20	19100.00	14680.00	4420.00	EN/STORE-19 (PARTVII)/504/2023 DT 20.05.2023
18	A0165	10 WAY / MS	BAC 52	22.12.1951	20	6000.00	5400.00	600.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
19	A0076	6 WAY / MS	NSR-10	01.05.1960	20	4000.00	3600.00	400.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
20	ACP005	MS	BAL 14B	02.08.1965	20	8500.00	7650.00	850.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
21	A1074	6 WAY / MS	MGL-44	08.06.1965	20	4000.00	3600.00	400.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
22	ACP009	MS	GO 6B	05.05.1967	20	8500.00	7650.00	850.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
23	CP007	MS	GG 12/13	30.06.1970	20	8500.00	7650.00	850.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
24	A1691	6 WAY / MS	MB-69	01.07.1970	20	3325.00	2992.50	332.50	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
25	A1811	6 WAY / MS	BAB-18/12	11.10.1971	20	3325.00	2992.50	332.50	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
26	A1867	6 WAY / MS	GMB-31	30.10.1972	20	5470.00	4923.00	547.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
27	A1384	6 WAY / MS	SAJ-05	08.12.1978	20	4190.00	3771.00	419.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
28	A1435	4 WAY / MS	BAL-12	22.12.1978	20	3240.00	2916.00	324.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
29	A2004	6 WAY / MS	-	31.05.1905	20	4190.00	3771.00	419.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
30	A2054	6 WAY / MS	LL-24	10.08.1978	20	4190.00	3771.00	419.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
31	A2121	10 WAY / MS	NM-130	23.10.1979	20	6740.00	6066.00	674.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
32	CP015	MS	BB-74	06.11.1979	20	8500.00	7650.00	850.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
33	CP023	C.1.	BAP 84	1980	20	8500.00	7650.00	850.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
34	A2219	6 WAY / MS	WSE- 72	09.02.1981	20	6440.00	5796.00	644.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
35	A2212/ZP0154	10 WAY / MS	DRN -2/4F	09.02.1981	20	9070.00	8163.00	907.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
36	CP017	MS	-	1980	20	8500.00	7650.00	850.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
37	CP019	MS	-	1980	20	8500.00	7650.00	850.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
38	A2288	6WAY / MS	WOOD HOUSE ROAD	30.11.1981	20	6440.00	5796.00	644.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
39	CP049	MS	RYN 101	1982	20	8500.00	7650.00	850.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
40	CP039	MS	-	1982	20	8500.00	7650.00	850.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
41	CP053	C.1.	PT 4	1984	20	8500.00	7650.00	850.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
42	CP055	MS	BAP 134	21.08.1984	20	8500.00	7650.00	850.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
43	CP046	MS	-	1984	20	8500.00	7650.00	850.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
44	CP047	MS	-	1984	20	8500.00	7650.00	850.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
45	CP071	C.1.	PTH 2	1985	20	8500.00	7650.00	850.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
46	CP061	MS	-	1985	20	8500.00	7650.00	850.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
47	A2589	6 WAY / MS	NAGINDAS MASTER ROAD	05.03.1986	20	9540.00	8586.00	954.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
48	CP073	MS	PT 115	1985	20	8500.00	7650.00	850.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
49	CP075	MS	ANR 76	1985	20	8500.00	7650.00	850.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
50	A0197	6 WAY / MS	WOOD HOUSE ROAD	31.10.1986	20	11900.00	10710.00	1190.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
51	A1198	10 WAY / MS	CHURCHAGATE	01.10.1986	20	16300.00	14670.00	1630.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
52	CP087	MS	-	1986	20	8500.00	7650.00	850.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
53	CP089	MS	-	1986	20	8500.00	7650.00	850.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
54	CP091	MS	-	1986	20	8500.00	7650.00	850.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
55	CP093	MS	-	1986	20	8500.00	7650.00	850.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
56	A2710	10 WAY / MS	PT-95	02.01.1988	20	16800.00	15120.00	1680.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
57	A0423	10 WAY / MS	BAV-68	20.04.1987	20	16800.00	15120.00	1680.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
58	A2711	4 WAY / MS	GMB-8/7	25.02.1988	20	3240.00	2916.00	324.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
59	A2758	6 WAY / MS	GPJ 14	23.12.1988	20	12200.00	10980.00	1220.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
60	A2935	6 WAY / MS	GG-161	25.01.1990	20	10500.00	9450.00	1050.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
61	A2887	6 WAY / MS	GRN- 100/03	17.11.1989	20	10500.00	9450.00	1050.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
62	SP003	2 WAY / MS	MDR-58	21.03.1990	20	3240.00	2916.00	324.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
63	SP005	6 WAY / MS	MDR-120	19.08.1990	20	17600.00	15840.00	1760.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
64	A2999	6 WAY / FRP	ABT-14/16	20.11.1990	20	17600.00	15840.00	1760.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
65	A0483	6 WAY / MS	NSJ-5	11.12.1990	20	17600.00	15840.00	1760.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
66	A1189	4 WAY / MS	SBD-45	12.12.1990	20	3240.00	2916.00	324.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
67	A3016	6 WAY / MS	RR-15/8	1990	20	17600.00	15840.00	1760.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
68	SP004	10 WAY / MS	MDR-120	22.05.1991	20	25000.00	22500.00	2500.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
69	A3159	6 WAY / MS	PCL-12	24.09.1991	20	17600.00	15840.00	1760.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
70	A3160	6 WAY / MS	PC-4	24.09.1991	20	17600.00	15840.00	1760.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
71	A3323	6 WAY / MS	CRE-29	12.04.1992	20	18200.00	16380.00	1820.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
72	A1397	10 WAY / MS	LIC	02.06.1992	20	31700.00	28530.00	3170.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
73	A3280	10 WAY / MS	BPT BUS STOP	26.06.1992	20	31700.00	28530.00	3170.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
74	A1879	10 WAY / MS	NSR-38	29.07.1992	20	31700.00	28530.00	3170.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
75	A1296	6 WAY / MS	M. KARVE ROAD	07.04.1993	20	20400.00	18360.00	2040.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
76	A3520	6 WAY / MS	NM-146	16.02.1994	20	20400.00	18360.00	2040.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
77	A3421	10 WAY / MS	TJR-23	31.05.1993	20	33800.00	30420.00	3380.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
78	A0660	10 WAY / MS	ELECTRIC HOUSE	06.12.1993	20	33800.00	30420.00	3380.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
79	A1910	10 WAY / MS	JOLLY CHAMBER NO 2	19.03.1994	20	33800.00	30420.00	3380.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
80	A1923	10 WAY / MS	VICTORIA BUNDER ROAD	08.05.1993	20	33800.00	30420.00	3380.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
81	A2065	10 WAY / MS	BADRUDDIN MARG	21.10.1993	20	33800.00	30420.00	3380.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
82	A3433	10 WAY / MS	NR MARINE DRIVE RSS	31.07.1993	20	33800.00	30420.00	3380.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
83	A3411	6 WAY / MS	ABT 37/07	03.05.1993	20	20400.00	18360.00	2040.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
84	A3494	10 WAY / MS	TP-32	24.12.1993	20	33800.00	30420.00	3380.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
85	A1272	6 WAY / MS	-	10.02.1995	20	21600.00	19440.00	2160.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
86	A3669	6 WAY / MS	DLM-03	22.02.1995	20	21600.00	19440.00	2160.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
87	A3623	6 WAY / MS	BAV-32	01.12.1994	20	21600.00	19440.00	2160.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
88	A1665	10 WAY / MS	LIC	07.02.1995	20	33800.00	30420.00	3380.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
89	A2494	10 WAY / MS	DUGAL	29.09.1994	20	33800.00	30420.00	3380.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
90	A1135	6 WAY / MS	SUR-1	28.05.1995	20	20700.00	18630.00	2070.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
91	A1461	10 WAY / MS	TH-2	08.07.1995	20	31400.00	28260.00	3140.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
92	A3823	6 WAY / MS	POLICE COURT LANE	06.11.1996	20	25900.00	23310.00	2590.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
93	A0204	6 WAY / MS	PT-1	06.05.1996	20	25900.00	23310.00	2590.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
94	A3848	10 WAY / MS	MANIKJI WADIA DSS	14.12.1996	20	39300.00	35370.00	3930.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
95	A3817	6 WAY / MS	WK-9	24.10.1996	20	25900.00	23310.00	2590.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
96	A3875	6 WAY / MS	WSE-28	07.02.1997	20	25900.00	23310.00	2590.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
97	A0465	6 WAY / MS	CAUSEWAY	06.04.1997	20	32400.00	29160.00	3240.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
98	A4186	6 WAY / MS	BORA BAZAR	15.01.1998	20	32400.00	29160.00	3240.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
99	A3949	10 WAY / MS	REGENT CHAMBER	10.09.1997	20	49100.00	44190.00	4910.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
100	MP0011	MS	NM-129	28.11.1997	20	6300.00	5670.00	630.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
101	A4014	4 WAY / MS	PKR-19	24.12.1997	20	3240.00	2916.00	324.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
102	A4015	4 WAY / MS	PKR-19	24.12.1997	20	3240.00	2916.00	324.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
103	A3981	6 WAY / MS	DKR-10/02	04.12.1997	20	32400.00	29160.00	3240.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
104	A3987	6 WAY / MS	PKR-16	24.12.1997	20	32400.00	29160.00	3240.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
105	A4002	6 WAY / MS	WK-40	17.12.1997	20	32400.00	29160.00	3240.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
106	A0481	10 WAY / MS	TELOPHONES	10.11.1998	20	61400.00	55260.00	6140.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
107	A4120	6 WAY / MS	SHANTIN AGAR ANTOP HILL	08.09.1998	20	40500.00	36450.00	4050.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
108	MPS0104	MS	INDRA NAGAR	23.11.1998	20	6300.00	5670.00	630.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
109	MPS0168	MS	NR DALDA CO SION	13.02.1999	20	6300.00	5670.00	630.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
110	MPS0053	MS	INDIRA NAGAR	20.05.1998	20	6300.00	5670.00	630.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
111	MPS0121	MS	INDIRA NAGAR	23.11.1998	20	6300.00	5670.00	630.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
112	MPS0089	MS	B K NAGAR ANTOP HILL	16.06.1998	20	6300.00	5670.00	630.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
113	MPS0088	MS	B K NAGAR ANTOP HILL	16.06.1998	20	6300.00	5670.00	630.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
114	A0224	10 WAY / MS	TJGI-2	19.01.1999	20	61400.00	55260.00	6140.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
115	A4440	6 WAY / MS	ESP-6/5	16.03.2000	20	50600.00	45540.00	5060.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
116	A0915	10 WAY / MS	BR-46	20.04.1999	20	76800.00	69120.00	7680.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
117	A1967	10 WAY / MS	BPT	27.07.1999	20	76800.00	69120.00	7680.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
118	MPS0356	MS	GEETA NAGAR PUMPING	25.08.1999	20	6300.00	5670.00	630.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
119	MPS0501	MS	GEETA NAGAR PUMPING	07.03.2000	20	6300.00	5670.00	630.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
120	MPS0502	MS	GEETA NAGAR PUMPING	07.03.2000	20	6300.00	5670.00	630.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
121	MPS0503	MS	GEETA NAGAR PUMPING	07.03.2000	20	6300.00	5670.00	630.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
122	MPS0505	MS	GEETA NAGAR PUMPING	07.03.2000	20	6300.00	5670.00	630.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
123	MPS0492	MS	BPT AREA	07.03.2000	20	6300.00	5670.00	630.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
124	MPS0366	MS	BEST CHAWL	03.09.1999	20	6300.00	5670.00	630.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
125	MPS0375	MS	B K NAGAR ANTOP HILL	10.09.1999	20	6300.00	5670.00	630.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
126	MPS0411	MS	VIJAY NAGAR	10.12.1999	20	6300.00	5670.00	630.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
127	MPS0292	MS	AZAD MOHALLA	25.05.1999	20	6300.00	5670.00	630.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
128	MPS0260	MS	MARIYAMMA TEMPLE	07.05.1999	20	6300.00	5670.00	630.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
129	MP0176	MS	DKR-10/5	12.11.1999	20	6300.00	5670.00	630.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
130	MPS0484	MS	MFC-3/11	17.02.2000	20	6300.00	5670.00	630.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
131	A0055	10 WAY / MS	KBC-12/13	09.10.1999	20	76800.00	69120.00	7680.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
132	MPS0391	M.S.	GEETA NAGAR PUMPING	03.07.2000	20	6300.00	5670.00	630.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
133	MPS0433	MS	CUFE PARADE TRANSIT CAMP	01.10.2000	20	6300.00	5670.00	630.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
134	A0586	6 WAY / MS	SYN 18	19.10.2000	20	19710.00	2190.00	2190.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
135	A4512	6 WAY / MS	NPD-7/9	27.09.2000	20	21900.00	19710.00	2190.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
136	A4525	6 WAY / MS	DRN -14/2	21.10.2000	20	21900.00	19710.00	2190.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
137	MPS0516	MS	B K NAGAR ANTOP HILL	13.09.2000	20	6300.00	5670.00	630.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
138	MP0595	MS	DRN-6/9	16.11.2000	20	6300.00	5670.00	630.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
139	MPS0555	MS	MFC-3/11	05.06.2000	20	6300.00	5670.00	630.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
140	MPS0622	MS	GPO1/2	30.01.2001	20	6300.00	5670.00	630.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
141	A3469	4 WAY / MS	BD-129	11.03.1993	20	3240.00	2916.00	324.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
142	A2238	10 WAY / MS	CENTRAL BANK	28.12.2001	20	30200.00	27180.00	3020.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
143	MMP0712	MS	BHADWAR PARK	24.04.2001	20	6300.00	5670.00	630.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
144	ZP0262	4 WAY / MS	GDP 15	1977	20	3240.00	2916.00	324.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
145	A0641	10 WAY / MS	SVC-131	1977	20	30200.00	27180.00	3020.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
146	SERV. PIL B	10 WAY / MS	KKR-37	1977	20	30200.00	27180.00	3020.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
147	MPS0973	MS	DRN -88	1977	20	5980.00	5382.00	598.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
148	A1090	10 WAY / MS	GT-37	27.02.2003	20	36700.00	33030.00	3670.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
149	A0222	6 WAY / MS	ESP-5	04.12.2002	20	26800.00	24120.00	2680.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
150	A2862	10 WAY / MS	ALEXANDRA	13.01.2003	20	42100.00	37890.00	4210.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
151	MP0081	MS	DLM-21	07.03.2003	20	5700.00	5130.00	570.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
152	MP0153	MS	BPT	05.10.2002	20	5700.00	5130.00	570.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
153	MPS0079	MS	ESP-6/4	22.02.2003	20	5700.00	5130.00	570.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
154	A0121	6 WAY /MS	LJM/.'	2002	20	26800.00	24120.00	2680.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
155	AMP0776	MS	MFC-.01	17.12.2002	20	5700.00	5130.00	570.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
156	A1468	4 WAY / CI	PBJ-5	15.12.2003	20	3240.00	2916.00	324.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
157	MP0178	MS	LL-21/5	20.12.2004	20	5700.00	5130.00	570.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
158	MPS0896	MS	DRN -2/3C	11.02.2005	20	5700.00	5130.00	570.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
159	MP0287	MS	BPT	31.05.2005	20	5700.00	5130.00	570.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
160	MP0277	MS	BPT	07.12.2005	20	5700.00	5130.00	570.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
161	MPS0419	MS	SADHU WASWANI	25.10.2005	20	5700.00	5130.00	570.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
162	MPS0661	MS	BACKBAY DEPOT	10.11.2005	20	5700.00	5130.00	570.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
163	MP0226	MS	WK 11/3	28.04.2005	20	5700.00	5130.00	570.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
164	MP0261	MS	BPT	28.10.2005	20	5700.00	5130.00	570.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
165	MPS0940	MS	SHANTI NAGAR ANTOP HILL	19.05.2006	20	10400.00	9360.00	1040.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
166	MP0277	MS	SHM-35/02	17.02.2007	20	10400.00	9360.00	1040.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
167	A0376	6 WAY / MS	FISHARIES	04.01.2006	20	23000.00	20700.00	2300.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
168	SERV.PIL.D	6 WAY / MS	MARINE DRIVE	09.01.2006	20	23000.00	20700.00	2300.00	EN/STORE-19 (PARTVII)/503/2023 DT 20.05.2023
169	A5407	10 WAY / MS	SADU WASWANI	14.03.2006	20	33900.00	30510.00	3390.00	EN/STORE-19 (PARTVII)/503/2023 DT

BATCHES OF SCRAPPED METERS (CONVENTIONAL METERS)
FOR THE YEAR 2023-24
COMMERCIAL SECTION

BATCH NO.	NO. OF METERS	TYPE	BOOK VALUE	DEP. FUND 90%	Rev.10%
3932	400	SINGLE	279951.76	251956.58	27995.18
3933	400	SINGLE	251630.99	226467.89	25163.10
3934	400	SINGLE	236489.70	212840.73	23648.97
3935	400	SINGLE	281443.08	253298.77	28144.31
3936	400	SINGLE	227567.00	204810.30	22756.70
3937	400	SINGLE	270103.02	243092.72	27010.30
3938	400	SINGLE	204777.94	184300.15	20477.79
3939	104	THREE	41080.70	36972.63	4108.07
3940	400	SINGLE	212867.76	191580.98	21286.78
3941	400	SINGLE	264761.68	238285.51	26476.17
3942	400	SINGLE	233820.42	210438.38	23382.04
3943	400	SINGLE	260567.72	234510.95	26056.77
3944	400	SINGLE	258757.09	232881.38	25875.71
3945	400	SINGLE	256383.87	230745.48	25638.39
3946	400	SINGLE	246560.43	221904.39	24656.04
3947	400	SINGLE	207253.02	186527.72	20725.30
3948	400	SINGLE	266425.29	239782.76	26642.53
3949	400	SINGLE	213249.05	191924.15	21324.91
TOTAL			**4213690.52**	**3792321.47**	**421369.05**

Accounts Department

Book Value Year Wise Meter Summary 2023-24 (Electronic Meter)

Sr. No.	Batch No.	Upto 1999	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	TOTAL
1	277										5906.01	48150.64	32362.00	103026.00	10927.00	881.87	21184.88	30865.45	26222.92	11373	32781	23765.2	20220.48	16652.18			**386298.61**
2	278										6745.29	14648.65	7355.00	14049.00			93478.22	83679.75	61933.63	40809	10704	625.4	4757.76				**338785.70**
3	279		11665.08	256631.76	317471.19	103201.80		8765.00	111261.50		89229.28	55642.76	89900.00	123445.04	89900.00		67425.00										**1324538.41**
4	280										11190.09	93089.62	63253.00	168588.00	37464.00	881.87	106706.27	18519.27									**499692.12**
5	281																22046.75	59085.29	72909.21	34110	109047	625.4					**297832.65**
6	282										25830.45	117397.51	39717.00	163905.00	53074.00	1763.74	72313.34	18519.27									**492520.31**
7	283		36739.47	11665.08	52664.01				23692.13		31617.66	62712.69	22475.00	85608.71	17980.00		58435.00	35792.78	49639.72	31863.10	60877.60	22621.38	33133	9745.02			**647352.35**
8	284			163311.12	279680.24	206403.60			19692.13		47136.78	47342.18	143840.00	145920.04	62930.00		58435.00	19986.51	17182.98	7894.2							**1219754.78**
9	285										21416.76	82130.60	32362.00	240394.00	64001.00		64376.51	13228.05	4703.82								**522612.68**
10	286		23911.57	174958.04	380936.56	92881.62		14625.53	108185.11	5860.53	74068.87	99465.34	35960.00	186271.76	94395.00		31465.00										**1322984.73**
11	287			221582.04	225407.70	92881.62			76000.00		101056.10	89934.11	76415.00	211644.49	80910.00		58435.00										**1234266.06**
12	288										12899.70	108130.63	45601.00	209174.00	37464.00		88187.00	15873.66									**517329.99**
13	289			185213.60	112431.14	61921.08		8651	16000.00		21142.82	53682.20	22475.00	72440.01	49445.00		13485.00	13364.54	28638.3	6315.36	140836.62						**806041.67**
14	290										2548.89	149048.97	63253.00	245077.00	39025.00		48502.85	10582.44									**558038.15**
15	291										13801.08	86874.61	30891.00	132685.00	40586.00	4409.35	129634.89	27337.97	2351.91								**468571.81**
16	292											1471.00					40566.02	60849.03	79180.97	24753	85632	10631.8	594.72				**303678.54**
17	293			34995.24	246838.84	185763.24		17302.00	139569.37		37241.36	8430.53	35960.00	57069.37	13485.00		13485.00	77072.62	28517.7	17572.80	46454.80	4736.52	1949				**966442.79**
18	294											61782.00	17652.00	62440.00	6244.00		35274.80	32629.19	34494.68	11373.00	70914.00	21263.60	9515.52	4757.76			**368340.55**
19	295										8517.00	84533.28	41188.00	382445.00	79611.00		1763.74										**598058.02**
20	296											52956.00	22065.00	304395.00	53074.00	1763.74	71431.47	21164.88		3345	4014	1250.8				**535459.89**
21	297			186632.20	269360.06	113521.98		8651.00	87322.88		68086.46	82134.27	94395.00	140923.65	112375.00		80910.00										**1244312.50**
22	298		24748.54	128315.88	223771.44	144482.52		8651.00	77337.04		15712.26	46742.22	103385.00	145920.04	247225.00		31465.00										**1197955.94**
23	299										16287.87	130881.91	69137.00	92099.00	3122.00	881.87	65258.38	31747.32	25087.04	7359	12042	625.4					**454528.79**
24	300										12868.65	63399.96	26478.00	280980.00	54635.00		7054.96	17637.4	9407.64	3345	14718	5003.2	8326.08	8920.8			**512774.69**
25	301																	24819.86	49639.72	48096.18	225048.24		3898				**351502.00**
26	302								1558024.00																		**1558024.00**
27	303		60651.04	279880.20	323677.67	51600.90			48492.98	5860.53	84571.28	125425.38	76415.00	228258.86	85405.00												**1370238.84**
28	304										11252.19	156489.58	52956.00	296590.00	68684.00												**585971.77**
29	305																37038.54	64082.81	65853.48	13390	114399	1876.2	594.72	3568.32			**300703.07**
30	306			233301.60	154257.28	92881.62		26067.00	63695.38		83715.41	60652.91	107880.00	173437.98	220255.00												**1216144.18**
31	307				10047.47	10320.18			19938.62		15656.72	14640.60		46519.34	17980.00		40455.00	30426.92	123374.29	30606.96	88734.90	20524.92	15592	13643.01			**459460.93**
32	308										9573.63	122779.28	73550.00	307517.00	70245.00		6173.09										**589838.00**
33	309		12246.49	198288.20	148462.25	92881.62		17530.00	63384.26		84764.42	101785.02	134850.00	234648.81	94395.00				8748.58								**1191984.65**
34	310										4320.60	134939.64	50014.00	343420.00	64001.00		1763.74	1763.74	783.97								**601006.69**
35	311		12246.49	23330.16	20640.36	10320.18			40557.61		31534.35	9760.40	13485.00	70545.06			215760.00	33109.85	61264.34	27706.6	44420.76	23682.6	40484	5847			**684694.76**
36	312										15355.44	205571.90	79434.00	245077.00	29659.00												**575097.34**
37	313													46830.00	1561.00	881.87	46739.11	39586.25	96428.31	27429	60210	5003.2	4757.76			**329426.50**
38	314			115241.28	316380.35	258004.50		17302.00	59922.13		41871.59	74693.55	112375.00	149393.64	103385.00		22475.00	11214.12	4712.75		1578.84						**1288319.75**
39	315	48985.96		209953.28	103201.80	41280.72		8651.00	68249.74		37020.45	51992.21	49445.00	102028.68	49445.00		4495.00	19865.91	22910.64	20168.68	61681.38	13192.54	15147.00	1949.00			**929664.97**
40	316										16381.02	188667.53	58840.00	223223.00	37464.00		7936.83	7054.96		1338	6690						**547995.34**
41	317		36158.06	218790.24	239463.01	165122.88		26067.00	96185.11		95597.77	89204.20	71920.00	198679.50	58435.00		4495.00	1909.22		3157.68	1578.84	3157.68	1949				**1311870.19**
42	318										5128.83	81444.32	22065.00	115514.00	6244.00		19401.14	31649.42	14111.46	8697	33450	18136.6	25572.96	19625.76			**401040.49**
43	319										12992.85	189991.57	77963.00	262248.00	35903.00												**579098.42**
44	320			313493.16	257431.35	72241.26		17302.00	71076.39		85343.94	87113.69	71920.00	223253.16	67425.00		40455.00										**1307054.85**
45	321										17375.55	161380.55	52956.00	277858.00	65562.00												**575132.10**
46	322		12246.49	268278.68	277281.31	247684.32		8765.00	31692.13		26380.24	52983.02	107880.00	168395.04	71920.00		35960.00	6621.97	7636.88	1909.22	3157.68	1578.84	1949	3898			**1336217.82**
47	323															13228.05	339519.95										**352748.00**
48	324																87305.13	108372.11	41550.41	6021	45492	6254	2973.6	19625.76			**317594.01**
49	325										25551.00	106205.92	42659.00	276297.00	49952.00		4321.63	783.97									**544869.52**
50	326		11665.08	208543.76	264807.56	154802.70			75692.13		68058.69	60652.91	85405.00	163398.65	152830.00		26970.00										**1272826.48**
51	327										11159.04	52502.29	22065.00	220101.00	70245.00		110233.75	2645.61			10035.00		1189.44				**500176.13**
52	328										7801.92	62946.25	26594.00	126441.00	31230.00		103178.79	12346.18	17247.34	4014	30105	7504.8	2378.88	1784.16			**427562.32**
53	329										11190.09	66819.93	29420.00	123319.00	24976.00		6173.09	25574.23	15679.4	8028	36128	13758.8	13083.84	30925.44			**405073.82**
54	330		24492.98	46642.16	152593.29	82561.44		8651.00	108681.34	5860.53	31755.26	21011.35	40455.00	85107.32	31465.00		8990.00	46765.7	22668.97	27912.18	49413.82	10184.78	51595	21439.06			**878246.18**
55	331										10412.91	105004.58	41188.00	210735.00	43708.00		99651.31	1763.74									**512463.54**
																											0.00
	TOTAL	**0.00**	**315757.25**	**3479047.68**	**4376804.88**	**2280759.78**	**0.00**	**196980.53**	**2964621.98**	**17581.59**	**1468068.21**	**4025241.26**	**2611853.00**	**8487336.15**	**2800236.00**	**24692.36**	**2589681.18**	**1058291.39**	**994881.06**	**428585.92**	**1400142.48**	**216003.66**	**259661.76**	**162381.25**	**0.00**	**0.00**	**40158609.37**
	Trf to Dep. Fund	**0.00**	**284181.53**	**3131142.91**	**3939124.39**	**2052683.80**	**0.00**	**177282.48**	**2668159.78**	**15823.43**	**1321261.39**	**3622717.13**	**2350667.70**	**7638602.54**	**2520212.40**	**22223.12**	**2330713.06**	**952462.25**	**895392.95**	**337511.41**	**945096.17**	**121502.06**	**116847.79**	**54803.67**	**0.00**	**0.00**	**35498411.98**
	Trf to Revenue	**0.00**	**31575.73**	**347904.77**	**437680.49**	**228075.98**	**0.00**	**19698.05**	**296462.20**	**1758.16**	**146806.82**	**402524.13**	**261185.30**	**848733.61**	**280023.60**	**2469.24**	**258968.12**	**105829.14**	**99488.11**	**91074.51**	**455046.31**	**94501.60**	**142813.97**	**107577.58**	**0.00**	**0.00**	**4660197.39**

Dep. Fund in % of Book Value & No. of Years	90% 26 (6%x14+ 11.25%x12)	90% 25 (6%x13+ 11.25%x12)	90% 24 (6%x12+ 11.25%x12)	90% 23 (6%x11+ 11.25%x12)	90% 22 (6%x10+ 11.25%x12)	90.00% 21 (6%x9+ 11.25%x12)	90.00% 20 (6%x8+ 11.25%x12)	90.00% 19 (6%x7+ 11.25%x12)	90.00% 18 (6%x6+ 11.25%x12)	90.00% 17 (6%x5+ 11.25%x12)	90.00% 16 (6%x4+ 11.25%x12)	90.00% 15 (6%x3+ 11.25%x12)	90.00% 14 (6%x2+ 11.25%x12)	90.00% 12 11.25%x12	90.00% 11 11.25%x11	90.00% 10 11.25%x10	90.00% 9 11.25%x9	90.00% 8 11.25%x8	78.75% 7 11.25%x7	67.50% 6 11.25%x6	56.25% 5 11.25%x5	45.00% 4 11.25%x4	33.75% 3 11.25%x3	22.50% 2 11.25%x2	11.25% 1 11.25%x1	
	0	284182	3131143	3939124	2052684	0	177282	2668160	15823	1321261	3622717	2350668	7638603	2520212	22223	2330713	952462	895393	337511	945096	121502	116848	54804	0	0	35498412
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0

Accounts Department

Book Value Year Wise Meter Summary 2023-24 (Electronic Meter)

THE STATEMENT SHOWING ASSETS TO BE WRITTERN OF FOR THE YEAR 2023-24

Description of Assets	Year	fe consumed (In Years)		Book Value	Life of Assets	Debit Provision for Depreciation	Trf. To Revenue A/C	Remarks
S/S SWITCHGEAR								
RALLY OIL MILL	27-07-1981	20		31366.87	20	28230.18	3136.69	EN/STORES-19 (PART-V)/517/2023.DT.26/082023.
RALLY OIL MILL	27-07-1981	20		31366.87	20	28230.18	3136.69	EN/STORES-19 (PART-V)/517/2023.DT.26/082023.
RALLY OIL MILL	27-07-1981	20		31366.87	20	28230.18	3136.69	EN/STORES-19 (PART-V)/517/2023.DT.26/082023.
RALLY OIL MILL	27-07-1981	20		31366.87	20	28230.18	3136.69	EN/STORES-19 (PART-V)/517/2023.DT.26/082023.
RALLY OIL MILL	27-07-1981	20		31366.87	20	28230.18	3136.69	EN/STORES-19 (PART-V)/517/2023.DT.26/082023.
RALLY OIL MILL	27-07-1981	20		31366.87	20	28230.18	3136.69	EN/STORES-19 (PART-V)/517/2023.DT.26/082023.
RALLY OIL MILL	27-07-1981	20		31366.86	20	28230.17	3136.69	EN/STORES-19 (PART-V)/517/2023.DT.26/082023.
SIDDHIVINAYAK EAST	31-08-1982	20		34043.00	20	30638.70	3404.30	EN/STORES-19 (PART-V)/517/2023.DT.26/082023.
SIDDHIVINAYAK EAST	31-08-1982	20		34043.00	20	30638.70	3404.30	EN/STORES-19 (PART-V)/517/2023.DT.26/082023.
SIDDHIVINAYAK EAST	31-08-1982	20		34043.00	20	30638.70	3404.30	EN/STORES-19 (PART-V)/517/2023.DT.26/082023.
SCOTISH ORPHANAGE	25-03-1999	25		122150.40	25	109935.36	12215.04	EN/STORES-19 (PART-V)/517/2023.DT.26/082023.
SCOTISH ORPHANAGE	25-03-1999	25		122150.40	25	109935.36	12215.04	EN/STORES-19 (PART-V)/517/2023.DT.26/082023.
SCOTISH ORPHANAGE	25-03-1999	25		122150.41	25	109935.37	12215.04	EN/STORES-19 (PART-V)/517/2023.DT.26/082023.
NEW DHOBIGHAT	02/031994	20		112728.45	20	101455.61	11272.85	EN/STORES-19 (PART-V)/517/2023.DT.26/082023.
NEW DHOBIGHAT	02/031994	20		112728.45	20	101455.61	11272.85	EN/STORES-19 (PART-V)/517/2023.DT.26/082023.
NEW DHOBIGHAT	02/031994	20		112728.45	20	101455.61	11272.85	EN/STORES-19 (PART-V)/517/2023.DT.26/082023.
NEW DHOBIGHAT	02/031994	20		112728.45	20	101455.61	11272.85	EN/STORES-19 (PART-V)/517/2023.DT.26/082023.
NUGGET	18-01-1998	25		86991.90	25	78292.71	8699.19	EN/STORES-19 (PART-V)/517/2023.DT.26/082023.
NUGGET	18-01-1998	25		86991.90	25	78292.71	8699.19	EN/STORES-19 (PART-V)/517/2023.DT.26/082023.
NUGGET	18-01-1998	25		86991.90	25	78292.71	8699.19	EN/STORES-19 (PART-V)/517/2023.DT.26/082023.
NUGGET	18-01-1998	25		86991.90	25	78292.71	8699.19	EN/STORES-19 (PART-V)/517/2023.DT.26/082023.
NUGGET	18-01-1998	25		86991.89	25	78292.70	8699.19	EN/STORES-19 (PART-V)/517/2023.DT.26/082023.
WILLINGDON	01-06-1999	25		208078.25	25	187270.43	20807.83	EN/STORES-19 (PART-V)/700/2023.DT.20/12/2023
WILLINGDON	01-06-1999	25		208078.25	25	187270.43	20807.83	EN/STORES-19 (PART-V)/700/2023.DT.20/12/2023
WILLINGDON	01-06-1999	25		208078.25	25	187270.43	20807.83	EN/STORES-19 (PART-V)/700/2023.DT.20/12/2023
WILLINGDON	01-06-1999	25		208078.24	25	187270.42	20807.82	EN/STORES-19 (PART-V)/700/2023.DT.20/12/2023
WILLINGDON	01-06-1999	25		208078.24	25	187270.42	20807.82	EN/STORES-19 (PART-V)/700/2023.DT.20/12/2023
NIRMAL PARK	27-11-2001	24	3.60%*12+5.28%*12	123883.54	25	111495.19	12388.35	EN/STORES-19 (PART-V)/700/2023.DT.20/12/2023
NIRMAL PARK	27-11-2001	24	3.60%*12+5.28%*12	123883.54	25	111495.19	12388.35	EN/STORES-19 (PART-V)/700/2023.DT.20/12/2023
NIRMAL PARK	27-11-2001	24	3.60%*12+5.28%*12	123883.54	25	111495.19	12388.35	EN/STORES-19 (PART-V)/700/2023.DT.20/12/2023
NIRMAL PARK	27-11-2001	24	3.60%*12+5.28%*12	123883.53	25	111495.18	12388.35	EN/STORES-19 (PART-V)/700/2023.DT.20/12/2023
WANI CHAWL	2003/04	21	3.60%*9+5.28%*12	17085.39	25	15376.85	1708.54	EN/STORES-19(PART-V) /700/2023 DT.120/10/2023
WANI CHAWL	2003/04	21	3.60%*9+5.28%*12	17085.39	25	15376.85	1708.54	EN/STORES-19(PART-V) /700/2023 DT.120/10/2023
WANI CHAWL	2003/04	21	3.60%*9+5.28%*12	17085.39	25	15376.85	1708.54	EN/STORES-19(PART-V) /700/2023 DT.120/10/2023
				3161203.13		**2845082.82**	**316120.31**	
SWITCHGEAR RSS								
MAHIM CAUSEWAY PRIM.1	1992/93	20		733744.00	20	660369.60	73374.40	EN/STORES-19 (PART V)/437/2023.DT.19/07/2023
MAHIM CAUSEWAY PRIM.4	1992/93	20		711744.00	20	640569.60	71174.40	EN/STORES-19 (PART V)/437/2023.DT.19/07/2023
MAHIM CAUSEWAY PRIM.3	1989/90	20		309369.32	20	278432.39	30936.93	EN/STORES-19 (PART V)/437/2023.DT.19/07/2023
SEWREE PRIM 2	1994/95	20		377100.73	20	339390.66	37710.07	EN/STORES-19 (PART V)/437/2023.DT.19/07/2023
SEWREE PRIM 3	1994/95	20		377100.74	20	339390.67	37710.07	EN/STORES-19 (PART V)/437/2023.DT.19/07/2023
KINGS WAY	1996/97	20		335789.00	20	302210.10	33578.90	EN/STORES-19 (PART V)/437/2023.DT.19/07/2023
MAZGAON DOCK CARP NO.1	29-03-2003	22	3.60%*10+5.28%*12	339596.71	12	305637.04	33959.67	EN/STORES-19 (PART V)/437/2023.DT.19/07/2023
MAZGAON DOCK CARP NO.2	29-03-2003	22	3.60%*10+5.28%*12	339596.72	12	305637.05	33959.67	EN/STORES-19 (PART V)/437/2023.DT.19/07/2023
KUSSARA CARP NO.2	13-02-2004	21	3.60%*9+5.28%*12	339596.72	12	305637.05	33959.67	EN/STORES-19 (PART V)/437/2023.DT.19/07/2023
				3863637.94		**3477274.15**	**386363.79**	
S/S TRANAFORMER								
CEMTAC	27/091969	35		8399.77	35	7559.79	839.98	EN/STORES-19 (PART-V)/517/2023.DT.26/082023.
LADY JAMSHETJI ROAD	17-11-1985	35		4860.18	35	4374.16	486.02	EN/STORES-19 (PART-V)/517/2023.DT.26/082023.
BAITUL HAJAJ	21-12-1985	35		1074.71	35	967.24	107.47	EN/STORES-19 (PART-V)/517/2023.DT.26/082023.
CAUSEWAY	01-04-1987	35		13070.57	35	11763.51	1307.06	EN/STORES-19 (PART-V)/517/2023.DT.26/082023.
BHARTIYA BHAVAN	07-11-1988	35		618584.23	35	556725.81	61858.42	EN/STORES-19 (PART-V)/517/2023.DT.26/082023.
GEETA NAGER PUMPING	01-12-1988	35		189637.06	35	170673.35	18963.71	EN/STORES-19 (PART-V)/517/2023.DT.26/082023.
SABU SIDDIQUE ROAD	21-10-1988	35		201186.39	35	181067.75	20118.64	EN/STORES-19 (PART-V)/517/2023.DT.26/082023.
HAINS SOUTH	03-05-1995	25		618595.47	25	556735.92	61859.55	EN/STORES-19 (PART-V)/517/2023.DT.26/082023.
CAVAL STREET	23-02-1997	25		570456.61	25	513410.95	57045.66	EN/STORES-19 (PART-V)/517/2023.DT.26/082023.
NEPEAN SEA (N)	01-05-1996	25		555510.94	25	499959.85	55551.09	EN/STORES-19 (PART-V)/517/2023.DT.26/082023.
CAUSEWAY	12-06-1990	25		13070.57	25	11763.51	1307.06	EN/STORES-19 (PART-V)/517/2023.DT.26/082023.
SHASTRI NAGAR	25-10-2000	24	3.60%*12+5.28%*12	40751.08	25	36675.97	4075.11	EN/STORES-19(PART-V) /700/2023 DT.120/10/2023
ERUCKSHAE	25-02-2004	21	3.60%*9+5.28%*12	36866.49	25	33179.84	3686.65	EN/STORES-19(PART-V) /700/2023 DT.120/10/2023
TOTAL				**2872064.07**		**2584857.663**	**287206.407**	
TRANSFORMER RSS								
G T HOSPITAL	17-11-1995	25		9259646.26	25	8333681.63	925964.63	EN/STORES-19 (PART V)/437/2023.DT.19/07/2023
TOTAL				**9259646.26**		**8333681.63**	**925964.63**	
RSS EQUIPMENTS								
WORLI DAIRY (BATTERY CHARGER)	31-03-2011	12		137752.56	12	123977.30	13775.26	EN/STORES 19(PART 2) /505/2023 DT.20/05/2023.
BALLARD ESTATE (BATTERY CHAR.)	13-03-2001	12		14326.69	12	12894.02	1432.67	EN/STORES 19(PART 2) /505/2023 DT.20/05/2023.
G.T.HOSPITAL (BATTERY CHARGER)	02-11-2001	12		1882271.18	12	1694044.06	188227.12	EN/STORES 19(PART 2) /505/2023 DT.20/05/2023.
DBA 110KV SET NO.1 (BATTERY CHARGER	14-10-2006	12		966035.69	12	869432.12	96603.57	EN/STORES 19(PART 2) /505/2023 DT.20/05/2023.
DBA 110KV SET NO.2 (BATTERY CHARGER	14-10-2006	12		966035.69	12	869432.12	96603.57	EN/STORES 19(PART 2) /505/2023 DT.20/05/2023.
SION FORT (BATTERY CHARGER)	31-01-2001	12		14326.69	12	12894.02	1432.67	EN/STORES 19(PART 2) /505/2023 DT.20/05/2023.
TARDEO (BATTERY CHARGER)	30-04-2010	12		1661931.94	12	1495738.75	166193.19	EN/STORES 19(PART 2) /505/2023 DT.20/05/2023.
MAZGAON DOCK (BATTERY CHARGER)	2003/04	12		404974.19	12	364476.77	40497.42	EN/STORES 19(PART 2) /505/2023 DT.20/05/2023.
KHETWADI 110KV (BATTERY CHARGER)	09-04-2001	12		842519.42	12	758267.48	84251.94	EN/STORES 19(PART 2) /505/2023 DT.20/05/2023.
MARATHON FUTUREX (BATTERY CHARGER)	16-12-2010	12		1909559.43	12	1718603.49	190955.94	EN/STORES 19(PART 2) /505/2023 DT.20/05/2023.
MAHIM CAUSEWAY (BATTERY CHARGER)	23-05-2011	12		430000.00	12	387000.00	43000.00	EN/STORES 19(PART 2) /505/2023 DT.20/05/2023.
PENINSULA LAND (BATTERY CELLS)	2010/11	12		2486686.26	12	2238017.63	248668.63	EN/STORES 19(PART 2) /505/2023 DT.20/05/2023.
MORARJI MILL (BATTERY CELLS)	11-12-2010	12		2194621.36	12	1975159.22	219462.14	EN/STORES 19(PART 2) /505/2023 DT.20/05/2023.
				13911041.10		**12519936.99**	**1391104.11**	
GRAND TOTAL				**33067592.50**		**29760833.25**	**3306759.25**	

SUMMARY OF ITEMS WRITTEN OFF DURING 22.23

ASSETS HEAD				BOOK VALUE		DEP.PROV.	REVENUE
S/S.SWITCHGEAR :				3161203.13		2845082.82	316120.31
DSS TRANSFORMERS				2872064.07		2584857.66	287206.41
RSS SWITCHGEARS:				3863637.94		3477274.15	386363.79
RSS TRANSFORMERS:				9259646.26		8333681.63	925964.63
H V & L V CAPACITOR				0.00		0.00	0.00
RSS EQUIPMENTS:				13911041.10		12519936.99	1391104.11
SCADA EQUIPMENT				0.00		0.00	0.00
TOTAL				**33067592.50**		**29760833.25**	**3306759.25**

Statement of Motor Vehicle Write-Off during the Period 01/04/2023 to 31/03/2024

Sr.No.	RegNo	Description	Make	Year	Chassis-Cost	Body-Cost	Book-value	Depre. Prov.	Revenue	MOH-year	MOH Cost	Depre. Prov.	Revenue	Remark
	Div: 100							Fund @90%	A/C @10%			Fund @90%	A/C @10%	
1	MH-01-GA-1664	ARIEL LIFT		2000-2001	394270.62	318308.00	712578.62	641320.76	71257.86	0	0	0.00	0.00	EET(ADMN)/AOR/30051/0241/2023 DT.26-05-23
2	MH-01-GA-1675	ARIEL LIFT		2000-2001	394270.62	318308.00	712578.62	641320.76	71257.86	0	0	0.00	0.00	EET(ADMN/AOR/30051/0241/2023 DT.26-05-23
3	MH-01-GA-1682	ARIEL LIFT		2000-2001	394270.62	333802.00	728072.62	655265.36	72807.26	0	0	0.00	0.00	EET(ADMN)/AOR/30051/0241/2023 DT.26-05-23
4	MH-01-GA-1947	FAULT TESTING VAN		1999-2000	0	0	556000.00	500400.00	55600.00	0	0	0.00	0.00	AM(TE)/AAO(B)/30183/286/2023 DTD.26-06-23
5	MH-01-GA-1958	FAULT TESTING VAN		1996-1997	0	0	699040.00	629136.00	69904.00	0	0	0.00	0.00	AM(TE)/AAO(B)/30183/286/2023 DT.26-06-23
6	MH-01-GA-1960	FAULT TESTING VAN		2000-2001	0	0	556000.00	500400.00	55600.00	0	0	0.00	0.00	EET(ADMN)/AOR/30051/0241/2023 DT.26-05-23
7	MH-01-GA-1966	FAULT TESTING VAN		1996-1997	0	0	410800.00	369720.00	41080.00	0	0	0.00	0.00	AM(TE)/AAO(B)/30183/286/2023 DT.26-06-23
8	MH-01-GA-1967	FAULT TESTING VAN		1996-1997	0	0	410800.00	369720.00	41080.00	0	0	0.00	0.00	EET(ADMN)/AOR/30051/0241/2023 DT.26-05-23
9	MH-01-LA-6034	CASH VAN		2007-2008	458086.00	225917.66	684003.66	615603.29	68400.37	0	0	0.00	0.00	AM(TE)/AO(B)/30183/406/2023 DT.31-08-23
10	MH-01-LA-6035	DELIVERY VAN		2007-2008	458086.00	216362.71	674448.71	607003.84	67444.87	0	0	0.00	0.00	AM(TE)/AO(B)/30183/406/2023 DT.31-08-23
11	MH-01-LA-6036	DELIVERY VAN		2007-2008	458086.00	221419.00	679505.00	611554.50	67950.50	0	0	0.00	0.00	AM(TE)/AO(B)/30183/406/2023 DT.31-08-23
12	MH-01-LA-6057	CASH VAN		2007-2008	458086.00	225917.66	684003.66	615603.29	68400.37	0	0	0.00	0.00	AM(TE)/AO(B)/30183/406/2023 DT.31-08-23
13	MH-01-LA-6058	CASH VAN		2007-2008	458086.00	225917.68	684003.68	615603.31	68400.37	0	0	0.00	0.00	AM(TE)/AO(B)/30183/406/2023 DT.31-08-23
14	MH-01-LA-6059	DELIVERY VAN		2007-2008	458086.00	216362.71	674448.71	607003.84	67444.87	0	0	0.00	0.00	AM(TE)/AO(B)/30183/406/2023 DT.31-08-23
15	MH-01-LA-6064	DELIVERY VAN		2007-2008	458086.00	219290.00	677376.00	609638.40	67737.60	0	0	0.00	0.00	AM(TE)/AO(B)/30183/406/2023 DT.31-08-23
16	MH-01-LA-6065	DELIVERY VAN		2007-2008	458086.00	219290.00	677376.00	609638.40	67737.60	0	0	0.00	0.00	AM(TE)/AO(B)/30183/406/2023 DT.31-08-23
17	MH-01-LA-6207	CASH VAN		2007-2008	458086.00	225829.00	683915.00	615523.50	68391.50	0	0	0.00	0.00	AM(TE)/AO(B)/30183/406/2023 DT.31-08-23
18	MH-01-LA-6208	DELIVERY VAN		2007-2008	458086.00	216063.00	674149.00	606734.10	67414.90	0	0	0.00	0.00	AM(TE)/AO(B)/30183/406/2023 DT.31-08-23
19	MH-01-LA-6209	DELIVERY VAN		2007-2008	458086.00	219290.00	677376.00	609638.40	67737.60	0	0	0.00	0.00	AM(TE)/AO(B)/30183/406/2023 DT.31-08-23
20	MH-01-LA-6210	DELIVERY VAN		2007-2008	458086.00	219290.00	677376.00	609638.40	67737.60	0	0	0.00	0.00	AM(TE)/AO(B)/30183/406/2023 DT.31-08-23
21	MH-01-LA-6211	DELIVERY VAN		2007-2008	458086.00	219290.00	677376.00	609638.40	67737.60	0	0	0.00	0.00	AM(TE)/AO(B)/30183/406/2023 DT.31-08-23
22	MH-01-LA-6212	DELIVERY VAN		2007-2008	458086.00	219290.00	677376.00	609638.40	67737.60	0	0	0.00	0.00	AM(TE)/AO(B)/30183/406/2023 DT.31-08-23
23	MH-01-LA-6854	DELIVERY VAN		2007-2008	458086.00	219290.00	677376.00	609638.40	67737.60	0	0	0.00	0.00	AM(TE)/AO(B)/30183/406/2023 DT.31-08-23
24	MH-01-LA-6855	DELIVERY VAN		2007-2008	458086.00	219290.00	677376.00	609638.40	67737.60	0	0	0.00	0.00	AM(TE)/AO(B)/30183/406/2023 DT.31-08-23
25	MH-01-MA-8472	ARIEL LIFT		2004-2005	728235.60	746776.00	1475011.60	1327510.44	147501.16	0	0	0.00	0.00	AM(TE)/AAO(B)/30183/286/2023 DT.26-06-23
26	MH-01-MA-8473	ARIEL LIFT		2002-2003	728235.59	746776.00	1475011.59	1327510.43	147501.16	0	0	0.00	0.00	AM(TE)/AAO(B)/30183/286/2023 DT.26-06-23
27	MH-01-MA-8553	ARIEL LIFT		2002-2003	728235.59	746776.00	1475011.59	1327510.43	147501.16	0	0	0.00	0.00	AM(TE)/AAO(B)/30183/286/2023 DT.26-06-23
28	MH-01-SA-3457	ARIEL LIFT		2006-2007	599362.00	754000.00	1353362.00	1218025.80	135336.20	0	0	0.00	0.00	EET(ADMN)/AOR/30051/0241/2023 DT.26-05-23
29	MH-01-SA-3458	ARIEL LIFT		2007-2008	599362.00	754000.00	1353362.00	1218025.80	135336.20	0	0	0.00	0.00	EET(ADMN)/AOR/30051/0241/2023 DT.26-05-23
30	MH-01-YA-3115	FAULT TESTING VAN		2007-2008	0	0	861080.00	774972.00	86108.00	0	0	0.00	0.00	EET(ADMN)/AOR/30051/0241/2023 DT.26-05-23
31	MH-01-YA-3116	FAULT TESTING VAN		2007-2008	0	0	861080.00	774972.00	86108.00	0	0	0.00	0.00	EET(ADMN)/AOR/30051/0241/2023 DT.26-05-23
32	MH-01-YA-4019	TRUCK MOUNTED CRANE		2009-2010	709574.84	1759536.50	2469111.34	2222200.21	246911.13	0	0	0.00	0.00	AM(TE)/AAO(B)/30183/286/2023 DT.26-06-23
33	MH-01-YA-4020	TRUCK MOUNTED CRANE		2009-2010	708432.62	1759536.50	2467969.12	2221172.21	246796.91	0	0	0.00	0.00	AM(TE)/AAO(B)/30183/286/2023 DT.26-06-23
					13313626.10	**11765928.42**	**29434354.52**	**26490919.07**	**2943435.45**			**0.00**	**0.00**	

ACCOUNTS DEPARTMENT

STATEMENT SHOWING THE COST OF ASSETS (CABLE/MAINS) & PILLARS TO BE WRITTEN OFF DURING THE YEAR 2023-24

DESCRIPTION OF ASSETS	BOOK VALUE	LESS: CASH RECEIVED OR RECOVERED	YEARS DEP. PROVIDED	DEP. PROVIDED	10% DEP.TRF. TO REV.A/C.	E.S. CONTGENCY RES.FUND ACT.100/107	REMARK
H.V. MAINS	4194086.50	0.00	40	3774677.85	419408.65	0.00	AGM(S) SANCTIONED DATED 22.08.90
L.V. MAINS	4194086.50	0.00	40	3774677.85	419408.65	0.00	REF NO. : PL/STORE/ 3 ; DTD.18.07.90
DISTRIBUTION PILLARS	3151149.00	0.00		2763763.00	387386.00	0.00	DETAILS ATTACHED
TOTAL:	11539322.00	0.00		10313118.70	1226203.30	0.00	

ANNEXURE-39

DETAILS OF AMISP INVOICE (M/S. AESL)

SAT No.	Date of SAT	Month of Invoice	Date of Invoice Raised	Amount of Invoice (in Rupees)	Date of Invoice cleared
1	March	Apr-24	08-05-2024	2,15,07,697.00	13-11-2024
2	May	May-24	07-06-2024	2,99,08,919.00	17-06-2024
3	May	Jun-24	05-07-2024	2,99,08,919.00	13-11-2024
4	June	Jul-24	07-08-2024	2,98,66,337.00	13-11-2024
5	October	Aug-24	06-09-2024	3,33,59,218.00	In Process
6	December	Sep-24	08-10-2024	3,33,81,020.00	In Process
7	--	Oct-24	08-11-2024	3,33,67,713.00	In Process
8	--	Nov-24	10-12-2024	3,51,44,818.00	In Process
9					
10					
11					
12					

MYT Petition for approval of Truing up for Aggregate Revenue Requirement (ARR) for FY 2022-23 & FY 2023-24, Provisional Truing up for FY 2024-25, and MYT for Fifth Control Period from FY 2025-26 to FY 2029-30

Annexures

Brihanmumbai Electric Supply & Transport Undertaking

(of the Brihanmumbai Mahanagarpalika)

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November 2024

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M. M. MATHURIA & ASSOCIATES.

CHARTERED ACCOUNTANTS

56, Botawala Building, 1st Floor, Office No: 9 & 10, Bomanji Master Lane, Mumbai- 400 002.
Website: http://www.mathuria.in, E-mail: incometax@mathuria.in

Date: 29th December,2023

To,
CAO & FA
The Brihan Mumbai Electric Supply & Transport Undertaking
BEST Bhavan, Best Marg,
Mumbai -400 001

Dear Sir,

1. This Certificate is issued in accordance with the terms of Appointment letter CAO & FA/Dy. CAO (RC)/128/2023 dated 28.06.2023 issued by BEST undertaking for certifying Restated Data of its Electricity Business & Data under MERC's (Uniform Recording and Reporting of Information) Regulation — 2009 for the F.Y. 2022-23 of Electricity Business & for certifying Restated Data of the BEST undertaking of Electricity Business for the F.Y. 2022-23 for the purpose of Revamped Distribution Sector Scheme (RDSS) of Government of India.

2. MERC has directed BEST undertaking vide their order dated 9th March,2006 to maintain the Proforma Accounts and Financial Statements for its Electricity Business separately from F.Y. 2006-07 onwards in the prescribed Formats as applicable to entities under the Companies Act, 2013 (Erstwhile Companies Act, 1956).

Responsibility of Management for Financial Statements

3. The Preparation of the Proforma Accounts is the Responsibility of the Management of BEST undertaking including the preparation and maintenance of all accounts, adequate accounting records and other relevant supporting documents. The Management of BEST undertaking is also responsible for applying appropriate basis for preparation and making estimates that are responsible and prudent.

4. The undertaking has ensured that it provides all relevant information pursuant to Companies Act. 2013.

Responsibility of Certifying Chartered Accountants Firm

5. We have examined the restated data of the Supply Division/ (Electricity Business) of the BEST undertaking for the year ended 31st March,2023 .The Financial Statements are prepared by the undertaking pursuant to the Mumbai Municipal Corporation Act,1888.

Emphasis of matter:

I. The figures of financial statements of Electric supply division are derived by management by allocating the items of consolidated financial statements into 3 divisions namely; Supply, Bus and General Administrative division. Further, the items of General Administrative division are divided into Electricity supply and Bus division in proportion of staff deployed by respective departments.

II. As informed by the management, depreciation on fixed Assets wherever applicable is based on the rules and the manner prescribed under Regulation of MERC (terms and conditions of Tariff) regulations 2019. The depreciation is provided on Straight Line Method. Depreciation rates and life of an asset are specified by MERC regulations.

III. It was observed that, no depreciation is charged on fixed assets purchased during the year as required by the MERC regulations. Also, for assets sold during the year, the depreciation for the entire year is provided irrespective of date of sale. This practice is consistently followed by the organization during the past several years.

IV. Gratuity paid to employees who have retired during the period under audit has been correctly provided in the accounts. However, no provision is made for gratuity in respect of employees who are still in employment.

V. Similarly, leave encashment paid during the period to employees has been duly accounted for. However, the provision is not made for the employees who have not yet opted for leave encashment

VI. The details of consumption of inventory are not shown under the statement of Profit & Loss as required by Schedule III of companies Act, 2013. It was observed that purchases are directly charged to revenue account.

VII. The asset side of the balance sheet includes Rs.1,66,32,000/-re1ated to "Fixed and call with Chetana Co-op Bank" in other current assets. However, as informed by the management, the said bank is in liquidation and the matter is pending in court of law.

CERTIFICATION:-

On the basis of examination of the books, records and statements produced before us and to the best of our knowledge and according to the information, explanations and representations given to us, subject to our observation above, we certify that the aforesaid restated data for Supply Division (Electricity Business) has been prepared in accordance with the generally accepted principles and the format prescribed under the Companies Act, 2013.

Our examination of these restated financial statements was conducted in accordance with the standards on Auditing and other applicable authoritative pronouncements issued by the Institute of Chartered Accountantsof India. Our examination was not planned or performed

in connection with any transactions to identify matters that may be of potential interest to third parties.

We conducted our examination of the statements in accordance with Guidance note on Reports or Certificate for special Purpose (Revised 2016) issued by the Institute of Chartered Accountants of India. The Guidance Note requires that we comply with ethical requirement of the code of Ethics issued by the Institute of Chartered Accountants of India.

We have complied with the relevant applicable requirement of the Standard on Quality control (SOC)1, Quality Control Firms that performs Audits and Reviews of Historical Financial information , and other Assurance and related Services Engagements.

Restriction on use

This report is issued solely for the purpose of MERC and RDSS Scheme of Government of India as mentioned in paragraph 1&2 above and should not be used by any other person or for any other purpose. Accordingly, we do not accept or assume any liability or any duty of care for any other purpose or to any other person to whom this report is shown or into whose hands it may come without our prior consent in writing. This report relates only to the items specified above and does not extend to any financial statements of the BEST undertaking taken asa Whole.

For M. M. Mathuria & Associates,
Chartered Accountants
FRNo. 115354W



Mr. Manoj Mathuria
(Proprietor)
M. No. 049425
Place: Mumbai

UDIN: 23049425BGUCJC6879

Brihan Mumbai Electric Supply & Transport Undertaking
Balance Sheet of Electric Supply as at 31st MARCH 2023
UDIN : 23049425BGUCJC6879

EQUITY AND LIABILITIES	Notes	As at 31st MARCH 2023 (in lakhs)	As at 31st March 2022 (in lakhs)
Shareholders' funds			
Reserves and surplus	2	4,66,672.25	5,68,257.53
		4,66,672.25	**5,68,257.53**
Non-current liabilities			
Long- Term Borrowings	3	2,14,890.57	**1,75,065.96**
Other non-current liabilities	4	53,171.66	44,779.52
		2,68,062.23	**2,19,845.48**
Current liabilities			
Trade payables	5	6,514.23	5,725.04
Other current liabilities	6	2,81,542.80	2,00,192.42
		2,88,057.03	**2,05,917.46**
TOTAL		**10,22,791.50**	**9,94,020.47**
ASSETS			
Non-current assets			
Fixed assets			
Tangible assets	7	1,60,901.27	1,55,885.11
Capital work-in-progress		4,174.89	3,642.03
Non-current investments	8	7,570.01	6,330.01
Long-term loans and advances	9	6,063.26	6,024.47
Other non-current assets	10	1,325.83	1,298.83
		1,80,035.25	**1,73,180.46**
Current assets			
Inventories	11	1,230.19	799.60
Trade receivables	12	42,259.34	53,151.25
Cash and Bank Balances	13	2,93,340.39	3,83,328.22
Short-term loans and advances	14	5,03,981.28	3,81,640.93
Other current assets	15	1,945.04	1,920.01
		8,42,756.24	**8,20,840.01**
TOTAL		**10,22,791.50**	**9,94,020.47**
Significant accounting policies	1		

As per our report of even date

For M.M MATHURIA & ASSOCIATES
Chartered Accountants
Registration No.:115354W

CA Manoj. M. Mathuria
Proprietor
M.No. 049425
Place: Mumbai
Date: 29th December, 2023

For Brihan Mumbai Electric Supply & Transport Undertaking

for Mr. Vijay Singhal
General Manager

Brihan Mumbai Electric Supply & Transport Undertaking
Statement of Profit and Loss for the year ended 31st March 2023
UDIN : 23049425BGUCJC6879

	Notes	For the year ended 31st MARCH 2023 (in lakhs)	For the year ended 31st MARCH 2022 (in lakhs)
Income			
Revenue from operation (gross)	16	3,60,797.03	3,04,904.06
Less: Excise duty			
Revenue from operation (net)		**3,60,797.03**	**3,04,904.06**
Other income	17	8,179.23	7,124.76
Total Revenue		**3,68,976.26**	**3,12,028.82**
Expenses			
Purchase of electricity		3,77,499.49	2,80,350.84
Emloyee benefit expense	18	59,532.90	55,978.26
Finance cost	19	11,922.75	8,539.66
Depreciation	7	10,928.82	10,757.63
Other expenses	20	18,075.91	17,315.89
Total expenses		**4,77,959.86**	**3,72,942.27**
Profit before tax and Exceptional items		**(1,08,983.60)**	**(60,913.45)**
Exceptional items		-	-
Profit before tax		**(1,08,983.60)**	**(60,913.45)**
Significant accounting policies	1		

As per our report of even date

For M.M MATHURIA & ASSOCIATES
Chartered Accountants
Registration No.:115351W

CA Manoj. M. Mathuria
Proprietor
M.No. 049425
Place: Mumbai
Date: 29th December, 2023

For Brihan Mumbai Electric Supply & Transport Undertaking

29/12/23

Mr. Vijay Singhal
General Manager

Brihan Mumbai Electric Supply & Transport Undertaking

Cash flow statement (Supply Division) for the year ended 31st March, 2023

UDIN : 23049425BGUCJC6879

PARTICULARS	For the year ended 31st March, 2023	For the year ended 31st March, 2022		For the year ended 31st March, 2020	For the year ended 31st March, 2019
				-	-
SURPLUS BEFORE TAX	(108983.60)	(60913.45)		29,342.72	-
Adjusted for :					
Depreciation	10,928.82	10,757.63		10,327.30	8,780.25
Profit on sale of Fixed Asset	983.94	971.29		(245.36)	(1,041.18)
Unclaimed balances/ excess provision written back					
Finance cost	11,922.75	8,539.66		8,780.25	44,158.01
Interest income	(55.40)	(75.82)		(54.83)	-
loss on sale of investments					
Movement in reserve and prior period items	7398.32	25868.90		13,966.24	-
Profit on sale of investment (including exceptional item)					
Provision for doubtful debts					
Advances/ balances written back	(2,337.29)	(757.50)		(2,000.06)	(1.63)
OPERATING SURPLUS BEFORE WORKING CAPITAL CHANGES	(80142.47)	(15609.30)		60,116.27	51,895.45
AND OTHER ADJUSTMENTS					
Adjustments for :					
(Increase)/ Decrease Trade Receivables	10891.91	(11,420.06)		(5,775.04)	1,349.27
(Increase) / Decrease Loans and advances	(122379.13)	(57,419.30)		5,364.68	(31,499.67)
Increase / (Decrease) Trade Payables	789.19	(285.94)		(950.19)	-
Increase / (Decrease) Other liabilities and provisions	89742.51	16,484.98		8,616.21	(5,123.32)
(Increase) / Decrease Other Assets	(52.03)	(40.50)		(125.45)	-
(Increase) / Decrease Inventories	(430.59)	(145.91)		1,349.27	-
Cash generated from operations	(1,01,580.61)	(68,436.03)		68,595.75	16,621.73
Direct Taxes (paid) / refund (net)					
(a) NET CASH FLOW FROM / (USED IN) OPERATION ACTIVITES	(1,01,580.61)	(68,436.03)		68,595.75	16,621.73
cash flow from investing activities:					
(Purchase) / Sale of fixed assets (including capital work in progress)	(15124.47)	(13,806.33)		(24,160.44)	(13,075.27)
Withdrawal / (investment) of margin deposits	(1240.00)	(674.00)		(620.00)	37.96
(Purchase) / Sale of Investments	55.40	41.77		19.37	-
Interest received					
Dividend received					
(b)NET CASH FROM /(USED) IN INVESTING ACTIVITIES	(16,309.07)	(14,438.56)		(24,761.08)	(13,037.31)
Cash flow from financing activities:					
Long term bank loan taken / (Repaid)	39,824.61	1,36,718.19		(4,174.76)	-
Short term bank loan taken / (Repaid)					
Unsecured Loans from related parties taken					
Unsecured Loans from related parties repaid					
Finance cost paid	(11922.75)	(8,539.66)		(8,780.25)	-
(c)NET CASH FROM/ (USED) IN FINANCING ACTIVITIES	27901.87	128178.53		(12,955.01)	-
Net increase / (decrease) in cash and cash equivalents (a+b+c)	(89987.81)	45303.94		30879.67	3584.42

PARTICULARS	For the year ended 31st March, 2023	For the year ended 31st March, 2022		For the year ended 31st March, 2020	For the year ended 31st March, 2019
	-	-		-	-
Cash and cash equivalents as at the commencement of the year, comprising :					
Cash	1711.14	4,188.49		3,546.03	-
Cheques on hand					
Balances with scheduled banks on current accounts	381617.07	3,33,835.79		2,53,104.69	-
	383328.21	3,38,024.28		2,56,650.72	-
Cash and cash equivalents as at the end of the year, comprising :					
Cash	(10604.18)	1,711.14		4,191.67	2,83,338.72
Cheques on hand					
Balances with scheduled banks on current accounts	303944.57	3,81,617.07		2,83,338.72	-
	293340.39	3,83,328.22		2,87,530.38	2,83,338.72
NET INCREASE /(DECREASE) AS DISCLOSED ABOVE	(89,987.82)	45303.94		30,879.67	2,83,338.72

As per our report of even date

For M.M MATHURIA & ASSOCIATES
Chartered Accountants
Registration No.:115354W

CA Manoj. M. Mathuria
Proprietor
M.No. 049425
Place: Mumbai
Date: 29th December, 2023

For Brihan Mumbai Electric Supply & Transport Undertaking

29/12/23

for Mr. Vijay Singhal
General Manager

Notes forming part of Accounts
For the year ended 31st March, 2023
(Supply)

The B.E.S. & T Undertaking is required to maintain books of account as provided in section 460MM of The Mumbai Municipal Corporation Act, 1888 as amended. Since the B.E.S.& T Undertaking does not have any share capital and being a part of the local authority, Maharashtra Electricity Regulatory Commission(MERC), has permitted it to maintain the books of account in the manner provided in the Mumbai Municipal Corporation Act, 1888. This is in addition to preparation of performa accounts in the format prescribed under the Companies Act, 1956 as amended 2013.

As provided in section 126A of the Mumbai Municipal Corporation Act, 1888 it is mandatory for the Undertaking to prepare budget estimates of income and expenditure of the next ensuing year. After the grant of approval by the B.E.S.T Committee and the Municipal Corporation these estimates are treated as grants.Keeping in view the above statutory position the following accounting policies are followed by the Undertaking: -

1) **Revenue Receipts Allocation:**

   a) **General administration receipts: -**

      i) These receipts include interest on deposits and other investments. These are allocated in the ratio of 90:10 to Electric Supply and Transport Divisions.

      ii) Apprentice premium and other receipts are allocated in the ratio of 50:50 to Electric Supply and Transport Divisions.

      iii) Rent of Land and Buildings is allocated in the ratio of 25:75 to Electric Supply and Transport Divisions.

      iv) Income arising on sale of assets of General Administration Department is allocated in the ratio of 27:73 to Electric Supply and Transport Divisions.

      v) Other Receipts and Advertisement receipts are allocated in the ratio of 50:50.

2) **Gratuity:**

   Provision is made in the accounts for gratuity payment due to the employees. The Liability on accrual basis is Rs. 105.57crores.

3) **Advertisement Receipts: -**

   The advertisement receipts are accounted in the ratio of 50:50.

4) **Encashment of Leave:**

   Provision is made in the accounts for LTA / leave encashment dues of the employees.

5) Allocation of General Administration Expenses:

The allocation of General Administration Expenses between the Electric Supply and Transport Division is mainly on the basis of number of employees deployed in each division and the percentage of allocation during the current financial year and the immediately preceding year were as under:

Sr No.	Particulars	2022-23		2021- 22	
		Supply (%)	Transport (%)	Supply (%)	Transport (%)
1)	Security and Vigilance	25	75	15	85
2)	Civil Engineering Department	45	55	45	55
3)	Time Keeping, Personnel, Welfare, Medical etc.	19	81	20	80
4)	EDP Department	65	35	51	49
5)	Legal, Audit, Accounts, Cash, Secretarial, PRO etc.	50	50	50	50

6) Allocation of Energy Charges for the purpose of considering the operational efficiency of the two divisions.

The energy utilised in the various Bus Depots is charged as expenditure to the Transport Division and corresponding notional income is included in the income of Electric Supply division.

7) Depreciation Provision:

i) The Depreciation on the Fixed Assets is provided under the Straight-Line Method.

ii) The estimated life of assets in the Electric Supply Division is based on the MERC's regulations, 2019.

iii) The Depreciation so computed is restricted to 90% of the book value of assets.

iv) The Depreciation has been provided on the Opening balance of the assetsas on 1st April, 2022.

v) Items of Furniture and other Office Equipments, tools individually costing lessthan Rs. 10,000/- are charged to revenue in the year of purchase.

vi) The rates of Depreciation applied for various classes of assets& policy for calculation of Depreciation is as per the MERC Regulations, 2019.

8) BEST Staff Benefit Fund (Statutory Fund under Section 460 HH):

As required under the M.M.C. Act, the said fund is created and source of this fund is fines collected from the Officers / Staff under Section 460 (W) on account of misconduct, etc. In addition to this, Donations from passengers, Income out of sale of lost property are also

credited to this fund. The application of this fund is to give financial assistance to the widows of the staff in case of death while in service and also for well being of staff members. This is a dedicated fund and not invested in the bankand included in otherReserve.

9) **Motor Vehicles(Third Party Insurance Fund) a Statutory Fund:-**

As required under the Motor Vehicle Act a statutory fund uptoRs. 20 Lakhs is required to be created to settle the claims arising out of accidents. This being a dedicated fund is required to be invested separately. The amount to be charged to Revenue depends upon the number of vehicles used by the Electric Supply, Transport and General Administration divisions of the Undertaking and included in other Reserve.

10) **Fidelity Insurance Fund (Non-Statutory): -**

Every year a provision is made towards Fidelity Insurance Fund to safeguard interest of the Undertaking against the risk arising out of cash handling by employees. Provision towards Fidelity Insurance Fund was stopped due to no debit was charged for last 8 years. No such incidence is reported in last 8 years.

11) **Property Insurance Fund (Non-Statutory): -**

The Property Insurance Fund is created by providing Minimum 0.5% and Maximum 5% of the opening value of the total Assets of the Undertaking (Excluding Land). In view of creating this fund no general insurance policy is contracted with any outside insurance company to cover the assets against any risk. Under this fund, a similar treatment is given as stated in the General Reserve Fund in order to equalize the provision towards the Property Insurance Fund to the extent of 0.5% on the Opening Gross Fixed Assets at the time of bifurcating the Balance sheet of Supply &Transport.In Case No.33 of 2016 Maharashtra Electricity Regulatory Commission(MERC) has disallowed the amount of Property Insurance Fund for Second MYT Control Period for FY 2012-13 to FY 2015-16 and have directed to take Property Insurance from an outside Agency, the corresponding Insurance Premium will be allowed as expenses. However, the BEST Undertaking could not take the policy in the F.Y.2022-23. Hence the provision of Property Insurance Fund is not considered by the Undertaking.

12) **Electric Supply Contingency Reserve Fund (Statutory Fund): -**

Every year 0.5% on the opening value of the total assets of the Electric Supply Division and 50% of the opening value of the General Administration assets (excluding land) is charged to revenue to create the above statutory fund. From FY 2011-12, it is decided to charge 0.25% on the Opening value of the asset on Electric Supply Division and 50% on the Opening value of General Administration Assets as per the MERC's & APTEL Order.

13) Generation of Electricity Fund(Non- Statutory Fund):-

The provision to this fund is made after keeping cash balance of Rs.50000, (for Electric supply Division) as per Section 460 KK (1) in the BEST Undertaking. The provision to this fund is made from the Surplus. The investment against this fund was already utilized for the earlier wage settlement for the period from FY 2001-02 to FY 2005-06.

14) Consumer Contribution & Government Grant:

Consumer Contribution, Capital Connection fees& Government Grant received till March, 2023 was brought under the Schedule 1 as both these funds are contributing for the Gross Block Assets of the Supply Division.

15) Obsolescence of Stores (Non-Statutory Fund): -

The said fund is created with the approval of BEST Committee & Corporation and source of this fund is based on quantum of Obsolescence of Stores value and same is first charged to Revenue Account. The application of this fund is to write off the book value of obsolete and unserviceable stores items. During the year entire amount lying in the fund is utilized.

16) BEST Group Insurance Fund (Non-Statutory Fund)

The said fund is created with the approval of BEST Committee & Corporation in the year 2014-15. The said fund is utilized to make the payment of Financial aid to the legal heirs of deceased members/ employees/officers along with payment under "The B.E.S. & T. Undertaking's Group Insurance Scheme".

17) Fixed Assets:-

i) The Fixed Assets are stated at Cost of Acquisition and net of Government Grants received from State&Central Government and consumers capital connection fees.

ii) The assets of General Administration Department which are made available to both the divisions are apportioned on 50:50 basis.

iii) Capital Work in – Progress includes Capital Stock in hand.

iv) Assets retired from active use and awaiting disposal have not been itemized.

18) Inventory:-

i) Stock of stores and consumables comprised of spares are valued at cost.

ii) Scrap declared but not disposed off is valued at expected average realizable sale rate.

iii) Purchases are charged to revenue account and stock taken at the year end.

19) **Investment: -**

Long term investments are stated at cost. Provision is generally made for diminution in realizablevalue other than temporary in nature.

20) **Bank Balances: -**

There were no separate designated bank accounts for Electric Supply Division till the Financial Year 2007-08. Since the Financial Year 2008-09 the bank accounts are designated. However, funds are utilized for Transport Division as& when required andvice-versa.

21) **Statutory Contribution to M.M.C. Fund:**

Due to deficitduring the year, the statutory contribution to the Municipal Fund as required under section 460KK(2)(e) amounting to Rs.40 lakhs have not paid and not reflected under Trade Payables.

22) **Fixed & Call with Chetana Co-operative Bank**

The Undertaking has invested an amount of Rs. 167.32 lakhs with Chetana Co-operative Bank Ltd. in the F.Y. 1989-90. Out of this, an amount of Rs.1.00 lakh was received on 20.11.1995 from the liquidator of the Bank. The said Bank is in liquidation and the matter is pending in the Court of Law.

23) **Generation of Electricity Fund Investment: -**

The BEST Undertaking has invested certain Provident Fund amount in Bonds issued by Madhya Pradesh Electricity Board and Uttar Pradesh Co-op. Spinning Mills from FY 1994-95 to 1998-99.

These Bonds issuing Companies had defaulted in payment of interest as and when it was due. Hence the Undertaking had filed suits in various Court of Law against both these companies. In turn, the Madhya Pradesh Electricity Board has made the payment of principal amount invested by the Undertaking and have not made the payment of interest thereon. As such, suit for recovery of interest thereon against this Company is pending in the Court of Law.

As regard to amount invested in UPCSMFL Bonds 2003, UPCSMFL Bonds 2004, the Company has neither made payment of principal amount nor interest thereon hence the Undertaking had filed suit for recovery of principal amount and interest against this Company and these suits are pending for final hearing.



24) **Contingent Liability**: -

Term Deposit with Chetana Co-operative Bank - Rs. 166.32 lakhs

Generation of Electricity Fund Investment - Rs. 200 lakhs

25) **Related Party Disclosures:-**

As per the Accounting Standard (AS-18) on related party disclosure issued by The Institute of Chartered Accountants of India, the disclosure of transaction with related party as defined in the Accounting Standard is as follows: -

i) **List of Related Parties and Relationships**

Name of Related Parties	Relationship
Mumbai Municipal Corporation	BEST Undertaking is a Statutory Committee of the Mumbai Municipal Corporation.
BEST Committee	Competent Authority
Mr. Lokesh Chandra, IAS	General Manager

The General Manager manages the affairs of BEST Undertaking, under the supervision and control of BEST committee and Mumbai Municipal Corporation.

ii) **Transaction / Balance with MMC:-**

Particulars/Natures	Type	Amounts in `. in Lakhs
Sale of Energy (Street Lighting)	Income	780.44 (786.77)
Repairs of Street Lighting	Income	6360.723 (4963.46)
Permanent reinstatement of Cable Trenches	Expenditure	1034.92 (1867.24)

Note: Figures in brackets are of Previous Year.

26) Spark Green Energy vendor – Penalty on Interest free deposit is applicable due to delay, which is not provided in the current financial statements.

27) Previous year's figures have been regrouped/restated/reclassified where necessary.

28) Provision for Bad Debts are made for 1.5% of closing balance of Sundry Debtors.

As per our attached report of even date

For M. M. Mathuria & Associates,
Chartered Accountants
FRN. 115354W

Mr. Manoj Mathuria
(Proprietor)
M. No. 049425
Place: Mumbai
Dated: 29th December,2023
UDIN : 23049425BGUCJC6879

For Brihan Mumbai Electric Supply&Transport Undertaking

29/12/23

for **Mr. Vijay Singhal**
General Manager

Notes forming part of financial statement

	As at 31st MARCH 2023 (in lakhs)	As at 31st March 2022 (in lakhs)
2 **RESERVES AND SURPLUS**		
STATUTORY RESERVE (As per BMC Act, 1888)		
A. Sinking Fund for Public Loan	-	-
Addition during the year	-	-
	-	-
Less: Deduction During the Year		
	-	-
B. *Best Staff Benefit Fund	296.65	270.43
Addition during the year	36.46	26.22
	333.11	296.65
Less: Adj/Deduction During the Year	-	-
	333.11	**296.65**
C. Motor Vehicles(Third Party Ins Reserve)		
Addition/ Adj during the year		
Less: Adj/Deduction During the Year		
Total of A+B+C	**333.11**	**296.65**
NON-STATUTORY RESERVE		
D. Property Insurance Reserve	10,014.73	10,014.73
Addition during the year	-	-
	10,014.73	10,014.73
Less:Adj/ Deduction During the Year	-	-
	10,014.73	**10,014.73**
E. Third Party Insurance Reserve		
Addition during the year		
Less: Deduction During the Year		
F. Depreciation Fund	-	-
Addition during the year	-	-
Less: Deduction during the year		
	-	-
G. Fidelity Insurance Reserve	7.03	7.03
Addition/Adj during the year	-	-
	7.03	7.03
Less: Adj/Deduction During the Year	-	-
	7.03	**7.03**



Notes forming part of financial statement

	As at 31st MARCH 2023 (in lakhs)	As at 31st March 2022 (in lakhs)
H. Grant/Consumer Cont.	36,631.00	35,803.01
Addition/ Adj during the year	3,954.12	827.99
	40,585.12	36,631.00
Less: Deduction / Adjustments During the Year		
	40,585.12	**36,631.00**
I. BEST Group Ins. Fund	(11.91)	(11.92)
Addition during the year	0.00	0.01
	(11.91)	(11.91)
Less: Deduction/Adj During the Year		
	(11.91)	**(11.91)**
J. Electric Supply Contingencies Reserve	6,897.10	6,161.57
Addition/Adj during the year	761.55	735.52
	7,658.64	6,897.10
Less: Deduction During the Year	-	-
	7,658.64	6,897.10
less: Invested amount as per regulation & investable amount	-	-
	7,658.64	**6,897.10**
K. * Generation Of Electricity Fund	19,687.30	19,655.30
Addition/Adj during the year	-	32.00
	19,687.30	19,687.30
Less: Deduction During the Year		
	19,687.30	**19,687.30**
Total of D+E+F+G+H+I+K	**77,940.92**	**73,225.25**
J. *Minimum Cash Balance as per Section 460KK1	0.50	0.50
Addition/Adj during the year		
	0.50	0.50
Less: Deduction During the Year		
	0.50	**0.50**
K. B. E. S. T. Staff Amenities Reserve	0.30	-
Provided during the year	-	0.30
	0.30	-
Less: Deduction During the Year	-	-
	0.30	**0.30**
L. Obsolescence of stores	10.53	6.53
Addition/Adj during the year		
	10.53	6.53
Less: Deduction / Adjustments During the Year	-	-
	10.53	**6.53**
M. Surplus		
Opening balances as per last financials	4,94,728.30	5,31,398.90
Add: Profit/(Loss) for the year	(1,08,983.60)	(60,913.45)
Add: Prior period items	3,403.74	24,978.37
	3,89,148.44	**4,95,463.82**
Deduct : Transfer to Contingency reserve fund	(761.55)	(735.52)
	3,88,386.89	**4,94,728.30**
Total of J+ K+L+M	**3,88,398.22**	**4,94,735.63**
Total	**4,66,672.25**	**5,68,257.53**

Notes forming part of financial statement

	As at 31st MARCH 2023 (in lakhs)
3 Long-term borrowings	
Secured loan	
Secured against first charge on plant & machinery from Canara Bank^	
Long Term finance *	-
Unsecured loan	
APDRP Loan**	453.95
Short Term Finance *	32,333.33
REC #	23,719.06
DEPOSIT WITH BEST FUND (FROM SBF)	
Short Term Finance (Tata Finance)	1,58,384.22
	2,14,890.57

^ Rate of Interest 12.95% and secured against first charge on plant & machinery

** The maturity period of the loan will be 20 years and repayments being made in 20 installments.
The loan carries interest @ 10.50%.

* The repayment to be made in 6 monthly installments. The loan carries interest @ 10.00%

Rate of Interest 11.75%

	As at 31st MARCH 2023 (in lakhs)
4 Other Non-Current Liabilities	
Security Deposit	
- Deposit from Employees	35.87
- Deposit from Customer	53,135.79
	53,171.66

	As at 31st MARCH 2023 (in lakhs)
5 Trade payables	
Trade payables *	6,514.23
	6,514.23

* The Company has not received information from Creditors regarding their status under the Micro, disclosure relating to amounts unpaid as on 31st March 2018 together with Interest paid / payable have not been ascertained.

	As at 31st MARCH 2023 (in lakhs)
6 Other current liabilities	
Statutory Liabiliities (Contributions to PF,Pension, ESIC, withholding Taxes,VAT etc.)	1,77,907.97
Empolyee dues payable	35,956.04
Current maturities for long term borrowings	
Other payables	67,678.79
	2,81,542.80

	As at 31st MARCH 2023 (in lakhs)

8 Non-current investments

Unquoted Bond	
General Securities :	
8.20% Oil Bond 2023	324.00
8.83%IRFC Bond 2034	350.00
9.97%APPFCL Bond 2024	110.00
9.97%APPFCL Bond 2024	230.00
	1,014.00
BEST Group Insurance Scheme Fund	
Central Bank of India Fort Branch	-
Indian Bank Fort Branch	-
Bank of India Electric House	-
Punjab National Bank Colaba	-
Central Bank of India Pedder Road Branch	-
Canara Bank Colaba	
Syndicate Bank,Fort	
State Bank of Patiala	
Generation of Electricity Fund Investment	200.00
Unquoted Shares	
Shares in Saraswat Co-op Bank	0.01
Contingencies Reserve Fund Investment	6,356.00
	6,356.01
Total	**7,570.01**

As at 31st MARCH 2023 (in lakhs)

9 Long term Loans and advances

(Unsecured, Considered good)

Deposits	6,063.26
	6,063.26

As at 31st MARCH 2023 (in lakhs)

10 Other Non - Current Assets (Considered good)

Deferred Revenue Expenditure	688.50
Staff Benefit Fund Investment (Fixed Deposit)	166.32
Fixed Deposit with Chetna Co - operative Bank	471.01
Term Deposit with Canara Bank for LC	**1,325.83**

As at 31st MARCH 2023 (in lakhs)

11 Inventories

Inventories	1,230.19
	1,230.19

As at 31st MARCH 2023 (in lakhs)

12 Trade receivables

Unsecured, considered good stated otherwise

Debts outstanding for a period exceeding six months from the date they are due for payment		27,512.58
		27,512.58
Other receivables		14,746.76
		14,746.76
	Total	42,259.34

	As at 31st MARCH 2023 (in lakhs)
13 Cash and bank balances	
Cash and cash equivalents	
Balance with banks in Current accounts	3,03,944.57
Cash on hand	(10,604.18)
	2,93,340.39
Balance in banks for margin money	
Staff Benefit Fund Investment (Fixed Deposit)	688.50
Fixed Deposit with Chetna Co - operative Bank	166.32
Term Deposit with Canara Bank for LC	471.01
CLTD A/C (FAME) WITH BANK OF INDIA	
	1,325.83
Less: Shown under other non current assets	(1,325.83)
	2,93,340.39

	As at 31st MARCH 2023 (in lakhs)
14 Short term Loans and advances	
(Unsecured, Considered good)	
Deposits	
Other loans and advances	
Loans to employees	67.04
Prepaid expenses	378.01
Advances recoverable in cash or kind	
- Others	2,937.14
- From Transport Division	5,01,333.12
- From suppliers	(734.03)
	5,03,981.28

	As at 31st MARCH 2023 (in lakhs)
15 Other current assets	
Interest Accrued but not received :	
Accrued Interest On contingencey reserve	162.21
Interest Accrued On Fixed And Call Deposit	116.67
Accrued Interest On Generation Of Electricty Fund	1,666.16
Accrued Interest On Staff Benefit Fund	-
Accrued Interest On BEST Group Insu. Fund	-
	1,945.04

		Year ended 31st March,2023 (in lakhs)	Year ended 31st March,2022 (in lakhs)
16	**Revenue from operations**		
	Sale of service	3,60,190.39	3,04,767.74
	Other operating income		
	Sale of Scrap	606.64	136.32
	Revenue from operations (Gross)	**3,60,797.03**	**3,04,904.06**
	Sale of Service		
	Distribution of energy by meter	3,52,954.28	2,99,017.54
	Distribution of energy	875.39	786.77
	Repairs & Maintenance of Street lighting	6,360.72	4,963.43
		3,60,190.39	**3,04,767.74**
17	**Interest income on**		
	Bank deposits	55.40	75.82
	Rent of Building & land	628.95	411.70
	E. D collection & D P charges	3,915.87	4,900.38
	Profit on Sale of Assets	983.94	971.29
	Miscellaneous income	19.87	7.77
	Discount, sundry balances written back	2,337.29	757.50
	Advertisement receipts	237.90	0.30
		8,179.23	**7,124.76**

	Year ended 31st March,2023 (in lakhs)	Year ended 31st March,2022 (in lakhs)
18 Employee benefit expense		
Salaries, wages and bonus	44,107.09	42,981.23
Contribution to provident and	15,223.60	12,743.37
Staff welfare expense	202.21	253.66
	59,532.90	**55,978.26**
19 Finance cost		
Interest expense	11,095.60	6,974.69
Other borrowing cost	827.14	1,564.97
	11,922.75	**8,539.66**
20 Other expenses		
Power, Fuel and Electricity	503.55	548.14
Rent	1,311.76	1,299.02
Repairs and Maintenance		
Building	773.67	839.26
Machinery	358.09	215.41
Others	3,393.36	2,199.20
Insurance	-	0.00
Incentive charges	1,236.67	1,027.29
Advertisement Expenses	72.15	81.05
Network charges	1,677.15	1,668.66
Payment to Auditors (Refer details Below)	250.00	225.00
Printing and Stationery	182.70	183.36
Communication cost	707.69	796.10
Travelling and Conveyance	1,677.53	1,622.70
Legal and Professional Fees	405.91	347.75
Rates and taxes	207.90	72.42
Bad debts	565.00	459.00
Bank Charges	352.10	693.74
Discount on Electricity charges	2,260.17	1,520.26
Permanent Reinstatement	1,034.92	1,867.24
Other Establishment Expenses	923.17	1,242.63
Best staff amenities reserve expense	178.37	403.59
Property insurance fund	-	-
Provision for Obsolescence of stores	4.05	4.05
Transfer to MCGM u/s 460 KK(2)e		
	18,075.91	**17,315.89**
Payment to auditors		
As auditor		
Audit fee	250.00	225.00
Tax audit fee		
Limited review		
	250.00	**225.00**

APPENDIX NO. E-6

KED CAPITAL EXPENDITURE AS AT 31ST MARCH, 2023

PARTICULARS	TOTAL AS AT 31ST MAR,2022		ADDITIONS DURING FY 2022-23	DEDUCTION IN RESPECT OF ASSETS WRITTEN OFF	ADJUSTMENT IN RESPECT OF TRANSFER (+) OR (-)	TOTAL AS AT 31ST MARCH,2023	ACCUMULATED DEPRECIATION AS ON 31ST MARCH, 2023	NET VALUE AS ON 31ST MARCH, 2023
NERAL ADMINISTRATION								
ID	41129692		0	0	0	41129692	0	41129692
LDINGS	766861935		400000	0	0	787261935	549610507	237651428
TOR VEHICLES	39295628		0	2837760	0	36457868	17735474	18722394
NT AND MACHINARY	38379262		0	0	0	38379262	29801033	8578229
NITURE AND OFFICE EQUIPMENTS	63058527		377371185	10651218	0	429778494	31859952	397918542
OLS AND EQUIPMENTS	2980347		150000	0	0	3130347	1821734	1308613
URITY EQUIPMENTS	3260388		0	0	0	3260388	2432064	828324
TOTAL	974965780		377921185	13488978	0	1339397987	633260764	706137223
CTRIC SUPPLY								
ID	22953418		0	0	0	22953418	0	22953418
LDINGS	824262843		59729458	0	-6237000	877755301	430667163	447088138
N & MACHINERY	12660786912	*	465264200	12864566	-302962	13112883584	7609785270	5503098314
BLES & MAINS / PILLARS/ST.LIGHTING	12384533986	*	811677522	9262163	-446475	13186502870	5457715492	7728787378
TERS AND INSTALLATIONS	1802474461	*	10273216	95613784	0	1517133893	928421502	588712391
REET LIGHTING LAMPS	1623029223	@	58807951	0	0	1681837174	560508606	1121328568
E. A. ON HIRE	419928		0	0	0	419928	344906	75022
TOR VEHICLES	138266692		0	15989559	0	122277133	101657197	20619936
OLS AND EQUIPMENTS	487828366		5716436	476110	2349024	495417716	206727063	288690653
RNITURE AND OFFICE EQUIPMENTS	273357486	+	14416453	5470321	0	282303618	266599466	15704152
TOTAL	30017913315		1425885236	139676503	-4637413	31299484635	15562426665	15737057970
SES								
ND	667872253		0	0	0	667872253	0	667872253
LDINGS	1274254111		19692492	0	0	1293946603	670748041	623198562
SES / MOH OF BUSES	4656054103	$	0	315606414	589646	4341037335	2407576741	1933460594
TOR VEHICLES/MOH OF MOTOR VEH.	121083496		0	2371200	0	118712296	80318993	38393303
NT AND MACHINERY	21360118		0	0	0	21360118	10072369	11287749
OLS AND EQUIPMENTS	104207707		101244	59438	0	104249513	72179449	32070064
RNITURE AND OFFICE EQUIPMENTS	491167652	&	56553232	1290087	0	546430797	184574525	361856272
TOTAL	7335999441		76346967	319327139	589646	7093608915	3425470118	3668138797
GRAND TOTAL	38328878536		1880153388	472492620	-4047767	39732491537	19621157547	20111333990

cludes 804 Nos of Buses (AC CNG 5Nos(2.75Cr) + Low Flooring CNG SD 549 Nos (127.19 Cr) + Midi CNG 250 Nos (49.97 Cr) under JNNURM amounting to Rs. 179.91 Crs.
cludes expenditure incurred Under Accelerated Power Development Reform Programme Scheme of Central Government From Financial Year 2001-02 to 2008-09 amounting to Rs.291.66 Crs (Rs.143.21 Crores Under
ant & Machinery,Rs. 64.52 Crs Under Cable & Mains, Rs.75 02 Crs Under Meters & Rs. 6.91 Crs Under Office Equipments)
cludes Expenditure Incurred Under Business Process Automation Project (BPAP) Amounting to Rs.102.85 crs. (Rs.51.71 +0.10+00.39 +47.65+3.00Lakhs)
C of Rs."0.44 (crore)" was brought into Books of Accounts in FY 2022-23
cludes expenditure incurred towards procurement of 185 Nos of SD TATA buses (Lot 1/303) Rs. 90.56 Cr & Electric Hybrid buses (Lot 1/6) 6 Nos of buses Rs. 9.84Cr
ainst Rs. 100.00 Crs grant received from MCGM and Tejaswini SD buses (Lot 1 / 37) of Rs. 10.92 Crs
cludes expenditure incurred towards procurement of Furniture & Office equipments of 42.61 lakhs under Skill Development at Traffic Training Centre, Dindoshi against Grant of Rs. 50.00 Lakhs received fr. Central govt.
n received under RDSS project Rs.29.19 Crs. From Central Govt. and Advance paid to L&T (Rs.4.67 crs.) + TATA power (Rs.24.52 crs.)
cludes Plant & Machinery of Rs. 108.72+0.11 Crs(21-22)+1.21 Crs (22-23) = 110.04 against 60% grant of Rs. 66.98 Crs received from Central Govt.for IPDS Project.
ncludes expenditure incurred towards Street Lighting Lamps (Rs.16.39+47.84 Crs (FY19-20) for LED Street Light Lanterns / flood lights/bulbs & 12.62 +4.97 (FY 19-20)= 17.59 Crs for Led street lanterns of various watts)
(21-22) Grant of (Rs. 7.35+18.57 FY 2019-20) Rs.25.95 Crs received from MCGM.

UDIN:	23049425BGUCJC6879
MRN/Name:	049425/MANOJ MAHENDRA MATHURIA
Firm Registration No.:	115354W
Document type:	Certificates
Document sub type:	Others
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Financial Figures/Particulars:	
certifying Restated Data of its Electricity Business & Data under MERC's (Uniform Recording and Reporting of Information) Regulation — 2009:	0
certifying Restated Data of its Electricity Business & Data under MERC's (Uniform Recording and Reporting of Information) Regulation — 2009:	0
Document description:	certifying Restated Data of its Electricity Business & Data under MERC's (Uniform Recording and Reporting of Information) Regulation — 2009

M. M. MATHURIA & ASSOCIATES MUMBAI M. No. 49425 CHARTERED ACCOUNTANTS

M. M. MATHURIA & ASSOCIATES.

CHARTERED ACCOUNTANTS

56, Botawala Building, 1st Floor, Office No: 9 & 10, Bomanji Master Lane, Mumbai- 400 002.
Website: http://www.mathuria.in, E-mail: incometax@mathuria.in

Date: 30th September, 2024

To,
CAO & FA
The Brihan Mumbai Electric Supply & Transport Undertaking
BEST Bhavan, Best Marg,
Mumbai -400 001

Dear Sir,

1. This Certificate is issued in accordance with the terms of Appointment letter CAO & FA/Dy. CAO (RC)/145/2023 dated 11.08.2023 issued by BEST undertaking for certifying Restated Data of its Electricity Business & Data under MERC's (Uniform Recording and Reporting of Information) Regulation — 2009 for the F.Y. 2023-24 of Electricity Business & for certifying Restated Data of the BEST undertaking of Electricity Business for the F.Y. 2023-24 for the purpose of Revamped Distribution Sector Scheme (RDSS) of Government of India.

2. MERC has directed BEST undertaking vide their order dated 9th March,2006 to maintain the Proforma Accounts and Financial Statements for its Electricity Business separately from F.Y. 2006-07 onwards in the prescribed Formats as applicable to entities under the Companies Act, 2013 (Erstwhile Companies Act, 1956).

Responsibility of Management for Financial Statements

3. The Preparation of the Proforma Accounts is the Responsibility of the Management of BEST undertaking including the preparation and maintenance of all accounts, adequate accounting records and other relevant supporting documents. The Management of BEST undertaking is also responsible for applying appropriate basis for preparation and making estimates that are responsible and prudent.

4. The undertaking has ensured that it provides all relevant information pursuant to Companies Act. 2013.

Responsibility of Certifying Chartered Accountants Firm

5. We have examined the restated data of the Supply Division/ (Electricity Business) of the BEST undertaking for the year ended 31st March,2024 .The Financial Statements are prepared by the undertaking pursuant to the Mumbai Municipal Corporation Act, 1888.

M.M. MATHURIA & ASSOCIATES * CHARTERED ACCOUNTANTS * MUMBAI M. No. 49425

Emphasis of matter:

I. The figures of financial statements of Electric supply division are derived by management by allocating the items of consolidated financial statements into 3 divisions namely; Electricity Supply, Transport and General Administrative division. Further, the items of General Administrative division are divided into Electricity supply and Transport division in proportion of staff deployed by respective departments.

II. As informed by the management, depreciation on Fixed Assets wherever applicable is based on the rules and the manner prescribed under Regulation of MERC (terms and conditions of Tariff) regulations 2019. The depreciation is provided on Straight Line Method. Depreciation rates and life of an asset are specified by MERC regulations.

III. It was observed that, no depreciation is charged on fixed assets purchased during the year as required by the MERC regulations. Also, for assets sold during the year, the depreciation for the entire year is provided irrespective of date of sale. This practice is consistently followed by the organization during the past several years.

IV. Gratuity paid to employees who have retired during the period under audit has been correctly provided in the accounts. However, no provision is made for gratuity in respect of employees who are still in employment.

V. Similarly, leave encashment paid during the period to employees has been duly accounted for. However, the provision is not made for the employees who have not yet opted for leave encashment

VI. The details of consumption of inventory are not shown under the statement of Profit & Loss as required by Schedule III of companies Act, 2013. It was observed that purchases are directly charged to revenue account.

VII. The asset side of the balance sheet includes Rs. 1,66,32,000/- related to "Fixed and call with Chetana Co-op Bank" in other current assets. However, as informed by the management, the said bank is in liquidation and the matter is pending in court of law.

CERTIFICATION:-

On the basis of examination of the books, records and statements produced before us and to the best of our knowledge and according to the information, explanations and representations given to us, subject to our observation above, we certify that the aforesaid restated data for Supply Division (Electricity Business) has been prepared in accordance with the generally accepted principles and the format prescribed under the Companies Act, 2013.

Our examination of these restated financial statements was conducted in accordance with the standards on Auditing and other applicable authoritative pronouncements issued by the Institute of Chartered Accountants of India. Our examination was not planned or performed in connection with any transactions to identify matters that may be of potential interest to third parties.

M.M. MATHURIA & ASSOCIATES
MUMBAI
M. No.
49425
CHARTERED ACCOUNTANTS

We conducted our examination of the statements in accordance with Guidance note on Reports or Certificate for special Purpose (Revised 2016) issued by the Institute of Chartered Accountants of India. The Guidance Note requires that we comply with ethical requirement of the code of Ethics issued by the Institute of Chartered Accountants of India.

We have complied with the relevant applicable requirement of the Standard on Quality control (SOC)1, Quality Control Firms that performs Audits and Reviews of Historical Financial information , and other Assurance and related Services Engagements.

Restriction on use

This report is issued solely for the purpose of MERC and RDSS Scheme of Government of India as mentioned in paragraph 1 & 2 above and should not be used by any other person or for any other purpose. Accordingly, we do not accept or assume any liability or any duty of care for any other purpose or to any other person to whom this report is shown or into whose hands it may come without our prior consent in writing. This report relates only to the items specified above and does not extend to any financial statements of the BEST undertaking taken as a Whole.

For M. M. Mathuria & Associates,
Chartered Accountants
FRNo. 115354W

M. M. MATHURIA & ASSOCIATES * CHARTERED ACCOUNTANTS * MUMBAI M. No. 49425

Mr. Manoj Mathuria
(Proprietor)
M. No. 049425
Place: Mumbai

UDIN: 24049425BKE7AY5206

Notes forming part of Accounts
For the year ended 31st March, 2024
(Electricity Supply division)

The B.E.S. & T Undertaking is required to maintain books of account as provided in section 460MM of The Mumbai Municipal Corporation Act, 1888 as amended. Since the B.E.S.& T Undertaking does not have any share capital and being a part of the local authority, Maharashtra Electricity Regulatory Commission(MERC), has permitted it to maintain the books of account in the manner provided in the Mumbai Municipal Corporation Act, 1888. This is in addition to preparation of proforma accounts in the format prescribed under the Companies Act, 1956 as amended 2013.

As provided in section 126A of the Mumbai Municipal Corporation Act, 1888 it is mandatory for the Undertaking to prepare budget estimates of income and expenditure of the next ensuing year. After the grant of approval by the B.E.S.T Committee and the Municipal Corporation these estimates are treated as grants.Keeping in view the above statutory position the following accounting policies are followed by the Undertaking: -

1) **Revenue Receipts Allocation:**

   a) **General administration receipts: -**

      i) These receipts include interest on deposits and other investments. These are allocated in the ratio of 90:10 to Electric Supply and Transport Divisions.

      ii) Apprentice premium and other receipts are allocated in the ratio of 50:50 to Electric Supply and Transport Divisions.

      iii) Rent of Land and Buildings is allocated in the ratio of 25:75 to Electric Supply and Transport Divisions.

      iv) Income arising on sale of assets of General Administration Department is allocated in the ratio of 69:31 to Electric Supply and Transport Divisions.

      v) Other Receipts and Advertisement receipts are allocated in the ratio of 50:50.

2) **Gratuity:**

   No Provision is made in the accounts for gratuity payment due to the employees. Gratuity actually paid to employees is recorded as an expense in the books amounting to Rs. 99.27 crores.

3) **Advertisement Receipts: -**

   During the year there are no advertisement receipts earned.

4) **Encashment of Leave:**

M.M. NATHURIA & ASSOCIATES MUMBAI CHARTERED ACCOUNTANTS

No Provision is made in the accounts for LTA / leave encashment dues of the employees. LTA / leave encashment actually paid to employees is recorded as an expense in the books amounting to Rs.5.90 crores.

5) Allocation of General Administration Expenses:

The allocation of General Administration Expenses between the Electric Supply and Transport Division is mainly on the basis of number of employees deployed in each division and the percentage of allocation during the current financial year and the immediately preceding year were as under:

Sr No.	Particulars	2023-24		2022-23	
		Supply (%)	Transport (%)	Supply (%)	Transport (%)
1)	Security and Vigilance	20	80	25	75
2)	Civil Engineering Department	45	55	45	55
3)	Time Keeping, Personnel, Welfare, Medical etc.	19	81	19	81
4)	EDP Department	65	35	65	35
5)	Legal, Audit, Accounts, Cash, Secretarial, PRO etc.	50	50	50	50

6) Allocation of Energy Charges for the purpose of considering the operational efficiency of the two divisions.

The energy utilised in the various Bus Depots is charged as expenditure to the Transport Division and corresponding notional income is included in the income of Electric Supply division.

7) Depreciation Provision:

i) The Depreciation on the Fixed Assets is provided under the Straight-Line Method.

ii) The estimated life of assets in the Electric Supply Division is based on the MERC's regulations, 2019.

iii) The Depreciation so computed is restricted to 90% of the book value of assets.

iv) The Depreciation has been provided on the Opening balance of the assetsas on 1st April, 2023.

v) Items of Furniture and other Office Equipments, tools individually costing lessthan Rs. 10,000/- are charged to revenue in the year of purchase.

vi) The rates of Depreciation applied for various classes of assets& policy for calculation of Depreciation is as per the MERC Regulations, 2019.

M. M. MATHURIA & ASSOCIATES MUMBAI CHARTERED ACCOUNTANTS

8) **BEST Staff Benefit Fund (Statutory Fund under Section 460 HH):**

As required under the M.M.C. Act, the said fund is created and source of this fund is fines collected from the Officers / Staff under Section 460 (W) on account of misconduct, etc. In addition to this, Donations from passengers, Income out of sale of lost property are also credited to this fund. The application of this fund is to give financial assistance to the widows of the staff in case of death while in service and also for well being of staff members. This is a dedicated fund and not invested in the bankand included in otherReserve.

9) **Motor Vehicles(Third Party Insurance Fund) a Statutory Fund:-**

As required under the Motor Vehicle Act a statutory fund uptoRs. 20 Lakhs is required to be created to settle the claims arising out of accidents. This being a dedicated fund is required to be invested separately. The amount to be charged to Revenue depends upon the number of vehicles used by the Electric Supply, Transport and General Administration divisions of the Undertaking and included in other Reserve.

10) **Fidelity Insurance Fund (Non-Statutory): -**

Every year a provision is made towards Fidelity Insurance Fund to safeguard interest of the Undertaking against the risk arising out of cash handling by employees. Provision towards Fidelity Insurance Fund was stopped due to no debit was charged for last 9 years. No such incidence is reported in last 9 years.

11) **Property Insurance Fund (Non-Statutory): -**

The Property Insurance Fund is created by providing Minimum 0.5% and Maximum 5% of the opening value of the total Assets of the Undertaking (Excluding Land). In view of creating this fund no general insurance policy is contracted with any outside insurance company to cover the assets against any risk. Under this fund, a similar treatment is given as stated in the General Reserve Fund in order to equalize the provision towards the Property Insurance Fund to the extent of 0.5% on the Opening Gross Fixed Assets at the time of bifurcating the Balance sheet of Supply &Transport.In Case No.33 of 2016 Maharashtra Electricity Regulatory Commission(MERC) has disallowed the amount of Property Insurance Fund for Second MYT Control Period for FY 2012-13 to FY 2015-16 and have directed to take Property Insurance from an outside Agency, the corresponding Insurance Premium will be allowed as expenses. However, the BEST Undertaking could not take the policy in the F.Y.2023-24. Hence the provision of Property Insurance Fund is not considered by the Undertaking.

12) **Electric Supply Contingency Reserve Fund (Statutory Fund): -**

Every year 0.5% on the opening value of the total assets of the Electric Supply Division and 50% of the opening value of the General Administration assets (excluding land) is charged to revenue to create the above statutory fund. From FY 2011-12, it is decided to charge 0.25% on the Opening value of the asset on Electric Supply Division and 50% on the Opening value of General Administration Assets as per the MERC's & APTEL Order.

13) Generation of Electricity Fund(Non- Statutory Fund):-

The provision to this fund is made after keeping cash balance of Rs.50000, (for Electric supply Division) as per Section 460 KK (1) in the BEST Undertaking. The provision to this fund is made from the Surplus. The investment against this fund was already utilized for the earlier wage settlement for the period from FY 2001-02 to FY 2005-06.

14) Consumer Contribution & Government Grant:

Consumer Contribution, Capital Connection fees& Government Grant received till March, 2024 was brought under the Schedule 1 as both these funds are contributing for the Gross Block Assets of the Supply Division.

15) Obsolescence of Stores (Non-Statutory Fund): -

The said fund is created with the approval of BEST Committee & Corporation and source of this fund is based on quantum of Obsolescence of Stores value and same is first charged to Revenue Account. The application of this fund is to write off the book value of obsolete and unserviceable stores items.

16) BEST Group Insurance Fund (Non-Statutory Fund)

The said fund is created with the approval of BEST Committee & Corporation in the year 2014-15. The said fund is utilized to make the payment of Financial aid to the legal heirs of deceased members/ employees/officers along with payment under "The B.E.S. & T. Undertaking's Group Insurance Scheme".

17) Fixed Assets:-

i) The Fixed Assets are stated at Cost of Acquisition and net of Government Grants received from State&Central Government and consumers capital connection fees.

ii) The assets of General Administration Department which are made available to both the divisions are apportioned on 50:50 basis.

iii) Capital Work in – Progress includes Capital Stock in hand.

iv) Assets retired from active use and awaiting disposal have not been itemized.

18) Inventory:-

i) Stock of stores and consumables comprised of spares are valued at cost.

M. M. NATHURIA & ASSOCIATES MUMBAI CHARTERED ACCOUNTANTS

ii) Scrap declared but not disposed off is valued at expected average realizable sale rate.

iii) Purchases are charged to revenue account and stock taken at the year end.

19) Investment: -

Long term investments are stated at cost. Provision is generally made for diminution in realizablevalue other than temporary in nature.

20) Bank Balances: -

There were no separate designated bank accounts for Electric Supply Division till the Financial Year 2007-08. Since the Financial Year 2008-09 the bank accounts are designated. However, funds are utilized for Transport Division as& when required andvice-versa.

21) Statutory Contribution to M.M.C. Fund:

Due to deficitduring the year, the statutory contribution to the Municipal Fund as required under section 460KK(2)(e) amounting to Rs.40 lakhs have not paid and not reflected under Trade Payables.

22) Fixed & Call with Chetana Co-operative Bank

The Undertaking has invested an amount of Rs. 167.32 lakhs with Chetana Co-operative Bank Ltd. in the F.Y. 1989-90. Out of this, an amount of Rs.1.00 lakh was received on 20.11.1995 from the liquidator of the Bank. The said Bank is in liquidation and the matter is pending in the Court of Law.

23) Generation of Electricity Fund Investment: -

The BEST Undertaking has invested certain Provident Fund amount in Bonds issued by Madhya Pradesh Electricity Board and Uttar Pradesh Co-op. Spinning Mills from FY 1994-95 to 1998-99.

These Bonds issuing Companies had defaulted in payment of interest as and when it was due. Hence the Undertaking had filed suits in various Court of Law against both these companies. In turn, the Madhya Pradesh Electricity Board has made the payment of principal amount invested by the Undertaking and have not made the payment of interest thereon. As such, suit for recovery of interest thereon against this Company is pending in the Court of Law.

As regard to amount invested in UPCSMFL Bonds 2003, UPCSMFL Bonds 2004, the Company has neither made payment of principal amount nor interest thereon hence the

M.M. MURIA & ASSOCIATES * CHARTERED ACCOUNTANTS * MUMBAI M. No. 49425

Undertaking had filed suit for recovery of principal amount and interest against this Company and these suits are pending for final hearing.

24) Contingent Liability: -

Term Deposit with Chetana Co-operative Bank -	Rs.	166.32 lakhs
Generation of Electricity Fund Investment -	Rs.	200 lakhs

25) Related Party Disclosures:-

As per the Accounting Standard (AS-18) on related party disclosure issued by The Institute of Chartered Accountants of India, the disclosure of transaction with related party as defined in the Accounting Standard is as follows: -

i) List of Related Parties and Relationships

Name of Related Parties	Relationship
Mumbai Municipal Corporation	BEST Undertaking is a Statutory Committee of the Mumbai Municipal Corporation.
BEST Committee	Competent Authority
Mr. Anil Diggikar, IAS	General Manager

The General Manager manages the affairs of BEST Undertaking, under the supervision and control of BEST committee and Mumbai Municipal Corporation.

ii) Transaction / Balance with MMC:-

Particulars/Natures	Type	Amounts in`. in Lakhs
Sale of Energy (Street Lighting)	Income	1121.68 (780.44)
Repairs of Street Lighting	Income	6971.85 (6360.72)
Permanent reinstatement of Cable Trenches	Expenditure	2644.52 (1034.92)

Note: Figures in brackets are of Previous Year.

M.M. MATHURIA & ASSOCIATES * CHARTERED ACCOUNTANTS * MUMBAI M. No. 49425

26) Spark Green Energy vendor – Penalty on Interest free deposit is applicable due to delay, which is not provided in the current financial statements.

27) Previous year's figures have been regrouped/restated/reclassified where necessary.

28) Provision for Bad Debts are made amounting to Rs. 6.6 crores for FY 2023-24.

As per our attached report of even date

For M. M. Mathuria & Associates,
Chartered Accountants
FRN. 115354W

M. MATHURIA & ASSOCIATES MUMBAI M. No. 49425 CHARTERED ACCOUNTANTS

Mr. Manoj Mathuria
(Proprietor)
M. No. 049425
Place: Mumbai

Dated:30th September,2024

UDIN : 24049425BKETA45306

For Brihan Mumbai Electric
Supply &Transport Undertaking

GAD&FA(Delegation)

Mr. Anil Diggikar
General Manager

30/X/24

Brihan Mumbai Electric Supply & Transport Undertaking
Balance Sheet of Electric Supply as at 31st March 2024

EQUITY AND LIABILITIES	Notes	As at 31st March 2024 (in lakhs)	As at 31st March 2023 (in lakhs)
Shareholders' funds			
Reserves and surplus	2	483,379.33	466,672.24
		483,379.33	**466,672.24**
Non-current liabilities			
Long- Term Borrowings	3	192,624.85	**214,890.57**
Other non-current liabilities	4	56,631.54	53,171.66
		249,256.39	**268,062.23**
Current liabilities			
Trade payables	5	48,010.98	6,514.23
Other current liabilities	6	245,079.01	281,542.80
		293,090.00	**288,057.03**
TOTAL		**1,025,725.72**	**1,022,791.49**
ASSETS			
Non-current assets			
Fixed assets			
Tangible assets	7	162,306.93	160,901.27
Capital work-in-progress		4,603.68	4,174.89
Non-current investments	8	7,022.01	7,570.01
Long-term loans and advances	9	6,073.26	6,063.26
Other non-current assets	10	1,368.58	1,325.83
		181,374.46	**180,035.25**
Current assets			
Inventories	11	965.80	1,230.19
Trade receivables	12	52,803.15	42,259.34
Cash and Bank Balances	13	177,483.85	293,340.39
Short-term loans and advances	14	611,158.80	503,981.28
Other current assets	15	1,939.89	1,945.04
		844,351.49	**842,756.24**
TOTAL		**1,025,725.72**	**1,022,791.49**
Significant accounting policies	1		

As per our report of even date

MANOJ M MATHURIA
Chartered Accountants
Registration No.: 111234W

MANOJ M MATHURIA
Partner
M.No. 49425
Place: Mumbai
Date: 30th September, 2024
UDIN - 24049425BKETA45206

For Brihan Mumbai Electric Supply & Transport Undertaking

CAO&FA(Delegation)
Mr. Anil Diggikar
General Manager

Brihan Mumbai Electric Supply & Transport Undertaking
Statement of Profit and Loss for the period 01/04/2023 to 31/03/2024

	Notes	For the year ended 31st Mar. 2024 (in lakhs)	1st April 2022 - 31st Mar. 2023 (in lakhs)
Income			
Revenue from operation (gross)	16	427,821.77	360,797.03
Less: Excise duty			-
Revenue from operation (net)		**427,821.77**	**360,797.03**
Other income	17	6,460.03	8,179.23
Total Revenue		**434,281.80**	**368,976.26**
Expenses			
Purchase of electricity		316,641.06	377,499.49
Emloyee benefit expense	18	58,468.06	59,532.90
Finance cost	19	17,514.65	11,922.75
Depreciation	7	11,304.33	10,928.82
Other expenses	20	22,120.87	18,075.91
Total expenses		**426,048.98**	**477,959.86**
Profit before tax and Exceptional items		**8,232.82**	**(108,983.60)**
Exceptional items		-	0.00
Profit before tax		**8,232.82**	**(108,983.60)**
Significant accounting policies	1		

As per our report of even date

MANOJ M MATHURIA
Chartered Accountants
Registration No.: 115357W

MANOJ M MATHURIA
Partner
M.No. 49425
Place: Mumbai
Date: 30th September, 2024

UDIN - 24049425BKEJAY5206

For Brihan Mumbai Electric Supply & Transport Undertaking

GAO&FA(Delegation)
Mr.Anil Diggikar, IAS
General Manager

Notes forming part of financial statement

	As at 31st March 2024 (in lakhs)	As at 31st March 2023 (in lakhs)
2 **RESERVES AND SURPLUS**		
STATUTORY RESERVE (As per BMC Act, 1888)		
A. Sinking Fund for Public Loan	-	-
Addition during the year	-	-
	-	-
Less: Deduction During the Year		
	-	-
B. *Best Staff Benefit Fund	333.11	296.65
Addition during the year	60.72	36.46
	393.83	333.11
Less: Adj/Deduction During the Year	-	-
	393.83	**333.11**
C. Motor Vehicles(Third Party Ins Reserve)		
Addition/ Adj during the year		
Less: Adj/Deduction During the Year		
Total of A+B+C	**393.83**	**333.11**
NON-STATUTORY RESERVE		
D. Property Insurance Reserve	10,014.73	10,014.73
Addition during the year	-	-
	10,014.73	10,014.73
Less:Adj/ Deduction During the Year	-	-
	10,014.73	**10,014.73**
E. Third Party Insurance Reserve		
Addition during the year		
Less: Deduction During the Year		
F. Depreciation Fund		
Addition during the year	0.00	(0.10)
	0.00	(0.10)
Less: Deduction during the year		
	0.00	(0.10)
G. Fidelity Insurance Reserve	7.03	7.03
Addition/Adj during the year	-	-
	7.03	7.03
Less: Adj/Deduction During the Year	-	-
	7.03	**7.03**

M.M. MATHURIA & ASSOCIATES * CHARTERED ACCOUNTANTS * MUMBAI M. No. 49425

Notes forming part of financial statement

	As at 31st March 2024 (in lakhs)	As at 31st March 2023 (in lakhs)
H. Grant/Consumer Cont.	40,585.12	36,631.00
Addition/ Adj during the year	4,332.01	3,954.12
	44,917.13	40,585.12
Less: Deduction / Adjustments During the Year		
	44,917.13	**40,585.12**
I. BEST Group Ins. Fund	(11.91)	(11.91)
Addition during the year	11.91	0.00
	0.00	(11.91)
Less: Deduction/Adj During the Year		
	0.00	**(11.91)**
J. Electric Supply Contingencies Reserve	7,658.64	6,897.10
Addition/Adj during the year	798.14	761.55
	8,456.79	7,658.64
Less: Deduction During the Year	-	-
	8,456.79	7,658.64
less: Invested amount as per regulation & investable amount	-	-
	8,456.79	**7,658.64**
K. * Generation Of Electricity Fund	19,687.30	19,687.30
Addition/Adj during the year	-	-
	19,687.30	19,687.30
Less: Deduction During the Year		
	19,687.30	**19,687.30**
Total of D+E+F+G+H+I+K	**83,082.98**	**77,940.82**
J. *Minimum Cash Balance as per Section 460KK1	0.50	0.50
Addition/Adj during the year		
	0.50	0.50
Less: Deduction During the Year		
	0.50	**0.50**
K. B. E. S. T. Staff Amenities Reserve	0.30	**0.30**
Provided during the year	-	-
	0.30	**0.30**
Less: Deduction During the Year	-	-
	0.30	**0.30**
L. Obsolescence of stores	14.53	10.53
Addition/Adj during the year		
	14.53	10.53
Less: Deduction / Adjustments During the Year	-	-
	14.53	**10.53**
M. Surplus		
Opening balances as per last financials	388,386.88	494,728.29
Add: Profit/(Loss) for the year	8,232.82	(108,983.60)
Add: Prior period items	4,065.62	3,403.74
	400,685.32	**389,148.43**
Deduct : Transfer to Contingency reserve fund	(798.14)	(761.55)
	399,887.18	**388,386.88**
Total of J+ K+L+M	**399,902.51**	**388,398.21**
Total	**483,379.33**	**466,672.14**

M. M. MATHURIA & ASSOCIATES * CHARTERED ACCOUNTANTS * MUMBAI M. No. 49425

Notes forming part of financial statement

	As at 31st March 2024 (in lakhs)	As at 31st March 2023 (in lakhs)
3 Long-term borrowings		
Secured loan		
Secured against first charge on plant & machinery from Canara Bank^		
Long Term finance *	-	158,384.22
Unsecured loan		
APDRP Loan**	232.37	453.95
Short Term Finance *	34,333.33	32333.33
REC #	19,765.89	23,719.06
TATA BILL Discounting	138,293.26	-
	192,624.85	**214,890.57**

^ Rate of Interest 12.95% and secured against first charge on plant & machinery
** The maturity period of the loan will be 20 years and repayments being made in 20 installments. The loan carries interest @ 10.50%.
* The repayment to be made in 6 monthly installments. The loan carries interest @ 10.00%
# Rate of Interest 11.75%

	As at 31st March 2024 (in lakhs)	As at 31st March 2023 (in lakhs)
4 Other Non-Current Liabilities		
Security Deposit		
- Deposit from Employees	34.51	35.87
- Deposit from Customer	56,597.03	53,135.79
	56,631.54	**53,171.66**

	As at 31st March 2024 (in lakhs)	As at 31st March 2023 (in lakhs)
5 Trade payables	48,010.98	6514.23
	48,010.98	**6,514.23**

	As at 31st March 2024 (in lakhs)	As at 31st March 2023 (in lakhs)
6 Other current liabilities		
Statutory Liabiliities (Contributions to PF,Pension, ESIC, withholding Taxes,VAT etc.)	184,414.29	177,907.97
Empolyee dues payable	2,893.66	35,956.04
Current maturities for long term borrowings	-	
Other payables	57,771.06	67,678.79
	245,079.01	**281,542.80**



SCHEDULE 7

FIXED ASSE AS AT 31ST MARCH, 2024

PARTICULARS	TOTAL AS AT 31ST MAR,2023	ADDITIONS DURING FY 2023-24	DEDUCTION IN RESPECT OF ASSETS WRITTEN OFF	ADJUSTMENT IN RESPECT OF TRANSFER	TOTAL AS AT 31ST MARCH,2024	ACCUMULATED DEPRECIATION AS ON 31ST MARCH, 2024	NET VALUE AS ON 31ST MARCH, 2024
LAND	435.18	-	-	-	435.18	-	435.18
BUILDINGS	12,713.86	129.46	-	-	12,843.33	7,456.20	5,387.13
PLANT & MACHINERY	1,31,320.73	4,160.02	330.68	9.89	1,35,159.97	80,191.37	54,968.60
CABLES & MAINS / PILLARS/ST.LIGHTING	1,31,865.03	6,959.79	115.39	-	1,38,709.43	59,195.48	79,513.95
METERS AND INSTALLATIONS	15,171.34	1.01	443.72	-	14,728.63	9,661.70	5,066.94
STREET LIGHTING LAMPS	16,818.37	282.71	-	-	17,101.08	6,151.66	10,949.41
D. E. A. ON HIRE	4.20	-	-	-	4.20	3.45	0.75
MOTOR VEHICLES	1,405.06	7.26	336.47	(8.87)	1,066.98	829.46	237.52
TOOLS AND EQUIPMENTS	4,969.83	7.49	4.82	-	4,972.50	2,270.84	2,701.65
FURNITURE AND OFFICE EQUIPMENTS	4,971.93	1,324.45	259.57	2.95	6,039.76	2,997.24	3,042.52
SECURITY EQUIPMENTS	16.30	-	-	-	16.30	13.02	3.28
TOTAL	3,19,691.84	12,872.21	1,490.66	3.97	3,31,077.35	1,68,770.41	1,62,306.93

	As at 31st March 2024 (in lakhs)	As at 31st March 2023 (in lakhs)
8 Non-current investments		
Unquoted Bond		
General Securities :		
8.20% Oil Bond 2023	-	324.00
8.83%IRFC Bond 2034	350.00	350.00
9.97%APPFCL Bond 2024	-	110.00
9.97%APPFCL Bond 2024	-	230.00
	350.00	**1,014.00**
BEST Group Insurance Scheme Fund		
Central Bank of India Fort Branch		
Indian Bank Fort Branch		
Bank of India Electric House		
Punjab National Bank Colaba		
Central Bank of India Pedder Road Branch	-	-
Canara Bank Colaba	-	-
Syndicate Bank,Fort	-	-
State Bank of Patiala	-	-
	-	-
Generation of Electricity Fund Investment	200.00	200.00
Unquoted Shares		
Shares in Saraswat Co-op Bank	0.01	0.01
Contingencies Reserve Fund Investment	6,472.00	6,356.00
	6,472.01	**6,556.01**
Total	**7,022.01**	**7,770.01**

	As at 31st March 2024 (in lakhs)	As at 31st March 2023 (in lakhs)
9 Long term Loans and advances		
(Unsecured, Considered good)		
Deposits	6,073.26	6,063.26
	6,073.26	**6,063.26**

	As at 31st March 2024 (in lakhs)	As at 31st March 2023 (in lakhs)
10 Other Non - Current Assets (Considered good)		
Deferred Revenue Expenditure		
Staff Benefit Fund Investment (Fixed Deposit)	731.25	688.50
Fixed Deposit with Chetna Co - operative Bank	166.32	166.32
Term Deposit with Canara Bank for LC	471.01	471.01
	1,368.58	**1,325.83**



	As at 31st March 2024 (in lakhs)	As at 31st March 2023 (in lakhs)
11 Inventories		
Inventories	965.80	1,230.19
	965.80	**1,230.19**

	As at 31st March 2024 (in lakhs)	As at 31st March 2023 (in lakhs)
12 Trade receivables		
Unsecured, considered good stated otherwise		
Debts outstanding for a period exceeding six months from the date they are due for payment	**39,575.29**	**27,512.58**
	39,575.29	**27,512.58**
Other receivables	13,227.87	**14,746.76**
	13,227.87	**14,746.76**
Total	**52,803.15**	**42,259.34**

	As at 31st March 2024 (in lakhs)	As at 31st March 2023 (in lakhs)
13 Cash and bank balances		
Cash and cash equivalents		
Balance with banks in Current accounts	199,350.32	303,944.57
Cash on hand	(21,866.47)	(10,604.18)
	177,483.85	**293,340.39**
Balance in banks for margin money		
Staff Benefit Fund Investment (Fixed Deposit)	731.25	688.50
Fixed Deposit with Chetna Co - operative Bank	166.32	166.32
Term Deposit with Canara Bank for LC	471.01	471.01
CLTD A/C (FAME) WITH BANK OF INDIA		
	1,368.58	**1,325.83**
Less: Shown under other non current assets	(1,368.58)	(1,325.83)
	177,483.85	**293,340.39**

	As at 31st March 2024 (in lakhs)	As at 31st March 2023 (in lakhs)
14 Short term Loans and advances		
(Unsecured, Considered good)		
Deposits		
Other loans and advances		
Loans to employees	50.79	67.04
Prepaid expenses	325.06	378.01
Advances recoverable in cash or kind		
- Others	6,270.44	2,937.14
- From Transport Division	605,634.42	501,333.12
- From suppliers	(1,121.91)	(734.03)
	611,158.80	**503,981.28**

M.M. MATHURIA & ASSOCIATES CHARTERED ACCOUNTANTS MUMBAI

	As at 31st March 2024 (in lakhs)	As at 31st March 2023 (in lakhs)

15 Other current assets

Interest Accrued but not received :		
Accrued Interest On contingencey reserve	157.06	162.21
Interest Accrued On Fixed And Call Deposit	116.67	116.67
Accrued Interest On Generation Of Electricty Fund	1,666.16	1,666.16
Accrued Interest On Staff benefit Fund	-	-
Accrued Interest On BEST Group Insu. Fund	-	-
	1,939.89	**1,945.04**



		Year ended 31ST MARCH,2024 (in lakhs)	Year ended 31ST MARCH,2023 (in lakhs)
16	**Revenue from operations**		
	Sale of service	426,608.01	360,190.39
	Other operating income		
	Sale of Scrap	1,213.75	606.64
	Revenue from operations (Gross)	**427,821.77**	**360,797.03**
	Sale of Service		
	Distribution of energy by meter	418,514.48	352954.28
	Distribution of energy	1,121.68	875.39
	Repairs & Maintenance of Street lighting	6,971.85	6360.72
		426,608.01	**360,190.39**
17	**Interest income on**		
	Bank deposits	67.90	55.40
	Rent of Building & land	399.32	628.95
	D P charges	1,606.58	3915.87
	Profit on Sale of Assets	983.94	983.94
	Miscellaneous income	2,236.43	19.87
	Discount, sundry balances written back	437.27	2337.29
	Advertisement receipts	728.59	237.90
		6,460.03	**8,179.23**

M.M. MATHURIA & ASSOCIATES * CHARTERED ACCOUNTANTS * MUMBAI FRN No. 129425

	Year ended 31ST MARCH,2024 (in lakhs)	Year ended 31ST MARCH,2023 (in lakhs)
18 Employee benefit expense		
Salaries, wages and bonus	44,061.77	44,107.09
Contribution to provident and	14,216.18	15,223.60
Staff welfare expense	190.11	202.21
	58,468.06	**59,532.90**
19 Finance cost		
Interest expense	14,950.98	11,095.60
Other borrowing cost	2,563.68	827.14
	17,514.65	**11,922.75**
20 Other expenses		
Power, Fuel and Electricity	453.28	503.55
Rent	1,210.78	1,311.76
Repairs and Maintenance		
Building	669.32	773.67
Machinery	286.39	358.09
Others	3,177.41	3,393.36
Insurance	-	-
Incentive charges	1,600.24	1,236.67
Advertisement Expenses	171.31	72.15
Network charges	3,237.67	1,677.15
Payment to Auditors (Refer details Below)	300.00	250.00
Printing and Stationery	182.99	182.70
Communication cost	676.48	707.69
Travelling and Conveyance	1,448.61	1,677.53
Legal and Professional Fees	438.36	405.91
Rates and taxes	1.43	207.90
Bad debts	660.00	565.00
Bank Charges	368.36	352.10
Discount on Electricity charges	2,622.51	2,260.17
Permanent Reinstatement	2,644.52	1,034.92
Other Establishment Expenses	1,884.59	923.17
Best staff amenities reserve expense	82.57	178.37
Property insurance fund	-	-
Provision for Obsolescence of stores	4.05	4.05
Transfer to MCGM u/s 460 KK(2)e		
	22,120.87	**18,075.91**
Payment to auditors		
As auditor		
Audit fee	300.00	250.00
Tax audit fee		
Limited review		
	300.00	**250.00**



UDIN:	24049425BKETAY5206
MRN/Name:	049425/MANOJ MAHENDRA MATHURIA
Firm Registration No.:	115354W
Document type:	Certificates
Document sub type:	Others
Document Date:	30-09-2024
Create Date/Time:	04-10-2024 | 11:07:54
Financial Figures/Particulars:	
Certifying Restated Data ofits Electricity Business & Dataunder MERC's (UniformRecording and Reporting ofInformation) Regulation —2009:	0
Certifying Restated Data ofits Electricity Business & Dataunder MERC's (UniformRecording and Reporting ofInformation) Regulation —2009:	0
FY:	2023-2024
Document description:	Certifying Restated Data ofits Electricity Business & Dataunder MERC's (UniformRecording and Reporting ofInformation) Regulation —2009

THE BRIHAN MUMBAI ELECTRIC SUPPLY AND TRANSPORT UNDERTAKING
(OF THE BRIHANMUMBAI MAHANAGARPALIKA)
APPENDIX NO. E-1
GENERAL FINANCIAL STATISTICS 2022-2023.

2021-2022	PARTICULARS		2022-23	2021-2022	PARTICULARS		2022-23
₹		₹	₹	₹		₹	₹
	ELECTRIC SUPPLY INCOME			1,00,000	Minimum Cash balance B/F		1,00,000
					Excess of Expenditure over Income		
29,90,17,54,121	Distribution of Energy by Meter	35,29,54,27,804		-6,16,48,97,389	Supply	-10,97,95,60,652	
7,86,76,541	Street Lighting sale of Energy	8,75,38,710		-3,35,84,33,088	Buses	22,10,07,307	
49,63,43,277	Street Lighting -R.&M	63,60,72,339			Excess of Income over Expenditure		
64,82,48,988	Other Receipts	54,39,56,390		0	Supply	0	
7,78,58,698	Share of General Admn. Receipts	33,46,30,315			Buses		-10,75,85,53,345
				-9,52,32,30,477	Total		-10,75,84,53,345
31,20,28,81,625	Total		36,89,76,25,558				
					Minimum Cash Balance required		
	ELECTRIC SUPPLY EXPENDITURE			1,00,000	under section 460KK (1) C/F		1,00,000
23,03,39,23,843	Cost of Energy Purchased	28,60,96,49,735		-9,52,33,30,477			-10,75,85,53,345
1,45,29,59,962	External Power Purchased	5,61,29,99,091			Balance appropriated as under:-		
2,55,42,00,000	Intra State Transmission Charges	2,54,20,00,131			Transferred to Municipal Fund		
99,39,99,996	Standby Charges	98,53,00,008	37,74,99,48,965	0	under section 460KK 2 (e)		0
28,03,50,83,801							
5,04,26,32,866	Establishment Cost		5,28,42,85,552		Transferred to Generation of		
				0	Electricity Fund		0
57,81,90,700	Admn.and Gen.Expenses		53,50,58,534	-9,52,33,30,477			-10,75,85,53,345
					Previous Year Accum. Surplus/Deficit		
60,60,40,945	Repairs and Maintenance		65,43,30,533	52,96,08,23,681	Supply	49,29,37,63,363	
				-75,00,23,34,893	Buses	-79,77,07,28,876	-30,47,69,65,513
55,23,42,120	Other Cost (includes Cont. Res. Fund & Interest on Consumer Deposit)		55,06,08,620	-22,04,15,11,212	ACCUMULATED DEFICIT		
1,05,99,75,876	Depreciation		1,07,72,35,346				
79,60,43,756	Share of Gen. Admn.		91,61,58,592				
69,74,68,950	Interest on Loans		1,10,95,60,068				
				1,08,78,76,176	Prior Period Adjustment (CR)		1,23,82,39,386
37,36,77,79,014	TOTAL		47,87,71,86,210	-30,47,69,65,513	Balance C/F To Balancesheet		-39,99,72,79,472
-6,16,48,97,389	SURPLUS / DEFICIT		-10,97,95,60,652				

Contd...

APPENDIX E-1 Contd....

2021-2022	PARTICULARS		2022-23	2021-2022	PARTICULARS		2022-23
₹		₹	₹	₹		₹	₹
	BUSES INCOME						
22,84,93,50,976	Passenger Receipts	29,04,35,22,445					
93,53,08,690	Other Receipts	1,00,55,92,765					
14,09,17,951	Share of Gen. Admn. Receipts	40,59,00,464					
23,92,55,77,617	Total		30,45,50,15,674				
	BUSES EXPENDITURE						
7,73,93,82,314	Fuel and Operating Materials		9,91,22,38,802				
16,07,40,57,512	Establishment Cost		17,40,99,44,242				
76,96,74,129	Admn.and Gen.Expenses		55,39,61,347				
55,43,49,431	Repairs and Maintenance		50,32,76,968				
11,57,31,186	Other Cost		5,68,14,715				
15,44,02,532	Depreciation		6,51,34,913				
35,11,76,099	Interest on Loans		27,39,00,500				
1,52,52,37,502	Share of Gen.Admn.		1,45,87,36,880				
27,28,40,10,705	TOTAL		30,23,40,08,367		TOTAL		
-3,35,84,33,088	SURPLUS / DEFICIT		22,10,07,307				

I Signed, subject to my Audit Report U/No.MCA/025/22-23/ dtd.28/12/2022 on the 2022-23 Accounts of B.E.S. & T. Undertaking & Certificate U/No. MCA/025/22-23/05 dtd.28/12/2022 enclosed therein.

CAO & FA

Dy.C.M.(A)

Municipal Chief Auditor

General Manager

Municipal Chief Auditor

APPENDIX NO. E-2

DIVISIONAL INCOME AND EXPENDITURE STATEMENT FOR THE YEAR ENDED 31ST MARCH, 2023
ELECTRIC SUPPLY

2021-22	EXPENDITURE		2022-23	2021-22	INCOME		2022-23
₹		₹	₹	₹		₹	₹
23,03,39,23,843	Cost of Energy Purchased	28,60,96,49,735		29,90,17,54,121	Distribution of Energy by Meter		35,29,54,27,804
1,45,29,59,962	External Power Purchased	5,61,29,99,091					
2,55,42,00,000	Intra State Transmission Charges	2,54,20,00,131		7,86,76,541	Street Lighting Sale of Energy		8,75,38,710
99,39,99,996	Standby Charges	98,53,00,008	37,74,99,48,965				
28,03,50,83,801				49,63,43,277	Street lighting -R & M		63,60,72,339
				30,47,67,73,939			36,01,90,38,853
5,04,26,32,866	Establishment Cost (Supply)		5,28,42,85,552		**Other Receipts**		
49,60,26,774	Establishment Cost (Gen.Admn.)		63,58,94,308	4,56,885	Electricity Duty Collection	0	0
				14,30,98,510	Delayed payment Charges	14,03,90,442	
57,81,90,700	Admn.and Gen.Expenses (Supply)		53,50,58,534	1,78,82,956	Rent of Land & Building	1,92,83,247	
14,51,68,363	Admn.and Gen.Expenses (Gen.Admn.)		12,39,51,532	0	Advertisement	2,37,60,000	
				48,68,10,637	Miscellaneous	36,05,22,701	54,39,56,390
60,60,40,945	Repairs and Maintenance (Supply)		65,43,30,533	64,82,48,988			
9,03,51,371	Repairs and Maintenance (Gen.Admn.)		9,17,24,973				
47,87,89,627	Other Cost (Supply)		47,44,53,926				
4,87,10,409	Other Cost (Gen.Admn.)		4,89,41,468				
					Share of General Administration		
1,05,99,75,876	Depreciation (Supply)		1,07,72,35,346	7,78,58,698	Receipts		33,46,30,315
1,57,86,840	Depreciation (Gen.Admn.)		1,56,46,311				
69,74,68,950	Interest on Loans (Supply)		1,10,95,60,067	31,20,28,81,625	**TOTAL**		36,89,76,25,558
0	Interest on Loans (Gen.Admn.)		0				
	Provisions towards Electric Supply			-6,16,48,97,389	Deficit Transferred to Appropriation A/C		-10,97,95,60,652
7,35,52,493	Contingencies Reserve Fund		7,61,54,695				
37,36,77,79,014	**TOTAL**	**	47,87,71,86,210				
0	Surplus Trf. to Appropriation A/c		0				
37,36,77,79,014	**TOTAL**		**47,87,71,86,210**	**37,36,77,79,014**	**TOTAL**		**47,87,71,86,210**

** The total expenditures Includes 2196325488/- not covered by Current Budget Grant but awaiting Corporation's Sanction.

APPENDIX NO. E-3

DIVISIONAL INCOME & EXPENDITURE STATEMENT FOR THE YEAR ENDED 31ST MARCH, 2023.
BUSES

2021-22	EXPENDITURE		2022-23	2021-22	INCOME		2022-23
₹		₹	₹	₹		₹	₹
	Fuel and Operating Materials				**Traffic Earning From**		
2,00,98,44,004	C.N.G.Fuel	2,75,85,45,574		5,44,82,55,340	Sale of Tickets	4,88,37,97,879	
55,74,44,418	Fuel Oil	51,42,29,856		2,09,23,68,616	Sale of Tickets wet-lease Buses	2,27,00,04,977	
0	Electricity for Electric Buses	0					
4,32,77,278	Lubricants	3,61,44,918		16,43,73,169	Monthly Bus Passes	43,86,436	
9,28,09,570	Tyre and Tubes	7,58,81,286		49,92,005	Reserved Buses	81,53,226	
14,69,64,083	Tickets	27,26,31,507			Lump sum payment from Govt.		
4,88,90,42,961	Hiring Chgs. For Buses (wet-lease)	6,25,48,05,661	9,91,22,38,802	6,64,61,847	towards free travel by police personnel	5,43,79,927	7,22,07,22,445
7,73,93,82,314				7,77,64,50,977			
16,07,40,57,512	Establishment Cost (Buses)		17,40,99,44,242				
1,17,82,05,685	Establishment Cost (Gen.Admn.)		1,13,74,42,390	26,50,96,529	Advertisement Receipts	35,07,95,482	
76,96,74,129	Admn.and Gen.Expenses (Buses)		55,39,61,347	12,17,29,00,000	Grant from MCGM	21,82,28,00,000	
15,46,48,520	Admn.and Gen.Expenses (Gen.Admn.)		12,85,04,945				
				2,90,00,00,000	Grant from other than MCGM	0	
				50,79,30,150	Other Receipts	50,96,76,553	
55,43,49,431	Repairs and Maintenance (Buses)		50,32,76,968				
9,69,21,216	Repairs and Maintenance (Gen.Admn.)		9,68,95,234	4,71,92,259	Engineering Receipts	2,66,96,684	
11,57,31,186	Other Cost (Buses)		5,68,14,715	11,50,89,751	Rent of Bldg.and Land	11,84,24,046	22,82,83,92,765
7,96,75,241	Other Cost (Gen.Admn.)		8,02,48,000	16,00,82,08,689			
				14,09,17,951	Share of Gen.Admn. Receipts		40,59,00,464
15,44,02,532	Depreciation (Buses)		6,51,34,913	23,92,55,77,617	**Total**		30,45,50,15,674
1,57,86,840	Depreciation (Gen.Admn.)		1,56,46,311				
				-3,35,84,33,088	Deficit Transferred to Appropriation A/c.		22,10,07,307
35,11,76,099	Interest on Loans (Buses)		27,39,00,500				
0	Interest on Loans (Gen.Admn.)						
27,28,40,10,705	**Total**	**	**30,23,40,08,367**	**27,28,40,10,705**	**Total**		**30,23,40,08,367**

** The total Expenditure Includes 2589553650/-not covered by Current Budget Grant but awaiting Corporation's Sanction.

APPENDIX NO. E-4

APPROPRIATION ACCOUNT FOR THE YEAR ENDED 31ST MARCH 2023

PARTICULARS		2021-2022		2022-2023	
		₹		₹	
MINIMUM CASH BALANCE B/F - SUPPLY		50,000		50,000	
BUSES		50,000		50,000	
ELECTRIC SUPPLY :--- SURPLUS / DEFICIT(APPENDIX E-1)		-6,16,48,97,389		-10,97,95,60,652	
BUSES :--- SURPLUS / DEFICIT (APPENDIX E-1)		-3,35,84,33,088		22,10,07,307	
TOTAL		**-9,52,32,30,477**		**-10,75,84,53,345**	
SUPPLY		-6,16,48,47,389		-10,97,95,10,652	
BUSES		-3,35,83,83,088		22,10,57,307	
LESS--- TRANSFERRED TO MUNICIPAL FUND UNDER SEC 460 KK (2) (e)					
SUPPLY		0		0	
BUSES		0		0	
LESS---MINIMUM CASH BALANCE REQUIRED UNDER SECTION 460 KK (1) C/F					
SUPPLY		50,000		50,000	
BUSES		50,000		50,000	
LESS---TRANSFERRED TO GENERATION OF ELECTRICITY FUND		0		0	
TOTAL SUPPLY		**-6,16,48,97,389**		**-10,97,95,60,652**	
BUSES		**-3,35,84,33,088**		**22,10,07,307**	
PREVIOUS YEAR ACCUMULATED SURPLUS / DEFICIT					
SUPPLY		52,96,08,23,681		49,29,37,63,363	
BUSES		-75,00,23,34,893		-79,77,07,28,876	
ACCUMULATED SURPLUS / DEFICIT					
SUPPLY		46,79,59,26,292		38,31,42,02,711	
BUSES		-78,36,07,67,981		-79,54,97,21,569	
PRIOR PERIOD ADJUSTMENT (NET)					
SUPPLY		CR 2,49,78,37,071		CR 34,03,73,974	
BUSES		DR 1,40,99,60,895		CR 89,78,65,412	
BALANCE SURPLUS /DEFICIT CARRIED FORWARD		**-30,47,69,65,513**		**-39,99,72,79,472**	
SUPPLY		**49,29,37,63,363**	**	**38,65,45,76,685**	
BUSES		-79,77,07,28,876		-78,65,18,56,157	

I Signed, subject to my Audit Report U/No.MCA/025/23-24/06 dtd.28/12/2023 on the 2022-23 Accounts of B.E.S. & T. Undertaking & Certificate U/No. MCA/025/23-24/05 dtd.28/12/2023 enclosed therein.

CAO & FA | Dy.M.(A) | Municipal Chief Auditor | General Manager

M. C. A. BMC DEPARTMENT

ANNEXURE :- 'A'

ALLOCATION OF GENERAL ADMINISTRATION INCOME FOR THE YEAR ENDED 31ST MARCH, 2023

AMOUNT 2021-2022	ALLOCATION		PARTICULARS	AMOUNT 2022-2023	ALLOCATION	
	ELE. SUPPLY	BUSES			ELE. SUPPLY	BUSES
₹	₹	₹		₹	₹	₹
8424105	7581694	842411	A) Interest on Deposits & Other Investments	6155301	5539770	615530
			B) MISCELLANEOUS:			
1432441	716220	716221	1) Apprentices Premium etc.	3852414	1926207	1926207
93147085	23286772	69860313	2) Rent of Buildings & Land	174448394	43612099	130836296
50489118	13632062	36857056	3) Sale of Stores & Scrap Material etc. (Net)	110298079	60663943	49634136
65223900	32611950	32611950	4) Other Receipts	445716592	222858296	222858296
60000	30000	30000	5) Advertisement Receipts	60000	30000	30000
218776649	**77858698**	**140917951**	**TOTAL**	**740530779**	**334630315**	**405900464**

ANNEXURE :-B

ALLOCATION OF GENERAL ADMINISTRATION EXPENDITURE FOR THE YEAR 2022-2023

AMOUNT 2021-2022	SUPPLY 2021-2022	BUSES 2021-2022	PARTICULARS	AMOUNT 2022-2023	SUPPLY 2022-2023	BUSES 2022-2023
₹	₹	₹		₹	₹	₹
			ESTABLISHMENT COST			
6,40,56,418	3,20,28,209	3,20,28,209	MANAGEMENT,SECY.TYPING,CORRESPONDENCE	7,16,58,646	3,58,29,323	3,58,29,323
12,82,24,976	6,41,12,488	6,41,12,488	ACCOUNTS,CAO & FA,BUDGET,PF,CASH	14,20,96,659	7,10,48,329	7,10,48,329
1,33,44,409	66,72,204	66,72,205	PUBLIC RELATION DEPARTMENT	1,69,22,602	84,61,301	84,61,301
2,73,42,894	1,36,71,447	1,36,71,447	LEGAL DEPARTMENT	2,39,89,965	1,19,94,982	1,19,94,982
11,60,29,259	5,80,14,629	5,80,14,630	INTERNAL AUDIT	11,31,98,533	5,65,99,266	5,65,99,266
7,93,47,803	3,96,73,902	3,96,73,901	MATERIAL MANAGEMENT	7,70,00,128	3,85,00,064	3,85,00,064
68,59,91,580	10,28,98,737	58,30,92,843	SECURITY AND VIGILANCE	63,87,77,739	15,96,94,435	47,90,83,304
11,84,34,927	5,32,95,717	6,51,39,210	CHIEF ENGINEER CIVIL & DRAWING OFFICE	19,82,12,495	8,91,95,623	10,90,16,872
11,99,16,954	2,39,83,391	9,59,33,563	TIME KEEPING	11,38,42,894	2,16,30,150	9,22,12,744
3,35,08,696	67,01,739	2,68,06,957	PERSONNEL	4,59,27,662	87,26,256	3,72,01,406
4,10,49,239	82,09,848	3,28,39,391	WELFARE	4,52,86,708	86,04,475	3,66,82,234
12,64,45,299	2,52,89,060	10,11,56,239	MEDICAL	12,71,22,891	2,41,53,349	10,29,69,541
12,05,40,005	6,14,75,403	5,90,64,602	INFORMATION TECHNOLOGY DEPARTMENT	14,53,79,109	9,44,96,421	5,08,82,688
-	-	-	GENERAL ADMINISTRATION	1,39,20,669	69,60,335	69,60,335
						-
1674232459	**496026774**	**1178205685**	**TOTAL ESTABLISHMENT COST**	**1,77,33,36,698**	**63,58,94,308**	**1,13,74,42,390**
			ADMINISTRATION & GENERAL EXPENSES			
27,09,273	13,54,637	13,54,636	MANAGEMENT,SECY.TYPING,CORRESPONDENCE	37,33,423	18,66,712	18,66,712
32,45,755	16,22,877	16,22,878	ACCOUNTS,CAO & FA,BUDGET,PF,CASH	43,04,671	21,52,336	21,52,335
7,74,886	3,87,443	3,87,443	PUBLIC RELATION DEPARTMENT	9,69,779	4,84,889	4,84,889
21,87,638	10,93,819	10,93,819	LEGAL DEPARTMENT	49,90,379	24,95,190	24,95,190
25,35,021	12,67,510	12,67,511	INTERNAL AUDIT	3,81,947	1,90,974	1,90,974
33,07,942	16,53,971	16,53,971	MATERIAL MANAGEMENT	1,09,24,913	54,62,456	54,62,456
59,36,540	8,90,481	50,46,059	SECURITY AND VIGILANCE	37,98,311	9,49,578	28,48,733
84,80,898	38,16,404	46,64,494	CHIEF ENGINEER CIVIL & DRAWING OFFICE	1,07,91,267	48,56,070	59,35,197
5,50,689	1,10,138	4,40,551	TIME KEEPING	2,11,294	40,146	1,71,148
25,54,624	5,10,925	20,43,699	PERSONNEL	25,98,622	4,93,738	21,04,884
4,71,416	94,283	3,77,133	WELFARE	12,41,865	2,35,954	10,05,911
79,45,810	15,89,162	63,56,648	MEDICAL	61,84,648	11,75,083	50,09,565
91,66,016	46,74,668	44,91,348	INFORMATION TECHNOLOGY DEPARTMENT	48,80,889	31,72,578	17,08,311
24,99,50,374	12,61,02,044	12,38,48,330	GENERAL ADMINISTRATION	19,74,44,469	10,03,75,829	9,70,68,640
299816882	**145168362**	**154648520**	**TOTAL ADMINISTRATION & GENERAL EXPENSES**	**25,24,56,478**	**12,39,51,532**	**12,85,04,946**

Contd...

AMOUNT 2021-2022	SUPPLY 2021-2022	BUSES 2021-2022	PARTICULARS	AMOUNT 2022-2023	SUPPLY 2022-2023	BUSES 2022-2023
₹	₹	₹		₹	₹	₹
			REPAIRS & MAINTENANCE			
5,77,070	2,88,535	2,88,535	MANAGEMENT,SECY.TYPING,CORRESPONDENCE	3,38,105	1,69,052	1,69,052
5,05,488	2,52,744	2,52,744	ACCOUNTS,CAO & FA,BUDGET,PF,CASH	8,05,721	4,02,861	4,02,861
11,261	5,630	5,631	PUBLIC RELATION DEPARTMENT	39,105	19,552	19,552
1,03,515	51,758	51,757	LEGAL DEPARTMENT	1,04,585	52,292	52,292
1,57,049	78,525	78,524	INTERNAL AUDIT	3,15,994	1,57,997	1,57,997
3,55,139	1,77,569	1,77,570	MATERIAL MANAGEMENT	8,50,421	4,25,210	4,25,210
15,17,340	2,27,601	12,89,739	SECURITY AND VIGILANCE	13,35,361	3,33,840	10,01,521
4,53,08,040	2,03,88,618	2,49,19,422	CHIEF ENGINEER CIVIL & DRAWING OFFICE	4,55,03,030	2,04,76,364	2,50,26,667
2,23,303	44,660	1,78,643	TIME KEEPING	3,58,287	68,075	2,90,213
2,58,958	51,792	2,07,166	PERSONNEL	1,73,073	32,884	1,40,189
3,29,419	65,884	2,63,535	WELFARE	1,03,065	19,582	83,483
9,01,117	1,80,223	7,20,894	MEDICAL	2,76,805	52,593	2,24,212
25,38,735	12,94,755	12,43,980	INFORMATION TECHNOLOGY DEPARTMENT	20,42,283	13,27,484	7,14,799
13,44,86,152	6,72,43,076	6,72,43,076	GENERAL ADMINISTRATION	13,63,74,371	6,81,87,185	6,81,87,185
18,72,72,586	**9,03,51,370**	**96921216**	**TOTAL REPAIRS & MAINTENANCE**	**18,86,20,206**	**9,17,24,972**	**9,68,95,234**
			OTHER COST			
1,107	553	554	MANAGEMENT,SECY.TYPING,CORRESPONDENCE	-	-	-
70,210	35,105	35,105	ACCOUNTS,CAO & FA,BUDGET,PF,CASH	-	-	-
64,276	32,138	32,138	PUBLIC RELATION DEPARTMENT	81,824	40,912	40,912
-	-	-	LEGAL DEPARTMENT	-	-	-
-	-	-	INTERNAL AUDIT	20,000	10,000	10,000
20,182	10,091	10,091	MATERIAL MANAGEMENT	-	-	-
1,53,884	23,083	1,30,801	SECURITY AND VIGILANCE	72,587	18,147	54,440
-	-	-	CHIEF ENGINEER CIVIL & DRAWING OFFICE	6,415	2,887	3,528
-	-	-	TIME KEEPING	-	-	-
-	-	-	PERSONNEL	-	-	-
3,42,51,885	68,50,377	2,74,01,508	WELFARE	3,57,37,802	67,90,182	2,89,47,620
89,65,245	17,93,049	71,72,196	MEDICAL	79,93,700	15,18,803	64,74,897
-	-	-	INFORMATION TECHNOLOGY DEPARTMENT	-	-	-
8,48,58,861	3,99,66,013	4,48,92,848	GENERAL ADMINISTRATION	8,52,77,139	4,05,60,537	4,47,16,603
12,83,85,650	**48710409**	**79675241**	**TOTAL OTHER COST**	**12,91,89,468**	**4,89,41,468**	**8,02,48,000**
31573680	15786840	15786840	**DEPRECIATION**	3,12,92,622	1,56,46,311	- 1,56,46,311
2321281258	**796043756**	**1525237502**	**TOTAL OF GENERAL ADMINISTRATION**	**2,37,48,95,472**	**91,61,58,592**	**1,45,87,36,881**

APPENDIX NO. E- 5
BALANCE SHEET AS AT 31ST MARCH, 2023.

2021-22		LIABILITIES		2022-23	2021-22		ASSETS		2022-23
₹			₹	₹	₹			₹	₹
		FUNDS					NET FIXED ASSETS		
0	1)	Revenue Reserve Fund Section 460 LL (1) (a)			38,32,88,78,533	1)	Fixed Capital Expenditure (E-6)	39,73,24,91,534	
0	2)	BEST Betterment Fund Section 460LL (1) (b)			-18,87,11,38,874		Less : Accumulated Depreciation	-19,62,11,57,547	
30,000	3)	Welfare Fund Section 460 LL (1) (c)		30,000	37,46,96,283	2)	Capital Work - in - Progress *	44,14,06,352	
					19,83,24,35,942				20,55,27,40,339
1,87,36,18,672	4)	Property Insurance Fund		1,87,97,27,265			INVESTMENT		
30,00,000	5)	Fidelity Insurance Fund		30,00,000	10,14,00,000	1)	General Investment (E - 7)	10,14,00,000	
	6)	General Fund		0	2,00,00,000	2)	Generation of Electricity Fund Investment	2,00,00,000	
18,87,11,38,875	7)	Depreciation Fund	19,62,11,57,547		1,250	3)	Shares in Co-Op. Banks	1,250	
-18,87,11,38,874		Less - Provision	-19,62,11,57,547	0	14,70,00,000	4)	BEST Staff Benefit Fund Investment	15,30,00,000	
1					1,67,33,321	5)	Fixed & Call Deposits with Banks.	1,60,15,467	
2,52,00,000	8)	Passenger Insurance Fund		2,52,00,000	51,16,00,000	6)	Contingencies Reserve Fund Investment	63,56,00,000	
	9)	Financial Asst. Recd. from Various Sources			0	7)	BEST Group Insurance Scheme Fund		
8,98,62,01,154		(i) Financial Asst.from State/Central Govt.	9,00,87,74,731		79,67,34,571				92,60,16,717
0		(ii) Non-Refundable Premium					CURRENT ASSETS		
7,71,43,777		(iii) Capital Connection Fees	10,35,12,073		60,00,00,000	1)	Interest Free Deposit for Renewal Power Purch	60,00,00,000	
0		(iv) RDSS Grant	29,19,00,000	9,40,41,86,804		2)	Interest Accrued on Fixed & Call		
10,96,51,63,604				11,31,21,44,069	20,14,60,179		Deposits and General Investment	20,71,00,588	
		Dedicated Fund			0	3)	Deferred Revenue Expenditure	0	
	1)	Electric Supply Contingencies Reserve Fund as per				4)	Securities Deposited by		
68,97,09,729		MERC from F. Y. 2008-09 onwards.	76,58,64,424		3,15,080		Employees,Consumers & Sundry Parties	3,15,080	
15,43,92,234	2)	Staff Benefit Fund	16,15,44,709		80,17,75,259				80,74,15,668
1,96,87,30,105	3)	Generation of Electricity Fund	1,96,87,30,105						
-38,19,323	4)	BEST Group Insurance Fund	-44,20,599			5)	Stock in Hand ##		
2,80,90,12,745				2,89,17,18,639	20,46,29,494		(a) Revenue		22,23,16,191
		LOAN FROM							
2,76,72,24,039		LOAN FROM RURAL ELECTRIFICATION CORPN. LTD.	2,37,19,06,319		0	6)	Work in Progress for outside parties		
0		Temporary Advance From MCGM	4,44,86,00,000		6,98,92,44,535	7)	Book Debts		6,85,09,24,416
36,17,69,200		World Bank Loan under MUTP	31,65,48,050			8)	Cash and Bank Balance		
6,75,52,880		APDRP Loan	4,53,94,960		2,99,41,21,121		(a) Cash on Hand	1,90,19,13,107	
1,85,22,00,000		Working Capital Demand loan with Canara	1,85,00,00,000		1,19,52,59,216		(b) With Banks	4,57,49,43,174	
11,85,37,61,329		TATA Power Bill Discouting Facilities	15,83,84,22,367		500		(c) Investment in Treasury Bill	500	
2,16,66,66,670		Short Term Assistance from Financial Institutions	75,00,00,001						
19,06,91,74,118				25,62,08,71,697	4,18,93,80,837				6,47,68,56,781
32,84,33,80,467		TOTAL C/F		39,82,47,34,405	32,81,42,00,638		TOTAL C/F		35,83,62,70,112

Contd....

2021-22 ₹	LIABILITIES	₹	2022-23 ₹	2021-22 ₹	ASSETS	₹	2022-23 ₹
32,84,33,80,467	TOTAL B/F		39,82,47,34,405	32,81,42,00,638	TOTAL B/F		35,83,62,70,112
	CURRENT LIABILITES				8) LOANS AND ADVANCES		
	A:- DEPOSITS FROM			20,77,262	a) Due from Staff	15,77,885	
3,34,82,852	(1) Employees	3,32,07,152		38,84,370	b) On Account Payment	38,73,945	
4,47,43,97,975	(2) Consumers	5,31,37,15,395		3,22,58,775	c) Festival Advance	3,59,49,276	4,14,01,106
-3,31,77,55,566	(3) Sundry Parties	3,43,07,97,309		56,39,19,168	d) Due from Suppliers	72,30,70,885	
3,15,080	(4) Govt. Securities	3,15,080		2,51,47,77,077	e) Due from Others	3,55,77,57,958	
1,19,04,40,341			8,77,80,34,936	2,96,62,161	f) Prepaid Expenses	4,28,01,421	
	B:- OTHER LIABILITIES FOR			504	g) Deposits with Suppliers	504	
				3,14,65,79,317			4,36,50,31,874
1,22,15,56,701	(1) Goods Supplied	1,85,17,52,283					
7,02,93,70,825	(2) Other Expenses	5,53,57,42,513			REVENUE ACCOUNTS		
10,03,21,83,322	(3) Other Finance	4,57,88,31,992		30,47,69,65,504	** Deficit As Per Revenue Accounts Upto 2022-2023		39,99,72,79,463
0	(4) Unclaimed Interest	0					
0	(5) Accrued Interest	0					
14,11,94,64,258	(6) Third Parties	19,62,72,47,350					
32,40,25,75,106			31,59,35,74,138				
	PROVISION FOR						
0	(1) BEST Staff Amenities Fund	0					
9,35,411	(2) Obsolescences of Stores	28,45,411					
0	(3) Third Party Insurance Fund	0					
3,14,134	(4) Motor Vehicle (Third Party Insurance Fund)	-7,07,441					
12,49,545			21,37,970				
1,00,000	Minimum Cash Balance Required under Sec. 460KK(1)		1,00,000				
66,43,77,45,459	TOTAL		80,19,85,81,449	66,43,77,45,459	TOTAL		80,19,85,81,449

* Includes Capital Stock in hand amounting to ₹ 35,99,99,259 i.e Supply ₹ 33,60,58,247 & Buses ₹ 2,39,41,012.

₹ 44,14,06,352 Includes CAPITAL STOCK of ₹ 35,99,99,259 & CWIP ₹ 8,14,07,093.

₹22,23,16,193 REVENUE STOCK

₹ 66,37,22,545

₹58,23,15,450 BALANCE AS PER LEDGER A/c586

₹8,14,07,093 CWIP AS PER LEDGER A/C 551

I Signed, subject to my Audit Report U/No.MCA/025/23-24/106 dtd.28/12/2023 on the 2022-23 Accounts of B.E.S. & T. Undertaking & Certificate U/No. MCA/025/23-24/05dtd.28/12/2023 enclosed therein.

CAO & FA

Dy.C.M.(A)

Municipal Chief Auditor

M. C. A. BMC DEPARTMENT

General Manager

ANNEXURE :- 'C'

NOTES ON THE BALANCE-SHEET AS AT 31ST MARCH, 2023.

1. Stores and Material except scrap are valued at cost, scrap is valued at average sale rates.

2. Amount receivable under Court Decree Award from M/s.Madison Communication Pvt. Ltd. ₹.13,15,31,438.

3. Contingent Liability :

Claims against the Undertaking not acknoweldged as debt ₹ 16,71,53,653/- (Previous year ₹29,14,52,773/-) .

APPENDIX NO. E-6

FIXED CAPITAL EXPENDITURE AS AT 31ST MARCH, 2023

PARTICULARS	TOTAL AS AT 31ST MAR,2022		ADDITIONS DURING FY 2022-23	DEDUCTION IN RESPECT OF ASSETS WRITTEN OFF	ADJUSTMENT IN RESPECT OF TRANSFER (+) OR (-)	TOTAL AS AT 31ST MARCH,2023	ACCUMULATED DEPRECIATION AS ON 31ST MARCH, 2023	NET VALUE AS ON 31ST MARCH, 2023
GENERAL ADMINISTRATION								
LAND	41129692		0	0	0	41129692	0	41129692
BUILDINGS	786861935		400000	0	0	787261935	549610507	237651428
MOTOR VEHICLES	39295628		0	2837760	0	36457868	17735474	18722394
PLANT AND MACHINARY	38379262		0	0	0	38379262	29801033	8578229
FURNITURE AND OFFICE EQUIPMENTS	63058527		377371185	10651218	0	429778494	31859952	397918542
TOOLS AND EQUIPMENTS	2980347		150000	0	0	3130347	1821734	1308613
SECURITY EQUIPMENTS	3260388		0	0	0	3260388	2432064	828324
TOTAL	974965780		377921185	13488978	0	1339397987	633260764	706137223
ELECTRIC SUPPLY								
LAND	22953418		0	0	0	22953418	0	22953418
BUILDINGS	824262843		59729458	0	-6237000	877755301	430667163	447088138
PLANT & MACHINERY	12660786912	*	465264200	12864566	-302962	13112883584	7609785270	5503098314
CABLES & MAINS / PILLARS/ST.LIGHTING	12384533986	*	811677522	9262163	-446475	13186502870	5457715492	7728787378
METERS AND INSTALLATIONS	1602474461	*	10273216	95613784	0	1517133893	928421502	588712391
STREET LIGHTING LAMPS	1623029223	@	58807951	0	0	1681837174	560508606	1121328568
D. E. A. ON HIRE	419928		0	0	0	419928	344906	75022
MOTOR VEHICLES	138266692		0	15989559	0	122277133	101657197	20619936
TOOLS AND EQUIPMENTS	487828366		5716436	476110	2349024	495417716	206727063	288690653
FURNITURE AND OFFICE EQUIPMENTS	273357486	+	14416453	5470321	0	282303618	266599466	15704152
TOTAL	30017913315		1425885236	139676503	-4637413	31299484635	15562426665	15737057970
BUSES								
LAND	667872253		0	0	0	667872253	0	667872253
BUILDINGS	1274254111		19692492	0	0	1293946603	670748041	623198562
BUSES / MOH OF BUSES	4656054103	$	0	315606414	589646	4341037335	2407576741	1933460594
MOTOR VEHICLES/MOH OF MOTOR VEH.	121083496		0	2371200	0	118712296	80318993	38393303
PLANT AND MACHINERY	21360118		0	0	0	21360118	10072369	11287749
TOOLS AND EQUIPMENTS	104207707		101244	59438	0	104249513	72179449	32070064
FURNITURE AND OFFICE EQUIPMENTS	491167652	&	56553232	1290087	0	546430797	184574525	361856272
TOTAL	7335999441		76346967	319327139	589646	7093608915	3425470118	3668138797
GRAND TOTAL	38328878536		1880153388	472492620	-4047767	39732491537	19621157547	20111333990

$ Inlcudes 804 Nos of Buses (AC CNG 5Nos(2.75Cr) + Low Flooring CNG SD 549 Nos (127.19 Cr) + Midi CNG 250 Nos (49.97 Cr) under JNNURM amounting to Rs. 179.91 Crs.

* Includes expenditure Incurred Under Accelerated Power Development Reform Programme Scheme of Central Government From Financial Year 2001-02 to 2008-09 amounting to Rs.291.66 Crs (Rs.143.21 Crores Under Plant & Machinery,Rs. 64.52 Crs Under Cable & Mains, Rs.75.02 Crs Under Meters & Rs. 8.91 Crs Under Office Equipments)

* Includes Expenditure Incurred Under Business Process Automation Project (BPAP) Amounting to Rs.102.85 crs. (Rs.51.71 +0.10+00.39 +47.65+3.00Lakhs)

* IDC of Rs."0.44 (crore)" was brought into Books of Accounts in FY 2022-23

$ Includes expenditure incurred towards procurement of 185 Nos of SD TATA buses (Lot 1/303) Rs. 90.56 Cr & Electric Hybrid buses (Lot 1/6) 6 Nos of buses Rs. 9.84Cr against Rs .100.00 Crs grant received from MCGM and Tejaswini SD buses (Lot 1 / 37) of Rs. 10.92 Crs

+ Includes expenditure incurred towards procurement of Furniture & Office equipments of 42.61 lakhs under Skill Development at Traffic Training Centre, Dindoshi against Grant of Rs. 50.00 Lakhs received fr. Central govt. Grant received under RDSS project Rs.29.19 Crs. From Central Govt. and Advance paid to L&T (Rs.4.67 crs.) + TATA power (Rs.24.52 crs.)

* Includes Plant & Machinery of Rs. 108.72+0.11 Crs(21-22)+1.21 Crs (22-23) = 110.04 against 60% grant of Rs. 56.98 Crs received from Central Govr.for IPDS Project.

@ Includes expenditure incurred towards Street Lighting Lamps (Rs. 16.39+47.84 Crs (FY19-20) for LED Street Light Lanterns / flood lights/bulbs & 12[illegible]+4.97 (FY 19-20)= 17.59 Crs for Led street lanterns of various watts) against Grant of (Rs. 7.38+18.57 FY 2019-20) Rs.25.95 Crs received from MCGM.

& Includes expenditure incurred towards procurement of Furniture & office equipments of Rs. 28.47 Crs +1.96 Crs. (21-22) = 30.43 Crs under I T M S project against Grant of Rs. 07.37 Crs received from MCGM.

Cr.Amount of Rs. -184789.00 of Skill Development Traffic Taining Centre at Dindoshi inadvertently bookd in FY 2019-20, now reverted.

APPENDIX NO. E-6 (Contd.)

FIXED CAPITAL EXPENDITURE AS AT 31ST MARCH, 2023

* Includes Rs. 15,35,690.01/- not covered by Current Budget Grant but awaiting Corporation sanction.
** Includes Unremunerative Capital Expenditure amounting to Rs.71,81,75,203.46 on Staff Quarters .
*** In addition to the above mentioned Fixed Assets owned & in the possession of the B. E. S. T. Undertaking as on 31-3-2022, some more Fixed Assets, which are not owned but are in possession of B.E.S.& T. Undertaking by way of Lease Agreement, detailed as under:

Sr. No.	NATURE OF FIXED ASSETS	NATURE OF AGREEMENT	COST OF LEASED/SERVICED CONTRACT ASSETS	TOTAL COST Of LEASE RENT	RENTAL PAID UP TO 31.03.2022	BALANCE as on 31.03.2022	TENURE OF AGREEMENT (YEARS)
1	2500 Nos. Electronic Meters Acquired in 1999-2000	Lease	30715425	43837448	43837448	0.00	7

APPENDIX E 7

SCHEDULE OF GENERAL INVESTMENTS AS AT 31ST MARCH, 2023

Sr.No.	Comp. No.	Name	Face Value	Purchase Rate per cent	Book Value	Market rate percent	Market Value
1	1	8.20% Oil Bonds 2023	3,24,00,000.00	99.63	3,24,00,000.00		3,24,00,000.00
2	2	8.83% IRFC 2034	3,50,00,000.00	101.12	3,50,00,000.00		3,50,00,000.00
3	3	9.97% Andhra Pradesh Power Finance Corpn.Ltd.	1,10,00,000.00	101.45	1,10,00,000.00		1,10,00,000.00
4	4	9.97% Andhra Pradesh Power Finance Corpn.Ltd.	2,30,00,000.00	107.70	2,30,00,000.00		2,30,00,000.00
		Total	10,14,00,000.00		10,14,00,000.00		10,14,00,000.00

Note:- The above Investments are transferred from Electricity Supply Contiengency Reserve Fund Investment.

APPENDIX NO. E-8

SOURCES AND APPLICATION OF FUNDS FOR THE YEAR ENDED 31ST MARCH 2023.

(Rs. In Crores.)

Source of Fund	(As at 31st March, 2022)	(As at 31st March, 2023)
SOURCES OF FUNDS		
Funds	1096.52	1131.21
Other Dedicated Fund	280.91	289.17
Loan	1906.92	2562.09
Total	**3284.35**	**3982.47**
APPLICATION OF FUNDS		
Fixed Assets		
Gross Block	3832.89	3973.25
Less : Depreciation	-1887.11	-1962.12
Net Block	1945.78	2011.13
Capital work in Progress	37.47	44.14
Total	**1983.25**	**2055.27**
A. Investments	**79.67**	**92.60**
B. Current Assets		
Inventories	20.46	22.23
Sundry Debtors	698.92	685.09
Cash and Bank Balances	418.93	647.69
Other Current Assets	80.18	80.74
Total	**1218.49**	**1435.75**
C. Loans and Advances	314.66	436.50
Total A+B+C	**1612.82**	**1964.85**
Less : Current Liabilities and Provisions		
Liabilities	3359.30	4037.16
Provisions	0.12	0.21
TOTAL	**3359.42**	**4037.37**
Net Current Assets	**-1746.60**	**-2072.52**
Profit and Loss Account	**3047.70**	**3999.73**
TOTAL	**3284.35**	**3982.47**

APPENDIX E-9

MOVEMENT IN INTERNAL AND SPECIAL FUNDS AND PROVISIONS FOR THE YEAR 2022-2023

Particulars	Balance as on 1st Apr.2022	Provided during the Year	Amount Credited	Total	Amount Debited	Balance as on 31st Mar.2023
1	2	3	4	5	6	7
	₹	₹	₹	₹	₹	₹
Revenue Reserve Fund (101)	0	0	0	0	0	0
BEST Betterment Fund (Sec 460 LL(i)(b))(102)	0	0	0	0	0	0
Welfare Fund (Section 120 A)(103)	30000	0		30000	0	30000
Property Insurance Fund(104)	1873618672	6227487	0	1879846159	118894	1879727265
Third Party Insurance Fund(105)	0	131994603	0	131994603	131994603	0
Motor Vehicles (Third Party Insurance Fund)(106)	314134	0	0	314134	1021575	-707441
Electric Supply Contingencies Reserve Fund(107)	689709729	76154695		765864424		765864424
Fidelity Insurance Fund(108)	2999999	0		2999999		2999999
BEST Staff Benefit Fund (SEC 460 H. H.)(109+110)	154392235	0	8436022	162828257	1283548	161544709
General Fund(111)	0			0		0
Special Depreciation Fund(112)	0			0		0
Generation of Electricity Fund(114)	1968730105			1968730105		1968730105
B. E. S. T. Staff Amenities Fund(421)	0		73012020	73012020	73012020	0
Provision for Depreciation Fund(423)	18871138875	1173811503	780485	20045730863	* 424322948 250368	19621157547
Provision for Obsolescence of Stores(424)	935411	1910000		2845411		2845411
Return on Equity	0			0		0
Passenger Insurance Fund (117)	25200000			25200000		25200000
Best Group Insurance Fund(118)	-3819323		724	-3818599	602000	-4420599
TOTAL	23583249837	1390098288	82229251	25055577376	632605956	24422971420
GRANT FROM STATE/CENTRAL GOVT.,(115)	9063344931		** 5544536566	14711393570	5307206766	9404186804
CAPITAL CONNECTION FEES			@ 103512073			
GRAND TOTAL	32646594768	1390098288	5730277890	39766970946	5939812722	33827158224

* ASSETS WRITTEN OFF	
** GRANT RECEIVED	
FAME 2	2958800000
15TH FINANCE COMMISSION	2293836566
RDSS GRANT RECV FROM GOV OF INDIA	291900000
TOTAL	5544536566
@ CAPITAL CONNECTION FEE	103512073
TOTAL	5648048639

APPEENDIX NO. **E 10**

SCHEDULE OF ELECTRIC SUPPLY CONTINGENCIES RESERVE FUND INVESTMENTS AS AT 31ST MARCH, 2023

Sr. No.	Comp. No.	Name	Date of Invt.	Face Value	Book Value	Purchase rate percent	Int.Rate	Date of Maturity	Last date of Int.Recd.	Period	Market rate percent	Market Value
1	1	8.20% Oil Bonds 2023	03.12.09	3,24,00,000.00	3,24,00,000.00	99.63	8.20	10.11.2023	10.11.2020	142		3,24,00,000.00
2	2	8.83% IRFC 2034	06.10.10	3,50,00,000.00	3,50,00,000.00	101.12	8.83	14.05.2034	15.10.2020	168		3,50,00,000.00
3	3	9.97% Andhra Pradesh Power Finance Corpn.Ltd.	23.02.12	1,10,00,000.00	1,10,00,000.00	101.45	9.97	30.01.2024	01.10.2020	182		1,10,00,000.00
4	4	9.97% Andhra Pradesh Power Finance Corpn.Ltd.	23.02.12	2,30,00,000.00	2,30,00,000.00	101.70	9.97	30.01.2024	01.10.2020	182		2,30,00,000.00
5	8	10.03% Rajasthan SDL Spl. 2022	30.10.15	1,00,00,000.00	1,00,00,000.00	112.18	8.55	18.10.2022	18.10.2020	165		1,00,00,000.00
6	10	8.21% Haryana SDL Spl 2026	30.11.16	5,00,00,000.00	5,00,00,000.00	102.60	8.21	31.03.2026	31.03.2021	1		5,00,00,000.00
7	11	8.19% Rajasthan SDL Spl. 2026	30.11.16	50,00,000.00	50,00,000.00	108.05	8.19	23.06.2026	23.12.2022	99		50,00,000.00
8	12	7.73% WB SDL 2032	17.11.17	6,00,00,000.00	6,00,00,000.00	100.18	7.73	11.08.2032	08.11.2020	144		6,00,00,000.00
9	13	8.45% Assam SDL 2029	29.03.19	4,60,00,000.00	4,60,00,000.00	102.48	8.45	03.06.2029	06.03.2021	26		4,60,00,000.00
10	14	8.84% Rajasthan SDL 2028	29.03.19	1,00,00,000.00	1,00,00,000.00	105.05	8.84	09.12.2028	12.03.2021	20		1,00,00,000.00
11	15	8.18% Haryana Uday 2025	20.01.20	2,60,00,000.00	2,60,00,000.00	104.15	8.18	15.03.2025	15.12.2020	107		2,60,00,000.00
12	16	8.20% Haryana SDL 2028	20.01.20	3,60,00,000.00	3,60,00,000.00	105.80	8.20	02.07.2028	07.02.2021	53		3,60,00,000.00
13	17	10.03% Rajasthan SDL Spl. 18.10.2028	31.03.21	3,30,00,000.00	3,30,00,000.00	118.54	10.03	18.10.2026	18.10.2022	165		3,30,00,000.00
14	18	6.91% Maharashtra SDL 2033	29.10.21	1,20,00,000.00	1,20,00,000.00	99.35	6.91	15.09.2033	15.03.2023	17		1,20,00,000.00
15	19	8.30 % GOI 2042	01.12.21	10,00,000.00	10,00,000.00	114.94	8.30	31.12.2042	31.12.2022	91		10,00,000.00
16	20	7.14% Kerala SDL 2035	31.12.21	7,12,00,000.00	7,12,00,000.00	100.20	7.14	29.12.2035	29.12.2022	93		7,12,00,000.00
17	21	7.83% Rajasthan SDL 2032	28.06.22	5,00,00,000.00	5,00,00,000.00	100.00	7.83	22.06.2032	22.12.2022	100		5,00,00,000.00
18	22	7.79% Tamil Nadu SDL 2032	20.10.22	7,40,00,000.00	7,40,00,000.00	100.00	7.79	04.10.2032	04.10.2022	179		7,40,00,000.00
19	23	7.87 Himachal Pradesh SDL 2032	30.11.22	5,00,00,000.00	5,00,00,000.00	100.00	7.87	09.11.2035	09.11.2022	143		5,00,00,000.00
				63,56,00,000.00	63,56,00,000.00							63,56,00,000.00

APPENDIX NO E:11

Cash Flow Statement for the Year Ended 31 March, 2023

(₹ In Crores)

Particulars	For the year ended 31-03-2022	For the year ended 31-03-2023
A) Cash Flow from operating activities :		
Difference in Net Profit /(Loss) - Cumulative	(843.54)	(952.02)
(Profit) / Loss on sale of Fixed Assets	-	-
Depreciation	39.13	75.00
Contingencies Reserve Fund	7.36	7.62
Miscellaneous Expenditure Written off	0.00	0.00
Interest Expenses	0.00	0.00
Other provision (propins, sb fund , ge, best group insu)	0.64	1.27
Non Operating Income	0.00	0.00
Operating Profit/(Loss) before working capital changes	(796.41)	(868.14)
A)Adjustments for changes in Working Capital:		
Adjustments for application Fund	0.00	0.00
Decrease / (Increase) in Stores & Spares	1.67	(1.77)
Decrease / (Increase) in Sundry Debtors	(109.44)	13.83
Decrease / (Increase) in other Current Assets	(0.02)	(0.56)
Decrease / (Increase) in Loans and Advances	(17.28)	(121.85)
Increase / (Decrease) in Current Liabilities, Deposits and Provisions	48.93	677.95
Cash flow from Operations (I)	(872.55)	(300.54)
B) Cash flow from investing activities		
Net cash flow from Purchase / sale of Fixed Assests	(34.88)	(140.36)
Net (Increase)/Decrease in Investments	(2.85)	(12.93)
Non Operating Income	0.00	0.00
Net (Increase)/Decrease in Capital work in progress	(6.50)	(6.67)
Net cash flow from investing activities (II)	(44.23)	(159.96)
C) Cash flow from financing activities		
Government Grant / Consumer Contribution received	41.58	34.08
Net increase/(Decrease) in Long Term Loans	1053.49	655.17
Interest Expenses	0.00	0.00
Internal Reserve Difference	0.00	0.00
Net cash flow from financing activities (III)	1095.07	689.25
Net Cash Inflow/(Outflow) (I)+(II)+(III)	178.28	228.75
Cash and Bank equivalents at beginning of the period	240.66	418.94
Cash and Bank equivalents at closing of the period	418.94	647.69

* Revised as per the MCA Report on Annual Accounts of F.Y. 2013-14 under para No. 4.

APPENDIX NO. E-12

ABSTRACT OF RECEIPTS AND EXPENDITURE FOR THE YEAR ENDED 31ST MARCH,2023.

RECEIPTS	₹	DISBURSEMENTS	₹
Balance as on 01-04-2022	1,57,92,58,920		
A: **Revenue Accounts**		A: **Revenue Accounts**	
Administration		General Administration	2,37,48,95,471
		Electric Supply	46,96,10,27,619
Miscellaneous Receipts	74,05,30,779	Buses	28,77,52,71,487
Electric Supply			
Distribution of Electric Energy	35,29,54,27,804	Statutory Transfer to Municipal & Other Funds	-
Street Lighting	72,36,11,048		
E. D. Collecting charges, delay payment charges etc.	39,15,86,840	Minimum Cash Balance as per Section 460kk(1)	-
Other Receipts	15,23,69,550		
		B: **Capital Account**	
BUSES		General Administration	37,79,21,185
Traffic Receipts	29,04,35,22,445	Electric Supply	1,42,58,85,236
Other Receipts	1,00,55,92,765	Buses	7,63,46,967
B: **Capital Account**		Loan Funds	8,72,06,55,664
		Other Items	(47,65,40,388)
Loan Funds - Debts Principal	11,28,76,92,205		
C: **Other Accounts**		C: **Other Accounts**	
1) Sinking Fund	-	1) Sinking Fund	-
2) Special & Internal Funds	48,16,36,242	2) Special and Internal Funds	46,99,98,026
3) Sinking, Special & Internal Funds Investments (Paper & Cash)	19,71,20,000	3) Sinking,Special & Internal Funds Investments (Paper & Cash)	32,71,20,000
4) Suspense Accounts		4) Suspense Accounts	
I) Deposits	7,25,31,63,421	i) Deposits	14,36,35,678
ii) Stores Accounts Purchases	6,11,85,83,865	ii) Stores Accounts Purchases	5,64,75,40,001
iii) Miscellaneous	2,71,37,30,28,933	iii) Miscellaneous	2,67,40,36,45,289
		Balance as on 31-03-2023	3,41,57,22,583
GRAND TOTAL	**3,65,64,31,24,819**	**GRAND TOTAL**	**3,65,64,31,24,819**

CAO & FA

DY.C.M.(A)

I Signed, subject to my Audit Report U/No.MCA/025/22-23/06 dtd.29/12/2022 on the 2022-23 Accounts of B.E.S. & T. Undertaking & Certificate U/No. MCA/025/22-23/05 dtd. 29/12/2022 enclosed herein.

Municipal Chief Auditor

M. C. A. BMC DEPARTMENT

General Manager

APPENDIX NO. E-13

STATEMENT OF SHORT TERM FINANCIAL ASSISTANCE FOR THE F.Y. 2022-23 (IN CRORES)

Sr.NO.	BANK NAME	INT. Rate	Sanction Amount	Loan Period		O/S As on 31.03.2022	S.T.F.A. Raised	S.T.F.A. Repaid	O/S As on 31.03.2023
(A)	SHORT TERM LOANS			From	To				
1	BANK OF INDIA	6.85%	200.00	31.03.2022	31.03.2023	200.00	0.00	200.00	0.00
		7.55%	200.00	30.06.2022	26.06.2023	0.00	200.00	200.00	0.00
		7.55%	50.00	11.08.2022	30.06.2023	0.00	50.00	50.00	0.00
2	HDFC BANK	7.51%	100.00	31.12.2022	30.12.2023	0.00	100.00	25.00	75.00
3	RURAL ELECTRIFICATION CORPORATION LTD.	8.10%	100.00	25.05.2021	15.05.2022	16.67	0.00	16.67	0.00
	SHORT TERM LOAN TOTAL - (A)					216.67	350.00	491.67	75.00

* RATE OF INTEREST FOR THE MONTH MARCH- 2022 IS SHOWN AS INTEREST RATES ARE FLUCTUATED DURING THE FINANCIAL YEAR.

THE BRIHAN MUMBAI ELECTRIC SUPPLY AND TRANSPORT UNDERTAKING
(OF THE BRIHANMUMBAI MAHANAGARPALIKA)
APPENDIX NO. E-1
GENERAL FINANCIAL STATISTICS 2023-2024

2022-2023	PARTICULARS		2023-24	2022-2023	PARTICULARS		2023-24
₹		₹	₹	₹		₹	₹
	ELECTRIC SUPPLY INCOME			1,00,000	Minimum Cash balance B/F		1,00,000
					Excess of Expenditure over Income		
35,29,54,27,804	Distribution of Energy by Meter	41,85,14,47,703		-10,97,95,60,652	Supply	0	
8,75,38,710	Street Lighting sale of Energy	11,21,68,428		0	Buses	-10,37,93,31,414	
63,60,72,339	Street Lighting -R.&M	69,71,85,338			Excess of Income over Expenditure		
54,39,56,350	Other Receipts	55,37,60,171		0	Supply	68,59,20,986	
33,46,30,315	Share of General Admn. Receipts	21,36,17,913		22,10,07,307	Buses		-9,69,34,10,428
				-10,75,84,53,345	Total		-9,69,33,10,428
36,89,76,25,558	Total		43,42,81,79,553				
					Minimum Cash Balance required		
	ELECTRIC SUPPLY EXPENDITURE			1,00,000	under section 460KK (1) C/F		1,00,000
28,60,96,49,735	Cost of Energy Purchased	23,93,68,55,673		-10,75,85,53,345			-9,69,34,10,428
5,61,29,99,091	External Power Purchased	4,45,05,80,615			Balance appropriated as under:-		
2,54,20,00,131	Intra State Transmission Charges	2,33,63,69,787			Transferred to Municipal Fund		
98,53,00,008	**Standby Charges**	94,02,99,996	31,66,41,06,071	0	**under section 460KK 2 (e)**		0
37,74,99,48,965							
5,28,42,85,552	**Establishment Cost**		5,24,38,61,648		**Transferred to Generation of**		
				0	**Electricity Fund**		0
53,50,58,534	**Admn.and Gen.Expenses**		52,53,69,534	-10,75,85,53,345			-9,69,34,10,428
					Previous Year Accum. Surplus/Deficit		
65,43,30,533	**Repairs and Maintenance**		1,00,25,70,055	49,29,37,63,363	Supply	38,65,45,76,685	
				-79,77,07,28,876	Buses	-78,65,18,56,157	-39,99,72,79,472
55,06,08,620	**Other Cost (includes Cont. Res. Fund & Interest on Consumer Deposit)**		84,61,22,715	-30,47,69,65,513	**ACCUMULATED DEFICIT**		
1,07,72,35,346	**Depreciation**		1,08,77,87,569				
91,61,58,592	**Share of Gen. Admn.**		87,73,43,468				
1,10,95,60,068	**Interest on Loans**		1,49,50,97,507				
				1,23,82,39,386	**Prior Period Adjustment (CR)**		55,75,19,128
47,87,71,86,210	**TOTAL**		42,74,22,58,567	-39,99,72,79,472	**Balance C/F To Balancesheet**		-49,13,31,70,772
-10,97,95,60,652	**SURPLUS / DEFICIT**		68,59,20,986				

Contd...

APPENDIX E-1 Contd....

2022-2023 ₹	PARTICULARS	₹	2023-24 ₹	2022-2023 ₹	PARTICULARS	₹	2023-24 ₹
	BUSES INCOME						
29,04,35,22,445	Passenger Receipts	19,98,35,07,331					
1,00,55,92,765	Other Receipts	1,29,04,62,525					
40,59,00,464	Share of Gen. Admn. Receipts	18,35,24,247					
30,45,50,15,674	Total		21,45,74,94,103				
	BUSES EXPENDITURE						
9,91,22,38,802	Fuel and Operating Materials		11,50,32,62,416				
17,40,99,44,242	Establishment Cost		17,43,43,09,298				
55,39,61,347	Admn.and Gen.Expenses		53,74,04,114				
50,32,76,968	Repairs and Maintenance		45,11,40,143				
5,68,14,715	Other Cost		4,48,58,330				
6,51,34,913	Depreciation		7,17,00,996				
27,39,00,500	Interest on Loans		34,97,97,425				
1,45,87,36,880	Share of Gen.Admn.		1,44,43,52,795				
30,23,40,08,367	TOTAL		31,83,68,25,517		TOTAL		
22,10,07,307	SURPLUS / DEFICIT		-10,37,93,31,414				

I Signed, subject to my Audit Report U/No.MCA/025/24-25/03 dtd.27/09/2024 on the 2023-24 Accounts of B.E.S. & T. Undertaking & Certificate U/No. MCA/025/24-25/02 dtd. 27/09/2024 enclosed therein.

CAO & FA (Del.) | Dy.C.M.(A) | Municipal Chief Auditor | Municipal Chief Auditor | General Manager

M.C.A. BMC DEPARTMENT

APPENDIX NO. E-2

DIVISIONAL INCOME AND EXPENDITURE STATEMENT FOR THE YEAR ENDED 31ST MARCH, 2024
ELECTRIC SUPPLY

2022-23	EXPENDITURE		2023-24	2022-23	INCOME		2023-24
₹		₹	₹	₹		₹	₹
28,60,96,49,735	Cost of Energy Purchased	23,93,68,55,673		35,29,54,27,804	Distribution of Energy by Meter		41,85,14,47,703
5,61,29,99,091	External Power Purchased	4,45,05,80,615					
2,54,20,00,131	Intra State Transmission Charges	2,33,63,69,787		8,75,38,710	Street Lighting Sale of Energy		11,21,68,428
98,53,00,008	Standby Charges	94,02,99,996	31,66,41,06,071				
37,74,99,48,965				63,60,72,339	Street lighting -R & M		69,71,85,338
				36,01,90,38,853			42,66,08,01,469
5,28,42,85,552	Establishment Cost (Supply)		5,24,38,61,648		**Other Receipts**		
63,58,94,308	Establishment Cost (Gen.Admn.)		57,35,46,035	0	Electricity Duty Collection	0	0
				14,03,90,442	Delayed payment Charges	16,06,57,945	
53,50,58,534	Admn.and Gen.Expenses (Supply)		52,53,69,534	1,92,83,247	Rent of Land & Building	1,85,39,048	
12,39,51,532	Admn.and Gen.Expenses (Gen.Admn.)		13,18,22,061	2,37,60,000	Advertisement	7,28,58,956	
				36,05,22,701	Miscellaneous	30,17,04,223	55,37,60,172
65,43,30,533	Repairs and Maintenance (Supply)		1,00,25,70,055	54,39,56,390			
9,17,24,973	Repairs and Maintenance (Gen.Admn.)		7,83,36,536				
47,44,53,926	Other Cost (Supply)		76,63,08,553				
4,89,41,468	Other Cost (Gen.Admn.)		5,09,93,015				
					Share of General Administration		
1,07,72,35,346	Depreciation (Supply)		1,08,77,87,569	33,46,30,315	Receipts		21,36,17,913
1,56,46,311	Depreciation (Gen.Admn.)		4,26,45,821				
1,10,95,60,067	Interest on Loans (Supply)		1,49,50,97,507				
0	Interest on Loans (Gen.Admn.)		0				
	Provisions towards Electric Supply						
7,61,54,695	Contingencies Reserve Fund		7,98,14,163				
47,87,71,86,210	**TOTAL**	**	42,74,22,58,568	36,89,76,25,558	**TOTAL**		43,42,81,79,554
	Surplus Transferred to Appropriation A/C		68,59,20,986	-10,97,95,60,652	Deficit Transferred to Appropriation A/C		
47,87,71,86,210	**TOTAL**		**43,42,81,79,554**	**47,87,71,86,210**	**TOTAL**		**43,42,81,79,554**

** The total expenditures Includes 1,53,79,88,528.07/- not covered by Current Budget Grant but awaiting Corporation's Sanction.

APPENDIX NO. E-3

DIVISIONAL INCOME & EXPENDITURE STATEMENT FOR THE YEAR ENDED 31ST MARCH, 2024.

BUSES

2022-23	EXPENDITURE		2023-24	2022-23	INCOME		2023-24
₹		₹	₹	₹		₹	₹
	Fuel and Operating Materials				**Traffic Earning From**		
2,75,85,45,574	C.N.G.Fuel	2,08,28,49,912		4,88,37,97,879	Sale of Tickets	3,94,82,27,202	
51,42,29,856	Fuel Oil	50,70,25,621		2,27,00,04,977	Sale of Tickets wet-lease Buses	3,01,81,04,265	
0	Electricity for Electric Buses	0					
3,61,44,918	Lubricants	3,17,06,261		43,86,436	Monthly Bus Passes	86,48,374	
7,58,81,286	Tyre and Tubes	6,64,85,261		81,53,226	Reserved Buses	68,44,879	
27,26,31,507	Tickets	22,30,61,859		0	Lump sum payment from Govt.	0	
6,25,48,05,661	Hiring Chgs. For Buses (wet-lease)	8,59,21,33,501	11,50,32,62,415	5,43,79,927	towards free travel by police personnel	16,82,611	6,98,35,07,331
9,91,22,38,802				7,22,07,22,445			
17,40,99,44,242	Establishment Cost (Buses)		17,43,43,09,298				
1,13,74,42,390	Establishment Cost (Gen.Admn.)		1,10,40,98,472	35,07,95,482	Advertisement Receipts	45,83,06,456	
55,39,61,347	Admn.and Gen.Expenses (Buses)		53,74,04,114	21,82,28,00,000	Grant from MCGM	13,00,00,00,000	
12,85,04,945	Admn.and Gen.Expenses (Gen.Admn.)		14,09,36,197				
				0	Grant from other than MCGM	0	
				50,96,76,553	Other Receipts	50,95,94,483	
50,32,76,968	Repairs and Maintenance (Buses)		45,11,40,144				
9,68,95,234	Repairs and Maintenance (Gen.Admn.)		8,46,63,916	2,66,96,684	Engineering Receipts	5,37,74,507	
5,68,14,715	Other Cost (Buses)		4,48,58,330	11,84,24,046	Rent of Bldg.and Land	26,87,87,079	14,29,04,62,525
8,02,48,000	Other Cost (Gen.Admn.)		7,20,08,388	22,82,83,92,765			
				40,59,00,464	Share of Gen.Admn. Receipts		18,35,24,247
6,51,34,913	Depreciation (Buses)		7,17,00,996				
1,56,46,311	Depreciation (Gen.Admn.)		4,26,45,822				
27,39,00,500	Interest on Loans (Buses)		34,97,97,425				
0	Interest on Loans (Gen.Admn.)		0				
30,23,40,08,367				30,45,50,15,674	**Total**		21,45,74,94,103
22,10,07,307	Surplus Transferred to Appropriation A/c.				Deficit Transferred to Appropriation A/c.		10,37,93,31,414
30,45,50,15,674	**Total**	**	**31,83,68,25,517**	**30,45,50,15,674**	**Total**		**31,83,68,25,517**

** The total Expenditure Includes 1,51,11,97,268.56/-not covered by Current Budget Grant but awaiting Corporation's Sanction.

APPENDIX NO. E-4

APPROPRIATION ACCOUNT FOR THE YEAR ENDED 31ST MARCH 2024

PARTICULARS		2022-23		2023-2024	
		₹		₹	
MINIMUM CASH BALANCE B/F - SUPPLY		50,000		50,000	
BUSES		50,000		50,000	
ELECTRIC SUPPLY :--- SURPLUS / DEFICIT(APPENDIX E-2)		-10,97,95,60,652		68,59,20,986	
BUSES :--- SURPLUS / DEFICIT (APPENDIX E-3)		22,10,07,307		-10,37,93,31,414	
TOTAL		**-10,75,84,53,345**		**-9,69,33,10,428**	
SUPPLY		-10,97,95,10,652		68,59,70,986	
BUSES		22,10,57,307		-10,37,92,81,414	
LESS--- TRANSFERRED TO MUNICIPAL FUND UNDER SEC 460 KK (2) (e)					
SUPPLY		0		0	
BUSES		0		0	
LESS---MINIMUM CASH BALANCE REQUIRED UNDER SECTION 460 KK (1) C/F					
SUPPLY		50,000		50,000	
BUSES		50,000		50,000	
LESS---TRANSFERRED TO GENERATION OF ELECTRICITY FUND		0		0	
TOTAL SUPPLY		**-10,97,95,60,652**		**68,59,20,986**	
BUSES		**22,10,07,307**		**-10,37,93,31,414**	
PREVIOUS YEAR ACCUMULATED SURPLUS / DEFICIT					
SUPPLY		49,29,37,63,363		38,65,45,76,685	
BUSES		-79,77,07,28,876		-78,65,18,56,157	
ACCUMULATED SURPLUS / DEFICIT					
SUPPLY		38,31,42,02,711		39,34,04,97,671	
BUSES		-79,54,97,21,569		-89,03,11,87,571	
PRIOR PERIOD ADJUSTMENT (NET)					
SUPPLY		CR 34,03,73,974		CR 40,65,62,254	
BUSES		CR 89,78,65,412		CR 15,09,56,874	
BALANCE SURPLUS /DEFICIT CARRIED FORWARD		**-39,99,72,79,472**		**-49,13,31,70,772**	
SUPPLY		**38,65,45,76,685**	**	**39,74,70,59,925**	
BUSES		**-78,65,18,56,157**		**-88,88,02,30,697**	

I Signed, subject to my Audit Report U/No.MCA/025/24-25/03 dtd.27/09/2024 on the 2023-24 Accounts of B.E.S. & T. Undertaking & Certificate U/No. MCA/025/24-25/02 dtd. 27/09/2024 enclosed therein.

CAO & FA (Del.) Dy.M.(A) Municipal Chief Auditor General Manager

Municipal Chief Auditor

ANNEXURE :- 'A'

ALLOCATION OF GENERAL ADMINISTRATION INCOME FOR THE YEAR ENDED 31ST MARCH, 2024.

AMOUNT 2022-2023	ALLOCATION		PARTICULARS	AMOUNT 2023-2024	ALLOCATION	
	ELE. SUPPLY	BUSES			ELE. SUPPLY	BUSES
₹	₹	₹		₹	₹	₹
61,55,301	55,39,770	6,15,530	A) Interest on Deposits & Other Investments	75,44,336	67,89,903	7,54,434
			B) MISCELLANEOUS:			
38,52,414	19,26,207	19,26,207	1) Apprentices Premium etc.	18,94,301	9,47,151	9,47,151
17,44,48,394	4,36,12,099	13,08,36,296	2) Rent of Buildings & Land	8,55,72,071	2,13,93,018	6,41,79,053
11,02,98,079	6,06,63,943	4,96,34,136	3) Sale of Stores & Scrap Material etc. (Net)	17,59,05,873	12,13,75,052	5,45,30,821
44,57,16,592	22,28,58,296	22,28,58,296	4) Other Receipts	12,62,25,579	6,31,12,789	6,31,12,789
60,000	30,000	30,000	5) Advertisement Receipts			-
74,05,30,779	**33,46,30,315**	**40,59,00,464**	**TOTAL**	**39,71,42,160**	**21,36,17,913**	**18,35,24,247**

ANNEXURE :-B

ALLOCATION OF GENERAL ADMINISTRATION EXPENDITURE FOR THE YEAR 2023-2024

AMOUNT 2022-2023 ₹	SUPPLY 2022-2023 ₹	BUSES 2022-2023 ₹	PARTICULARS	AMOUNT 2023-2024 ₹	SUPPLY 2023-2024 ₹	BUSES 2023-2024 ₹
			ESTABLISHMENT COST			
7,16,58,646	3,58,29,323	3,58,29,323	MANAGEMENT,SECY.TYPING,CORRESPONDENCE	7,87,84,511	3,93,92,256	3,93,92,256
14,20,96,659	7,10,48,329	7,10,48,329	ACCOUNTS,CAO & FA,BUDGET,PF,CASH	14,25,07,225	7,12,53,613	7,12,53,613
1,69,22,602	84,61,301	84,61,301	PUBLIC RELATION DEPARTMENT	1,08,34,290	54,17,145	54,17,145
2,39,89,965	1,19,94,982	1,19,94,982	LEGAL DEPARTMENT	2,80,15,994	1,40,07,997	1,40,07,997
11,31,98,533	5,65,99,266	5,65,99,266	INTERNAL AUDIT	11,00,54,944	5,50,27,472	5,50,27,472
7,70,00,128	3,85,00,064	3,85,00,064	MATERIAL MANAGEMENT	8,17,47,307	4,08,73,654	4,08,73,654
63,87,77,739	15,96,94,435	47,90,83,304	SECURITY AND VIGILANCE	55,35,24,367	11,07,04,873	44,28,19,493
19,82,12,495	8,91,95,623	10,90,16,872	CHIEF ENGINEER CIVIL & DRAWING OFFICE	16,69,86,436	7,51,43,896	9,18,42,540
11,38,42,894	2,16,30,150	9,22,12,744	TIME KEEPING	11,64,69,003	2,21,29,111	9,43,39,892
4,59,27,662	87,26,256	3,72,01,406	PERSONNEL	6,09,83,906	1,15,86,942	4,93,96,964
4,52,86,708	86,04,475	3,66,82,234	WELFARE	4,74,62,837	90,17,939	3,84,44,898
12,71,22,891	2,41,53,349	10,29,69,541	MEDICAL	13,73,62,519	2,60,98,879	11,12,63,641
14,53,79,109	9,44,96,421	5,08,82,688	INFORMATION TECHNOLOGY DEPARTMENT	14,29,11,167	9,28,92,259	5,00,18,909
1,39,20,669	69,60,335	69,60,335 -	GENERAL ADMINISTRATION	-	-	-
1773336698	**635894308**	**1137442390**	**TOTAL ESTABLISHMENT COST**	**1,67,76,44,507**	**57,35,46,035**	**1,10,40,98,472**
			ADMINISTRATION & GENERAL EXPENSES			
37,33,423	18,66,712	18,66,712	MANAGEMENT,SECY.TYPING,CORRESPONDENCE	32,63,430	16,31,715	16,31,715
43,04,671	21,52,336	21,52,335	ACCOUNTS,CAO & FA,BUDGET,PF,CASH	39,11,261	19,55,630	19,55,630
9,69,779	4,84,889	4,84,889	PUBLIC RELATION DEPARTMENT	7,08,773	3,54,387	3,54,387
49,90,379	24,95,190	24,95,190	LEGAL DEPARTMENT	21,56,151	10,78,076	10,78,076
3,81,947	1,90,974	1,90,974	INTERNAL AUDIT	23,69,505	11,84,753	11,84,753
1,09,24,913	54,62,456	54,62,456	MATERIAL MANAGEMENT	1,41,67,015	70,83,507	70,83,507
37,98,311	9,49,578	28,48,733	SECURITY AND VIGILANCE	48,53,169	9,70,634	38,82,535
1,07,91,267	48,56,070	59,35,197	CHIEF ENGINEER CIVIL & DRAWING OFFICE	1,64,36,259	73,96,317	90,39,942
2,11,294	40,146	1,71,148	TIME KEEPING	6,57,388	1,24,904	5,32,484
25,98,622	4,93,738	21,04,884	PERSONNEL	35,75,372	6,79,321	28,96,051
12,41,865	2,35,954	10,05,911	WELFARE	13,20,834	2,50,958	10,69,876
61,84,648	11,75,083	50,09,565	MEDICAL	69,84,689	13,27,091	56,57,598
48,80,889	31,72,578	17,08,311	INFORMATION TECHNOLOGY DEPARTMENT	75,99,749	49,39,837	26,59,912
19,74,44,469	10,03,75,829	9,70,68,640	GENERAL ADMINISTRATION	20,47,54,662	10,28,44,932	10,19,09,731
252456478	**123951532**	**128504946**	**TOTAL ADMINISTRATION & GENERAL EXPENSES**	**27,27,58,258**	**13,18,22,061**	**14,09,36,197**

Contd...

AMOUNT 2022-2023	SUPPLY 2022-2023	BUSES 2022-2023	PARTICULARS	AMOUNT 2023-2024	SUPPLY 2023-2024	BUSES 2023-2024
₹	₹	₹		₹	₹	₹
			REPAIRS & MAINTENANCE			
3,38,105	1,69,052	1,69,052	MANAGEMENT,SECY.TYPING,CORRESPONDENCE	4,21,854	2,10,927	2,10,927
8,05,721	4,02,861	4,02,861	ACCOUNTS,CAO & FA,BUDGET,PF,CASH	7,31,041	3,65,521	3,65,521
39,105	19,552	19,552	PUBLIC RELATION DEPARTMENT	35,226	17,613	17,613
1,04,585	52,292	52,292	LEGAL DEPARTMENT	1,78,711	89,356	89,356
3,15,994	1,57,997	1,57,997	INTERNAL AUDIT	3,12,827	1,56,414	1,56,414
8,50,421	4,25,210	4,25,210	MATERIAL MANAGEMENT	3,96,439	1,98,219	1,98,219
13,35,361	3,33,840	10,01,521	SECURITY AND VIGILANCE	12,75,868	2,55,174	10,20,694
4,55,03,030	2,04,76,364	2,50,26,667	CHIEF ENGINEER CIVIL & DRAWING OFFICE	5,39,40,004	2,42,73,002	2,96,67,002
3,58,287	68,075	2,90,213	TIME KEEPING	1,58,474	30,110	1,28,364
1,73,073	32,884	1,40,189	PERSONNEL	3,05,686	58,080	2,47,605
1,03,065	19,582	83,483	WELFARE	60,604	11,515	49,089
2,76,805	52,593	2,24,212	MEDICAL	3,23,557	61,476	2,62,081
20,42,283	13,27,484	7,14,799	INFORMATION TECHNOLOGY DEPARTMENT	11,93,666	7,75,883	4,17,783
13,63,74,371	6,81,87,185	6,81,87,185	GENERAL ADMINISTRATION	10,36,66,495	5,18,33,247	5,18,33,247
18,86,20,206	**9,17,24,972**	**96895234**	**TOTAL REPAIRS & MAINTENANCE**	**16,30,00,452**	**7,83,36,536**	**8,46,63,916**
			OTHER COST			
-	-	-	MANAGEMENT,SECY.TYPING,CORRESPONDENCE	-	-	-
-	-	-	ACCOUNTS,CAO & FA,BUDGET,PF,CASH	79,532	39,766	39,766
81,824	40,912	40,912	PUBLIC RELATION DEPARTMENT	-	-	-
-	-	-	LEGAL DEPARTMENT	-	-	-
20,000	10,000	10,000	INTERNAL AUDIT	-	-	-
-	-	-	MATERIAL MANAGEMENT	-	-	-
72,587	18,147	54,440	SECURITY AND VIGILANCE	93,186	18,637	74,549
6,415	2,887	3,528	CHIEF ENGINEER CIVIL & DRAWING OFFICE	4,720	2,124	2,596
-	-	-	TIME KEEPING	-	-	-
-	-	-	PERSONNEL	-	-	-
3,57,37,802	67,90,182	2,89,47,620	WELFARE	2,28,48,611	43,41,236	1,85,07,375
79,93,700	15,18,803	64,74,897	MEDICAL	61,98,062	11,77,632	50,20,431
-	-	-	INFORMATION TECHNOLOGY DEPARTMENT	4,777	3,105	1,672
8,52,77,139	4,05,60,537	4,47,16,603	GENERAL ADMINISTRATION	9,37,72,515	4,54,10,515	4,83,62,000
12,91,89,468	**48941468**	**80248000**	**TOTAL OTHER COST**	**12,30,01,404**	**5,09,93,015**	**7,20,08,388**
3,12,92,622	1,56,46,311	1,56,46,311	**DEPRECIATION**	8,52,91,643	4,26,45,822	- 4,26,45,822
2374895473	**916158592**	**1458736881**	**TOTAL OF GENERAL ADMINISTRATION**	**2,32,16,96,263**	**87,73,43,468**	**1,44,43,52,795**

APPENDIX NO. E- 5
BALANCE SHEET AS AT 31ST MARCH, 2024

2022-23		LIABILITIES		2023-24	2022-23		ASSETS		2023-24
₹			₹	₹	₹			₹	₹
		FUNDS					**NET FIXED ASSETS**		
0	1)	Revenue Reserve Fund Section 460 LL (1) (a)		0	39,73,24,91,534	1)	Fixed Capital Expenditure (E-6)	39,84,86,06,699	
0	2)	BEST Betterment Fund Section 460LL (1) (b)		0	-19,62,11,57,547		Less : Accumulated Depreciation	-19,67,88,74,118	
30,000	3)	Welfare Fund Section 460 LL (1) (c)		30,000	44,14,06,352	2)	Capital Work - in - Progress *	47,44,72,586	
					20,55,27,40,339				20,64,42,05,167
1,87,97,27,265	4)	Property Insurance Fund		1,95,00,26,135			**INVESTMENT**		
30,00,000	5)	Fidelity Insurance Fund		30,00,000	10,14,00,000	1)	General Investment (E - 7)	3,50,00,000	
	6)	General Fund		0	2,00,00,000	2)	Generation of Electricity Fund Investment	2,00,00,000	
19,62,11,57,547	7)	Depreciation Fund	19,67,88,74,120		1,250	3)	Shares in Co-Op. Banks	1,250	
-19,62,11,57,547		Less - Provision	-19,67,88,74,118	2	15,30,00,000	4)	BEST Staff Benefit Fund Investment	16,25,00,000	
0					1,60,15,467	5)	Fixed & Call Deposits with Banks.	7,45,33,311	
2,52,00,000	8)	Passenger Insurance Fund		2,52,00,000	63,56,00,000	6)	Contingencies Reserve Fund Investment	64,72,00,000	
	9)	Financial Asst. Recd. from Various Sources			0	7)	BEST Group Insurance Scheme Fund		
9,00,87,74,731		(i) Financial Asst.from State/Central Govt.	7,38,63,58,969		92,60,16,717				93,92,34,561
0		(ii) Non-Refundable Premium	0				**CURRENT ASSETS**		
10,35,12,073		(iii) Capital Connection Fees	1,67,30,24,714		60,00,00,000	1)	Interest Free Deposit for Renewal Power Purch	60,00,00,000	
29,19,00,000		(iv) RDSS Grant	58,38,00,000	9,64,31,83,683		2)	Interest Accrued on Fixed & Call		
11,31,21,44,069				11,62,14,39,820	20,71,00,588		Deposits and General Investment	20,90,16,111	
		Dedicated Fund			0	3)	Deferred Revenue Expenditure	0	
	1)	Electric Supply Contingencies Reserve Fund as per				4)	Securities Deposited by		
76,58,64,424		MERC from F. Y. 2008-09 onwards.	84,56,78,587		3,15,080		Employees,Consumers & Sundry Parties	3,15,080	
16,15,44,709	2)	Staff Benefit Fund	17,35,66,878		80,74,15,668				80,93,31,191
1,96,87,30,105	3)	Generation of Electricity Fund	1,96,87,30,105						
-44,20,599	4)	BEST Group Insurance Fund	829			5)	Stock in Hand ##		
2,89,17,18,639				2,98,79,76,399	22,23,16,191		(a) Revenue		17,77,43,898
		LOAN FROM							
2,37,19,06,319		LOAN FROM RURAL ELECTRIFICATION CORPN. LTD.	1,97,65,88,599		0	6)	Work in Progress for outside parties		
4,44,86,00,000		Temporary Advance From MCGM	4,44,86,00,000		6,85,09,24,416	7)	Book Debts		7,83,28,85,016
31,65,48,050		World Bank Loan under MUTP	27,13,26,900			8)	Cash and Bank Balance		
4,53,94,960		APDRP Loan	2,32,37,040		1,90,19,13,107		(a) Cash on Hand	51,50,57,756	
1,85,00,00,000		Working Capital Demand loan with Canara	2,05,00,00,000		4,57,49,43,174		(b) With Banks	3,28,98,13,806	
15,83,84,22,367		TATA Power Bill Discouting Facilities	13,82,93,26,199		500		(c) Investment in Treasury Bill	500	
75,00,00,001		Short Term Assistance from Financial Institutions	6,28,75,00,001						
25,62,08,71,697				28,88,65,78,739	6,47,68,56,781				3,80,48,72,062
39,82,47,34,405		TOTAL C/F		43,49,59,94,958	35,83,62,70,112		TOTAL C/F		34,20,82,71,895

Contd....

APPENDIX NO. E- 5. (CONTD.)

2022-23 ₹	LIABILITIES	₹	2023-24 ₹	2022-23 ₹	ASSETS	₹	2023-24 ₹
39,82,47,34,405	TOTAL B/F		43,49,59,94,958	35,83,62,70,112	TOTAL B/F		34,20,82,71,895
	CURRENT LIABILITES				8) LOANS AND ADVANCES		
	A:- DEPOSITS FROM			15,77,885	a) Due from Staff	8,30,798	
3,32,07,152	(1) Employees	3,26,43,572		38,73,945	b) On Account Payment	38,55,330	
5,31,37,15,395	(2) Consumers	5,65,98,39,449		3,59,49,276	c) Festival Advance	3,50,99,776	3,97,85,904
3,43,07,97,309	(3) Sundry Parties	3,63,05,81,605		72,30,70,885	d) Due from Suppliers	65,72,43,818	
3,15,080	(4) Govt. Securities	3,15,080		3,55,77,57,958	e) Due from Others	4,21,37,09,473	
8,77,80,34,936			9,32,33,79,706	4,28,01,421	f) Prepaid Expenses	3,90,77,880	
	B:- OTHER LIABILITIES FOR			504	g) Deposits with Suppliers	504	
				4,36,50,31,874			4,94,98,17,579
1,85,17,52,283	(1) Goods Supplied	1,50,81,46,921					
5,53,57,42,513	(2) Other Expenses	7,47,07,31,463			REVENUE ACCOUNTS		
4,57,88,31,992	(3) Other Finance	5,78,72,73,670		39,99,72,79,463	** Deficit As Per Revenue Accounts		49,13,31,70,762
0	(4) Unclaimed Interest	0					
0	(5) Accrued Interest	0					
19,62,72,47,350	(6) Third Parties	20,70,23,18,548					
31,59,35,74,138			35,46,84,70,602				
	PROVISION FOR						
0	(1) BEST Staff Amenities Fund	1,17,000					
28,45,411	(2) Obsolescences of Stores	47,55,411					
0	(3) Third Party Insurance Fund	0					
-7,07,441	(4) Motor Vehicle (Third Party Insurance Fund)	-15,57,441					
21,37,970			33,14,970				
1,00,000	Minimum Cash Balance Required under Sec. 460KK(1)		1,00,000				
80,19,85,81,449	TOTAL		88,29,12,60,236	80,19,85,81,449	TOTAL		88,29,12,60,236

* Includes Capital Stock in hand amounting to ₹ 37,96,03,217 i.e Supply ₹ 36,54,74,942 & Buses ₹ 1,41,28,276.

₹ 47,44,72,585 Includes CAPITAL STOCK of ₹ 37,96,03,217 & CWIP ₹ 9,48,69,368.

₹17,75,27,020 REVENUE STOCK

₹ 65,19,99,605

₹55,71,30,237 BALANCE AS PER LEDGER A/c586

₹9,48,69,368 CWIP AS PER LEDGER A/C 551

I Signed, subject to my Audit Report U/No.MCA/025/24-25/03 dtd.27/09/2024 on the 2023-24 Accounts of B.E.S. & T. Undertaking & Certificate U/No. MCA/025/24-25/02 dtd. 27/09/2024 enclosed therein.

M.C.A. BMC DEPARTMENT

CAO & FA (Bel.) Dy.M.(A) Municipal Chief Auditor Municipal Chief Auditor General Manager

ANNEXURE :- 'C'

NOTES ON THE BALANCE-SHEET AS AT 31ST MARCH 2024.

1. Stores and Material except scrap are valued at cost, scrap is valued at average sale rates.

2. Amount receivable under Court Decree Award from M/s.Madison Communication Pvt. Ltd. ₹.13,15,31,438.

3. Contingent Liability :

   Claims against the Undertaking not acknoweldged as debt ₹ 25,34,46,293/- (Previous year ₹16,71,53,653/-) .

APPENDIX NO. E-6

FIXED CAPITAL EXPENDITURE AS AT 31ST MARCH, 2024

PARTICULARS	TOTAL AS AT 31ST MAR,2023		ADDITIONS DURING FY 2023-24	DEDUCTION IN RESPECT OF ASSETS WRITTEN OFF	ADJUSTMENT IN RESPECT OF TRANSFER (+) OR (-)	TOTAL AS AT 31ST MARCH,2024	ACCUMULATED DEPRECIATION AS ON 31ST MARCH, 2024	NET VALUE AS ON 31ST MARCH, 2024
GENERAL ADMINISTRATION								
LAND	41129692		0	0	0	41129692	0	41129692
BUILDINGS	787261935		817300	0	0	788079235	573682204	214397031
MOTOR VEHICLES	36457868		1452416	8426194	0	29484090	10882672	18601418
PLANT AND MACHINARY	38379262		0	0	0	38379262	29801033	8578229
FURNITURE AND OFFICE EQUIPMENTS	429778494		261021691	3072609	521189	688248765	89444674	598804091
TOOLS AND EQUIPMENTS	3130347		0	167409	0	2962938	1775683	1187255
SECURITY EQUIPMENTS	3260388		0	0	0	3260388	2604212	656176
TOTAL	1339397987		263291407	11666212	521189	1591544371	708190478	883353893
ELECTRIC SUPPLY								
LAND	22953418		0	0	0	22953418	0	22953418
BUILDINGS	877755301		12537758	0	0	890293059	458778591	431514468
PLANT & MACHINERY	13112883584	*	416002115	33067593	989000	13496807106	8004236660	5492570446
CABLES & MAINS / PILLARS/ST.LIGHTING	13186502870	*	695979313	11539322	0	13870942861	5919547997	7951394864
METERS AND INSTALLATIONS	1517133893	*	101493	44372300	0	1472863086	966169505	506693581
STREET LIGHTING LAMPS	1681837174	@	28270605	0	0	1710107779	615166421	1094941358
D. E. A. ON HIRE	419928		0	0	0	419928	344906	75022
MOTOR VEHICLES	122277133		0	29434355	-887179	91955599	77504207	14451392
TOOLS AND EQUIPMENTS	495417716		749017	398601	0	495768132	226196380	269571752
FURNITURE AND OFFICE EQUIPMENTS	282303618	+	1934653	24421106	34392	259851557	255001580	4849977
TOTAL	31299484635		1155574952	143233275	136213	32311962525	16522946247	15789016278
BUSES								
LAND	667872253		0	0	0	667872253	0	667872253
BUILDINGS	1293946603		470683	0	0	1294417286	696066078	598351208
BUSES / MOH OF BUSES	4341037334	$	0	1143081697	8440141	3206395778	1389572239	1816823539
MOTOR VEHICLES/MOH OF MOTOR VEH.	118712296		0	33809743	3508358	88410911	54619859	33791052
PLANT AND MACHINERY	21360118		0	0	0	21360118	10732293	10627825
TOOLS AND EQUIPMENTS	104249513		0	0	0	104249513	74200488	30049025
FURNITURE AND OFFICE EQUIPMENTS	546430797	&	13649345	150094	2463898	562393946	222546436	339847510
TOTAL	7093608915		14120028	1177041534	14412397	5945099806	2447737393	3497362413
GRAND TOTAL	39732491537		1432986387	1331941021	15069799	39848606702	19678874118	20169732584

$ Inlcudes 804 Nos of Buses (AC CNG 5Nos(2.75Cr) + Low Flooring CNG SD 549 Nos (127.19 Cr) + Midi CNG 250 Nos (49.97 Cr) under JNNURM amounting to Rs. 179.91 Crs.

* Includes expenditure Incurred Under Accelerated Power Development Reform Programme Scheme of Central Government From Financial Year 2001-02 to 2008-09 amounting to Rs.291.66 Crs (Rs.143.21 Crores Under Plant & Machinery,Rs. 64.52 Crs Under Cable & Mains, Rs.75.02 Crs Under Meters & Rs. 8.91 Crs Under Office Equipments)

* Includes Expenditure Incurred Under Business Process Automation Project (BPAP) Amounting to Rs.102.85 crs. (Rs.51.71 +0.10+00.39 +47.65+3.00Lakhs)

* IDC of Rs."0.93 (crore)" was brought into Books of Accounts in FY 2023-24

$ Includes expenditure incurred towards procurement of 185 Nos of SD TATA buses (Lot 1/303) Rs. 90.56 Cr & Electric Hybrid buses (Lot 1/6) 6 Nos of buses Rs. 9.84Cr against Rs .100.00 Crs grant received from MCGM and Tejaswini SD buses (Lot 1 / 37) of Rs. 10.92 Crs. And 70 no. SD TATA CNG amt. Rs.11.30 crs. & 50 Nos. CNG Midi bus amt. Rs.9.00 Crs.

+ Includes expenditure incurred towards procurement of Furniture & Office equipments of 44.86 lakhs under Skill Development at Traffic Training Centre, Dindoshi against Grant of Rs. 50.00 Lakhs received fr. Central govt. Grant received under RDSS project Rs.58.38 Crs. From Central Govt. and Advance paid to L&T (Rs.9.86 crs.) + TATA power (Rs.24.52 crs.)+ Rahul Cables (Rs.15 Crs.) + Infinite Comp. Serv.(Rs.9 Crs)

* Includes Plant & Machinery of Rs. 108.72+0.11 Crs(21-22)+1.21 Crs (22-23) = 110.04 against 60% grant of Rs. 56.98 Crs received from Central Govr.for IPDS Project.

@ Includes expenditure incurred towards Street Lighting Lamps (Rs. 16.39+47.84 Crs (FY19-20) for LED Street Light Lanterns / fitted lights/bulbs & 12.62 +4.97 (FY 19-20)= 17.59 Crs for Led street lanterns of various watts) against Grant of (Rs. 7.38+18.57 FY 2019-20) Rs.25.95 Crs received from MCGM.

& Includes expenditure incurred towards procurement of Furniture & office equipments of Rs. 30.98 under I T M S project against Grant of Rs. 07.37 Crs received from MCGM.

APPENDIX E 7

SCHEDULE OF GENERAL INVESTMENTS AS AT 31ST MARCH, 2024

Sr.No.	Comp. No.	Name	Face Value	Book Value	Market Value
1	2	8.83% IRFC 2034	3,50,00,000.00	3,50,00,000.00	3,50,00,000.00
		Total	3,50,00,000.00	3,50,00,000.00	3,50,00,000.00

Note:- The above Investments are transferred from Electricity Supply Contiengency Reserve Fund Investment.

APPENDIX NO. E-8

SOURCES AND APPLICATION OF FUNDS FOR THE YEAR ENDED 31ST MARCH 2024

(Rs. In Crores.)

Source of Fund	(As at 31st March, 2023)	(As at 31st March, 2024)
SOURCES OF FUNDS		
Funds	1131.21	1162.14
Other Dedicated Fund	289.17	298.80
Loan	2562.09	2888.66
Total	**3982.47**	**4349.60**
APPLICATION OF FUNDS		
Fixed Assets		
Gross Block	3973.25	3984.86
Less : Depreciation	-1962.12	-1967.89
Net Block	2011.13	2016.97
Capital work in Progress	44.14	47.45
Total	**2055.27**	**2064.42**
A. Investments	**92.60**	**93.92**
B. Current Assets		
Inventories	22.23	17.77
Sundry Debtors	685.09	783.29
Cash and Bank Balances	647.69	380.49
Other Current Assets	80.74	80.93
Total	**1435.75**	**1262.48**
C. Loans and Advances	436.50	494.98
Total A+B+C	**1964.85**	**1851.38**
Less : Current Liabilities and Provisions		
Liabilities	4037.16	4479.19
Provisions	0.21	0.33
TOTAL	**4037.37**	**4479.52**
Net Current Assets	**-2072.52**	**-2628.14**
Profit and Loss Account	**3999.73**	**4913.32**
TOTAL	**3982.48**	**4349.60**

APPENDIX E-9

MOVEMENT IN INTERNAL AND SPECIAL FUNDS AND PROVISIONS FOR THE YEAR 2023-2024

Particulars	Balance as on 1st Apr.2023	Provided during the Year	Amount Credited	Total	Amount Debited	Balance as on 31st Mar.2024
1	2.00	3	4	5	6	7
	₹	₹	₹	₹	₹	₹
Revenue Reserve Fund (101)	-	-	-	-	-	-
BEST Betterment Fund (Sec 460 LL(i)(b))(102)	-	-	-	-	-	-
Welfare Fund (Section 120 A)(103)	30,000.00	-		30,000.00	-	30,000.00
Property Insurance Fund(104)	1,87,97,27,265.00	7,02,99,543.00	-	1,95,00,26,808.00	672.86	1,95,00,26,135.14
Third Party Insurance Fund(105)	-	7,15,94,538.00	-	7,15,94,538.00	7,15,94,538.00	-
Motor Vehicles (Third Party Insurance Fund)(106)	(7,07,441.00)	-	-	(7,07,441.00)	8,50,000.00	(15,57,441.00)
Electric Supply Contingencies Reserve Fund(107)	76,58,64,424.00	7,98,14,163.00	-	84,56,78,587.00	-	84,56,78,587.00
Fidelity Insurance Fund(108)	29,99,999.00	-	-	29,99,999.00	-	29,99,999.00
BEST Staff Benefit Fund (SEC 460 H. H.)(109+110)	16,15,44,709.00	-	1,35,17,668.50	17,50,62,377.50	14,95,500.00	17,35,66,877.50
General Fund(111)	-			-		-
Special Depreciation Fund(112)	-			-		-
Generation of Electricity Fund(114)	1,96,87,30,105.00	-	-	1,96,87,30,105.00	-	1,96,87,30,105.00
B. E. S. T. Staff Amenities Fund(421)	-	-	4,25,71,971.00	4,25,71,971.00	4,25,71,971.00	-
Provision for Depreciation Fund(423)	19,62,11,57,547.00	1,24,47,80,208.00	-	20,86,59,37,755.00	* 1,18,69,96,927.88	19,67,88,74,120.12
					66,707.00	
Provision for Obsolescence of Stores(424)	28,45,411.00	19,10,000.00		47,55,411.00		47,55,411.00
Return on Equity	-			-		-
Passenger Insurance Fund (117)	2,52,00,000.00			2,52,00,000.00		2,52,00,000.00
Best Group Insurance Fund(118)	(44,20,599.00)		54,15,379.00	9,94,780.00	9,93,951.00	829.00
TOTAL	24,42,29,71,420.00	1468398452	6,15,05,018.50	25,95,28,74,890.50	1,30,45,70,267.74	24,64,83,04,622.76
GRANT FROM STATE/CENTRAL GOVT.,(115)	9,40,41,86,804.00		** 1,54,48,12,000.00	11,04,26,99,990.00	1,39,95,16,307.00	9,64,31,83,683.00
CAPITAL CONNECTION FEES			@ 9,37,01,186.00			
GRAND TOTAL	33,82,71,58,224.00	1,46,83,98,452.00	1,70,00,18,204.50	36,99,55,74,880.50	2,70,40,86,574.74	34,29,14,88,305.76

* ASSETS WRITTEN OFF	1,18,69,96,927.88
** GRANT RECEIVED	
FIN ASST. FOR IPDS	4,76,00,000.00
MAHARASHTRA EV POLICY FOR 3000 EV BUSES	1,75,00,000.00
RDSS GRANT RECV FROM GOV OF INDIA	29,19,00,000.00
GRANT FROM MCGM	1,18,78,12,000.00
TOTAL	1,54,48,12,000.00
@ CAPITAL CONNECTION FEE	9,37,01,186.00
TOTAL	2,82,55,10,113.88

APPEENDIX NO. **E 10**

SCHEDULE OF ELECTRIC SUPPLY CONTINGENCIES RESERVE FUND INVESTMENTS AS AT 31ST MARCH, 2024

Sr. No.	Comp. No.	Particulars	Date of Invt.	Face Value	Book Value	Int.Rate	Date of Maturity	Market Value
1	2	8.83% IRFC 2034	06.10.10	3,50,00,000.00	3,50,00,000.00	8.83	14.05.34	3,50,00,000.00
2	8	10.03% Rajasthan SDL Spl. 2028	19.11.14	1,00,00,000.00	1,00,00,000.00	10.03	18.10.28	1,00,00,000.00
3	10	8.21% Haryana SDL Spl 2026	30.11.16	5,00,00,000.00	5,00,00,000.00	8.21	31.03.26	5,00,00,000.00
4	11	8.19 Raj SPL Uday SDL 2026	30.11.16	50,00,000.00	50,00,000.00	8.19	23.06.26	50,00,000.00
5	12	7.73% WB SDL 2032	17.11.17	6,00,00,000.00	6,00,00,000.00	7.73	11.08.32	6,00,00,000.00
6	13	8.45% Assam SDL 2029	29.03.19	4,60,00,000.00	4,60,00,000.00	8.45	03.06.29	4,60,00,000.00
7	14	8.84% Rajasthan SDL 2028	29.03.19	1,00,00,000.00	1,00,00,000.00	8.84	09.12.28	1,00,00,000.00
8	15	8.18% Haryana Uday 2025	20.01.20	2,60,00,000.00	2,60,00,000.00	8.18	15.03.25	2,60,00,000.00
9	16	8.20% Haryana SDL 2028	20.01.20	3,60,00,000.00	3,60,00,000.00	8.20	02.07.28	3,60,00,000.00
10	17	10.03% Raj SDL SPL 18.10.28	31.03.21	3,30,00,000.00	3,30,00,000.00	10.03	18.10.28	3,30,00,000.00
11	18	6.91% Maharashtra SDL 2033	29.10.21	1,20,00,000.00	1,20,00,000.00	6.91	15.09.33	1,20,00,000.00
12	19	8.30% G.O.I. 2042	01.12.21	10,00,000.00	10,00,000.00	8.30	31.12.42	10,00,000.00
13	20	7.14% Kerala SDL 2035	31.12.21	7,12,00,000.00	7,12,00,000.00	7.14	29.12.35	7,12,00,000.00
14	21	7.83% Rajasthan SDL 2032	28.06.22	5,00,00,000.00	5,00,00,000.00	7.83	22.06.32	5,00,00,000.00
15	22	7.79% Tamil Nadu SDL 2028	20.10.22	7,40,00,000.00	7,40,00,000.00	7.79	04.10.32	7,40,00,000.00
16	23	7.87 Himachal Pradesh SDL 2035	30.11.22	5,00,00,000.00	5,00,00,000.00	7.87	09.11.35	5,00,00,000.00
17	24	7.85% West Bengal SDL 2042	06.07.23	2,80,00,000.00	2,80,00,000.00	7.85	29.03.42	2,80,00,000.00
18	25	7.89% West Bengal SDL 2040	06.07.23	5,00,00,000.00	5,00,00,000.00	7.89	29.03.40	5,00,00,000.00
		TOTAL		**64,72,00,000.00**	**64,72,00,000.00**			**64,72,00,000.00**

APPENDIX NO E:11

Cash Flow Statement for the Year Ended 31 March, 2024

(₹ In Crores)

Particulars	For the year ended 31-03-2023	For the year ended 31-03-2024
A) Cash Flow from operating activities :		
Difference in Net Profit /(Loss) - Cumulative	(952.02)	(913.59)
(Profit) / Loss on sale of Fixed Assets	-	-
Depreciation	75.00	5.77
Contingencies Reserve Fund	7.61	7.98
Miscellaneous Expenditure Written off	0.00	0.00
Interest Expenses	0.00	0.00
Other provision (propins, sb fund , ge, best group insu)	1.27	8.68
Non Operating Income	0.00	
Operating Profit/(Loss) before working capital changes	(868.14)	(891.16)
A)Adjustments for changes in Working Capital:		
Adjustments for application Fund	0.00	0.00
Decrease / (Increase) in Stores & Spares	(1.77)	4.46
Decrease / (Increase) in Sundry Debtors	13.83	(98.20)
Decrease / (Increase) in other Current Assets	(0.56)	(0.19)
Decrease / (Increase) in Loans and Advances	(121.85)	(58.48)
Increase / (Decrease) in Current Liabilities, Deposits and Provisions	677.95	442.14
Cash flow from Operations (I)	**(300.54)**	(601.43)
B) Cash flow from investing activities		
Net cash flow from Purchase / sale of Fixed Assests	(140.36)	(11.61)
Net (Increase)/Decrease in Investments	(12.93)	(1.32)
Non Operating Income	0.00	0.00
Net (Increase)/Decrease in Capital work in progress	(6.67)	(3.31)
Net cash flow from investing activities (II)	(159.96)	(16.24)
C) Cash flow from financing activities		
Government Grant / Consumer Contribution received	34.08	23.90
Net increase/(Decrease) in Long Term Loans	655.17	326.57
Interest Expenses	0.00	0.00
Internal Reserve Difference	0.00	0.00
Net cash flow from financing activities (III)	689.25	350.47
Net Cash Inflow/(Outflow) (I)+(II)+(III)	228.75	(267.20)
Cash and Bank equivalents at beginning of the period	418.94	647.69
Cash and Bank equivalents at closing of the period	647.69	380.49

* Revised as per the MCA Report on Annual Accounts of F.Y. 2013-14 under para No. 4.

APPENDIX NO. E-12

ABSTRACT OF RECEIPTS AND EXPENDITURE FOR THE YEAR ENDED 31ST MARCH,2024

RECEIPTS	₹	DISBURSEMENTS	₹
Balance as on 01-04-2023	3,41,57,22,583		
A: Revenue Accounts		**A: Revenue Accounts**	
Administration		General Administration	2,32,16,96,262
		Electric Supply	41,86,49,15,100
Miscellaneous Receipts	39,71,42,160	Buses	30,39,24,72,722
Electric Supply			
Distribution of Electric Energy	41,85,14,47,703	Statutory Transfer to Municipal & Other Funds	-
Street Lighting	80,93,53,766		
E. D. Collecting charges, delay payment charges etc.	38,32,92,726	Minimum Cash Balance as per Section 460kk(1)	-
Other Receipts	17,04,67,445		
		B: Capital Account	
BUSES			
		General Administration	26,32,91,407
Traffic Receipts	19,98,35,07,331	Electric Supply	1,15,55,74,952
Other Receipts	1,29,04,62,526	Buses	1,41,20,028
B: Capital Account		Loan Funds	10,42,54,48,090
		Other Items	-1316871222.08
Loan Funds - Debts Principal	15,70,02,51,300		
C: Other Accounts		**C: Other Accounts**	
1) Sinking Fund	-	1) Sinking Fund	-
2) Special & Internal Funds	33,19,09,584	2) Special and Internal Funds	24,60,17,117
3) Sinking, Special & Internal Funds Investments (Paper & Cash)	31,82,00,000	3) Sinking,Special & Internal Funds Investments (Paper & Cash)	27,29,00,000
4) Suspense Accounts		4) Suspense Accounts	
I) Deposits	64,56,36,824	i) Deposits	17,98,15,605
ii) Stores Accounts Purchases	5,14,32,20,226	ii) Stores Accounts Purchases	5,42,09,98,520
iii) Miscellaneous	2,69,73,61,46,224	iii) Miscellaneous	2,65,20,81,27,710
		Balance as on 31-03-2024	3,72,82,54,106
GRAND TOTAL	**3,60,17,67,60,400**	**GRAND TOTAL**	**3,60,17,67,60,400**

I Signed, subject to my Audit Report U/No.MCA/025/24-25/03 dtd.27/09/2024 on the 2023-24 Accounts of B.E.S. & T. Undertaking & Certificate U/No. MCA/025/24-25/02 dtd. 27/09/2024, enclosed therein.

CAO & FA (Del.) | Dy.M.(A) | Municipal Chief Auditor | Municipal Chief Auditor | General Manager

APPENDIX NO. E-13

STATEMENT OF SHORT TERM FINANCIAL ASSISTANCE FOR THE F.Y. 2023-24 (Rs. In Crores)

Sr.NO.	BANK NAME	INT. Rate	Sanction Amount	Loan Period		O/S As on 31.03.2023	S.T.F.A. Raised	S.T.F.A. Repaid	O/S As on 31.03.2024
(A)	SHORT TERM LOANS			From	To				
1	BANK OF INDIA	8.80%	110.00	15.09.2023	14.09.2024	0.00	110.00	50.00	60.00
		8.80%	90.00	27.09.2023	15.09.2024	0.00	90.00	0.00	90.00
2	Canara Bank	8.55%	200.00	14.06.2023	14.06.2024	0.00	200.00	100.00	100.00
		8.70%	200.00	14.03.2024	14.03.2025	0.00	200.00	0.00	200.00
3	HDFC BANK	8.05%	100.00	31.12.2022	30.12.2023	75.00	0.00	75.00	0.00
		8.31%	100.00	09.11.2023	09.11.2024	0.00	100.00	33.33	66.67
		8.15%	50.00	29.11.2023	29.11.2024	0.00	50.00	16.67	33.33
		8.31%	75.00	29.02.2024	28.02.2025	0.00	75.00	6.25	68.75
4	RURAL ELECTRIFICATION CORPORATION LTD.	9.25%	60.00	28.04.2023	15.04.2024	0.00	60.00	50.00	10.00
	SHORT TERM LOAN TOTAL - (A)					75.00	885.00	331.25	628.75

* RATE OF INTEREST FOR THE MONTH MARCH- 2024 IS SHOWN AS INTEREST RATES ARE FLUCTUATED DURING THE FINANCIAL YEAR.

The Brihan Mumbai Electric Supply & Transport Undertaking

BEST Bhavan, BEST Marg, Mumbai, Maharashtra- 400 001

Cost Audit Report
FY 2022-23

Jitendrakumar & Associates

Cost & Management Accountants

708-A, 7th Floor, P.J. Tower, Bombay Stock Exchange
Dalal Street, Fort Mumbai – 400001

Email id : jitendrakumarassociates@gmail.com

Contact : +91 9699024004

CMA

Jitendrakumar & Associates

Cost & Management Accountants

708A,P.J. Tower, 7th Floor, BSE, Dalal Street, Fort, Mumbai, 400 001.email : jitendrakumarassociates@gmail.com Tel : 022-68011565(O), 9699324004(M)

Form CRA-3

[Pursuant to rule 6(4) of the Companies (Cost Records and Audit) Rules, 2014]
FORM OF THE COST AUDIT REPORT

We, **M/s Jitendrakumar & Associates** having been appointed as Cost Auditor(s) to submit the cost audit report to MERC as per regulations 23.4 of the MERC (MYT) regulations 2019 of **The Brihan Mumbai Electric Supply & Transport Undertaking** having its registered office at **BEST Bhavan, BEST Marg, Mumbai, Maharashtra- 400 001,** (herein after referred to as the company), have audited the Cost Records and other relevant records maintained in respect of the product group "**Electricity"** for the financial year **2022-23** in compliance with the cost auditing standards by the Company and report, in addition to our observations and suggestions in Para 2.

i. We have obtained all the information and explanations, which to the best of our knowledge and belief were necessary for the purpose of this audit.
ii. In our opinion, proper cost records, as prescribed under cost accounting standards, have been maintained by the company so as to give a true and fair view of the cost and margin of the product groups under reference.
iii. In our opinion, proper records adequate for the purpose of the Cost Audit have been received from the branches not visited by us.
iv. In our opinion and to the best of our information, the said books and records give the information in the manner so required.
v. In our opinion, the said books and records are in conformity with the Cost Accounting Standards issued by The Institute of Cost Accountants of India; to the extent these are found to be relevant and applicable.
vi. In our opinion, company has adequate system of internal audit of cost records which to our opinion is commensurate to its nature and size of its business.
vii. Detailed unit-wise and product-wise cost statements and schedules thereto in respect of the product groups under reference of the company duly audited and certified by us are kept in the company.

2. Observations and suggestions, if any, of the Cost Auditor, relevant to the cost audit.

(a) The Cost Accounting Records of the company have been maintained in accordance with CRA-1 of the Rules and are also in conformity with the generally accepted cost accounting principles and cost accounting standards issued by the institute of Cost Accountants of India to the extent these are found to be relevant and applicable. There has been no change in the system of cost accounting during the year under review and the same is being followed consistently by the company.

(b) The annexures to the Cost Audit Report from Part A to D are integral part of this report.

(c) The Available Capacity shown in Part B-1 in respect of the different Products, wherever applicable, is as certified by the management.

(d) Normal Price and basis adopted to determine the normal price are as certified by the Management.

(e) The non-cost revenue and the expenses for the period have been disclosed in the reconciliation of profit/loss para after discussion with the management.

Management's Responsibility for the Cost Records

The Company is responsible for preparation of the Cost Records that give a true and fair view of the Cost Sheets & Annexures to the Cost Audit Report in accordance with the Generally Accepted Cost Accounting Principles and the cost records as per the Companies (Cost Records & Audit) Rules, 2014 read with its amendments. This responsibility also includes maintenance of adequate cost accounting records in accordance with the provisions of the Act and the Rules for preventing and detecting frauds and other irregularities; selection and application of appropriate Cost accounting policies; making judgements and estimates that are reasonable and prudent; and design, Implementation and maintenance of adequate internal financial controls, relevant to the preparation and presentation of the Annexures to the Cost Audit Report that give a true and fair view and are free from material misstatements, whether due to fraud or error.

Auditors Responsibility

Our responsibility is to express an opinion on these Cost Records based on our audit. We have taken into consideration the signed standalone financial statements provided to us by the management, the provisions of the Act, The Cost Accounting and Auditing Standards and the matters which are required to be included in the Cost Audit Report under the provisions of the Act and Rules made thereunder. We have conducted our audit in accordance with the Standards on Cost Auditing as specified under section 148(3) of the Act. Those Standards required that we comply with the ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the cost records are free from material misstatements.

An audit involves performing procedures to obtain audit evidence about the amounts and the disclosures in the cost records. The procedures selected depend on the auditor's judgement, including the assessment of risks of material misstatement of the cost records, whether due to fraud or error. In making those risk assessments, the auditor considers internal financial control relevant to the Company's preparation of the cost records that give a true and fair view in order to design audit procedures that are appropriate in the circumstances, but not for expressing an opinion on whether the company has in place an adequate internal financial controls system and the operating effectiveness of such controls.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion on the cost records and in accordance with the rules and processes laid by MERC, appropriate samples were randomly selected, opinion & explanations were seeked from the respective managements wherever required.

Disclosures

i. The Management, executives, staff, members, etc. gave the audit team their full co-operation in conducting the cost audit.

ii. All facts mentioned in this report were discussed, deliberated, consulted, etc. with the management, wherever deemed fit. the opinions and suggestions have been incorporated satisfactorily, the said report is well within the knowledge and due notice of the management.

iii. Annexures to Cost Audit Report is the responsibility of the Company's Management. This responsibility also includes maintenance of adequate cost accounting records in accordance with the provisions of the Act and the Rules for preventing and detecting frauds and other irregularities; selection and application of appropriate Cost accounting policies; making judgements and estimates that are reasonable and prudent; and design, Implementation and maintenance of adequate internal financial controls, relevant to the preparation and presentation of the Annexures to the Cost Audit Report that give a true and fair view and are free from material misstatements, whether due to fraud or error. Our audit includes examining, on a test basis, evidence supporting these statements to verify that these statements are free of material misstatement. Our Observations and suggestions are based on the information contained in these Statements.

iv. In our opinion, the Cost Accounting Records are in conformity with the Cost Accounting Standardsissued by The Institute of Cost Accountants of India to the extent these are found to be relevant and applicable. The Cost Auditing Standards have not been notified by the competent authority on the date of this report and as such the compliance thereof is not applicable.

v. The Cost Records and Annexures to the Cost Audit Report are based on financial accounts approved by the Competent Authority of the company.

For Jitendrakumar & Associates
Cost Accountants

FCMA Jitendrakumar Yadav
Sr. Partner
Membership No. 30106

Dated : 15-10-2024
Place : Mumbai
UDIN : 2430106ZZ8XZ5EDL62

3. **Cost Accounting Policy**

I) **Briefly describe the cost accounting policy adopted by the Company and its adequacy or otherwise to determine correctly the cost of production/operation, cost of sales, sales realization and margin of the product(s)/service(s) under reference separately for each product(s)/service(s). The policy shall cover, inter alia, the following areas:**

Cost accounting policy adopted by the Company keeping in view the requirements of the Companies (Cost Records and Audit) amendment (Rules),2014 and also the Cost AuditingStandards, under Section 148 (3) of the Companies Act 2013.

Cost records are prepared to conform with CRA 1 guidelines of Companies (Cost Records and Audit) amendment (Rules) 2014 and Cost Accounting Standards issued by The Instituteof Cost Accountants of India.

a) **Identification of cost centres/ cost objects and cost drivers: -**

The company has accounting system with cost centers, cost object & cost drivers are properlyidentified for the product. Each site is a cost centre with activities like procurement, stores, quality control, etc. The product acts as the primary cost objects to which all cost are ultimately assigned and allocated.

b) **Accounting for material cost including packing materials, stores and spares etc.,employee cost, utilities and other relevant cost components: -**

i. **Material Cost: -**

Material receipts are valued at purchase price, including duties and taxes (net of credits), freight inward, insurance and other expenses directly attributable to the same. The material cost are assigned to products based on consumption of inputs.

ii. **Packing Cost: -**

Not applicable.

iii. **Employee Cost: -**

The employee cost has been calculated as per Cost Accounting Standard 7. Aggregate value of all kinds of consideration paid & payable has been considered properly. Employee cost is traced to specific cost centre depending on the department of the employee. Cost centre wise employee cost is allocated over the products depending upon the nature of each cost centre.

iv. **Utilities: -**

Utilities cost include cost of power for auxiliary consumption has been considered in costof utilities and loaded to the cost centres based on the actual consumptions. The cost of utility has been treated as distinct cost object as per Cost Accounting Standard 8.

c) **Accounting, allocation and absorption of overheads**: -

Administrative overheads are apportioned based on aggregate of employees cost, office rent, travelling expenses of each production cost centres. Apportionment of all overheads is made to various cost centres. The overheads are apportioned as per Cost Accounting standard 3 & 11.

d) **Accounting for Depreciation/ Amortization**: -

Depreciation of various plants & machinery, building and other equipments has been accounted for the product cost centre. Depreciation is provided on straight-line method. The estimated life of the assets is based on the MERC Regulation 2019.The rates of depreciation on various class of assets and the policy for calculation of depreciation is as per the MERC Regulation 2019

e) **Accounting for by-products/ joint-products, scraps, wastage etc.**: -

Wastage/scrap derived during manufacturing process is accounted for product cost centre through the accounting system.

f) **Basis for Inventory Valuation**: -

Not applicable.

g) **Methodology for valuation of Inter-Unit/Inter Company and Related Party transactions: -**

There are related party transactions during the year. The Company use cost plus method for valuation of related party transaction.

h) **Treatment of abnormal and non-recurring costs including classification of other non-cost items: -**

Abnormal, non-recurring costs and other non-cost items are shown under reconciliation of financial accounting profits and costing accounting profits in the report. Abnormal/Non-recurring costs are not considered for product costing.

i) **Other relevant cost accounting policy adopted by the Company**: -

Nil.

2) **Briefly specify the changes, if any, made in the cost accounting policy for the product(s)/service(s) under audit during the current financial year as compared to the previous financial year**: -

No such changes in the current financial year.

3) **Observations of the Cost Auditor regarding adequacy or otherwise of the Budgetary Control System, if any, followed by the company**: -

Budgetary control system prevalent in the company is considered adequate, taking into account the size of the Company and the nature of its operations.

The Brihan Mumbai Electric Supply & Transport Undertaking
1st April 2022 to 31st March 2023

	GENERAL INFORMATION	
1	Corporate identity number or foreign company registration number	N.A.
2	Name of company/undertaking	The Brihan Mumbai Electric Supply & Transport Undertaking
3	Address of registered office or of principal place of business in India of company	BEST Bhavan, BEST Marg, Mumbai, Maharashtra- 400 001
4	Address of corporate office of company	BEST Bhavan, BEST Marg, Mumbai, Maharashtra- 400 001
5	Email address of company	accounts@bestundertaking.com
6	Date of start of reporting period	01-04-2022
7	Date of end of reporting period	31-03-2023
8	Date of start of first previous financial year	01-04-2021
9	Date of end of first previous financial year	31-03-2022
10	Level of rounding used in cost statements	in Lakh
11	Reporting currency of entity	INR
12	Number of cost auditor(s) for reporting period	1
13	Date of board of directors' meeting in which annexure to cost audit report was approved	N.A.
14	Whether cost auditors report has been qualified or has any reservations or contains adverse remarks	No
15	Consolidated qualifications, reservations or adverse remarks of all cost auditors [text block]	As Per CRA-3
16	Consolidated observations or suggestions of all cost auditors	As Per CRA-3
17	Whether company has related party transactions for sale or purchase of goods or services	N.A.

For Jitendrakumar & Associates
Cost Accountants

FCMA Jitendrakumar Rambaran Yadav
Sr. Partner
Membership No: 30106

Date : - 15-10-2024
Place:- Mumbai

For and On Behalf of
The Brihan Mumbai Electric Supply & Transport Undertaking

Authorised Signatory
Name : ANAND MAHADEO SAKHARE
Designation : GAO&FA(Delegation)

The Brihan Mumbai Electric Supply & Transport Undertaking 1st April 2022 to 31st March 2023		
GENERAL DETAILS OF COST AUDITOR		
1	Whether cost auditor is lead auditor	Yes
2	Category of cost auditor	Firm
3	Firm's registration number	101561
4	Name of cost auditor or cost auditors firm	Jitendrakumar & Associates
5	Permanent account number of cost auditor or cost auditors firm	AAMFJ2611C
6	Address of cost auditor or cost auditors firm	708A, P.J. Tower, 7th Floor, BSE, Dalal Street, Fort, Mumbai, 400 001,
7	Email id of cost auditor or cost auditors firm	jitendrakumarassociates@gmail.com,
8	Membership number of member signing report	30106
9	Name of member signing report	Jitendrakumar Rambaran Yadav
10	Name of product or services with CETA HEADING	Transmission & Distribution of Electricity
11	SRN number of Form 23C/CRA 2	NA
12	Number of audit committee meeting attended by cost auditor during year	N.A
13	Date of signing cost audit report and annexure by cost auditor	15-10-2024
14	Place of signing cost audit report and annexure by cost auditor	Mumbai

For Jitendrakumar & Associates
Cost Accountants

FCMA Jitendrakumar Rambaran Yadav
Sr. Partner
Membership No: 30106

Date : - 15-10-2024
Place:- Mumbai

For and On Behalf of
The Brihan Mumbai Electric Supply & Transport Undertaking

Authorised Signatory
Name : ANAND MAHADEO SAKHARE.
Designation :

The Brihan Mumbai Electric Supply & Transport Undertaking
1st April 2022 to 31st March 2023

4. Product / Service Details (for the company as a whole)

SrNo	Name of Product / Service	UOM	CETA	Covered under	Whether Previous	Net Opertional Revenue	
	Service Provided:-					CURRENT YEAR	PREVIOUS YEAR
1	Transmission & Distribution of Electricity		N.A	YES	YES	3,60,190	3,04,768
3	Sale of Scrap			NO	NO	607	136
	Total Net Revenue from Operations					**3,60,797**	**3,04,904**
	Other Incomes of Company					8,179	7,125
	Total Revenue as per Financial Accounts					**3,68,976**	**3,12,029**
	Extra Ordinary Income, If any					-	-
	Total Revenue including extra ordinary Income, If any					**3,68,976**	**3,12,029**
	Turnover as per GST						

For Jitendrakumar & Associates
Cost Accountants

FCMA Jitendrakumar Rambaran Yadav
Sr. Partner
Membership No: 30106

Date : - 15-10-2024
Place:- Mumbai

For and On Behalf of
The Brihan Mumbai Electric Supply & Transport Undertaking

Authorised Signatory
Name : ANAND MAHADEV SAKHARE
Designation : CAO&FA(Delegation)

THE BRIHAN MUMBAI ELECTRIC SUPPLY & TRANSPORT UNDERTAKING
1st April 2022 to 31st March 2023

QUANTITATIVE INFORMATION (for each product ceta separately)				
4 Digit Ceta code		N.A		
Service Name		Transmission or Distribution of Electricity		
FINANCIAL YEAR :		2022-23		
	PARTICULARS	UOM	Current Year	Previous Year
	1. AVAILABLE CAPACITY:			
a)	Installed Capacity	Lacs	N.A	N.A
b)	Capacity Enhanced During the Year	Lacs	N.A	N.A
c)	Capacity available through leasing arrangements, if	Lacs	N.A	N.A
d)	Capacity available through loan license/ third partie	Lacs	N.A	N.A
e)	**Total available capacity**	Lacs	N.A	N.A
	2. Actual Production:			
a)	Self Manufactured	Lacs	N.A	N.A
b)	Produced under leasing arrangements	Lacs	N.A	N.A
c)	Produced on loan license/ by third parties on job wo	Lacs	N.A	N.A
d)	**Total Production**	Lacs	N.A	N.A
			-	
	3.Production as per Excise Records:	Lacs	N.A	N.A
	4. Capacity utilisation (In House)	Lacs	N.A	N.A
	5.Finished Goods Purchased			
a)	Domestic purchase	Lacs	48,363	44,072
b)	Imports			
c)	**Total Finished Goods Purchased**	Lacs	**48,363**	**44,072**
	6. Stock & Other Adjustments:			
a)	Change in Stock of Finished Goods	Lacs	N.A	N.A
b)	Self / Captive Consumption (incl. samples etc.)	Lacs	N.A	N.A
c)	Other Quantitative Adjustments, if any (Wastage. Et	Lacs	3,530	N.A
d)	**Total Adjustments**	Lacs	N.A	N.A
	7. Total Available Quantity for sale { 2[d] + 5[c] +	Lacs	**44,833**	**44,072**
	8. Actual Sales:			
a)	Domestic Sales(Manufacturing)	Lacs	N.A	N.A
b)	Domestic Sales(Trading)	Lacs	44,833	40,784
c)	Export Sales(Manufacturing)	Lacs	N.A	N.A
d)	Export Sales (Trading)	Lacs	N.A	N.A
e)	**Total Quantity Sold**	Lacs	**44,833**	**40,784**

Note Distribution loss for FY 2022-23 is considered 4.18% & Transmission Loss for FY 2022-23 is 1.10%

For Jitendrakumar & Associates
Cost Accountants

FCMA Jitendrakumar Rambaran Yadav
Sr. Partner
Membership No: 30106

Date : - 15-10-2024
Place:- Mumbai

For and On Behalf of
The Brihan Mumbai Electric Supply & Transport Undertaking

Authorised Signatory
Name : ANAND MAHADEO SAKHARE.
Designation : CAO&FA(Delegation)

1st April 2022 to 31st March 2023

2. ABRIDGED COST STATEMENT.

	Name of the Service		Transmission or Distribution of Electricity			
	CETA Heading		NA			
	UOM		Lacs			
	Production	FG Purchased	Finished Stock Adjustments	Captive consumption	Other Adjustments	Quantity Sold
	CURRENT YEAR	48,363.17	-	-	3,530.00	44,833.17
	PREVIOUS YEAR	44,072.02	-	-	-	40,784.32

Sr	Description	CURRENT YEAR		PREVIOUS YEAR	
		Amount	Rate/unit	Amount	Rate/unit
1	Cost of materials consumed				
2	Cost of process materials or chemicals consumed				
3	Cost of utilities consumed				
4	Cost of direct employees				
5	Cost of direct expenses				
6	Cost of stores and spares consumed				
7	Cost of repairs and maintenance	52,403	1.08	23,448.31	0.53
8	Cost of quality control	197	0.004	182.32	0.00
9	Cost of research and development	2,519	0.05	1,466.77	0.03
10	Cost of technical knowhow fee or royalty				
11	Cost of depreciation or amortization	10,929	0.23	10,757.63	0.24
12	Cost of other production overheads	67	0.001		
13	Cost of industry specific operating expenses				
14	**Total of inputs and conversion cost**	66,115	1.37	35,855.03	0.81
15	Cost of increase/decrease in work-in-progress				
16	Credits for recoveries				
17	Cost of primary packing				
18	**Cost of production or operations**	66,115	1.37	35,855.03	0.81
19	Cost of finished goods purchased	3,78,736	7.83	2,83,254.84	6.43
20	**Total cost of production and purchases**	4,44,851	9.20	3,19,109.86	7.24
21	Cost of increase/decrease in finished goods				
22	Cost of self or captive consumption				
23	Cost of other adjustments				
24	**Cost of production or operations of goods or services sold**	4,44,851	9.20	3,19,109.86	7.24
25	Cost of administrative overheads	9,116	0.20	14,707.48	0.36
26	Cost of secondary packing				
27	Cost of selling and distribution overheads	3,924	0.088	21,243.86	
28	**Cost of sales before Interest**	4,57,891	10.21	3,55,061.21	8.71
29	Cost of interest and financing charges	11,923	0.27	9,816.50	0.24
30	**Cost of sales of product or activity group**	**4,69,814**	**10.48**	**3,64,877.71**	**8.95**
31	**Net sales realization of product or activity group**	**3,60,797**	**8.05**	**3,04,903.95**	**7.48**
32	**Amount of margin as per cost accounts**	**-1,09,017**	**(2.43)**	**-59,973.76**	**(1.47)**

For Jitendrakumar & Associates
Cost Accountants

FCMA Jitendrakumar Rambaran Yadav
Sr. Partner
Membership No: 30106

Date : - 15-10-2024
Place:- Mumbai

For and On Behalf of
The Brihan Mumbai Electric Supply & Transport Undertaking

Authorised Signatory
Name : ANAND MAHADEO SAKHARE
Designation : GA(R&A)(Additional)

The Brihan Mumbai Electric Supply & Transport Undertaking
1st April 2022 to 31st March 2023

1. PRODUCT AND SERVICE PROFITABILITY STATEMENT (for audited products/services)

Sr No	Particulars	Current Year			Previous Year		
		Sales	Cost of sales	Margin	Sales	Cost of sales	Margin
1	Transmission & Distribution of Electricity	3,60,797	4,69,814	(1,09,017)	3,04,904	3,64,878	(59,974)
	Total	3,60,797	4,69,814	(1,09,017)	3,04,904	3,64,878	(59,974)

For Jitendrakumar & Associates
Cost Accountants

FCMA Jitendrakumar Rambaran Yadav
Sr. Partner
Membership No: 30106

Date : - 15-10-2024
Place:- Mumbai

For and On Behalf of
The Brihan Mumbai Electric Supply &
Transport Undertaking

Authorised Signatory
Name : ANAND MAHADEO SAKHARE.
Designation : GAO&FA(Delegation)

The Brihan Mumbai Electric Supply & Transport Undertaking
1st April 2022 to 31st March 2023

2. PROFIT RECONCILIATION (for the company as a whole)			
Sr no.	Particulars	Current Year	Previous Year
1	**Profit/loss as per Cost Accounting Records**	(1,09,017)	(59,974)
	(a) For the Audited Product(s) /service(s)	(1,09,017)	(59,974)
	(b) For the Un-audited Product(s) /service(s)		
2	**Add: Incomes not considered in Cost accounts (specify details)**	8,179	7,125
	Bank Deposits	55	76
	Rent of building & Land	629	412
	E.D. Collection & DP Chgs	3,916	4,900
	Profit on sale of assets'	984	971
	Misc Income	20	8
	Discount, Sundry balance Written Back	2,337	758
	Advertisement Receipts	238	0
3	**Less: Expenses not considered in cost accounts (specify details)**	8,146	8,065
	HIRING OF REFRIGERATOR & OTHER	0	0
	ELECTRICAL APPLIANCE ON HIRE	0	3
	CLEANING AND DISINFECTING -Corona	15	37
	CLEANING & DISINFECTING DEPART	0	0
	BAD DEBTS	565	459
	OTHER EXPENDITURE	583	874
	STOCK ADJUSTMENT	1	1
	CELEBRATION OF REPUBLIC DAY /	0	- 0
	MAHAPARINIRVAN DAY	3	0
	WEATHER FORECAST PROVIDER	-	3
	PROVISION FOR OBSOLESCENCE	4	4
	STREET LIGHTING EXPENSE	6,974	6,684
	Past Revenue Surplus	-	-
	ELECT. SUPPLY CONTIN. RESERVE	-	-
4	**Diffrence in Valuation of stock between financial accounts and cost accounts**		
5	**Profit or Loss as per Financial Accounts**	(1,08,984)	(60,914)

For Jitendrakumar & Associates
Cost Accountants

FCMA Jitendrakumar Ramharan Yadav
Sr. Partner
Membership No: 30106

Date : - 15-10-2024
Place:- Mumbai

For and On Behalf of
The Brihan Mumbai Electric Supply
& Transport Undertaking

Authorised Signatory
Name : ANAND MAHADEO SAKHARE
Designation : GAO&FA (Evaluation)

The Brihan Mumbai Electric Supply & Transport Undertaking
1st April 2022 to 31st March 2023

3.VALUE ADDITION AND DISTRIBUTION OF EARNING (for the company as a whole)

Sr. No.	Particulars	Current Year Rs.	Previous Year Rs.
	Value Addition:		
1	Gross Sales (excluding sales returns)	3,68,976	3,12,029
2	Less: Excise Duty,etc.		
3	Net Sales	3,68,976	3,12,029
4	Add: Export Incentives		
5	Add/Less: Adjustments in finished stocks		
6	Less: Cost of bought out inputs		
	(a)Cost of Materials Consumed		
	(b)Process Materials / Chemicals		
	(c)Consumption of Stores & Spares		
	(d)Utilities (e.g. power & fuel)		
	(e)Others,if any (specify PURCHASE OF POWER & RELATED MATERIAL)	3,77,499	2,83,665
	Total Cost of bought out inputs	**3,77,499**	**2,83,665**
7	**Value Added**	**(8,523)**	**28,363**
8	Add:Income from Other sources		
9	Add:Extra ordinery Income		
10	**Earnings available for distribution**	**(8,523)**	**28,363**
	Distribution of Earnings to:		
1	Employees as salaries & wages, retirement benefits, etc.	59,533	
2	Shareholders as dividend	-	
3	Company as retained funds	(98,055)	(50,156)
4	Government as taxes	-	
5	Extra ordinery Expenses	-	
6	Others, if any (specify)	29,999	78,519
7	**Total distribution of earnings**	**(8,523)**	**28,363**

For Jitendrakumar & Associates
Cost Accountants

FCMA Jitendrakumar Rambaran Yadav
Sr. Partner
Membership No: 30106

Date : - 15-10-2024
Place:- Mumbai

For and On Behalf of
The Brihan Mumbai Electric Supply & Transport Undertaking

Authorised Signatory
Name : ANAND MAHADEO SAKHARE
Designation : CAO&FA(Delegation)

The Brihan Mumbai Electric Supply & Transport Undertaking
1st April 2022 to 31st March 2023

4.FINANCIAL POSITION AND RATIO ANALYSIS (for the company as a whole)

	Particulars	Units	Current Year	Previous Year
A.	**Financial Position**			
1	Share Capital			
2	Reserves & Surplus		4,66,672	5,68,258
3	Long Term Borrowings		2,14,891	1,75,066
4	(a) Gross Assets		10,22,792	9,94,020
	(b) Net Non-Current Assets		1,65,076	1,59,527
5	(a) Current Assets		8,42,756	8,20,840
	(b) Less: Current Liabilities		2,88,057	2,05,917
	(c) Net Current Assets		5,54,699	6,14,923
6	Capital Employed		4,66,672	5,68,258
7	Net Worth		4,66,672	5,68,258
B.	**Financial Performance**			
1	Value added		(8,523)	28,363
2	Net Revenue from Operations of Company		3,68,976	3,12,029
3	Profit before Tax (PBT)		(1,08,984)	(60,913)
C.	**Profitability Ratios**			
1	PBT to Capital Employed (B3/A6)	%	-23.35%	-10.72%
2	PBT to Net Worth (B3/A7)	%	-23.35%	-10.72%
3	PBT to Value Added (B3/B4)	%	1278.67%	-214.76%
4	PBT to Net revenue from operations (B3/B2)	%	-30%	-19.52%
D.	**Other Financial Ratios**			
1	Debt-Equity Ratio		0.46	0.31
2	Current Assets to Current Liabilities		2.93	3.99
3	Valued Added to Net Revenue from Operations	%	-2%	9.09%
E.	**Working Capital Ratios**			
1	Raw Materials Stock to Consumption	month	NA	NA
2	Stores & Spares to Consumption	month	NA	NA

For Jitendrakumar & Associates
Cost Accountants

FCMA Jitendrakumar Rambaran Yadav
Sr. Partner
Membership No: 30106

Date : - 15-10-2024
Place:- Mumbai

For and On Behalf of
The Brihan Mumbai Electric Supply &
Transport Undertaking

Authorised Signatory
Name : ANAND MAHADEO SAKHARE.
Designation : GAO&FA(Delegation)

The Brihan Mumbai Electric Supply & Transport Undertaking

BEST Bhavan, BEST Marg, Mumbai, Maharashtra- 400 001

Cost Audit Report

FY 2023-24

Jitendrakumar & Associates

Cost & Management Accountants

708-A, 7th Floor, P.J. Tower, Bombay Stock Exchange
Dalal Street, Fort Mumbai – 400001

Email id : jitendrakumarassociates@gmail.com

Contact : +91 9699024004

CMA

Jitendrakumar & Associates

Cost & Management Accountants

708A,P.J. Tower, 7th Floor, BSE, Dalal Street, Fort, Mumbai, 400 001.email : jitendrakumarassociates@gmail.com Tel : 022-68011565(O), 9699024004(M)

Form CRA-3

[Pursuant to rule 6(4) of the Companies (Cost Records and Audit) Rules, 2014]
FORM OF THE COST AUDIT REPORT

We, **M/s Jitendrakumar & Associates** having been appointed as Cost Auditor(s) to submit the cost audit report to MERC as per regulations 23.4 of the MERC (MYT) regulations 2019 of **The Brihan Mumbai Electric Supply & Transport Undertaking** having its registered office at **BEST Bhavan, BEST Marg, Mumbai, Maharashtra- 400 001,** (herein after referred to as the company), have audited the Cost Records and other relevant records maintained in respect of the product group **"Electricity"** for the financial year **2023-24** in compliance with the cost auditing standards by the Company and report, in addition to our observations and suggestions in Para 2.

i. We have obtained all the information and explanations, which to the best of our knowledge and belief were necessary for the purpose of this audit.
ii. In our opinion, proper cost records, as prescribed under cost accounting standards, have been maintained by the company so as to give a true and fair view of the cost and margin of the product groups under reference.
iii. In our opinion, proper records adequate for the purpose of the Cost Audit have been received from the branches not visited by us.
iv. In our opinion and to the best of our information, the said books and records give the information in the manner so required.
v. In our opinion, the said books and records are in conformity with the Cost Accounting Standards issued by The Institute of Cost Accountants of India; to the extent these are found to be relevant and applicable.
vi. In our opinion, company has adequate system of internal audit of cost records which to our opinion is commensurate to its nature and size of its business.
vii. Detailed unit-wise and product-wise cost statements and schedules thereto in respect of the product groups under reference of the company duly audited and certified by us are kept in the company.

2. Observations and suggestions, if any, of the Cost Auditor, relevant to the cost audit.

(a) The Cost Accounting Records of the company have been maintained in accordance with CRA-1 of the Rules and are also in conformity with the generally accepted cost accounting principles and cost accounting standards issued by the institute of Cost Accountants of India to the extent these are found to be relevant and applicable. There has been no change in the system of cost accounting during the year under review and the same is being followed consistently by the company.



(b) The annexures to the Cost Audit Report from Part A to D are integral part of this report.

(c) The Available Capacity shown in Part B-1 in respect of the different Products, wherever applicable, is as certified by the management.

(d) Normal Price and basis adopted to determine the normal price are as certified by the Management.

(e) The non-cost revenue and the expenses for the period have been disclosed in the reconciliation of profit/loss para after discussion with the management.

Management's Responsibility for the Cost Records

The Company is responsible for preparation of the Cost Records that give a true and fair view of the Cost Sheets & Annexures to the Cost Audit Report in accordance with the Generally Accepted Cost Accounting Principles and the cost records as per the Companies (Cost Records & Audit) Rules, 2014 read with its amendments. This responsibility also includes maintenance of adequate cost accounting records in accordance with the provisions of the Act and the Rules for preventing and detecting frauds and other irregularities; selection and application of appropriate Cost accounting policies; making judgements and estimates that are reasonable and prudent; and design, Implementation and maintenance of adequate internal financial controls, relevant to the preparation and presentation of the Annexures to the Cost Audit Report that give a true and fair view and are free from material misstatements, whether due to fraud or error.

Auditors Responsibility

Our responsibility is to express an opinion on these Cost Records based on our audit. We have taken into consideration the signed standalone financial statements provided to us by the management, the provisions of the Act, The Cost Accounting and Auditing Standards and the matters which are required to be included in the Cost Audit Report under the provisions of the Act and Rules made thereunder. We have conducted our audit in accordance with the Standards on Cost Auditing as specified under section 148(3) of the Act. Those Standards required that we comply with the ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the cost records are free from material misstatements.

An audit involves performing procedures to obtain audit evidence about the amounts and the disclosures in the cost records. The procedures selected depend on the auditor's judgement, including the assessment of risks of material misstatement of the cost records, whether due to fraud or error. In making those risk assessments, the auditor considers internal financial control relevant to the Company's preparation of the cost records that give a true and fair view in order to design audit procedures that are appropriate in the circumstances, but not for expressing an opinion on whether the company has in place an adequate internal financial controls system and the operating effectiveness of such controls.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion on the cost records and in accordance with the rules and processes laid by MERC, appropriate samples were randomly selected, opinion & explanations were seeked from the respective managements wherever required.

Disclosures

i. The Management, executives, staff, members, etc. gave the audit team their full co-operation in conducting the cost audit.

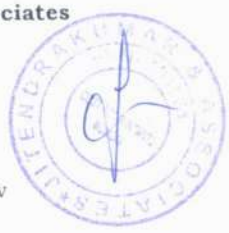
ii. All facts mentioned in this report were discussed, deliberated, consulted, etc. with the management, wherever deemed fit, the opinions and suggestions have been incorporated satisfactorily, the said report is well within the knowledge and due notice of the management.

iii. Annexures to Cost Audit Report is the responsibility of the Company's Management. This responsibility also includes maintenance of adequate cost accounting records in accordance with the provisions of the Act and the Rules for preventing and detecting frauds and other irregularities; selection and application of appropriate Cost accounting policies; making judgements and estimates that are reasonable and prudent; and design, Implementation and maintenance of adequate internal financial controls, relevant to the preparation and presentation of the Annexures to the Cost Audit Report that give a true and fair view and are free from material misstatements, whether due to fraud or error. Our audit includes examining, on a test basis, evidence supporting these statements to verify that these statements are free of material misstatement. Our Observations and suggestions are based on the information contained in these Statements.

iv. In our opinion, the Cost Accounting Records are in conformity with the Cost Accounting Standardsissued by The Institute of Cost Accountants of India to the extent these are found to be relevant and applicable. The Cost Auditing Standards have not been notified by the competent authority on the date of this report and as such the compliance thereof is not applicable.

v. The Cost Records and Annexures to the Cost Audit Report are based on financial accounts approved by the Competent Authority of the company.

For Jitendrakumar & Associates
Cost Accountants



FCMA Jitendrakumar Yadav
Sr. Partner
Membership No. 30106

Dated : 31-10-2024
Place : Mumbai
UDIN : 2430106ZZORKRQ85MG

3. Cost Accounting Policy

1) Briefly describe the cost accounting policy adopted by the Company and its adequacy or otherwise to determine correctly the cost of production/operation, cost of sales, sales realization and margin of the product(s)/service(s) under reference separately for each product(s)/service(s). The policy shall cover, inter alia, the following areas:

Cost accounting policy adopted by the Company keeping in view the requirements of the Companies (Cost Records and Audit) amendment (Rules),2014 and also the Cost Auditing Standards, under Section 148 (3) of the Companies Act 2013.

Cost records are prepared to conform with CRA 1 guidelines of Companies (Cost Records and Audit) amendment (Rules) 2014 and Cost Accounting Standards issued by The Institute of Cost Accountants of India.

a) Identification of cost centres/ cost objects and cost drivers: -

The company has accounting system with cost centers, cost object & cost drivers are properly identified for the product. Each site is a cost centre with activities like procurement, stores, quality control, etc. The product acts as the primary cost objects to which all cost are ultimately assigned and allocated.

b) Accounting for material cost including packing materials, stores and spares etc., employee cost, utilities and other relevant cost components: -

i. Material Cost: -

Material receipts are valued at purchase price, including duties and taxes (net of credits), freight inward, insurance and other expenses directly attributable to the same. The material cost are assigned to products based on consumption of inputs.

ii. Packing Cost: -

Not applicable.

iii. Employee Cost: -

The employee cost has been calculated as per Cost Accounting Standard 7. Aggregate value of all kinds of consideration paid & payable has been considered properly. Employee cost is traced to specific cost centre depending on the department of the employee. Cost centre wise employee cost is allocated over the products depending upon the nature of each cost centre.

iv. Utilities: -

Utilities cost include cost of power for auxiliary consumption has been considered in cost of utilities and loaded to the cost centres based on the actual consumptions. The cost of utility has been treated as distinct cost object as per Cost Accounting Standard 8.



c) **Accounting, allocation and absorption of overheads**: -

Administrative overheads are apportioned based on aggregate of employees cost, office rent, travelling expenses of each production cost centres. Apportionment of all overheads is made to various cost centres. The overheads are apportioned as per Cost Accounting standard 3 & 11.

d) **Accounting for Depreciation/ Amortization**: -

Depreciation of various plants & machinery, building and other equipments has been accounted for the product cost centre. Depreciation is provided on straight-line method. The estimated life of the assets is based on the MERC Regulation 2019.The rates of depreciation on various class of assets and the policy for calculation of depreciation is as per the MERC Regulation 2019

e) **Accounting for by-products/ joint-products, scraps, wastage etc.**: -

Wastage/scrap derived during manufacturing process is accounted for product cost centre through the accounting system.

f) **Basis for Inventory Valuation**: -

Not applicable.

g) **Methodology for valuation of Inter-Unit/Inter Company and Related Party transactions: -**

There are related party transactions during the year. The Company use cost plus method for valuation of related party transaction.

h) **Treatment of abnormal and non-recurring costs including classification of other non-cost items**: -

Abnormal, non-recurring costs and other non-cost items are shown under reconciliation of financial accounting profits and costing accounting profits in the report. Abnormal/Non-recurring costs are not considered for product costing.

i) **Other relevant cost accounting policy adopted by the Company**: -

Nil.

2) **Briefly specify the changes, if any, made in the cost accounting policy for the product(s)/service(s) under audit during the current financial year as compared to the previous financial year**: -

No such changes in the current financial year.

3) **Observations of the Cost Auditor regarding adequacy or otherwise of the Budgetary Control System, if any, followed by the company**: -

Budgetary control system prevalent in the company is considered adequate, taking into account the size of the Company and the nature of its operations.

The Brihan Mumbai Electric Supply & Transport Undertaking
1st April 2023 to 31st March 2024

	GENERAL INFORMATION	
1	Corporate identity number or foreign company registration number	N.A.
2	Name of company/undertaking	The Brihan Mumbai Electric Supply & Transport Undertaking
3	Address of registered office or of principal place of business in India of company	BEST Bhavan, BEST Marg, Mumbai, Maharashtra- 400 001
4	Address of corporate office of company	BEST Bhavan, BEST Marg, Mumbai, Maharashtra- 400 001
5	Email address of company	accounts@bestundertaking.com
6	Date of start of reporting period	01-04-2023
7	Date of end of reporting period	31-03-2024
8	Date of start of first previous financial year	01-04-2022
9	Date of end of first previous financial year	31-03-2023
10	Level of rounding used in cost statements	in Lakh
11	Reporting currency of entity	INR
12	Number of cost auditor(s) for reporting period	1
13	Date of board of directors' meeting in which annexure to cost audit report was approved	N.A.
14	Whether cost auditors report has been qualified or has any reservations or contains adverse remarks	No
15	Consolidated qualifications, reservations or adverse remarks of all cost auditors [text block]	As Per CRA-3
16	Consolidated observations or suggestions of all cost auditors	As Per CRA-3
17	Whether company has related party transactions for sale or purchase of goods or services	N.A.

For Jitendrakumar & Associates
Cost Accountants

FCMA Jitendrakumar Rambaran Yadav
Sr. Partner
Membership No: 30106

Date : - 31-10-2024
Place:- Mumbai

For and On Behalf of
The Brihan Mumbai Electric Supply & Transport Undertaking

Authorised Signatory
Name : ANAND MAHADEO SAKHARE
Designation : CAO&FA(Delegation)

The Brihan Mumbai Electric Supply & Transport Undertaking 1st April 2023 to 31st March 2024		
GENERAL DETAILS OF COST AUDITOR		
1	Whether cost auditor is lead auditor	Yes
2	Category of cost auditor	Firm
3	Firm's registration number	101561
4	Name of cost auditor or cost auditors firm	Jitendrakumar & Associates
5	Permanent account number of cost auditor or cost auditors firm	AAMFJ2611C
6	Address of cost auditor or cost auditors firm	708A, P.J. Tower, 7th Floor, BSE, Dalal Street, Fort, Mumbai, 400 001,
7	Email id of cost auditor or cost auditors firm	jitendrakumarassociates@gmail.com.
8	Membership number of member signing report	30106
9	Name of member signing report	Jitendrakumar Rambaran Yadav
10	Name of product or services with CETA HEADING	Transmission & Distribution of Electricity
11	SRN number of Form 23C/CRA 2	N.A
12	Number of audit committee meeting attended by cost auditor during year	N.A
13	Date of signing cost audit report and annexure by cost auditor	31-10-2024
14	Place of signing cost audit report and annexure by cost auditor	Mumbai

For Jitendrakumar & Associates
Cost Accountants

FCMA Jitendrakumar Rambaran Yadav
Sr. Partner
Membership No: 30106

Date : - 31-10-2024
Place:- Mumbai

For and On Behalf of
The Brihan Mumbai Electric Supply & Transport Undertaking

Authorised Signatory
Name : ANAND MAHADEO SAKHARE.
Designation : CAO&FA(Delegation)

The Brihan Mumbai Electric Supply & Transport Undertaking
1st April 2023 to 31st March 2024

4. Product / Service Details (for the company as a whole)

SrNo	Name of Product / Service	UOM	CETA	Covered under Audit or Not	Whether Previous Fig Reported or not	Net Opertional Revenue	
	Service Provided:-					CURRENT YEAR	PREVIOUS YEAR
1	Transmission & Distribution of Electricity		N A	YES	YES	4,26,608	3,60,190
3	Sale of Scrap			No	No	1,214	607
	Total Net Revenue from Operations					**4,27,822**	**3,60,797**
	Other Incomes of Company					6,460	8,179
	Other Operating Incomes of Company (Past Revenue Shortfall/(Surplus)					-	-
	Total Revenue as per Financial Accounts					**4,34,282**	**3,68,976**
	Extra Ordinary Income, If any Past Revenue Shortfall/(Surplus)					-	-
	Total Revenue including extra ordinary Income, If any					4,34,282	3,68,976
	Turnover as per GST						

For Jitendrakumar & Associates
Cost Accountants

FCMA Jitendrakumar Rambaran Yadav
Sr. Partner
Membership No: 30106

Date : - 31-10-2024
Place:- Mumbai

For and On Behalf of
The Brihan Mumbai Electric Supply & Transport

Authorised Signatory
Name : ANAND MAHADEO LAKHARE
Designation :

CAO&FA(Delegation)

THE BRIHAN MUMBAI ELECTRIC SUPPLY & TRANSPORT UNDERTAKING
1st April 2023 to 31st March 2024

QUANTITATIVE INFORMATION (for each product ceta separately)				
4 Digit Ceta code			N.A	
Service Name			Transmission or Distribution of Electricity	
FINANCIAL YEAR :			2023-24	
	PARTICULARS	UOM	Current Year	Previous Year
	1. AVAILABLE CAPACITY:			
a)	Installed Capacity	Lacs	N.A	N.A
b)	Capacity Enhanced During the Year	Lacs	N.A	N.A
c)	Capacity available through leasing arrangements, if	Lacs	N.A	N.A
d)	Capacity available through loan license/ third parties	Lacs	N.A	N.A
e)	**Total available capacity**	Lacs	N.A	N.A
	2. Actual Production:			
a)	Self Manufactured	Lacs	N.A	N.A
b)	Produced under leasing arrangements	Lacs	N.A	N.A
c)	Produced on loan license/ by third parties on job work	Lacs	N.A	N.A
d)	**Total Production**	Lacs	N.A	N.A
	3.Production as per Excise Records:	Lacs	N.A	N.A
	4. Capacity utilisation (In House)	Lacs	N.A	N.A
	5.Finished Goods Purchased			
a)	Domestic purchase	Lacs	51,120.23	48,363.17
b)	Imports			
c)	**Total Finished Goods Purchased**	Lacs	**51,120.23**	**48,363.17**
	6. Stock & Other Adjustments:			
a)	Change in Stock of Finished Goods	Lacs	N.A	N.A
b)	Self / Captive Consumption (incl. samples etc.)	Lacs	N.A	N.A
c)	Other Quantitative Adjustments, if any (Wastage. Etc.)	Lacs	3,718.72	3,530.00
d)	**Total Adjustments**	Lacs	N.A	N.A
	7. Total Available Quantity for sale { 2[d] + 5[c] + 6[d]} :-	Lacs	**47,401.51**	**44,833.17**
	8. Actual Sales:			
a)	Domestic Sales(Manufacturing)	Lacs	N.A	N.A
b)	Domestic Sales(Trading)	Lacs	47,401.51	44,833.17
c)	Export Sales(Manufacturing)	Lacs	N.A	N.A
d)	Export Sales (Trading)	Lacs	N.A	N.A
e)	**Total Quantity Sold**	Lacs	**47,401.51**	**44,833.17**

Note Distribution loss for FY 2023-24 is considered 4.12% & Transmission Loss for FY 2023-24 is 2.91%

For Jitendrakumar & Associates
Cost Accountants

FCMA Jitendrakumar Rambaran Yadav
Sr. Partner
Membership No: 30106

Date : - 31-10-2024
Place:- Mumbai

For and On Behalf of
The Brihan Mumbai Electric Supply &
Transport Undertaking

Authorised Signatory
Name : ANAND MAHADEO SAWARE.
Designation : CAO&FA(Delegation)

1st April 2023 to 31st March 2024

2. ABRIDGED COST STATEMENT.

	Name of the Service		Transmission or Distribution of Electricity			
	CETA Heading		NA			
	UOM		Lacs			
	Production	FG Purchased	Finished Stock Adjustments	Captive consumption	Other Adjustments	Quantity Sold
	CURRENT YEAR	51,120.23	-	-	3,718.72	47,401.51
	PREVIOUS YEAR	48,363.17	-	-	3,530.00	44,833.17

Sr	Description	CURRENT YEAR		PREVIOUS YEAR	
		Amount	Rate/unit	Amount	Rate/unit
1	Cost of materials consumed				
2	Cost of process materials or chemicals consumed				
3	Cost of utilities consumed				
4	Cost of direct employees				
5	Cost of direct expenses				
6	Cost of stores and spares consumed				
7	Cost of repairs and maintenance	56,850	1.11	52,403	1.08
8	Cost of quality control	201	0.004	197	0.004
9	Cost of research and development	2,532	0.05	2,519	0.05
10	Cost of technical knowhow fee or royalty		-		-
11	Cost of depreciation or amortization	11,304	0.22	10,929	0.23
12	Cost of other production overheads	75	0.001	67	0.001
13	Cost of industry specific operating expenses		-		-
14	**Total of inputs and conversion cost**	70,962	1.39	66,115	1.37
15	Cost of increase/decrease in work-in-progress				
16	Credits for recoveries				
17	Cost of primary packing				
18	**Cost of production or operations**	70,962	1.39	66,115	1.37
19	Cost of finished goods purchased	3,18,241	6.23	3,78,736	7.831
20	**Total cost of production and purchases**	3,89,203	7.61	4,44,851	9.20
21	Cost of increase/decrease in finished goods				
22	Cost of self or captive consumption				
23	Cost of other adjustments				
24	**Cost of production or operations of goods or services so**	3,89,203	7.61	4,44,851	9.20
25	Cost of administrative overheads	8,094	0.17	9,116	0.20
26	Cost of secondary packing				
27	Cost of selling and distribution overheads	6,048	0.13	3,924	0.088
28	**Cost of sales before Interest**	4,03,345	8.51	4,57,891	10.21
29	Cost of interest and financing charges	17,515	0.37	11,923	0.27
30	**Cost of sales of product or activity group**	**4,20,859**	**8.88**	**4,69,814**	**10.48**
31	**Net sales realization of product or activity group**	**4,27,822**	**9.03**	**3,60,797**	**8.05**
32	**Amount of margin as per cost accounts**	**6,962**	**0.15**	**(1,09,017)**	**(2.43)**

For Jitendrakumar & Associates
Cost Accountants

FCMA Jitendrakumar Ramharan Yadav
Sr. Partner
Membership No: 30106

Date : - 31-10-2024
Place:- Mumbai

For and On Behalf of
The Brihan Mumbai Electric Supply & Transport Undertaking

Authorised Signatory
Name : ANAND MAHADEO SAKHARE
Designation : CAO&FA(Delegation)

The Brihan Mumbai Electric Supply & Transport Undertaking
1st April 2023 to 31st March 2024

1. PRODUCT AND SERVICE PROFITABILITY STATEMENT (for audited products/services)

Sr No	Particulars	Current Year			Previous Year		
		Sales	Cost of sales	Margin	Sales	Cost of sales	Margin
1	Transmission & Distribution of Electricity	4,27,822	4,20,859	6,962	3,60,797	4,69,814	(1,09,017)
	Total	4,27,822	4,20,859	6,962	3,60,797	4,69,814	(1,09,017)

For Jitendrakumar & Associates
Cost Accountants

FCMA Jitendrakumar Rambaran Yadav
Sr. Partner
Membership No: 30106

Date : - 31-10-2024
Place:- Mumbai

For and On Behalf of
The Brihan Mumbai Electric Supply & Transport Undertaking

Authorised Signatory
Name : ANAND MAHMOOD SAKHARE
Designation : CAO&FA(Delegation)

The Brihan Mumbai Electric Supply & Transport Undertaking 1st April 2023 to 31st March 2024			
2. PROFIT RECONCILIATION (for the company as a whole)			
Sr no	**Particulars**	**Current Year**	**Previous Year**
1	**Profit/loss as per Cost Accounting Records**	**6,962**	**(1,09,017)**
	(a) For the Audited Product(s) /service(s)	6,962	(1,09,017)
	(b) For the Un-audited Product(s) /service(s)		
2	**Add: Incomes not considered in Cost accounts (specify details)**	**6,460**	**8,179**
	Bank Deposits	68	55
	Rent of building & Land	399	629
	E.D. Collection & DP Chgs	3,833	3,916
	Profit on sale of assets'	984	984
	Misc Income	10	20
	Discount, Sundry balance Written Back	437	2,337
	Advertisement Receipts	729	238
3	**Less: Expenses not considered in cost accounts (specify details)**	**5,190**	**8,146**
	HIRING OF REFRIGERATOR & OTHER	0	0
	ELECTRICAL APPLIANCE ON HIRE	0	0
	CLEANING AND DISINFECTING -Corona	12	15
	CLEANING & DISINFECTING DEPART	0	0
	BAD DEBTS	660	565
	OTHER EXPENDITURE	897	583
	STOCK ADJUSTMENT	3	1
	CELEBRATION OF REPUBLIC DAY /	0	0
	MAHAPARINIRVAN DAY	3	3
	WEATHER FORECAST PROVIDER	-	-
	PROVISION FOR OBSOLESCENCE	4	4
	STREET LIGHTING EXPENSE	3,608	6,974
	ELECT. SUPPLY CONTIN. RESERVE	-	-
4	**Diffrence in Valuation of stock between financial accounts and cost accounts**		
5	**Profit or Loss as per Financial Accounts**	**8,233**	**(1,08,984)**

For Jitendrakumar & Associates
Cost Accountants

FCMA Jitendrakumar Rambaran Yadav
Sr. Partner
Membership No: 30106

Date : - 31-10-2024
Place:- Mumbai

For and On Behalf of
The Brihan Mumbai Electric Supply & Transport Undertaking

Authorised Signatory
Name : ANAND MAHADEO SARWADE
Designation : CAO&FA(Delegation)

The Brihan Mumbai Electric Supply & Transport Undertaking
1st April 2023 to 31st March 2024

3.VALUE ADDITION AND DISTRIBUTION OF EARNING (for the company as a whole)

Sr. No.	Particulars	Current Year Rs.	Previous Year Rs.
	Value Addition:		
1	Gross Sales (excluding sales returns)	4,34,282	3,68,976
2	Less: Excise Duty,etc.		
3	Net Sales	4,34,282	3,68,976
4	Add: Export Incentives		
5	Add/Less: Adjustments in finished stocks		
6	Less: Cost of bought out inputs		
	(a)Cost of Materials Consumed		
	(b)Process Materials / Chemicals		
	(c)Consumption of Stores & Spares		
	(d)Utilities (e.g. power & fuel)		
	(e)Others,if any (specify PURCHASE OF POWER & RELATED MATERIAL)	3,16,641	3,77,499
	Total Cost of bought out inputs	**3,16,641**	**3,77,499**
7	**Value Added**	**1,17,641**	**(8,523)**
8	Add:Income from Other sources	-	-
9	Add:Extra ordinery Income		
10	**Earnings available for distribution**	**1,17,641**	**(8,523)**
	Distribution of Earnings to:		
1	Employees as salaries & wages, retirement benefits, etc.	58,468	59,533
2	Shareholders as dividend	-	
3	Company as retained funds	19,537	(98,055)
4	Government as taxes	-	
5	Extra ordinery Expenses	-	
6	Others, if any (specify)	39,636	50,664
7	**Total distribution of earnings**	**1,17,641**	**12,142**

For Jitendrakumar & Associates
Cost Accountants

FCMA Jitendrakumar Rambaran Yadav
Sr. Partner
Membership No: 30106

Date : - 31-10-2024
Place:- Mumbai

For and On Behalf of
The Brihan Mumbai Electric Supply & Transport Undertaking

Authorised Signatory
Name : ANAND MADHAORAO SARTHARE.
Designation : CAO(Fa/Delegation)

The Brihan Mumbai Electric Supply & Transport Undertaking
1st April 2023 to 31st March 2024

4.FINANCIAL POSITION AND RATIO ANALYSIS (for the company as a whole)

	Particulars	Units	Current Year	Previous Year
A.	**Financial Position**			
1	Share Capital			
2	Reserves & Surplus		4,83,379	4,66,672
3	Long Term Borrowings		1,88,450	2,14,891
4	(a) Gross Assets		10,25,726	10,22,792
	(b) Net Non-Current Assets		1,66,911	1,65,076
5	(a) Current Assets		8,44,351	8,42,756
	(b) Less: Current Liabilities		2,97,265	2,88,057
	(c) Net Current Assets		5,47,087	5,54,699
6	Capital Employed		4,83,379	4,66,672
7	Net Worth		4,83,379	4,66,672
B.	**Financial Performance**			
1	Value added		1,17,641	(8,523)
2	Net Revenue from Operations of Company		4,34,282	3,68,976
3	Profit before Tax (PBT)		8,233	(1,08,984)
C.	**Profitability Ratios**			
1	PBT to Capital Employed (B3/A6)	%	1.70%	-23%
2	PBT to Net Worth (B3/A7)	%	1.70%	-23%
3	PBT to Value Added (B3/B4)	%	7.00%	1279%
4	PBT to Net revenue from operations (B3/B2)	%	2%	-30%
D.	**Other Financial Ratios**			
1	Debt-Equity Ratio		0.39	0.46
2	Current Assets to Current Liabilities		2.84	2.93
3	Valued Added to Net Revenue from Operations	%	27%	-2%
E.	**Working Capital Ratios**			
1	Raw Materials Stock to Consumption	month	NA	NA
2	Stores & Spares to Consumption	month	N.A	NA

For Jitendrakumar & Associates
Cost Accountants

FCMA Jitendrakumar Rambaran Yadav
Sr. Partner
Membership No: 30106

Date : - 31-10-2024
Place:- Mumbai

For and On Behalf of
The Brihan Mumbai Electric Supply & Transport Undertaking

Authorised Signatory
Name : ANAND MAHADEO SAKHARE
Designation : CAO&FA(Delegation)

MAHARASHTRA STATE ELECTRICITY TRANSMISSION CO.LTD.
CIN NO. U40109MH2005SGC153646
Maharashtra State Load Dispatch Center
Tele :91-22-27601765/1766/1931/2937Office of The Chief Engineer
Fax :91-22-27601769/2936Maharashtra State Load Dispatch Center
Email : cesldc@mahasldc.in Thane-Belapur Road, P.O. Airoli
website : http://www.mahasldc.inNavi Mumbai Pin – 400 708.

Ref: CE/MSLDC/EA/ No 0 0 9 9 6 Date: 0 9 JUN 2023

To,

The General Manager (REC , RPO, R&D),
Maharashtra Energy Development Agency
Government of Maharashtra
Aundh Road, Opposite Spicer College,
Near Commissionerate of Animal Husbandry, Pune 411067
(Maharashtra), INDIA

Sub: Submission of Gross Energy consumption (GEC) data of utilities for the financial year 2022-2023.

Dear Sir,

With reference to the above subject please find enclosed herewith Revised Gross Energy consumption (GEC) data of utilities for the financial year 2022-2023.

Submitted for your kind information and needful please.

Yours Faithfully,

ENCL : As above.

(Mahesh Bhagwat)
Chief Engineer
MSLDC, Airoli

MAHARASHTRA STATE LOAD DISPATCH CENTRE

Utility wise Gross Energy Consumption Data FY 2022-23

Month	MSEDCL			TATA Power		
	Drawl (KWH) (T<>D)	% State Grid Loss	Drawl (KWH) (Loss Adjusted)	Drawl (KWH) (T<>D)	% State Grid Loss	Drawl (KWH) (Loss Adjusted)
Apr-22	14,52,57,22,987	3.43	15,04,16,51,638	35,56,35,279	3.43	36,82,66,831
May-22	14,50,62,93,105	3.26	14,99,51,34,489	36,64,73,214	3.26	37,88,22,839
Jun-22	12,63,25,61,296	3.29	13,06,23,11,339	35,03,67,006	3.29	36,22,86,223
Jul-22	10,84,22,90,524	3.47	11,23,20,42,395	34,28,70,252	3.47	35,51,95,537
Aug-22	11,36,31,18,612	3.21	11,73,99,71,704	34,29,12,970	3.21	35,42,85,536
Sep-22	10,89,41,63,927	3.32	11,26,82,70,508	33,74,26,421	3.32	34,90,13,675
Oct-22	10,96,02,81,962	3.00	11,29,92,59,755	34,12,52,130	3.00	35,18,06,320
Nov-22	12,42,89,18,682	3.20	12,83,97,92,027	32,56,17,388	3.20	33,63,81,599
Dec-22	13,47,90,15,057	3.13	13,91,45,40,164	34,35,64,308	3.13	35,46,65,333
Jan-23	13,58,65,08,989	3.12	14,02,40,59,650	31,30,80,687	3.12	32,31,63,385
Feb-23	13,01,23,22,814	3.43	13,47,44,98,099	30,45,58,060	3.43	31,53,75,438
Mar-23	14,30,08,84,762	3.23	14,77,82,21,310	35,37,40,103	3.23	36,55,47,280
Total	1,52,53,20,82,717		1,57,66,97,53,078	4,07,74,97,818		4,21,48,09,994

Month	AEML (FORMERLY R-Infra)			BEST		
	Drawl (KWH) (T<>D)	% State Grid Loss	Drawl (KWH) (Loss Adjusted)	Drawl (KWH) (T<>D)	% State Grid Loss	Drawl (KWH) (Loss Adjusted)
Apr-22	1,09,44,87,245	3.43	1,13,33,61,546	44,18,83,164	3.43	45,75,78,093
May-22	1,15,51,68,439	3.26	1,19,40,95,968	46,35,30,626	3.26	47,91,50,947
Jun-22	1,04,67,58,808	3.29	1,08,23,68,740	42,51,99,934	3.29	43,96,64,910
Jul-22	94,59,74,640	3.47	97,99,79,944	38,85,25,073	3.47	40,24,91,529
Aug-22	95,56,78,909	3.21	98,84,06,766	39,13,07,195	3.21	40,42,84,735
Sep-22	94,69,70,190	3.32	97,94,89,233	39,02,54,871	3.32	40,36,56,259
Oct-22	98,26,87,449	3.00	1,01,30,79,844	40,32,09,071	3.00	41,56,79,455
Nov-22	88,81,63,360	3.20	91,75,24,132	36,73,92,652	3.20	37,95,37,864
Dec-22	90,29,29,263	3.13	93,21,04,122	37,05,87,610	3.13	38,25,61,794
Jan-23	76,35,21,625	3.12	78,81,10,678	31,08,81,873	3.12	32,08,93,758
Feb-23	81,06,96,006	3.43	83,94,90,531	32,50,22,233	3.43	33,65,66,463
Mar-23	99,74,80,433	3.23	1,03,07,74,448	40,08,81,298	3.23	41,42,61,959
Total	11,49,15,16,367		11,87,87,85,951	4,67,86,75,600		4,83,63,27,764

Month	Railways			NIDAR SEZ		
	Drawl (KWH) (T<>D)	% State Grid Loss	Drawl (KWH) (Loss Adjusted)	Drawl (KWH) (T<>D)	% State Grid Loss	Drawl (KWH) (Loss Adjusted)
Apr-22	24,92,80,057	3.43	25,81,34,055	20,44,533	3.43	21,17,151
May-22	26,13,88,406	3.26	27,01,96,822	21,45,850	3.26	22,18,162
Jun-22	25,03,55,413	3.29	25,88,72,312	20,17,723	3.29	20,86,364
Jul-22	25,15,16,860	3.47	26,05,58,231	20,18,022	3.47	20,90,565
Aug-22	25,18,11,361	3.21	26,01,62,580	21,29,500	3.21	22,00,124
Sep-22	25,31,92,660	3.32	26,18,87,319	20,90,364	3.32	21,62,147
Oct-22	26,76,17,702	3.00	27,58,94,538	21,33,323	3.00	21,99,302
Nov-22	26,30,61,647	3.20	27,17,57,900	20,82,729	3.20	21,51,580
Dec-22	27,90,19,512	3.13	28,80,35,008	22,15,584	3.13	22,87,172
Jan-23	28,37,54,434	3.12	29,28,92,686	22,08,210	3.12	22,79,325
Feb-23	25,59,07,795	3.43	26,49,97,199	21,17,070	3.43	21,92,265
Mar-23	28,60,11,315	3.23	29,55,57,833	25,08,011	3.23	25,91,724
Total	3,15,29,17,162		3,25,89,46,482	2,57,10,919		2,65,75,881

Superintending Engineer (EA),
MSETCL, MSLDC, Airoli

	MBPPPL SEZ- started from 9 April 15			KRC- started in June 2019 -deemed distr. Licensee		
	Drawl (KWH) (T<>D)	% State Grid Loss	Drawl (KWH) (Loss Adjusted)	Drawl (KWH) (T<>D)	% State Grid Loss	Drawl (KWH) (Loss Adjusted)
Apr-22	43,91,393	3.43	45,47,368	18,27,398	3.43	18,92,304
May-22	50,23,924	3.26	51,93,223	20,68,177	3.26	21,37,872
Jun-22	48,02,950	3.29	49,66,343	20,07,859	3.29	20,76,165
Jul-22	44,13,352	3.47	45,72,000	18,90,896	3.47	19,58,869
Aug-22	45,71,702	3.21	47,23,321	19,67,772	3.21	20,33,032
Sep-22	44,74,235	3.32	46,27,881	19,64,839	3.32	20,32,312
Oct-22	44,74,014	3.00	46,12,386	18,78,618	3.00	19,36,718
Nov-22	43,31,775	3.20	44,74,974	18,20,698	3.20	18,80,886
Dec-22	44,38,370	3.13	45,81,760	18,76,034	3.13	19,38,716
Jan-23	41,33,614	3.12	42,68,736	18,37,321	3.12	18,96,492
Feb-23	40,50,397	3.43	41,94,260	17,46,113	3.43	18,08,132
Mar-23	47,21,370	3.23	48,78,960	20,06,043	3.23	20,73,001
Total	5,38,27,096		5,56,39,231	2,26,93,766		2,36,84,497

	GIGAPLEX - started 19 april 16			Laxmipati Balaji started 02/02/2021		
	Drawl (KWH) (T<>D)	% State Grid Loss	Drawl (KWH) (Loss Adjusted)	Drawl (KWH) (T<>D)	% State Grid Loss	Drawl (KWH) (Loss Adjusted)
Apr-22	22,09,775	3.43	22,88,262	3,06,911	3.43	3,17,812
May-22	25,25,234	3.26	26,10,331	3,46,119	3.26	3,57,783
Jun-22	25,66,138	3.29	26,53,436	3,08,917	3.29	3,19,426
Jul-22	24,34,352	3.47	25,21,861	2,79,490	3.47	2,89,537
Aug-22	24,96,368	3.21	25,79,159	2,85,532	3.21	2,95,002
Sep-22	25,18,156	3.32	26,04,630	3,09,239	3.32	3,19,858
Oct-22	25,70,210	3.00	26,49,701	2,96,337	3.00	3,05,502
Nov-22	22,03,535	3.20	22,76,379	2,65,680	3.20	2,74,463
Dec-22	20,30,069	3.13	20,95,663	2,42,912	3.13	2,50,761
Jan-23	19,01,364	3.12	19,62,597	2,35,714	3.12	2,43,305
Feb-23	18,87,887	3.43	19,54,941	2,31,900	3.43	2,40,137
Mar-23	22,07,098	3.23	22,80,767	2,86,042	3.23	2,95,590
Total	2,75,50,186		2,84,77,727	33,94,793		35,09,175

	EON Khardi Phase I-started 06/11/2020			EON Khardi Phase II-started 05/03/2021		
	Drawl (KWH) (T<>D)	% State Grid Loss	Drawl (KWH) (Loss Adjusted)	Drawl (KWH) (T<>D)	% State Grid Loss	Drawl (KWH) (Loss Adjusted)
Apr-22	23,52,685	3.43	24,36,248	18,14,472	3.43	18,78,919
May-22	27,33,975	3.26	28,26,108	20,18,341	3.26	20,86,356
Jun-22	25,53,767	3.29	26,40,644	22,31,230	3.29	23,07,135
Jul-22	27,33,836	3.47	28,32,110	18,62,381	3.47	19,29,329
Aug-22	25,88,895	3.21	26,74,755	19,33,165	3.21	19,97,278
Sep-22	21,37,637	3.32	22,11,044	19,56,867	3.32	20,24,066
Oct-22	24,90,127	3.00	25,67,141	18,82,164	3.00	19,40,375
Nov-22	23,05,773	3.20	23,81,997	18,48,021	3.20	19,09,113
Dec-22	23,80,697	3.13	24,57,621	19,43,743	3.13	20,06,548
Jan-23	22,62,117	3.12	23,34,968	15,10,707	3.12	15,59,359
Feb-23	21,78,771	3.43	22,56,157	19,17,048	3.43	19,85,138
Mar-23	24,28,171	3.23	25,09,219	23,74,345	3.23	24,53,596
Total	2,91,46,451		3,01,28,010	2,32,92,484		31,19,531

Superintending Engineer (EA)
MSETCL, MSLDC, Airoli

	JNPT started 06/07/2021			MADC		
	Drawl (KWH) (T<>D)	% State Grid Loss	Drawl (KWH) (Loss Adjusted)	Drawl (KWH) (T<>D)	% State Grid Loss	Drawl (KWH) (Loss Adjusted)
Apr-22	3,09,795	3.43	3,20,798	65,68,557	3.43	68,01,861
May-22	3,28,079	3.26	3,39,135	74,31,297	3.26	76,81,721
Jun-22	3,63,021	3.29	3,75,371	70,35,289	3.29	72,74,624
Jul-22	3,70,311	3.47	3,83,623	67,92,890	3.47	70,37,077
Aug-22	3,76,584	3.21	3,89,073	66,12,588	3.21	68,31,892
Sep-22	3,83,676	3.32	3,96,851	64,98,956	3.32	67,22,131
Oct-22	4,17,210	3.00	4,30,113	60,06,246	3.00	61,92,006
Nov-22	4,68,380	3.20	4,83,864	53,88,874	3.20	55,67,019
Dec-22	4,52,548	3.13	4,67,170	56,14,641	3.13	57,96,058
Jan-23	4,03,078	3.12	4,16,059	55,19,288	3.12	56,97,036
Feb-23	4,03,701	3.43	4,18,040	52,53,631	3.43	54,40,231
Mar-23	5,03,598	3.23	5,20,407	63,18,536	3.23	65,29,437
Total	47,79,981		49,40,505	7,50,40,793		7,75,71,091

Superintending Engineer (EA)
MSETCL, MSLDC, Airoli

MAHATRANSCO
Maharashtra State Electricity Transmission Co. Ltd

MAHARASHTRA STATE ELECTRICITY TRANSMISSION CO.LTD.
CIN NO. U40109MH2005SGC153646
Maharashtra State Load Dispatch Center

Tele :91-022-27601762 (P)
91-022-27601931 (O) Extn.1003
Center
Email : cesldc@mahasldc.in
website : www.mahasldc.in

Office of The Chief Engineer
Maharashtra State Load Dispatch

Thane-Belapur Road, P.O. Airoli
Navi Mumbai Pin – 400 708.

RIGHT TO INFORMATION

Ref: CE/MSLDC/EA/ No 00974 Date: 21 MAY 2024

To,

The General Manager (REC , RPO, R&D),
Maharashtra Energy Development Agency
Government of Maharashtra
Aundh Road, Opposite Spicer College,
Near Commissionerate of Animal Husbandry, Pune 411067
(Maharashtra), INDIA

Sub: Submission of Gross Energy consumption (GEC) data of utilities for of the financial year 2023-2024.

Dear Sir,

With reference to the above subject please find enclosed herewith Revised Gross Energy consumption (GEC) data of utilities for the financial year 2023-2024.

Submitted for your kind information and needful please.

Yours Faithfully,

21/05/24

(Mahesh Bhagwat)
Chief Engineer
MSLDC, Airoli

ENCL : As above.

MAHARASHTRA STATE LOAD DISPATCH CENTRE

Utility wise Gross Energy Consumption Data FY 2023-24

Month	MSEDCL			TATA Power		
	Drawl (KWH) (T<>D)	% State Grid Loss	Drawl (KWH) (Loss Adjusted)	Drawl (KWH) (T<>D)	% State Grid Loss	Drawl (KWH) (Loss Adjusted)
Apr-23	14,22,27,62,225	3.71	14,77,07,57,322	36,58,98,782	3.71	37,99,96,658
May-23	14,72,45,48,252	3.56	15,26,80,92,339	39,31,32,796	3.56	40,76,44,956
Jun-23	14,19,59,36,134	3.42	14,69,86,29,255	37,27,99,133	3.42	38,60,00,345
Jul-23	12,22,55,84,805	3.24	12,63,49,57,425	36,54,58,646	3.24	37,76,95,996
Aug-23	13,45,63,79,846	3.22	13,90,40,91,595	35,17,95,655	3.22	36,35,00,367
Sep-23	12,81,99,81,641	3.28	13,25,47,37,015	34,44,19,770	3.28	35,60,99,845
Oct-23	14,67,89,06,814	3.53	15,21,60,32,770	37,47,39,263	3.53	38,84,51,605
Nov-23	13,65,50,72,908	3.17	14,10,21,09,788	34,67,95,407	3.17	35,81,48,721
Dec-23	13,17,41,66,378	2.94	13,57,32,19,018	36,61,09,151	2.94	37,71,98,796
Jan-24	14,13,36,33,853	2.84	14,54,67,61,890	35,65,40,608	2.84	36,69,62,338
Feb-24	13,87,30,21,917	3.07	14,31,24,12,996	33,55,60,381	3.07	34,61,88,364
Mar-24	15,24,63,46,173	3.21	15,75,19,84,888	36,85,28,652	3.21	38,07,50,751
Total	1,66,40,63,40,945		1,72,03,37,86,302	4,34,17,78,244		4,48,86,38,742

Month	AEML (FORMERLY R-Infra)			BEST		
	Drawl (KWH) (T<>D)	% State Grid Loss	Drawl (KWH) (Loss Adjusted)	Drawl (KWH) (T<>D)	% State Grid Loss	Drawl (KWH) (Loss Adjusted)
Apr-23	1,07,88,99,711	3.71	1,12,04,69,115	42,68,31,023	3.71	44,32,76,584
May-23	1,18,78,93,355	3.56	1,23,17,43,421	47,16,46,674	3.56	48,90,57,107
Jun-23	1,17,19,33,215	3.42	1,21,34,32,610	46,80,31,968	3.42	48,46,05,475
Jul-23	98,45,81,291	3.24	1,01,75,49,908	40,11,83,747	3.24	41,46,17,349
Aug-23	1,04,22,92,971	3.22	1,07,69,71,452	42,09,16,200	3.22	43,49,20,645
Sep-23	1,02,12,60,352	3.28	1,05,58,93,664	41,15,49,235	3.28	42,55,05,826
Oct-23	1,16,48,15,848	3.53	1,20,74,38,425	46,05,21,261	3.53	47,73,72,511
Nov-23	1,00,28,08,998	3.17	1,03,56,38,746	41,25,67,610	3.17	42,60,74,161
Dec-23	92,71 73,469	2.94	95,52,58,056	38,24,45,156	2.94	39,40,29,627
Jan-24	86,40,64,907	2.84	88,93,21,642	35,35,69,472	2.84	36,39,04,356
Feb-24	84,04,85,463	3.07	86,71,05,605	34,11,27,089	3.07	35,19,31,382
Mar-24	98,81,94,157	3.21	1,02,09,67,204	39,36,72,117	3.21	40,67,28,089
Total	12,27,44,03,737		12,69,17,89,848	4,94,40,61,552		5,11,20,23,112

Month	Railways			NIDAR SEZ		
	Drawl (KWH) (T<>D)	% State Grid Loss	Drawl (KWH) (Loss Adjusted)	Drawl (KWH) (T<>D)	% State Grid Loss	Drawl (KWH) (Loss Adjusted)
Apr-23	28,50,96,569	3.71	29,60,81,181	26,34,276	3.71	27,35,773
May-23	29,75,77,140	3.56	30,85,61,945	29,14,745	3.56	30,22,340
Jun-23	28,40,53,577	3.42	29,41,12,215	28,18,114	3.42	29,17,906
Jul-23	27,22,86,743	3.24	28,14,04,240	28,30,047	3.24	29,24,811
Aug-23	28,92,37,067	3.22	29,88,60,371	33,01,755	3.22	34,11,609
Sep-23	28,10,77,727	3.28	29,06,09,726	33,10,718	3.28	34,22,992
Oct-23	29,70,94,440	3.53	30,79,65,627	36,24,449	3.53	37,57,074
Nov-23	29,47,48,321	3.17	30,43,97,729	34,71,640	3.17	35,85,294
Dec-23	30,26,08,069	2.94	31,17,74,231	35,98,926	2.94	37,07,939
Jan-24	30,36,44,861	2.84	31,25,20,442	36,45,703	2.84	37,52,267
Feb-24	29,03,36,943	3.07	29,95,32,594	34,58,955	3.07	35,68,508
Mar-24	32,01,18,493	3.21	33,07,35,089	38,50,585	3.21	39,78,288
Total	3,51,78,79,950		3,63,65,55,390	3,94,59,913		4,07,84,802

S.E(EA)

Superintending Engineer (EA)
MSETCL, MSLDC, Airoli

	MBPPPL SEZ			KRC		
	Drawl (KWH) (T<>D)	% State Grid Loss	Drawl (KWH) (Loss Adjusted)	Drawl (KWH) (T<>D)	% State Grid Loss	Drawl (KWH) (Loss Adjusted)
Apr-23	49,12,107	3.71	51,01,368	20,41,177	3.71	21,19,822
May-23	54,99,172	3.56	57,02,169	22,94,199	3.56	23,78,887
Jun-23	52,92,524	3.42	54,79,938	22,95,669	3.42	23,76,961
Jul-23	47,60,874	3.24	49,20,291	22,16,231	3.24	22,90,441
Aug-23	49,83,012	3.22	51,48,803	22,27,221	3.22	23,01,324
Sep-23	46,89,853	3.28	48,48,897	20,81,323	3.28	21,51,906
Oct-23	51,15,413	3.53	53,02,595	21,71,787	3.53	22,51,256
Nov-23	47,42,609	3.17	48,97,872	19,66,376	3.17	20,30,751
Dec-23	44,99,459	2.94	46,35,750	18,54,202	2.94	19,10,367
Jan-24	43,58,348	2.84	44,85,743	18,96,074	2.84	19,51,497
Feb-24	41,04,964	3.07	42,34,978	18,84,877	3.07	19,44,575
Mar-24	44,40,170	3.21	45,87,426	19,80,301	3.21	20,45,977
Total	5,73,98,505		5,93,45,830	2,49,09,437		2,57,53,764

	GEPL SEZ			LBSCML		
	Drawl (KWH) (T<>D)	% State Grid Loss	Drawl (KWH) (Loss Adjusted)	Drawl (KWH) (T<>D)	% State Grid Loss	Drawl (KWH) (Loss Adjusted)
Apr-23	22,30,841	3.71	23,16,794	2,93,375	3.71	3,04,679
May-23	25,45,504	3.56	26,39,469	3,35,197	3.56	3,47,571
Jun-23	24,79,432	3.42	25,67,231	3,33,694	3.42	3,45,510
Jul-23	22,42,599	3.24	23,17,692	2,74,975	3.24	2,84,183
Aug-23	23,44,266	3.22	24,22,263	2,76,839	3.22	2,86,050
Sep-23	21,88,600	3.28	22,62,821	2,79,728	3.28	2,89,214
Oct-23	23,48,453	3.53	24,34,387	2,82,612	3.53	2,92,953
Nov-23	22,00,133	3.17	22,72,160	2,53,806	3.17	2,62,115
Dec-23	21,07,595	2.94	21,71,435	2,84,066	2.94	2,92,671
Jan-24	21,04,256	2.84	21,65,764	2,49,419	2.84	2,56,710
Feb-24	20,33,456	3.07	20,97,860	2,35,932	3.07	2,43,405
Mar-24	21,70,668	3.21	22,42,657	2,85,519	3.21	2,94,988
Total	2,69,95,803		2,79,10,534	33,85,162		35,00,047

	EON Khardi Phase I			EON Khardi Phase II		
	Drawl (KWH) (T<>D)	% State Grid Loss	Drawl (KWH) (Loss Adjusted)	Drawl (KWH) (T<>D)	% State Grid Loss	Drawl (KWH) (Loss Adjusted)
Apr-23	26,55,198	3.71	27,57,501	22,51,529	3.71	23,38,279
May-23	28,74,783	3.56	29,80,903	24,48,270	3.56	25,38,646
Jun-23	28,65,094	3.42	29,66,550	24,26,800	3.42	25,12,736
Jul-23	23,79,416	3.24	24,59,091	21,56,953	3.24	22,29,178
Aug-23	37,12,773	3.22	38,36,302	21,91,818	3.22	22,64,743
Sep-23	34,84,985	3.28	36,03,169	20,89,469	3.28	21,60,328
Oct-23	37,70,095	3.53	39,08,049	22,13,167	3.53	22,94,151
Nov-23	33,86,357	3.17	34,97,219	19,66,701	3.17	20,31,086
Dec-23	29,74,850	2.94	30,64,960	17,88,551	2.94	18,42,727
Jan-24	32,30,696	2.84	33,25,130	17,52,912	2.84	18,04,150
Feb-24	33,93,068	3.07	35,00,534	17,92,835	3.07	18,49,618
Mar-24	38,22,730	3.21	39,49,509	20,23,848	3.21	20,90,968
Total	3,85,50,045		3,98,48,917	2,51,02,853		31,19,531

Superintending Engineer (EA)
MSETCL, MSLDC, Airoli

	JNPT			MADC		
	Drawl (KWH) (T<>D)	% State Grid Loss	Drawl (KWH) (Loss Adjusted)	Drawl (KWH) (T<>D)	% State Grid Loss	Drawl (KWH) (Loss Adjusted)
Apr-23	4,90,780	3.71	5,09,689	66,85,431	3.71	69,43,017
May-23	5,17,991	3.56	5,37,112	72,87,517	3.56	75,56,529
Jun-23	5,52,571	3.42	5,72,138	74,86,954	3.42	77,52,075
Jul-23	5,54,700	3.24	5,73,274	73,78,026	3.24	76,25,079
Aug-23	5,97,662	3.22	6,17,547	72,55,954	3.22	74,97,369
Sep-23	5,99,927	3.28	6,20,272	68,75,393	3.28	71,08,554
Oct-23	5,16,182	3.53	5,35,070	68,37,367	3.53	70,87,558
Nov-23	3,91,886	3.17	4,04,715	59,21,197	3.17	61,15,044
Dec-23	4,59,688	2.94	4,73,612	58,76,776	2.94	60,54,787
Jan-24	4,49,794	2.84	4,62,942	59,05,780	2.84	60,78,407
Feb-24	4,51,031	3.07	4,65,316	60,71,670	3.07	62,63,974
Mar-24	5,22,773	3.21	5,40,111	69,85,444	3.21	72,17,113
Total	61,04,985		63,11,799	8,05,67,509		8,32,99,505

	AEML SEEPZ Ltd(ASL) (started from 01.11.23)		
	Drawl (KWH) (T<>D)	% State Grid Loss	Drawl (KWH) (Loss Adjusted)
Apr-23	0	3.71	0
May-23	0	3.56	0
Jun-23	0	3.42	0
Jul-23	0	3.24	0
Aug-23	0	3.22	0
Sep-23	0	3.28	0
Oct-23	0	3.53	0
Nov-23	93,07,595	3.17	96,12,305
Dec-23	86,39,833	2.94	89,01,538
Jan-24	82,37,874	2.84	84,78,668
Feb-24	86,21,459	3.07	88,94,521
Mar-24	95,91,702	3.21	99,09,807
Total	4,43,98,463		4,57,96,839

Superintending Engineer (EA)
MSETCL, MSLDC, Airoli

The Brihan Mumbai Electric Supply & Transport Undertaking

(OF THE BRIHAN MUMBAI MAHANAGARPALIKA)

TELEPHONE : (022) 22856262
FAX : (022) 22851244
TELEX : 1185755 BEST IN
TELEGRAM : BEST, MUMBAI-400 001.

BEST BHAVAN,
BEST MARG,
POST BOX NO. 192.
MUMBAI - 400 001.

ADDRESS ALL COMMUNICATION BY TITLE NOT BY NAME

OUR REF. : PP/MEDA/ RPO/2022-23 / 42 /2023

DATE : 13 JUN 2023

To,
General Manager (REC, RPO)
Maharashtra Energy Development Agency,
Government of Maharashtra
Aundh Road, Opposite Spicer College,
Near Commissionerate of Animal Husbandry,
PUNE – 411 067.
Email: - manrd@mahaurja.com

Sub:- Submission of final audited RPO achievement data of BEST for FY 2022-23 as per MERC (RPO Compliance &Implementation of REC framework) Regulations, 2019.

Ref: - Your email dated 18.04.2023

Sir,

With reference to your above referred email, we are submitting the final audited RPO achievement report for FY 2022-23. Necessary information is as below,

A. Gross Electricity Consumption and procurement of Renewable Energy for FY 2022-23 in the prescribed Form No. I, II, III.
B. CPP / OA consumer Data FY 2022-23.
C. Source wise contracted RE capacity addition in MW & details of RE procured in MUs for FY 2022-23.

Thanking you,

Yours faithfully,

13.06.2023

(Satish A. Jadhav)
Divisional Engineer
Power Purchase

Encl: - As above

Gross Energy Consumption statement of BEST Undertaking FY 2022-23

Power Purchase for FY 2022-23	Energy at T<>D interface as per e-mail from SLDC dtd. 09.06.2023	Transmission Loss as per MSLDC	Grossed up Energy at G<>T as per SLDC Certification	Energy procured from Hydro source by BEST	GEC for Obligation
Month	MUs	%	MUs	MUs	MUs
Apr-22	441.883164	3.43	457.578093	70.706979	386.871114
May-22	463.530626	3.26	479.150947	68.422878	410.728069
Jun-22	425.199934	3.29	439.664910	58.579871	381.085039
Jul-22	388.525073	3.47	402.491529	89.276994	313.214535
Aug-22	391.307195	3.21	404.284735	94.111280	310.173455
Sep-22	390.254871	3.32	403.656259	73.849146	329.807113
Oct-22	403.209071	3.00	415.679455	49.835879	365.843576
Nov-22	367.392652	3.20	379.537864	47.029058	332.508806
Dec-22	370.587610	3.13	382.561794	55.088434	327.473360
Jan-23	310.881873	3.12	320.893758	60.564104	260.329654
Feb-23	325.022233	3.43	336.566463	54.680815	281.885648
Mar-23	400.881298	3.23	414.261959	56.944211	357.317748
TOTAL	**4678.675600**		**4836.327764**	**779.089649**	**4057.238116**

13/6/23

BEST Undertaking, MUMBAI

Form-I: RPO Settlement Account FY-2022-23

A - SOLAR

Gross Energy Consumption for Obligation (Excluding Hydro)		RPO Obligation (8.00%)	RPO % up to Previous month	RPO % Cumulative up to month (1)	RE Purchase for the Month		RE Purchase upto the Previous Month		RE Cumulative up to the Month (2)		Short if any (1-2)
					MU's		MU's		MU's		
Month	MU's	MU's	MU's	MU's	Pref Tariff	REC	Pref Tariff	REC	Pref Tariff	REC	MU's
Apr-22	386.871114	30.95	0.00	30.95	2.895303	0.00	0.00	0.00	2.90	0.00	28.05
May-22	410.728069	32.86	30.95	63.81	2.888148	0.00	2.90	0.00	5.78	0.00	58.02
Jun-22	381.085039	30.49	63.81	94.29	7.652486	0.00	5.78	0.00	13.44	0.00	80.86
Jul-22	313.214535	25.06	94.29	119.35	19.877044	0.00	13.44	0.00	33.31	0.00	86.04
Aug-22	310.173455	24.81	119.35	144.17	8.169947	0.00	33.31	0.00	41.48	0.00	102.68
Sep-22	329.807113	26.38	144.17	170.55	2.098816	0.00	41.48	0.00	43.58	0.00	126.97
Oct-22	365.843576	29.27	170.55	199.82	2.503653	0.00	43.58	0.00	46.09	0.00	153.73
Nov-22	332.508806	26.60	199.82	226.42	2.565313	0.00	46.09	0.00	48.65	0.00	177.77
Dec-22	327.473360	26.20	226.42	252.62	2.504450	0.00	48.65	0.00	51.16	0.00	201.46
Jan-23	260.329654	20.83	252.62	273.44	2.885478	0.00	51.16	0.00	54.04	0.00	219.40
Feb-23	281.885648	22.55	273.44	295.99	2.946628	0.00	54.04	0.00	56.99	0.00	239.01
Mar-23	357.317748	28.59	295.99	324.58	3.270381	0.00	56.99	0.00	60.26	0.00	264.32
	* Solar Energy Generation from Net metered consumers for FY 2022-23			324.58	11.796648	0.00	60.26	0.00	72.05	0.00	252.52
TOTAL	4057.238116	324.579049		324.58	72.054294	0.00		0.00	72.05	0.00	252.52

B - Non-Solar

Gross Energy Consumption for Obligation (Excluding Hydro)		RPO Obligation (11.50%)	RPO % up to Previous month	RPO % Cumulative up to month (1)	RE Purchase for the Month		RE Purchase upto the Previous Month		RE Cumulative up to the Month (2)		Short if any (1-2)
					MU's		MU's		MU's		
Month	MU's	MU's	MU's	MU's	Pref Tariff	REC	Pref Tariff	REC	Pref Tariff	REC	MU's
Apr-22	386.871114	44.49	0.00	44.49	0.00	0.00	0.00	0.00	0.00	0.00	44.49
May-22	410.728069	47.23	44.49	91.72	0.0043	0.00	0.00	0.00	0.00	0.00	91.72
Jun-22	381.085039	43.82	91.72	135.55	0.86	0.00	0.00	0.00	0.86	0.00	134.69
Jul-22	313.214535	36.02	135.55	171.57	2.64	0.00	0.86	0.00	3.50	0.00	168.07
Aug-22	310.173455	35.67	171.57	207.24	1.76	0.00	2.64	0.00	5.26	0.00	201.98
Sep-22	329.807113	37.93	207.24	245.17	0.00	0.00	1.76	0.00	5.26	0.00	239.91
Oct-22	365.843576	42.07	245.17	287.24	0.00	0.00	0.00	0.00	5.26	0.00	281.98
Nov-22	332.508806	38.24	287.24	325.48	0.00	0.00	0.00	0.00	5.26	0.00	320.22
Dec-22	327.473360	37.66	325.48	363.14	0.00	0.00	0.00	0.00	5.26	0.00	357.88
Jan-23	260.329654	29.94	363.14	393.07	0.00	0.00	0.00	0.00	5.26	0.00	387.81
Feb-23	281.885648	32.42	393.07	425.49	0.00	0.00	0.00	0.00	5.26	0.00	420.23
Mar-23	357.317748	41.09	425.49	466.58	0.00	0.00	0.00	0.00	5.26	0.00	461.32
TOTAL	4057.238116	466.58		466.58	5.26	0.00		0.00	5.26	0.00	461.32

As per RPO-REC Regulation, 2019	
Solar	*8.00%*
Non Soalar	*11.50%*

Note:- We hereby declare that the gross energy consumption & R.E procurement data submitted above does not includes the gross energy & R.E procurement data of CPP / OA consumers on our network

Form II - Gross Energy Consumption				
	BEST Undertaking. Mumbai.			
	April- 2022			
1	**Gross Consumption**		**Quantum (Mus)**	**Remarks**
O	Own Generation			
	Source 1		Nil	BEST not having own generation
	Source 2		Nil	
	Source N		Nil	
		Sub Total (1)	**Nil**	
P	Purchaase from other Generating Company			
	TATA Power Co (G) & Manikaran Power Ltd. Excluding Hydro		386.871114	
		Sub Total (2)	**386.87**	
S	Sale to other Licensee / Intermediaries			
	Source 1		0	
		Sub Total (3)	**0**	
	Total GEC for The Month (O+P-S) for obligation		**386.87**	
2	**RPO Obligation (19.50 % of GEC)**		**75.44**	

13/6/22

Form III - Renewable Energy Procurement				
	BEST Undertaking. Mumbai.			
	April- 2022			
	RE Sources Detail (Solar)			
A	Own Generation			BEST not having own RE generation
	RE-1		0	
		Sub Total (A)	**0**	
B	Purchaase from other RE Source / Licensee			
1	Walwhan Solar MH Limited	Solar PV	2.895303	Long Term PPA
		Sub Total (B)	**2.90**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		Nil	
		Sub Total (D)	**Nil**	
	Total GEC for The Month (A+B+C)-(D)		**2.90**	

	RE Sources Detail (Non Solar)			
A	Own Generation		Quantam (Mus)	Remarks
	RE-1		Nil	BEST not having own RE generation
		Sub Total (A)	**Nil**	
B	RE Source (Type of RE)	Source	Quantam (Mus)	Remarks
1	Nil		Nil	
		Sub Total (B)	**0.00**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		**Nil**	
	Total GEC for The Month (A+B+C)-(D)		**0.00**	

NOTE: *- 1. Above Energy as per Generation Credit Note, Joint meter reading certified by MSEDCL/MSETCL & Yet to be Accounted in FBSM bill.*

2. WE hereby declare that the gross energy consumption & R.E procurement data submitted above does not includes the gross energy & R.E procurement data of CPP / OA consumers on our network

3/6/23

Form II - Gross Energy Consumption				
	BEST Undertaking. Mumbai.			
	May- 2022			
1	**Gross Consumption**		**Quantum (Mus)**	**Remarks**
O	Own Generation			
	Source 1		Nil	BEST not having own generation
	Source 2		Nil	
	Source N		Nil	
		Sub Total (1)	**Nil**	
P	Purchase from other Generating Company			
	TATA Power Co (G) & Manikaran Power Ltd.Excluding Hydro		410.728069	
		Sub Total (2)	**410.73**	
S	Sale to other Licensee / Intermediaries			
	Source 1		0	
		Sub Total (3)	**0**	
	Total GEC for The Month (O+P-S)		**410.73**	
2	**RPO Obligation (19.50 % of GEC)**		**80.09**	

DWS
13/6/23

Form III - Renewable Energy Procurement				
	BEST Undertaking. Mumbai.			
	May- 2022			
	RE Sources Detail (Solar)			
A	Own Generation			BEST not having own RE generation
	RE-1		0	
	Sub Total (A)		**0**	
B	Purchaase from other RE Source / Licensee			
1	Walwhan Solar MH Limited	Solar PV	2.841488	Long Term PPA
2	Solar energy purchased from IEX		0.046660	
	Sub Total (B)		**2.89**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		Nil	
	Sub Total (D)		**Nil**	
	Total GEC for The Month (A+B+C)-(D)		**2.89**	

	RE Sources Detail (Non Solar)			
A	Own Generation		Quantam (Mus)	Remarks
	RE-1		0	BEST not having own RE generation
	Sub Total (A)		**0**	
B	RE Source (Type of RE)	Source	Quantam (Mus)	Remarks
1	Non-Solar energy purchased from IEX		0.00433	
	Sub Total (B)		**0.0043**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		**0**	
	Total GEC for The Month (A+B+C)-(D)		**0.0043**	

NOTE: *- 1. Above Energy as per Generation Credit Note, Joint meter reading certified by MSEDCL/MSETCL & Yet to be Accounted in FBSM bill.*

2. WE hereby declare that the gross energy consumption & R.E procurement data submitted above does not includes the gross energy & R.E procurement data of CPP / OA consumers on our network

13/6/22

IEX
INDIAN ENERGY EXCHANGE

Certificate of Purchase of Renewable Energy in Green-Day Ahead Market

For the Month of : May-2022 **Issued on :** 01/06/2022

Portfolio Name: **BEST**

This is certified that BEST has purchased 52.82 MWh (at regional periphery) of Renewable Energy for the period 01/05/2022 to 31/05/2022 through Indian Energy Exchange Limited in Green-Day Ahead Market.

Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
48.33	4.49	0	52.82

This certificate represented hereby is issued on non-transferable and non-tradable basis and shall be held subject to Orders and Regulations of Honorable Central Electricity Regulatory Commission as amended from time to time and the Bye-laws, Rules and Business Rules of Indian Energy Exchange Limited.

Amit Kumar
Sr VP Market Operations

13/6/22

*Computer generated report signature not required.

IEX
INDIAN ENERGY EXCHANGE

Annexure 1- (Date Wise Scheduling Details)

Participant ID	W2MH0BST0000
Participant Name	Brihanmumbai Electric Supply & Transport (BEST)
Portfolio ID	W2MH0BST0001
Portfolio Name	BEST

Scheduling details at Regional Periphery (Traded)

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
14-May-22	0	0	0	0
16-May-22	0	0	0	0
17-May-22	0	0	0	0
18-May-22	0	0	0	0
25-May-22	48.33	4.49	0	52.82
28-May-22	0	0	0	0
Grand Total				52.82

Scheduling details after applying ISTS (POC) loss

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
14-May-22	0	0	0	0
16-May-22	0	0	0	0
17-May-22	0	0	0	0
18-May-22	0	0	0	0
25-May-22	46.66	4.33	0	50.99
28-May-22	0	0	0	0
Grand Total				50.99

Scheduling details after applying ISTS (POC) and State loss

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
14-May-22	0	0	0	0
16-May-22	0	0	0	0
17-May-22	0	0	0	0
18-May-22	0	0	0	0
25-May-22	45.17	4.2	0	49.37
28-May-22	0	0	0	0
Grand Total				49.37

*Computer generated report signature not required.

Form II - Gross Energy Consumption				
	BEST Undertaking. Mumbai.			
	June- 2022			
1	**Gross Consumption**		**Quantum (Mus)**	**Remarks**
O	Own Generation			
	Source 1		Nil	BEST not having own generation
	Source 2		Nil	
	Source N		Nil	
		Sub Total (1)	**Nil**	
P	Purchase from other Generating Company			
	TATA Power Co (G) & Manikaran Power Ltd. Excluding Hydro		381.085039	
		Sub Total (2)	**381.09**	
S	Sale to other Licensee / Intermediaries			
	Source 1		**Nil**	
		Sub Total (3)	**0**	
	Total GEC for The Month (O+P-S)		**381.09**	
2	**RPO Obligation (17.50 % of GEC)**		**66.69**	

12/6/23

Form III - Renewable Energy Procurement

BEST Undertaking. Mumbai.

June- 2022

RE Sources Detail (SOLAR)

A	Own Generation			BEST not having own RE generation
	RE-1		0	
		Sub Total (A)	**0**	
B	Purchase from other RE Source / Licensee			
1	Walwhan Solar MH Limited	Solar PV	2.661366	Long Term PPA
2	Solar energy purchased from IEX		4.991120	
		Sub Total (B)	**7.65**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		Nil	
		Sub Total (D)	**Nil**	
	Total GEC for The Month (A+B+C)-(D)		**7.65**	

RE Sources Detail (Non Solar)

A	Own Generation		Quantam (Mus)	Remarks
	RE-1		Nil	BEST not having own RE generation
		Sub Total (A)	**Nil**	
B	RE Source (Type of RE)	Source	Quantam (Mus)	Remarks
1	Non-Solar energy purchased from IEX		0.8565	
		Sub Total (B)	**0.86**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		**Nil**	
	Total GEC for The Month (A+B+C)-(D)		**0.86**	

NOTE: *- 1. Above Energy as per Generation Credit Note, Joint meter reading certified by MSEDCL/MSETCL & Yet to be Accounted in FBSM bill.*

2. WE hereby declare that the gross energy consumption & R.E procurement data submitted above does not includes the gross energy & R.E procurement data of CPP / OA consumers on our network

13/6/22

B.E.S.&T. Undertaking DEPT

IEX
INDIAN ENERGY EXCHANGE

Certificate of Purchase of Renewable Energy in Green-Day Ahead Market

For the Month of : June-2022 **Issued on :** 01/07/2022

Portfolio Name: **BEST**

This is certified that BEST has purchased 6051.60 MWh (at regional periphery) of Renewable Energy for the period 01/06/2022 to 30/06/2022 through Indian Energy Exchange Limited in Green-Day Ahead Market.

Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
5165.26	886.34	0	6051.6

This certificate represented hereby is issued on non-transferable and non-tradable basis and shall be held subject to Orders and Regulations of Honorable Central Electricity Regulatory Commission as amended from time to time and the Bye-laws, Rules and Business Rules of Indian Energy Exchange Limited.

Amit Kumar
Sr VP Market Operations

12/8/22

B.E.S.T. Undertaking DEPP

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IEX
INDIAN ENERGY EXCHANGE

Annexure 1- (Date Wise Scheduling Details)

Participant ID	W2MH0BST0000
Participant Name	Brihanmumbai Electric Supply & Transport (BEST)
Portfolio ID	W2MH0BST0001
Portfolio Name	BEST

Scheduling details at Regional Periphery (Traded)

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
02-Jun-22	364.57	101.73	0	466.3
03-Jun-22	83.84	11.5	0	95.34
04-Jun-22	103.17	14.77	0	117.94
05-Jun-22	75.88	3.94	0	79.82
06-Jun-22	117.67	14.17	0	131.84
07-Jun-22	38.41	8.37	0	46.78
08-Jun-22	405.35	55.09	0	460.44
09-Jun-22	26.76	3.68	0	30.44
10-Jun-22	455.05	45.64	0	500.69
11-Jun-22	0	0	0	0
12-Jun-22	4.14	0.48	0	4.62
13-Jun-22	0	0	0	0
14-Jun-22	0	0	0	0
15-Jun-22	0	0	0	0
16-Jun-22	0	0	0	0
17-Jun-22	0	0	0	0
18-Jun-22	0	0	0	0
19-Jun-22	62.7	32.22	0	94.92
20-Jun-22	49.31	7.74	0	57.05
21-Jun-22	390.87	99.5	0	490.37
22-Jun-22	598.21	208.67	0	806.88
23-Jun-22	465.34	56.4	0	521.74
24-Jun-22	253.76	15.65	0	269.41
25-Jun-22	0	0	0	0
27-Jun-22	577.19	68.21	0	645.4
28-Jun-22	297.1	24.73	0	321.83
29-Jun-22	119.08	21.2	0	140.28
30-Jun-22	676.86	92.65	0	769.51
Grand Total				6051.6

B.E.S.T. Undertaking DEPP

*Computer generated report signature not required.

IEX
INDIAN ENERGY EXCHANGE

Scheduling details after applying ISTS (POC) loss

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
02-Jun-22	351.92	98.19	0	450.11
03-Jun-22	80.93	11.1	0	92.03
04-Jun-22	99.59	14.27	0	113.86
05-Jun-22	73.25	3.8	0	77.05
06-Jun-22	113.73	13.69	0	127.42
07-Jun-22	37.12	8.09	0	45.21
08-Jun-22	391.79	53.25	0	445.04
09-Jun-22	25.87	3.55	0	29.42
10-Jun-22	439.85	44.11	0	483.96
11-Jun-22	0	0	0	0
12-Jun-22	4	0.46	0	4.46
13-Jun-22	0	0	0	0
14-Jun-22	0	0	0	0
15-Jun-22	0	0	0	0
16-Jun-22	0	0	0	0
17-Jun-22	0	0	0	0
18-Jun-22	0	0	0	0
19-Jun-22	60.73	31.21	0	91.94
20-Jun-22	47.66	7.48	0	55.14
21-Jun-22	377.76	96.17	0	473.93
22-Jun-22	578.14	201.67	0	779.81
23-Jun-22	449.72	54.51	0	504.23
24-Jun-22	245.25	15.13	0	260.38
25-Jun-22	0	0	0	0
27-Jun-22	557.68	65.91	0	623.59
28-Jun-22	287.05	23.9	0	310.95
29-Jun-22	115.06	20.48	0	135.54
30-Jun-22	654.02	89.53	0	743.55
Grand Total				5847.62

Scheduling details after applying ISTS (POC) and State loss

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
02-Jun-22	340.71	95.08	0	435.79
03-Jun-22	78.35	10.75	0	89.1
04-Jun-22	96.43	13.81	0	110.24
05-Jun-22	70.92	3.68	0	74.6
06-Jun-22	110.11	13.25	0	123.36
07-Jun-22	35.94	7.83	0	43.77
08-Jun-22	379.32	51.55	0	430.87
09-Jun-22	25.04	3.44	0	28.48

B.E.S. & T. Undertaking DEPP

12/6/23

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10-Jun-22	425.87	42.7	0	468.57
11-Jun-22	0	0	0	0
12-Jun-22	3.87	0.45	0	4.32
13-Jun-22	0	0	0	0
14-Jun-22	0	0	0	0
15-Jun-22	0	0	0	0
16-Jun-22	0	0	0	0
17-Jun-22	0	0	0	0
18-Jun-22	0	0	0	0
19-Jun-22	58.8	30.22	0	89.02
20-Jun-22	46.14	7.24	0	53.38
21-Jun-22	365.75	93.11	0	458.86
22-Jun-22	559.76	195.25	0	755.01
23-Jun-22	435.42	52.78	0	488.2
24-Jun-22	237.45	14.65	0	252.1
25-Jun-22	0	0	0	0
27-Jun-22	539.95	63.81	0	603.76
28-Jun-22	277.92	23.14	0	301.06
29-Jun-22	111.4	19.83	0	131.23
30-Jun-22	633.22	86.68	0	719.9
Grand Total				5661.62

Scheduling details after applying ISTS (POC) Loss, State Loss, Distribution Loss and Other Loss if any (at Ex-bus)

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
02-Jun-22	340.71	95.08	0	435.79
03-Jun-22	78.35	10.75	0	89.1
04-Jun-22	96.43	13.81	0	110.24
05-Jun-22	70.92	3.68	0	74.6
06-Jun-22	110.11	13.25	0	123.36
07-Jun-22	35.94	7.83	0	43.77
08-Jun-22	379.32	51.55	0	430.87
09-Jun-22	25.04	3.44	0	28.48
10-Jun-22	425.87	42.7	0	468.57
11-Jun-22	0	0	0	0
12-Jun-22	3.87	0.45	0	4.32
13-Jun-22	0	0	0	0
14-Jun-22	0	0	0	0
15-Jun-22	0	0	0	0
16-Jun-22	0	0	0	0
17-Jun-22	0	0	0	0
18-Jun-22	0	0	0	0
19-Jun-22	58.8	30.22	0	89.02
20-Jun-22	46.14	7.24	0	53.38

*Computer generated report signature not required.

Form II - Gross Energy Consumption				
	BEST Undertaking. Mumbai.			
	July- 2022			
1	**Gross Consumption**		**Quantum (Mus)**	**Remarks**
O	Own Generation			
	Source 1		Nil	BEST not having own generation
	Source 2		Nil	
	Source N		Nil	
		Sub Total (1)	**Nil**	
P	Purchase from other Generating Company			
	TATA Power Co (G) & Manikaran Power Ltd. Excluding Hydro		313.214535	
		Sub Total (2)	**313.21**	
S	Sale to other Licensee / Intermediaries			
	Source 1		0	
		Sub Total (3)	**0**	
	Total GEC for The Month (O+P-S)		**313.21**	
2	**RPO Obligation (19.50 % of GEC)**		**61.08**	

13/6/22

B.E.S. & T. Undertaking CEPP

Form III - Renewable Energy Procurement

BEST Undertaking. Mumbai.

July- 2022

RE Sources Detail (Solar)

A	Own Generation			BEST not having own RE generation
	RE-1		0	
		Sub Total (A)	**0**	
B	Purchaase from other RE Source / Licensee			
1	Walwhan Solar MH Limited	Solar PV	1.900434	Long Term PPA
2	Solar energy purchased from IEX		17.976610	
		Sub Total (B)	**19.88**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		Nil	
		Sub Total (D)	**Nil**	
	Total GEC for The Month (A+B+C)-(D)		**19.88**	

RE Sources Detail (Non Solar)

A	Own Generation		Quantam (Mus)	Remarks
	RE-1		Nil	BEST not having own RE generation
		Sub Total (A)	**Nil**	
B	RE Source (Type of RE)	Source	Quantam (Mus)	Remarks
1	Non-Solar energy purchased from IEX		2.63794	
		Sub Total (B)	**2.64**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		**Nil**	
	Total GEC for The Month (A+B+C)-(D)		**2.64**	

NOTE: *- 1. Above Energy as per Generation Credit Note, Joint meter reading certified by MSEDCL/MSETCL & Yet to be Accounted in FBSM bill.*

2. WE hereby declare that the gross energy consumption & R.E procurement data submitted above does not includes the gross energy & R.E procurement data of CPP / OA consumers on our network

13/8/22

BEST Undertaking QEPP

IEX
INDIAN ENERGY EXCHANGE

Certificate of Purchase of Renewable Energy in Green-Day Ahead Market

For the Month of : July-2022 **Issued on :** 01/08/2022

Portfolio Name: **BEST**

This is certified that BEST has purchased 21335.83 MWh (at regional periphery) of Renewable Energy for the period 01/07/2022 to 31/07/2022 through Indian Energy Exchange Limited in Green-Day Ahead Market.

Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
18605.11	2730.72	0	21335.83

This certificate represented hereby is issued on non-transferable and non-tradable basis and shall be held subject to Orders and Regulations of Honorable Central Electricity Regulatory Commission as amended from time to time and the Bye-laws, Rules and Business Rules of Indian Energy Exchange Limited.

Amit Kumar
Sr VP Market Operations

12/8/22

B.E.S.T. Undertaking DEPP

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IEX
INDIAN ENERGY EXCHANGE

Annexure 1- (Date Wise Scheduling Details)

Participant ID	**W2MH0BST0000**
Participant Name	**Brihanmumbai Electric Supply & Transport (BEST)**
Portfolio ID	**W2MH0BST0001**
Portfolio Name	**BEST**

Scheduling details at Regional Periphery (Traded)

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
01-Jul-22	881.74	196.72	0	1078.46
02-Jul-22	693.63	163.16	0	856.79
03-Jul-22	457.46	70.37	0	527.83
04-Jul-22	744.83	126.32	0	871.15
05-Jul-22	1271.36	173.13	0	1444.49
06-Jul-22	862.4	20.58	0	882.98
07-Jul-22	787.2	48.11	0	835.31
08-Jul-22	1293.49	94.98	0	1388.47
09-Jul-22	1288.71	77.45	0	1366.16
10-Jul-22	987.98	183.2	0	1171.18
11-Jul-22	1264.95	234.83	0	1499.78
12-Jul-22	2371.92	254.4	0	2626.32
13-Jul-22	1705.74	43.24	0	1748.98
14-Jul-22	738.12	21.63	0	759.75
16-Jul-22	65.62	4.38	0	70
17-Jul-22	347.47	88.14	0	435.61
18-Jul-22	365.38	135.88	0	501.26
19-Jul-22	289.25	115.79	0	405.04
20-Jul-22	567.36	229.59	0	796.95
21-Jul-22	16.46	5.32	0	21.78
22-Jul-22	294.81	105.3	0	400.11
23-Jul-22	7.54	2.14	0	9.68
24-Jul-22	201.81	76.68	0	278.49
25-Jul-22	414.91	62.58	0	477.49
26-Jul-22	0	0	0	0
27-Jul-22	97.75	12.26	0	110.01
28-Jul-22	317.21	55.36	0	372.57
29-Jul-22	0	0	0	0
30-Jul-22	112.28	49.61	0	161.89

B.E.S. & T. Undertaking DEPP

*Computer generated report signature not required.

31-Jul-22	157.73	79.57	0	237.3
Grand Total				21335.83

Scheduling details after applying ISTS (POC) loss

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
01-Jul-22	851.93	190.06	0	1041.99
02-Jul-22	670.17	157.65	0	827.82
03-Jul-22	442	67.98	0	509.98
04-Jul-22	719.23	121.96	0	841.19
05-Jul-22	1227.66	167.18	0	1394.84
06-Jul-22	832.72	19.87	0	852.59
07-Jul-22	760.12	46.44	0	806.56
08-Jul-22	1248.99	91.7	0	1340.69
09-Jul-22	1244.37	74.79	0	1319.16
10-Jul-22	954.01	176.89	0	1130.9
11-Jul-22	1223.69	227.17	0	1450.86
12-Jul-22	2294.57	246.09	0	2540.66
13-Jul-22	1650.11	41.82	0	1691.93
14-Jul-22	714.05	20.93	0	734.98
16-Jul-22	63.48	4.24	0	67.72
17-Jul-22	336.14	85.26	0	421.4
18-Jul-22	353.16	131.33	0	484.49
19-Jul-22	279.56	111.91	0	391.47
20-Jul-22	548.35	221.9	0	770.25
21-Jul-22	15.91	5.14	0	21.05
22-Jul-22	284.93	101.76	0	386.69
23-Jul-22	7.28	2.07	0	9.35
24-Jul-22	195.05	74.11	0	269.16
25-Jul-22	400.02	60.33	0	460.35
26-Jul-22	0	0	0	0
27-Jul-22	94.07	11.79	0	105.86
28-Jul-22	305.23	53.27	0	358.5
29-Jul-22	0	0	0	0
30-Jul-22	108.04	47.74	0	155.78
31-Jul-22	151.77	76.56	0	228.33
Grand Total				20614.55

Scheduling details after applying ISTS (POC) and State loss

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
01-Jul-22	824.83	184.02	0	1008.85
02-Jul-22	648.86	152.63	0	801.49
03-Jul-22	427.93	65.84	0	493.77
04-Jul-22	696.35	118.09	0	814.44

B.E.S.T. Undertaking DEPP

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05-Jul-22	1188.64	161.85	0	1350.49
06-Jul-22	806.23	19.24	0	825.47
07-Jul-22	735.96	44.96	0	780.92
08-Jul-22	1209.27	88.79	0	1298.06
09-Jul-22	1204.8	72.41	0	1277.21
10-Jul-22	923.67	171.27	0	1094.94
11-Jul-22	1184.76	219.95	0	1404.71
12-Jul-22	2221.58	238.29	0	2459.87
13-Jul-22	1597.62	40.5	0	1638.12
14-Jul-22	691.34	20.27	0	711.61
16-Jul-22	61.45	4.11	0	65.56
17-Jul-22	325.45	82.55	0	408
18-Jul-22	341.93	127.16	0	469.09
19-Jul-22	270.67	108.35	0	379.02
20-Jul-22	530.91	214.85	0	745.76
21-Jul-22	15.41	4.97	0	20.38
22-Jul-22	275.86	98.53	0	374.39
23-Jul-22	7.05	2.01	0	9.06
24-Jul-22	188.84	71.77	0	260.61
25-Jul-22	387.31	58.4	0	445.71
26-Jul-22	0	0	0	0
27-Jul-22	91.07	11.42	0	102.49
28-Jul-22	295.52	51.57	0	347.09
29-Jul-22	0	0	0	0
30-Jul-22	104.61	46.22	0	150.83
31-Jul-22	146.95	74.12	0	221.07
Grand Total				19959.01

Scheduling details after applying ISTS (POC) Loss, State Loss, Distribution Loss and Other Loss if any (at Ex-bus)

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
01-Jul-22	824.83	184.02	0	1008.85
02-Jul-22	648.86	152.63	0	801.49
03-Jul-22	427.93	65.84	0	493.77
04-Jul-22	696.35	118.09	0	814.44
05-Jul-22	1188.64	161.85	0	1350.49
06-Jul-22	806.23	19.24	0	825.47
07-Jul-22	735.96	44.96	0	780.92
08-Jul-22	1209.27	88.79	0	1298.06
09-Jul-22	1204.8	72.41	0	1277.21
10-Jul-22	923.67	171.27	0	1094.94
11-Jul-22	1184.76	219.95	0	1404.71
12-Jul-22	2221.58	238.29	0	2459.87
13-Jul-22	1597.62	40.5	0	1638.12

B.E.S. & T. Undertaking DEPP

13/6/22

*Computer generated report signature not required.

Form II - Gross Energy Consumption				
	BEST Undertaking. Mumbai.			
	August- 2022			
1	**Gross Consumption**		**Quantum (Mus)**	**Remarks**
O	Own Generation			
	Source 1		Nil	BEST not having own generation
	Source 2		Nil	
	Source N		Nil	
		Sub Total (1)	**Nil**	
P	Purchase from other Generating Company			
	TATA Power Co (G) & Manikaran Power Ltd. Excluding Hydro		310.173455	
		Sub Total (2)	**310.17**	
S	Sale to other Licensee / Intermediaries			
	Source 1		0	
		Sub Total (3)	**0**	
	Total GEC for The Month (O+P-S)		**310.17**	
2	**RPO Obligation (19.50 % of GEC)**		**60.48**	

13/6/23

Form III - Renewable Energy Procurement

BEST Undertaking. Mumbai.

August- 2022

RE Sources Detail (SOLAR)

A	Own Generation			BEST not having own RE generation
	RE-1		0	
		Sub Total (A)	**0**	
B	Purchaase from other RE Source / Licensee			
1	Walwhan Solar MH Limited	Solar PV	2.053547	Long Term PPA
2	Solar energy purchased from IEX		6.116400	
		Sub Total (B)	**8.17**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		Nil	
		Sub Total (D)	**Nil**	
	Total GEC for The Month (A+B+C)-(D)		**8.17**	

RE Sources Detail (Non Solar)

A	Own Generation		Quantam (Mus)	Remarks
	RE-1		Nil	BEST not having own RE generation
		Sub Total (A)	**Nil**	
B	RE Source (Type of RE)	Source	Quantam (Mus)	Remarks
1	Non-Solar energy purchased from IEX		1.76134	
		Sub Total (B)	**1.76**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		**Nil**	
	Total GEC for The Month (A+B+C)-(D)		**1.76**	

NOTE: *- 1. Above Energy as per Generation Credit Note, Joint meter reading certified by MSEDCL/MSETCL & Yet to be Accounted in FBSM bill.*

2. WE hereby declare that the gross energy consumption & R.E procurement data submitted above does not includes the gross energy & R.E procurement data of CPP / OA consumers on our network

13/6/22

IEX
INDIAN ENERGY EXCHANGE

Certificate of Purchase of Renewable Energy in Green-Day Ahead Market

For the Month of : August-2022 **Issued on :** 01/09/2022

Portfolio Name: **BEST**

This is certified that BEST has purchased 8143.86 MWh (at regional periphery) of Renewable Energy for the period 01/08/2022 to 31/08/2022 through Indian Energy Exchange Limited in Green-Day Ahead Market.

Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
6322.58	1821.28	0	8143.86

This certificate represented hereby is issued on non-transferable and non-tradable basis and shall be held subject to Orders and Regulations of Honorable Central Electricity Regulatory Commission as amended from time to time and the Bye-laws, Rules and Business Rules of Indian Energy Exchange Limited.

Amit Kumar
Sr VP Market Operations

*Computer generated report signature not required.

IEX
INDIAN ENERGY EXCHANGE

Annexure 1- (Date Wise Scheduling Details)

Participant ID	**W2MH0BST0000**
Participant Name	**Brihanmumbai Electric Supply & Transport (BEST)**
Portfolio ID	**W2MH0BST0001**
Portfolio Name	**BEST**

Scheduling details at Regional Periphery (Traded)

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
01-Aug-22	0	0	0	0
02-Aug-22	0	0	0	0
03-Aug-22	0	0	0	0
04-Aug-22	0	0	0	0
05-Aug-22	0	0	0	0
06-Aug-22	0	0	0	0
07-Aug-22	505.78	58.15	0	563.93
08-Aug-22	920.15	32.04	0	952.19
09-Aug-22	1130.93	144.96	0	1275.89
10-Aug-22	624.98	69.25	0	694.23
11-Aug-22	500.75	73	0	573.75
13-Aug-22	339.85	133.69	0	473.54
14-Aug-22	64.49	40.7	0	105.19
15-Aug-22	103.8	126.99	0	230.79
16-Aug-22	356.27	202.14	0	558.41
17-Aug-22	366.59	212.89	0	579.48
18-Aug-22	491.19	129.31	0	620.5
19-Aug-22	116.74	105.49	0	222.23
20-Aug-22	165.55	162.94	0	328.49
21-Aug-22	276.01	147.64	0	423.65
22-Aug-22	336.6	163.63	0	500.23
23-Aug-22	15.51	10.77	0	26.28
24-Aug-22	7.39	7.69	0	15.08
25-Aug-22	0	0	0	0
26-Aug-22	0	0	0	0
27-Aug-22	0	0	0	0
30-Aug-22	0	0	0	0
31-Aug-22	0	0	0	0
Grand Total				8143.86



*Computer generated report signature not required.

Scheduling details after applying ISTS (POC) loss

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
01-Aug-22	0	0	0	0
02-Aug-22	0	0	0	0
03-Aug-22	0	0	0	0
04-Aug-22	0	0	0	0
05-Aug-22	0	0	0	0
06-Aug-22	0	0	0	0
07-Aug-22	487.2	56.01	0	543.21
08-Aug-22	891.09	31.01	0	922.1
09-Aug-22	1095.2	140.39	0	1235.59
10-Aug-22	605.24	67.06	0	672.3
11-Aug-22	484.92	70.69	0	555.61
13-Aug-22	329.11	129.46	0	458.57
14-Aug-22	62.45	39.41	0	101.86
15-Aug-22	100.43	122.85	0	223.28
16-Aug-22	344.69	195.58	0	540.27
17-Aug-22	354.69	205.97	0	560.66
18-Aug-22	475.23	125.11	0	600.34
19-Aug-22	112.94	102.06	0	215
20-Aug-22	160.17	157.64	0	317.81
21-Aug-22	267.02	142.84	0	409.86
22-Aug-22	323.97	157.49	0	481.46
23-Aug-22	14.93	10.37	0	25.3
24-Aug-22	7.12	7.4	0	14.52
25-Aug-22	0	0	0	0
26-Aug-22	0	0	0	0
27-Aug-22	0	0	0	0
30-Aug-22	0	0	0	0
31-Aug-22	0	0	0	0
Grand Total				7877.74

Scheduling details after applying ISTS (POC) and State loss

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
01-Aug-22	0	0	0	0
02-Aug-22	0	0	0	0
03-Aug-22	0	0	0	0
04-Aug-22	0	0	0	0
05-Aug-22	0	0	0	0
06-Aug-22	0	0	0	0
07-Aug-22	471.71	54.23	0	525.94
08-Aug-22	862.75	30.03	0	892.78

*Computer generated report signature not required.

09-Aug-22	1060.37	135.92	0	1196.29
10-Aug-22	585.99	64.93	0	650.92
11-Aug-22	469.5	68.44	0	537.94
13-Aug-22	318.64	125.35	0	443.99
14-Aug-22	60.47	38.16	0	98.63
15-Aug-22	97.24	118.94	0	216.18
16-Aug-22	333.73	189.36	0	523.09
17-Aug-22	343.41	199.42	0	542.83
18-Aug-22	460.12	121.13	0	581.25
19-Aug-22	109.36	98.8	0	208.16
20-Aug-22	155.08	152.62	0	307.7
21-Aug-22	258.53	138.3	0	396.83
22-Aug-22	313.67	152.48	0	466.15
23-Aug-22	14.45	10.04	0	24.49
24-Aug-22	6.89	7.16	0	14.05
25-Aug-22	0	0	0	0
26-Aug-22	0	0	0	0
27-Aug-22	0	0	0	0
30-Aug-22	0	0	0	0
31-Aug-22	0	0	0	0
Grand Total				7627.22

Scheduling details after applying ISTS (POC) Loss, State Loss, Distribution Loss and Other Loss if any (at Ex-bus)

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
01-Aug-22	0	0	0	0
02-Aug-22	0	0	0	0
03-Aug-22	0	0	0	0
04-Aug-22	0	0	0	0
05-Aug-22	0	0	0	0
06-Aug-22	0	0	0	0
07-Aug-22	471.71	54.23	0	525.94
08-Aug-22	862.75	30.03	0	892.78
09-Aug-22	1060.37	135.92	0	1196.29
10-Aug-22	585.99	64.93	0	650.92
11-Aug-22	469.5	68.44	0	537.94
13-Aug-22	318.64	125.35	0	443.99
14-Aug-22	60.47	38.16	0	98.63
15-Aug-22	97.24	118.94	0	216.18
16-Aug-22	333.73	189.36	0	523.09
17-Aug-22	343.41	199.42	0	542.83
18-Aug-22	460.12	121.13	0	581.25
19-Aug-22	109.36	98.8	0	208.16
20-Aug-22	155.08	152.62	0	307.7



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*Computer generated report signature not required.

Form II - Gross Energy Consumption				
	BEST Undertaking. Mumbai.			
	September- 2022			
1	**Gross Consumption**		**Quantum (Mus)**	**Remarks**
O	Own Generation			
	Source 1		Nil	BEST not having own generation
	Source 2		Nil	
	Source N		Nil	
	Sub Total (1)		**Nil**	
P	Purchaase from other Generating Company			
	TATA Power Co (G) & Manikaran Power Ltd. Excluding Hydro		329.807113	
	Sub Total (2)		**329.81**	
S	Sale to other Licensee / Intermediaries			
	Source 1		**Nil**	
	Sub Total (3)		**0**	
	Total GEC for The Month (O+P-S)		**329.81**	
2	**RPO Obligation (19.50 % of GEC)**		**64.31**	

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Form III - Renewable Energy Procurement

BEST Undertaking. Mumbai.

September- 2022

RE Sources Detail (Solar)

A	Own Generation			BEST not having own RE generation
	RE-1		0	
		Sub Total (A)	**0**	
B	Purchaase from other RE Source / Licensee			
1	Walwhan Solar MH Limited	Solar PV	2.098816	Long Term PPA
		Sub Total (B)	**2.10**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		Nil	
		Sub Total (D)	**Nil**	
	Total GEC for The Month (A+B+C)-(D)		**2.10**	

RE Sources Detail (Non Solar)

A	Own Generation		Quantam (Mus)	Remarks
	RE-1		Nil	BEST not having own RE generation
		Sub Total (A)	**Nil**	
B	RE Source (Type of RE)	Source	Quantam (Mus)	Remarks
1	Nil		Nil	
		Sub Total (B)	**0.00**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		**Nil**	
	Total GEC for The Month (A+B+C)-(D)		**0.00**	

NOTE: *- 1. Above Energy as per Generation Credit Note, Joint meter reading certified by MSEDCL/MSETCL & Yet to be Accounted in FBSM bill.*

2. WE hereby declare that the gross energy consumption & R.E procurement data submitted above does not includes the gross energy & R.E procurement data of CPP / OA consumers on our network

13/6/23

B.E.S.T. Undertaking D.E.P.P.

Form II - Gross Energy Consumption				
	BEST Undertaking. Mumbai.			
	October- 2022			
1	**Gross Consumption**		**Quantum (Mus)**	**Remarks**
O	Own Generation			
	Source 1		Nil	BEST not having own generation
	Source 2		Nil	
	Source N		Nil	
		Sub Total (1)	**Nil**	
P	Purchase from other Generating Company			
	TATA Power Co (G) & Manikaran Power Ltd. Excluding Hydro		365.843576	
		Sub Total (2)	**365.84**	
S	Sale to other Licensee / Intermediaries			
	Source 1		**Nil**	
		Sub Total (3)	**0**	
	Total GEC for The Month (O+P-S)		**365.84**	
2	**RPO Obligation (19.50 % of GEC)**		**71.34**	

B.E.S. & T. Undertaking DEPP

Form III - Renewable Energy Procurement

BEST Undertaking, Mumbai.

October- 2022

RE Sources Detail (SOLAR)

A	Own Generation			BEST not having own RE generation
	RE-1		0	
		Sub Total (A)	**0**	
B	Purchase from other RE Source / Licensee			
1	Walwhan Solar MH Limited	Solar PV	2.503653	Long Term PPA
		Sub Total (B)	**2.50**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		Nil	
		Sub Total (D)	**Nil**	
	Total GEC for The Month (A+B+C)-(D)		**2.50**	

RE Sources Detail (Non Solar)

A	Own Generation		Quantam (Mus)	Remarks
	RE-1		Nil	BEST not having own RE generation
		Sub Total (A)	**Nil**	
B	RE Source (Type of RE)	Source	Quantam (Mus)	Remarks
1	Nil		0.00	
		Sub Total (B)	**0.00**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		**Nil**	
	Total GEC for The Month (A+B+C)-(D)		**0.00**	

NOTE: *- 1. Above Energy as per Generation Credit Note, Joint meter reading certified by MSEDCL/MSETCL & Yet to be Accounted in FBSM bill.*

2. WE hereby declare that the gross energy consumption & R.E procurement data submitted above does not includes the gross energy & R.E procurement data of CPP / OA consumers on our network

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B.E.S.T. Undertaking DEPP

Form II - Gross Energy Consumption				
	BEST Undertaking. Mumbai.			
	November- 2022			
1	**Gross Consumption**		**Quantum (Mus)**	**Remarks**
O	Own Generation			
	Source 1		Nil	BEST not having own generation
	Source 2		Nil	
	Source N		Nil	
		Sub Total (1)	**Nil**	
P	Purchase from other Generating Company			
	TATA Power Co (G) & Manikaran Power Ltd. Excluding Hydro		332.508806	
		Sub Total (2)	**332.51**	
S	Sale to other Licensee / Intermediaries			
	Source 1		**Nil**	
		Sub Total (3)	**0**	
	Total GEC for The Month (O+P-S)		**332.51**	
2	**RPO Obligation (19.50 % of GEC)**		**64.84**	

13/12/22

Form III - Renewable Energy Procurement				
	BEST Undertaking. Mumbai.			
	November- 2022			
	RE Sources Detail (Solar)			
A	Own Generation			BEST not having own RE generation
	RE-1		0	
		Sub Total (A)	**0**	
B	Purchase from other RE Source / Licensee			
1	Walwhan Solar MH Limited	Solar PV	2.565313	Long Term PPA
		Sub Total (B)	**2.57**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		Nil	
		Sub Total (D)	**Nil**	
	Total GEC for The Month (A+B+C)-(D)		**2.57**	
	RE Sources Detail (Non Solar)			
A	Own Generation		Quantam (Mus)	Remarks
	RE-1		Nil	BEST not having own RE generation
		Sub Total (A)	**Nil**	
B	RE Source (Type of RE)	Source	Quantam (Mus)	Remarks
1	Nil		0.00	
		Sub Total (B)	**0.00**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		**Nil**	
	Total GEC for The Month (A+B+C)-(D)		**0.00**	

NOTE: *- 1. Above Energy as per Generation Credit Note, Joint meter reading certified by MSEDCL/MSETCL & Yet to be Accounted in FBSM bill.*

2. WE hereby declare that the gross energy consumption & R.E procurement data submitted above does not includes the gross energy & R.E procurement data of CPP / OA consumers on our network





Form II - Gross Energy Consumption				
	BEST Undertaking. Mumbai.			
	December- 2022			
1	**Gross Consumption**		**Quantum (Mus)**	**Remarks**
O	Own Generation			
	Source 1		Nil	BEST not having own generation
	Source 2		Nil	
	Source N		Nil	
		Sub Total (1)	**Nil**	
P	Purchaase from other Generating Company			
	TATA Power Co (G) & Manikaran Power Ltd. Excluding Hydro		327.473360	
		Sub Total (2)	**327.47**	
S	Sale to other Licensee / Intermediaries			
	Source 1		**Nil**	
		Sub Total (3)	**0.00**	
	Total GEC for The Month (O+P-S)		**327.47**	
2	**RPO Obligation (19.50 % of GEC)**		**63.86**	





Form III - Renewable Energy Procurement

BEST Undertaking. Mumbai.

December- 2022

RE Sources Detail (SOLAR)

A	Own Generation			BEST not having own RE generation
	RE-1		0	
		Sub Total (A)	**0**	
B	Purchaase from other RE Source / Licensee			
1	Walwhan Solar MH Limited	Solar PV	2.504450	Long Term PPA
		Sub Total (B)	**2.50**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		Nil	
		Sub Total (D)	**Nil**	
	Total GEC for The Month (A+B+C)-(D)		**2.50**	

RE Sources Detail (Non Solar)

A	Own Generation		Quantam (Mus)	Remarks
	RE-1		Nil	BEST not having own RE generation
		Sub Total (A)	**Nil**	
B	RE Source (Type of RE)	Source	Quantam (Mus)	Remarks
1	Nil		0	
		Sub Total (B)	**0.00**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		**Nil**	
	Total GEC for The Month (A+B+C)-(D)		**0.00**	

NOTE: *- 1. Above Energy as per Generation Credit Note, Joint meter reading certified by MSEDCL/MSETCL & Yet to be Accounted in FBSM bill.*

2. WE hereby declare that the gross energy consumption & R.E procurement data submitted above does not includes the gross energy & R.E procurement data of CPP / OA consumers on our network

13/1/23

B.E.S. & T. Undertaking DEPT.

Form II - Gross Energy Consumption				
	BEST Undertaking. Mumbai.			
	January- 2023			
1	**Gross Consumption**		**Quantum (Mus)**	**Remarks**
O	Own Generation			
	Source 1		Nil	BEST not having own generation
	Source 2		Nil	
	Source N		Nil	
		Sub Total (1)	**Nil**	
P	Purchaase from other Generating Company			
	TATA Power Co (G) & Manikaran Power Ltd. Excluding Hydro		260.329654	
		Sub Total (2)	**260.33**	
S	Sale to other Licensee / Intermediaries			
	Source 1		0	
		Sub Total (3)	**0**	
	Total GEC for The Month (O+P-S)		**260.33**	
2	**RPO Obligation (19.50 % of GEC)**		**50.76**	

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B.E.S.T. Undertaking DEPP

Form III - Renewable Energy Procurement

BEST Undertaking. Mumbai.

January- 2023

RE Sources Detail (SOLAR)

A	Own Generation			BEST not having own RE generation
	RE-1		0	
		Sub Total (A)	**0**	
B	Purchaase from other RE Source / Licensee			
1	Walwhan Solar MH Limited	Solar PV	2.885478	Long Term PPA
		Sub Total (B)	**2.89**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		Nil	
		Sub Total (D)	**Nil**	
	Total GEC for The Month (A+B+C)-(D)		**2.89**	

RE Sources Detail (Non Solar)

A	Own Generation		Quantam (Mus)	Remarks
	RE-1		Nil	BEST not having own RE generation
		Sub Total (A)	**Nil**	
B	RE Source (Type of RE)	Source	Quantam (Mus)	Remarks
1	Nil		0	
		Sub Total (B)	**0.00**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		**Nil**	
	Total GEC for The Month (A+B+C)-(D)		**0.00**	

NOTE: *- 1. Above Energy as per Generation Credit Note, Joint meter reading certified by MSEDCL/MSETCL & Yet to be Accounted in FBSM bill.*

2. WE hereby declare that the gross energy consumption & R.E procurement data submitted above does not includes the gross energy & R.E procurement data of CPP / OA consumers on our network

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Form II - Gross Energy Consumption				
	BEST Undertaking. Mumbai.			
	February- 2023			
1	**Gross Consumption**		**Quantum (Mus)**	**Remarks**
O	Own Generation			
	Source 1		Nil	BEST not having own generation
	Source 2		Nil	
	Source N		Nil	
	Sub Total (1)		**Nil**	
P	Purchase from other Generating Company			
	TATA Power Co (G) & Manikaran Power Ltd. Excluding Hydro		281.885648	
	Sub Total (2)		**281.89**	
S	Sale to other Licensee / Intermediaries			
	Source 1		**Nil**	
	Sub Total (3)		**0**	
	Total GEC for The Month (O+P-S)		**281.89**	
2	**RPO Obligation (19.50 % of GEC)**		**54.97**	

DWT
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Form III - Renewable Energy Procurement

BEST Undertaking. Mumbai.

February- 2023

RE Sources Detail (SOLAR)

A	Own Generation			BEST not having own RE generation
	RE-1		0	
		Sub Total (A)	**0**	
B	Purchase from other RE Source / Licensee			
1	Walwhan Solar MH Limited	Solar PV	2.946628	Long Term PPA
		Sub Total (B)	**2.95**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		Nil	
		Sub Total (D)	**Nil**	
	Total GEC for The Month (A+B+C)-(D)		**2.95**	

RE Sources Detail (Non Solar)

A	Own Generation		Quantam (Mus)	Remarks
	RE-1		Nil	BEST not having own RE generation
		Sub Total (A)	**Nil**	
B	RE Source (Type of RE)	Source	Quantam (Mus)	Remarks
1	Nil		Nil	
		Sub Total (B)	**0.00**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		**Nil**	
	Total GEC for The Month (A+B+C)-(D)		**0.00**	

NOTE: - 1. Above Energy as per Generation Credit Note, Joint meter reading certified by MSEDCL/MSETCL & Yet to be Accounted in FBSM bill.

2. WE hereby declare that the gross energy consumption & R.E procurement data submitted above does not includes the gross energy & R.E procurement data of CPP / OA consumers on our network

B.E.S. & T. Undertaking QEPP

Form II - Gross Energy Consumption				
	BEST Undertaking. Mumbai.			
	March- 2023			
1	**Gross Consumption**		**Quantum (Mus)**	**Remarks**
O	Own Generation			
	Source 1		Nil	BEST not having own generation
	Source 2		Nil	
	Source N		Nil	
	Sub Total (1)		**Nil**	
P	Purchaase from other Generating Company			
	TATA Power Co (G) & Manikaran Power Ltd. Excluding Hydro		357.317748	
	Sub Total (2)		**357.32**	
S	Sale to other Licensee / Intermediaries			
	Source 1		**Nil**	
	Sub Total (3)		**0**	
	Total GEC for The Month (O+P-S)		**357.32**	
2	**RPO Obligation (19.50 % of GEC)**		**69.68**	

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B.E.S.T. Undertaking QEPP

Form III - Renewable Energy Procurement				
	BEST Undertaking. Mumbai.			
	March- 2023			
	RE Sources Detail (SOLAR)			
A	Own Generation			BEST not having own RE generation
	RE-1		0	
	Sub Total (A)		**0**	
B	Purchase from other RE Source / Licensee			
1	Walwhan Solar MH Limited	Solar PV	3.270381	Long Term PPA
	Sub Total (B)		**3.27**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		Nil	
	Sub Total (D)		**Nil**	
E	RE Received from Net metered consumers for FY 2022-23		11.796648	
	Total GEC for The Month (A+B+C+E)-(D)		**15.07**	

	RE Sources Detail (Non Solar)			
A	Own Generation		Quantam (Mus)	Remarks
	RE-1		Nil	BEST not having own RE generation
	Sub Total (A)		**Nil**	
B	RE Source (Type of RE)	Source	Quantam (Mus)	Remarks
1	Nil		Nil	
	Sub Total (B)		**0.00**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		**Nil**	
	Total GEC for The Month (A+B+C)-(D)		**0.00**	

NOTE: *- 1. Above Energy as per Generation Credit Note, Joint meter reading certified by MSEDCL/MSETCL & Yet to be Accounted in FBSM bill.*

2. WE hereby declare that the gross energy consumption & R.E procurement data submitted above does not includes the gross energy & R.E procurement data of CPP / OA consumers on our network

Quarterly updated details of Registered Self Use/CPPs above 1 MW to be submitted by DISCOM / PWD (Electrical) to MEDA

Discom:- BEST Undertaking. Mumbai FY- *2022-23*

Sr. No	Name of CPP unit (Self Use)	Address / Location of Self Use / CPP unit	Email-id / Contact details	Self Use CPP installed & generation capacity (in MW)	Registration No.	Registration date (DD/MM/YYYY)	Date of Commissioning (DD/MM/YYYY)	Source of generation (specify fuel type / technology)	Voltage level of grid connection) (in KV)	Grid connection status **(whether synchronised for parallel operation or not)**	Gross Energy Consumption from own generation (from CPP unit) (in MWh)	Host DISCOM (not necessary if location of CPP specified)	Consumer number	Meter location and meter type (marked on the Single Line Diagram to be provided)
1														
2														
3														
4														

NIL

Note: DISCOMs / PWD (Electrical) needs to submit above updated details for the quarter by first week of next quarter to MEDA.

Say: for April- June quarter-First week of July
for July- September quarter-First week of October for October- December quarter-First week of January for January- March quarter-First week of April

13/6/23

B.E.S. & T. Undertaking DEPPS

Quarterly updated details of Registered OA consumers having Contract demand 1MVA & above to be submitted by DISCOMs / SLDC to MEDA

Discom:- BEST Undertaking. Mumbai FY- *2022-23*

Sr. No	Name of OA consumer	Address / location of OA consumer	Email-id / Contact details	Consumer No.	Capacity of Open Access (in MW) & period for Open Access	OA consumer contract demand (in KVA)	Consumer Voltage level (in KV)	Name & address of Generator Unit	Source of generation (specify fuel type/technology)	Generation Voltage level (in KV)	Energy wheeled under Open Access (Grossed up for losses) (in MWh)
1											
2											
3					**NIL**						
4											
N											

Note: DISCOMs/ SLDC needs to submit above updated details for the quarter by first week of next quarter to MEDA.

Say: for April- June quarter-First week of July
for July- September quarter-First week of October for October- December quarter-First week of January for January- March quarter-First week of April

13/6/23

B.E.S.T. Undertaking DEPT.

Compliance as per regulation 4.1(a) of MERC (Terms and Conditions for Determination of RE Tariff) Regulation 2015 for FY 2022-23

Sr. No.	Name of RE Generator	Date of Comm.	Contract Period		Type of Source	Details of source wise RE Contracted Capacity in MW				
			From	To		Qtr- I	Qtr-2	Qtr-3	Qtr-4	FY 2022-23
1	M/s. Walwhan Solar MH Limited.	04.10.13	25 years PPA		Solar-PV	20.00	20.00	20.00	20.00	20.00
	Total					**20.00**	**20.00**	**20.00**	**20.00**	**20.00**

Compliance as per Regulation 4.1(b) of MERC (Terms and Conditions for Determination of RE Tariff) Regulation 2015 for FY 2022-23.

Sr. No.	Name of RE Generator	Date of Commissing	Contract Period		Type of Source	Details of Purchase of RE in Mus				
			From	To		Qtr-I	Qtr-2	Qtr-3	Qtr-4	FY 2022-23
1	M/s. Walwhan Solar MH Limited.	04.10.13	25 years PPA		Solar-PV	8.40	6.05	7.57	9.10	31.13
2	Solar Power purchased from power Exchange (IEX)	-	-	-		5.04	24.09	0.00	0.00	29.13
3	Non SolarSolar Power purchased from power Exchange (IEX)					0.86	4.40	0.00	0.00	5.26
4	Solar Energy from Net Metered Consumers	-	01.04.22	31.03.23		-	-	-	-	11.80
Total Mus						**14.30**	**34.55**	**7.57**	**9.10**	**77.31**

13/6/23

The Brihan Mumbai Electric Supply & Transport Undertaking

(OF THE BRIHAN MUMBAI MAHANAGARPALIKA)

TELEPHONE : (022) 22856262
FAX : (022) 22851244
TELEX : 1185755 BEST IN
TELEGRAM : BEST, MUMBAI-400 001.

BEST BHAVAN,
BEST MARG,
POST BOX NO. 192.
MUMBAI - 400 001.

ADDRESS ALL COMMUNICATION BY TITLE NOT BY NAME

OUR REF. PP/MEDA/ RPO/2023-24 / 41 /2024

DATE : 24 MAY 2024

To,
General Manager (REC, RPO)
Maharashtra Energy Development Agency,
Government of Maharashtra
Aundh Road, Opposite Spicer College,
Near Commissionerate of Animal Husbandry,
PUNE – 411 067.
Email: - manrd@mahaurja.com

Sub:- Submission of final audited RPO achievement data of BEST for FY 2023-24 as per MERC (RPO Compliance & Implementation of REC framework) Regulations, 2019.

Ref: - Your email dated 03.04.2024

Sir,

With reference to your above referred email, we are submitting the final audited RPO achievement report for FY 2023-24. Necessary information is as below,

A. Gross Electricity Consumption and procurement of Renewable Energy for FY 2023-24 in the prescribed Form No. I, II, III.
B. CPP / OA consumer Data FY 2023-24.
C. Source wise contracted RE capacity addition in MW & details of RE procured in MUs for FY 2023-24.

Thanking you,

Yours faithfully,

(Satish A. Jadhav)
Divisional Engineer
Power Purchase

Encl: - As above

Gross Energy Consumption statement of BEST Undertaking FY 2023-24

Power Purchase for FY 2023-24	Energy at T<>D interface as per e-mail from SLDC dtd. 21.05.2024	Transmission Loss as per MSLDC	Grossed up Energy at G<>T as per SLDC Certification	Energy procured from Hydro source by BEST	GEC for Obligation
Month	MUs	%	MUs	MUs	MUs
Apr-23	426.831023	3.71	443.276584	83.090493	360.186091
May-23	471.646674	3.56	489.057107	85.945921	403.111186
Jun-23	468.031968	3.42	484.605475	67.547709	417.057766
Jul-23	401.183747	3.24	414.617349	72.321089	342.296260
Aug-23	420.916200	3.22	434.920645	84.690385	350.230260
Sep-23	411.549235	3.28	425.505826	58.526749	366.979077
Oct-23	460.521261	3.53	477.372511	60.761186	416.611325
Nov-23	412.567610	3.17	426.074161	52.678216	373.395945
Dec-23	382.445156	2.94	394.029627	56.917121	337.112506
Jan-24	353.569472	2.84	363.904356	57.316682	306.587674
Feb-24	341.127089	3.07	351.931382	49.336413	302.594969
Mar-24	393.672117	3.21	406.728089	68.497372	338.230717
TOTAL	**4944.061552**		**5112.023112**	**797.629336**	**4314.393776**

BEST Undertaking, MUMBAI

Form-I: RPO Settlement Account FY-2023-24

A - SOLAR

Gross Energy Consumption for Obligation (Excluding Hydro)		RPO Obligation (10.50%)	RPO % up to Previous month	RPO % Cumulative up to month (1)	**RE Purchase for the Month**		RE Purchase upto the Previous Month		RE Cumulative up to the Month (2)		**Short if any (1-2)**
					MU's		MU's		MU's		
Month	MU's	MU's	MU's	MU's	**Pref Tariff**	**REC**	Pref Tariff	REC	Pref Tariff	REC	**MU's**
Apr-23	360.186091	37.82	0.00	37.82	**4.495325**	**0.00**	0.00	0.00	4.50	0.00	**33.32**
May-23	403.111186	42.33	37.82	80.15	**4.683023**	**0.00**	4.50	0.00	9.18	0.00	**70.97**
Jun-23	417.057766	43.79	80.15	123.94	**4.088623**	**0.00**	9.18	0.00	13.27	0.00	**110.67**
Jul-23	342.296260	35.94	123.94	159.88	**2.613669**	**0.00**	13.27	0.00	15.88	0.00	**144.00**
Aug-23	350.230260	36.77	159.88	196.65	**3.867039**	**0.00**	15.88	0.00	19.75	0.00	**176.90**
Sep-23	366.979077	38.53	196.65	235.19	**3.488215**	**0.00**	19.75	0.00	23.24	0.00	**211.95**
Oct-23	416.611325	43.74	235.19	278.93	**4.122288**	**0.00**	23.24	0.00	27.36	0.00	**251.57**
Nov-23	373.395945	39.21	278.93	318.14	**3.483430**	**0.00**	27.36	0.00	30.84	0.00	**287.29**
Dec-23	337.112506	35.40	318.14	353.53	**3.485098**	**0.00**	30.84	0.00	34.33	0.00	**319.21**
Jan-24	306.587674	32.19	353.53	385.72	**3.932386**	**0.00**	34.33	0.00	38.26	0.00	**347.47**
Feb-24	302.594969	31.77	385.72	417.50	**5.425279**	**0.00**	38.26	0.00	43.68	0.00	**373.81**
Mar-24	338.230717	35.51	417.50	453.01	**4.499652**	**0.00**	43.68	0.00	48.18	0.00	**404.83**
TOTAL	**4314.393776**	**453.011346**			**48.184025**	**0.00**					**404.83**

B - Non-Solar

Gross Energy Consumption for Obligation (Excluding Hydro)		RPO Obligation (11.50%)	RPO % up to Previous month	RPO % Cumulative up to month (1)	**RE Purchase for the Month**		RE Purchase upto the Previous Month		RE Cumulative up to the Month (2)		**Short if any (1-2)**
					MU's		MU's		MU's		
Month	MU's	MU's	MU's	MU's	**Pref Tariff**	**REC**	Pref Tariff	REC	Pref Tariff	REC	**MU's**
Apr-23	360.186091	41.42	0.00	41.42	**0.00**	**0.00**	0.00	0.00	0.00	0.00	**41.42**
May-23	403.111186	46.36	41.42	87.78	**0.00**	**0.00**	0.00	0.00	0.00	0.00	**87.78**
Jun-23	417.057766	47.96	87.78	135.74	**0.00**	**0.00**	0.00	0.00	0.00	0.00	**135.74**
Jul-23	342.296260	39.36	135.74	175.10	**0.00**	**0.00**	0.00	0.00	0.00	0.00	**175.10**
Aug-23	350.230260	40.28	175.10	215.38	**0.00**	**0.00**	0.00	0.00	0.00	0.00	**215.38**
Sep-23	366.979077	42.20	215.38	257.58	**0.00**	**0.00**	0.00	0.00	0.00	0.00	**257.58**
Oct-23	416.611325	47.91	257.58	305.49	**0.00**	**0.00**	0.00	0.00	0.00	0.00	**305.49**
Nov-23	373.395945	42.94	305.49	348.43	**0.00**	**0.00**	0.00	0.00	0.00	0.00	**348.43**
Dec-23	337.112506	38.77	348.43	387.20	**0.00**	**0.00**	0.00	0.00	0.00	0.00	**387.20**
Jan-24	306.587674	35.26	387.20	422.46	**0.02**	**0.00**	0.00	0.00	0.02	0.00	**422.44**
Feb-24	302.594969	34.80	422.46	457.26	**0.42**	**0.00**	0.02	0.00	0.43	0.00	**456.83**
Mar-24	338.230717	38.90	457.26	496.16	**0.32**	**0.00**	0.42	0.00	0.75	0.00	**495.41**
TOTAL	**4314.393776**	**496.155284**			**0.75**	**0.00**					**495.41**

As per RPO-REC Regulation, 2019	
Solar	***10.50%***
Non Soalar	***11.50%***

Note:- We hereby declare that the gross energy consumption & R.E procurement data submitted above does not includes the gross energy & R.E procurement data of CPP / OA consumers on our network

Form II - Gross Energy Consumption				
	BEST Undertaking. Mumbai.			
	April- 2023			
1	**Gross Consumption**		**Quantum (Mus)**	**Remarks**
O	Own Generation			
	Source 1		Nil	BEST not having own generation
	Source 2		Nil	
	Source N		Nil	
	Sub Total (1)		**Nil**	
P	Purchaase from other Generating Company			
	TATA Power Co (G) & Manikaran Power Ltd. Excluding Hydro		360.186091	
	Sub Total (2)		**360.19**	
S	Sale to other Licensee / Intermediaries			
	Source 1		0	
	Sub Total (3)		**0**	
	Total GEC for The Month (O+P-S) for obligation		**360.19**	
2	**RPO Obligation (22.00 % of GEC)**		**79.24**	





Form III - Renewable Energy Procurement				
	BEST Undertaking. Mumbai.			
	April- 2023			
	RE Sources Detail (Solar)			
A	Own Generation			BEST not having own RE generation
	RE-1		0	
	Sub Total (A)		**0**	
B	Purchaase from other RE Source / Licensee			
1	Walwhan Solar MH Limited	Solar PV	3.116369	Long Term PPA
2	RE Generated from Net metered consumers		1.378956	
	Sub Total (B)		**4.50**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		Nil	
	Sub Total (D)		**Nil**	
	Total GEC for The Month (A+B+C)-(D)		**4.50**	

	RE Sources Detail (Non Solar)			
A	Own Generation		Quantam (Mus)	Remarks
	RE-1		Nil	BEST not having own RE generation
	Sub Total (A)		**Nil**	
B	RE Source (Type of RE)	Source	Quantam (Mus)	Remarks
1	Nil		Nil	
	Sub Total (B)		**0.00**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		**Nil**	
	Total GEC for The Month (A+B+C)-(D)		**0.00**	

NOTE: *- 1. Above Energy as per Generation Credit Note, Joint meter reading certified by MSEDCL/MSETCL & Yet to be Accounted in FBSM bill.*

2. WE hereby declare that the gross energy consumption & R.E procurement data submitted above does not includes the gross energy & R.E procurement data of CPP / OA consumers on our network

Form II - Gross Energy Consumption				
	BEST Undertaking. Mumbai.			
	May- 2023			
1	**Gross Consumption**		**Quantum (Mus)**	**Remarks**
O	Own Generation			
	Source 1		Nil	BEST not having own generation
	Source 2		Nil	
	Source N		Nil	
	Sub Total (1)		**Nil**	
P	Purchase from other Generating Company			
	TATA Power Co (G) & Manikaran Power Ltd.Excluding Hydro		403.111186	
	Sub Total (2)		**403.11**	
S	Sale to other Licensee / Intermediaries			
	Source 1		0	
	Sub Total (3)		**0**	
	Total GEC for The Month (O+P-S)		**403.11**	
2	**RPO Obligation (22.00 % of GEC)**		**88.68**	

Form III - Renewable Energy Procurement				
	BEST Undertaking. Mumbai.			
	May- 2023			
	RE Sources Detail (Solar)			
A	Own Generation			BEST not having own RE generation
	RE-1		0	
	Sub Total (A)		**0**	
B	Purchaase from other RE Source / Licensee			
1	Walwhan Solar MH Limited	Solar PV	3.329350	Long Term PPA
2	RE Generated from Net metered consumers		1.353673	
	Sub Total (B)		**4.68**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		Nil	
	Sub Total (D)		**Nil**	
	Total GEC for The Month (A+B+C)-(D)		**4.68**	

	RE Sources Detail (Non Solar)			
A	Own Generation		Quantam (Mus)	Remarks
	RE-1		0	BEST not having own RE generation
	Sub Total (A)		**0**	
B	RE Source (Type of RE)	Source	Quantam (Mus)	Remarks
1	Nil		0.00000	
	Sub Total (B)		**0.0000**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		**0**	
	Total GEC for The Month (A+B+C)-(D)		**0.0000**	

NOTE: *- 1. Above Energy as per Generation Credit Note, Joint meter reading certified by MSEDCL/MSETCL & Yet to be Accounted in FBSM bill.*

2. WE hereby declare that the gross energy consumption & R.E procurement data submitted above does not includes the gross energy & R.E procurement data of CPP / OA consumers on our network

Form II - Gross Energy Consumption				
	BEST Undertaking. Mumbai.			
	June- 2023			
1	**Gross Consumption**		**Quantum (Mus)**	**Remarks**
O	Own Generation			
	Source 1		Nil	BEST not having own generation
	Source 2		Nil	
	Source N		Nil	
	Sub Total (1)		**Nil**	
P	Purchase from other Generating Company			
	TATA Power Co (G) & Manikaran Power Ltd. Excluding Hydro		417.057766	
	Sub Total (2)		**417.06**	
S	Sale to other Licensee / Intermediaries			
	Source 1		**Nil**	
	Sub Total (3)		**0**	
	Total GEC for The Month (O+P-S)		**417.06**	
2	**RPO Obligation (22.00 % of GEC)**		**91.75**	





Form III - Renewable Energy Procurement				
	BEST Undertaking. Mumbai.			
	June- 2023			
	RE Sources Detail (SOLAR)			
A	Own Generation			BEST not having own RE generation
	RE-1		0	
		Sub Total (A)	**0**	
B	Purchase from other RE Source / Licensee			
1	Walwhan Solar MH Limited	Solar PV	2.994191	Long Term PPA
2	RE Generated from Net metered consumers		1.094432	
		Sub Total (B)	**4.09**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		Nil	
		Sub Total (D)	**Nil**	
	Total GEC for The Month (A+B+C)-(D)		**4.09**	

	RE Sources Detail (Non Solar)			
A	Own Generation		Quantam (Mus)	Remarks
	RE-1		Nil	BEST not having own RE generation
		Sub Total (A)	**Nil**	
B	RE Source (Type of RE)	Source	Quantam (Mus)	Remarks
1	Nil		Nil	
		Sub Total (B)	**0.00**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		**Nil**	
	Total GEC for The Month (A+B+C)-(D)		**0.00**	

NOTE: *- 1. Above Energy as per Generation Credit Note, Joint meter reading certified by MSEDCL/MSETCL & Yet to be Accounted in FBSM bill.*

2. WE hereby declare that the gross energy consumption & R.E procurement data submitted above does not includes the gross energy & R.E procurement data of CPP / OA consumers on our network

Form II - Gross Energy Consumption				
	BEST Undertaking, Mumbai.			
	July- 2023			
1	Gross Consumption		Quantum (Mus)	Remarks
O	Own Generation			
	Source 1		Nil	BEST not having own generation
	Source 2		Nil	
	Source N		Nil	
	Sub Total (1)		Nil	
P	Purchase from other Generating Company			
	TATA Power Co (G) & Manikaran Power Ltd. Excluding Hydro		342.296260	
	Sub Total (2)		342.30	
S	Sale to other Licensee / Intermediaries			
	Source 1		0	
	Sub Total (3)		0	
	Total GEC for The Month (O+P-S)		342.30	
2	RPO Obligation (22.00 % of GEC)		75.31	

Form III - Renewable Energy Procurement

BEST Undertaking, Mumbai.

July- 2023

RE Sources Detail (Solar)

A	Own Generation			BEST not having own RE generation
	RE-1		0	
		Sub Total (A)	**0**	
B	Purchaase from other RE Source / Licensee			
1	Walwhan Solar MH Limited	Solar PV	2.009731	Long Term PPA
2	RE Generated from Net metered consumers		0.603938	
		Sub Total (B)	**2.61**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		Nil	
		Sub Total (D)	**Nil**	
	Total GEC for The Month (A+B+C)-(D)		**2.61**	

RE Sources Detail (Non Solar)

A	Own Generation		Quantam (Mus)	Remarks
	RE-1		Nil	BEST not having own RE generation
		Sub Total (A)	**Nil**	
B	RE Source (Type of RE)	Source	Quantam (Mus)	Remarks
1	Nil		Nil	
		Sub Total (B)	**0.00**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		**Nil**	
	Total GEC for The Month (A+B+C)-(D)		**0.00**	

NOTE: *- 1. Above Energy as per Generation Credit Note, Joint meter reading certified by MSEDCL/MSETCL & Yet to be Accounted in FBSM bill.*

2. WE hereby declare that the gross energy consumption & R.E procurement data submitted above does not includes the gross energy & R.E procurement data of CPP / OA consumers on our network

Form II - Gross Energy Consumption				
	BEST Undertaking, Mumbai.			
	August- 2023			
1	**Gross Consumption**		**Quantum (Mus)**	**Remarks**
O	Own Generation			
	Source 1		Nil	BEST not having own generation
	Source 2		Nil	
	Source N		Nil	
	Sub Total (1)		**Nil**	
P	Purchase from other Generating Company			
	TATA Power Co (G) & Manikaran Power Ltd. Excluding Hydro		350.230260	
	Sub Total (2)		**350.23**	
S	Sale to other Licensee / Intermediaries			
	Source 1		0	
	Sub Total (3)		**0**	
	Total GEC for The Month (O+P-S)		**350.23**	
2	**RPO Obligation (22.00 % of GEC)**		**77.05**	

Form III - Renewable Energy Procurement

BEST Undertaking, Mumbai.

August- 2023

RE Sources Detail (SOLAR)

A	Own Generation			BEST not having own RE generation
	RE-1		0	
		Sub Total (A)	**0**	
B	Purchaase from other RE Source / Licensee			
1	Walwhan Solar MH Limited	Solar PV	2.668953	Long Term PPA
2	RE Generated from Net metered consumers		1.198086	
		Sub Total (B)	**3.87**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		Nil	
		Sub Total (D)	**Nil**	
	Total GEC for The Month (A+B+C)-(D)		**3.87**	

RE Sources Detail (Non Solar)

A	Own Generation		Quantam (Mus)	Remarks
	RE-1		Nil	BEST not having own RE generation
		Sub Total (A)	**Nil**	
B	RE Source (Type of RE)	Source	Quantam (Mus)	Remarks
1			Nil	
		Sub Total (B)	**0.00**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		**Nil**	
	Total GEC for The Month (A+B+C)-(D)		**0.00**	

NOTE: *- 1. Above Energy as per Generation Credit Note, Joint meter reading certified by MSEDCL/MSETCL & Yet to be Accounted in FBSM bill.*

2. WE hereby declare that the gross energy consumption & R.E procurement data submitted above does not includes the gross energy & R.E procurement data of CPP / OA consumers on our network

B.E.S. & T. Undertaking बेस्ट Power Purchase Dept.

Form II - Gross Energy Consumption				
	BEST Undertaking, Mumbai.			
	September- 2023			
1	**Gross Consumption**		**Quantum (Mus)**	**Remarks**
O	Own Generation			
	Source 1		Nil	BEST not having own generation
	Source 2		Nil	
	Source N		Nil	
	Sub Total (1)		**Nil**	
P	Purchaase from other Generating Company			
	TATA Power Co (G) & Manikaran Power Ltd. Excluding Hydro		366.979077	
	Sub Total (2)		**366.98**	
S	Sale to other Licensee / Intermediaries			
	Source 1		**Nil**	
	Sub Total (3)		**0**	
	Total GEC for The Month (O+P-S)		**366.98**	
2	**RPO Obligation (22.00 % of GEC)**		**80.74**	

Form III - Renewable Energy Procurement				
	BEST Undertaking, Mumbai.			
	September- 2023			
	RE Sources Detail (Solar)			
A	Own Generation			BEST not having own RE generation
	RE-1		0	
	Sub Total (A)		**0**	
B	Purchaase from other RE Source / Licensee			
1	Walwhan Solar MH Limited	Solar PV	2.412066	Long Term PPA
2	RE Generated from Net metered consumers		1.076149	
	Sub Total (B)		**3.49**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		Nil	
	Sub Total (D)		**Nil**	
	Total GEC for The Month (A+B+C)-(D)		**3.49**	
	RE Sources Detail (Non Solar)			
A	Own Generation		Quantam (Mus)	Remarks
	RE-1		Nil	BEST not having own RE generation
	Sub Total (A)		**Nil**	
B	RE Source (Type of RE)	Source	Quantam (Mus)	Remarks
1	Nil		Nil	
	Sub Total (B)		**0.00**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		**Nil**	
	Total GEC for The Month (A+B+C)-(D)		**0.00**	

NOTE: *- 1. Above Energy as per Generation Credit Note, Joint meter reading certified by MSEDCL/MSETCL & Yet to be Accounted in FBSM bill.*

2. WE hereby declare that the gross energy consumption & R.E procurement data submitted above does not includes the gross energy & R.E procurement data of CPP / OA consumers on our network

THE BRIHANMUMBAI ELECTRIC SUPPLY & TRANSPORT UNDERTAKING * INTERNAL AUDIT DEPARTMENT *

B.E.S.T. Undertaking * बेस्ट * Power Purchase Dept.

Form II - Gross Energy Consumption				
	BEST Undertaking, Mumbai.			
	October- 2023			
1	Gross Consumption		Quantum (Mus)	Remarks
O	Own Generation			
	Source 1		Nil	BEST not having own generation
	Source 2		Nil	
	Source N		Nil	
	Sub Total (1)		Nil	
P	Purchase from other Generating Company			
	TATA Power Co (G) & Manikaran Power Ltd. Excluding Hydro		416.611325	
	Sub Total (2)		416.61	
S	Sale to other Licensee / Intermediaries			
	Source 1		Nil	
	Sub Total (3)		0	
	Total GEC for The Month (O+P-S)		416.61	
2	RPO Obligation (22.00 % of GEC)		91.65	

Form III - Renewable Energy Procurement

BEST Undertaking. Mumbai.

October- 2023

RE Sources Detail (SOLAR)

A	Own Generation			BEST not having own RE generation
	RE-1		0	
		Sub Total (A)	**0**	
B	Purchase from other RE Source / Licensee			
1	Walwhan Solar MH Limited	Solar PV	3.050063	Long Term PPA
2	RE Generated from Net metered consumers		1.072225	
		Sub Total (B)	**4.12**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		Nil	
		Sub Total (D)	**Nil**	
	Total GEC for The Month (A+B+C)-(D)		**4.12**	

RE Sources Detail (Non Solar)

A	Own Generation		Quantam (Mus)	Remarks
	RE-1		Nil	BEST not having own RE generation
		Sub Total (A)	**Nil**	
B	RE Source (Type of RE)	Source	Quantam (Mus)	Remarks
1	Nil		0.00	
		Sub Total (B)	**0.00**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		**Nil**	
	Total GEC for The Month (A+B+C)-(D)		**0.00**	

NOTE: *- 1. Above Energy as per Generation Credit Note, Joint meter reading certified by MSEDCL/MSETCL & Yet to be Accounted in FBSM bill.*

2. WE hereby declare that the gross energy consumption & R.E procurement data submitted above does not includes the gross energy & R.E procurement data of CPP / OA consumers on our network

Form II - Gross Energy Consumption				
	BEST Undertaking, Mumbai.			
	November- 2023			
1	**Gross Consumption**		**Quantum (Mus)**	**Remarks**
O	Own Generation			
	Source 1		Nil	BEST not having own generation
	Source 2		Nil	
	Source N		Nil	
	Sub Total (1)		**Nil**	
P	Purchase from other Generating Company			
	TATA Power Co (G) & Manikaran Power Ltd. Excluding Hydro		373.395945	
	Sub Total (2)		**373.40**	
S	Sale to other Licensee / Intermediaries			
	Source 1		**Nil**	
	Sub Total (3)		**0**	
	Total GEC for The Month (O+P-S)		**373.40**	
2	**RPO Obligation (22.00 % of GEC)**		**82.15**	





Form III - Renewable Energy Procurement

BEST Undertaking, Mumbai.

November- 2023

RE Sources Detail (Solar)

A	Own Generation			BEST not having own RE generation
	RE-1		0	
		Sub Total (A)	**0**	
B	Purchase from other RE Source / Licensee			
1	Walwhan Solar MH Limited	Solar PV	2.386216	Long Term PPA
2	RE Generated from Net metered consumers		1.097214	
		Sub Total (B)	**3.48**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		Nil	
		Sub Total (D)	**Nil**	
	Total GEC for The Month (A+B+C)-(D)		**3.48**	

RE Sources Detail (Non Solar)

A	Own Generation		Quantam (Mus)	Remarks
	RE-1		Nil	BEST not having own RE generation
		Sub Total (A)	**Nil**	
B	RE Source (Type of RE)	Source	Quantam (Mus)	Remarks
1	Nil		0.00	
		Sub Total (B)	**0.00**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		**Nil**	
	Total GEC for The Month (A+B+C)-(D)		**0.00**	

NOTE: *- 1. Above Energy as per Generation Credit Note, Joint meter reading certified by MSEDCL/MSETCL & Yet to be Accounted in FBSM bill.*

2. WE hereby declare that the gross energy consumption & R.E procurement data submitted above does not includes the gross energy & R.E procurement data of CPP / OA consumers on our network

THE BRIHANMUMBAI ELECTRIC SUPPLY & TRANSPORT UNDERTAKING * INTERNAL AUDIT DEPARTMENT *

B.E.S.&T. Undertaking * Power Purchase Dept.

Form II - Gross Energy Consumption				
	BEST Undertaking. Mumbai.			
	December- 2023			
1	**Gross Consumption**		**Quantum (Mus)**	**Remarks**
O	Own Generation			
	Source 1		Nil	BEST not having own generation
	Source 2		Nil	
	Source N		Nil	
	Sub Total (1)		**Nil**	
P	Purchaase from other Generating Company			
	TATA Power Co (G) & Manikaran Power Ltd. Excluding Hydro		337.112506	
	Sub Total (2)		**337.11**	
S	Sale to other Licensee / Intermediaries			
	Source 1		**Nil**	
	Sub Total (3)		**0.00**	
	Total GEC for The Month (O+P-S)		**337.11**	
2	**RPO Obligation (22.00 % of GEC)**		**74.16**	





Form III - Renewable Energy Procurement				
	BEST Undertaking. Mumbai.			
	December- 2023			
	RE Sources Detail (SOLAR)			
A	Own Generation			BEST not having own RE generation
	RE-1		0	
	Sub Total (A)		**0**	
B	Purchaase from other RE Source / Licensee			
1	Walwhan Solar MH Limited	Solar PV	2.536569	Long Term PPA
2	RE Generated from Net metered consumers		0.948529	
	Sub Total (B)		**3.49**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		Nil	
	Sub Total (D)		**Nil**	
	Total GEC for The Month (A+B+C)-(D)		**3.49**	
	RE Sources Detail (Non Solar)			
A	Own Generation		Quantam (Mus)	Remarks
	RE-1		Nil	BEST not having own RE generation
	Sub Total (A)		**Nil**	
B	RE Source (Type of RE)	Source	Quantam (Mus)	Remarks
1	Nil		0	
	Sub Total (B)		**0.00**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		**Nil**	
	Total GEC for The Month (A+B+C)-(D)		**0.00**	

NOTE: *- 1. Above Energy as per Generation Credit Note, Joint meter reading certified by MSEDCL/MSETCL & Yet to be Accounted in FBSM bill.*

2. WE hereby declare that the gross energy consumption & R.E procurement data submitted above does not includes the gross energy & R.E procurement data of CPP / OA consumers on our network





Form II - Gross Energy Consumption				
	BEST Undertaking. Mumbai.			
	January- 2024			
1	**Gross Consumption**		**Quantum (Mus)**	**Remarks**
O	Own Generation			
	Source 1		Nil	BEST not having own generation
	Source 2		Nil	
	Source N		Nil	
	Sub Total (1)		**Nil**	
P	Purchaase from other Generating Company			
	TATA Power Co (G) & Manikaran Power Ltd. Excluding Hydro		306.587674	
	Sub Total (2)		**306.59**	
S	Sale to other Licensee / Intermediaries			
	Source 1		0	
	Sub Total (3)		**0**	
	Total GEC for The Month (O+P-S)		**306.59**	
2	**RPO Obligation (22.00 % of GEC)**		**67.45**	





Form III - Renewable Energy Procurement

BEST Undertaking. Mumbai.

January- 2024

RE Sources Detail (SOLAR)

A	Own Generation			BEST not having own RE generation
	RE-1		0	
		Sub Total (A)	**0**	
B	Purchaase from other RE Source / Licensee			
1	Walwhan Solar MH Limited	Solar PV	2.910041	Long Term PPA
2	Solar Energy purchased from Power Exchange		0.033440	
3	RE Generated from Net metered consumers		0.988905	
		Sub Total (B)	**3.93**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		Nil	
		Sub Total (D)	**Nil**	
	Total GEC for The Month (A+B+C)-(D)		**3.93**	

RE Sources Detail (Non Solar)

A	Own Generation		Quantam (Mus)	Remarks
	RE-1		Nil	BEST not having own RE generation
		Sub Total (A)	**Nil**	
B	RE Source (Type of RE)	Source	Quantam (Mus)	Remarks
1	Non Solar Energy purchased from Power Exchange		0.01534	
		Sub Total (B)	**0.02**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		**Nil**	
	Total GEC for The Month (A+B+C)-(D)		**0.02**	

NOTE: *- 1. Above Energy as per Generation Credit Note, Joint meter reading certified by MSEDCL/MSETCL & Yet to be Accounted in FBSM bill.*

2. WE hereby declare that the gross energy consumption & R.E procurement data submitted above does not includes the gross energy & R.E procurement data of CPP / OA consumers on our network

IEX
INDIAN ENERGY EXCHANGE

Certificate of Purchase of Renewable Energy in Green-Day Ahead Market

For the Month of : January-2024 **Issued on :** 01/02/2024

Portfolio Name: **BEST**

This is certified that BEST has purchased 50.79 MWh (at regional periphery) of Renewable Energy for the period 01/01/2024 to 31/01/2024 through Indian Energy Exchange Limited in Green-Day Ahead Market.

Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
34.83	15.96	0	50.79

This certificate represented hereby is issued on non-transferable and non-tradable basis and shall be held subject to Orders and Regulations of Honorable Central Electricity Regulatory Commission as amended from time to time and the Bye-laws, Rules and Business Rules of Indian Energy Exchange Limited.

Amit Kumar
Sr VP Market Operations

THE BRIHANMUMBAI ELECTRIC SUPPLY & TRANSPORT UNDERTAKING * INTERNAL AUDIT DEPARTMENT *

B.E.S. & T. Undertaking बेस्ट Power Purchase Dept.

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INDIAN ENERGY EXCHANGE

Annexure 1- (Date Wise Scheduling Details)

Participant ID	**W2MH0BST0000**
Participant Name	**Brihanmumbai Electric Supply & Transport (BEST)**
Portfolio ID	**W2MH0BST0001**
Portfolio Name	**BEST**

Scheduling details at Regional Periphery (Traded)

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
18-Jan-24	2.03	0.65	0	2.68
19-Jan-24	0	0	0	0
20-Jan-24	0	0	0	0
21-Jan-24	32.8	7.2	0	40
22-Jan-24	0	0	0	0
23-Jan-24	0	0	0	0
24-Jan-24	0	0	0	0
25-Jan-24	0	0	0	0
26-Jan-24	0	0	0	0
27-Jan-24	0	0	0	0
28-Jan-24	0	0	0	0
29-Jan-24	0	0	0	0
30-Jan-24	0	8.11	0	8.11
31-Jan-24	0	0	0	0
Grand Total				50.79

Scheduling details after applying ISTS (POC) loss

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
18-Jan-24	1.95	0.62	0	2.57
19-Jan-24	0	0	0	0
20-Jan-24	0	0	0	0
21-Jan-24	31.49	6.91	0	38.4
22-Jan-24	0	0	0	0
23-Jan-24	0	0	0	0
24-Jan-24	0	0	0	0
25-Jan-24	0	0	0	0
26-Jan-24	0	0	0	0
27-Jan-24	0	0	0	0

*Computer generated report signature not required.

B.E.S.&T. Undertaking * Power Purchase Dept. *

28-Jan-24	0	0	0	0
29-Jan-24	0	0	0	0
30-Jan-24	0	7.81	0	7.81
31-Jan-24	0	0	0	0
Grand Total				48.78

Scheduling details after applying ISTS (POC) and State loss

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
18-Jan-24	1.88	0.6	0	2.48
19-Jan-24	0	0	0	0
20-Jan-24	0	0	0	0
21-Jan-24	30.49	6.69	0	37.18
22-Jan-24	0	0	0	0
23-Jan-24	0	0	0	0
24-Jan-24	0	0	0	0
25-Jan-24	0	0	0	0
26-Jan-24	0	0	0	0
27-Jan-24	0	0	0	0
28-Jan-24	0	0	0	0
29-Jan-24	0	0	0	0
30-Jan-24	0	7.56	0	7.56
31-Jan-24	0	0	0	0
Grand Total				47.22

Scheduling details after applying ISTS (POC) Loss, State Loss, Distribution Loss and Other Loss if any (at Ex-bus)

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
18-Jan-24	1.88	0.6	0	2.48
19-Jan-24	0	0	0	0
20-Jan-24	0	0	0	0
21-Jan-24	30.49	6.69	0	37.18
22-Jan-24	0	0	0	0
23-Jan-24	0	0	0	0
24-Jan-24	0	0	0	0
25-Jan-24	0	0	0	0
26-Jan-24	0	0	0	0
27-Jan-24	0	0	0	0
28-Jan-24	0	0	0	0
29-Jan-24	0	0	0	0
30-Jan-24	0	7.56	0	7.56
31-Jan-24	0	0	0	0
Grand Total				47.22

B.E.S. & T. Undertaking बेस्ट Power Purchase Dept.

*Computer generated report signature not required.

Form II - Gross Energy Consumption				
	BEST Undertaking. Mumbai.			
	February- 2024			
1	**Gross Consumption**		**Quantum (Mus)**	**Remarks**
O	Own Generation			
	Source 1		Nil	BEST not having own generation
	Source 2		Nil	
	Source N		Nil	
	Sub Total (1)		**Nil**	
P	Purchase from other Generating Company			
	TATA Power Co (G) & Manikaran Power Ltd. Excluding Hydro		302.594969	
	Sub Total (2)		**302.59**	
S	Sale to other Licensee / Intermediaries			
	Source 1		**Nil**	
	Sub Total (3)		**0**	
	Total GEC for The Month (O+P-S)		**302.59**	
2	**RPO Obligation (22.00 % of GEC)**		**66.57**	

Form III - Renewable Energy Procurement				
	BEST Undertaking. Mumbai.			
	February- 2024			
	RE Sources Detail (Solar)			
A	Own Generation			BEST not having own RE generation
	RE-1		0	
	Sub Total (A)		**0**	
B	Purchase from other RE Source / Licensee			
1	Walwhan Solar MH Limited	Solar PV	2.973972	Long Term PPA
2	Solar Energy purchased from Power Exchange		1.346360	
3	RE Generated from Net metered consumers		1.104947	
	Sub Total (B)		**5.43**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		**Nil**	
	Sub Total (D)			
	Total GEC for The Month (A+B+C)-(D)		**5.43**	

	RE Sources Detail (Non Solar)			
A	Own Generation		Quantam (Mus)	Remarks
	RE-1		Nil	BEST not having own RE generation
	Sub Total (A)		**Nil**	
B	RE Source (Type of RE)	Source	Quantam (Mus)	Remarks
1	Non Solar Energy purchased from Power Exchange		0.41566	
	Sub Total (B)		**0.42**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		**Nil**	
	Total GEC for The Month (A+B+C)-(D)		**0.42**	

NOTE: *- 1. Above Energy as per Generation Credit Note, Joint meter reading certified by MSEDCL/MSETCL & Yet to be Accounted in FBSM bill.*

2. WE hereby declare that the gross energy consumption & R.E procurement data submitted above does not includes the

Certificate of Purchase of Renewable Energy in Green-Day Ahead Market

For the Month of : February-2024 **Issued on :** 01/03/2024

Portfolio Name: **BEST**

This is certified that BEST has purchased 1830.05 MWh (at regional periphery) of Renewable Energy for the period 01/02/2024 to 29/02/2024 through Indian Energy Exchange Limited in Green-Day Ahead Market.

Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
1398.3	429.27	2.48	1830.05

This certificate represented hereby is issued on non-transferable and non-tradable basis and shall be held subject to Orders and Regulations of Honorable Central Electricity Regulatory Commission as amended from time to time and the Bye-laws, Rules and Business Rules of Indian Energy Exchange Limited.

Amit Kumar
Sr VP Market Operations

*Computer generated report signature not required.

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INDIAN ENERGY EXCHANGE

Annexure 1- (Date Wise Scheduling Details)

Participant ID	**W2MH0BST0000**
Participant Name	**Brihanmumbai Electric Supply & Transport (BEST)**
Portfolio ID	**W2MH0BST0001**
Portfolio Name	**BEST**

Scheduling details at Regional Periphery (Traded)

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
01-Feb-24	0	0	0	0
02-Feb-24	0	0	0	0
03-Feb-24	0	0	0	0
04-Feb-24	0	0	0	0
05-Feb-24	0	0	0	0
06-Feb-24	94.09	21.41	0	115.5
07-Feb-24	121.61	26.65	0	148.26
08-Feb-24	133.8	164.5	1.32	299.62
09-Feb-24	45.21	6.24	0	51.45
10-Feb-24	25.86	4.32	0	30.18
11-Feb-24	0	0	0	0
12-Feb-24	106.22	33.78	0	140
13-Feb-24	86.57	21.91	0	108.48
14-Feb-24	94.9	15.4	0	110.3
15-Feb-24	90.19	9.91	0	100.1
16-Feb-24	94.28	41.5	0.01	135.79
17-Feb-24	79.37	16.47	0	95.84
19-Feb-24	150.02	28.73	0	178.75
20-Feb-24	91.04	12.34	1.15	104.53
24-Feb-24	185.14	26.11	0	211.25
Grand Total				1830.05

Scheduling details after applying ISTS (POC) loss

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
01-Feb-24	0	0	0	0
02-Feb-24	0	0	0	0
03-Feb-24	0	0	0	0
04-Feb-24	0	0	0	0

*Computer generated report signature not required.

THE BRIHANMUMBAI ELECTRIC SUPPLY & TRANSPORT UNDERTAKING INTERNAL AUDIT DEPARTMENT

B.E.S.&T. Undertaking बेस्ट Power Purchase Dept.

05-Feb-24	0	0	0	0
06-Feb-24	90.56	20.61	0	111.17
07-Feb-24	117.05	25.65	0	142.7
08-Feb-24	128.79	158.33	1.27	288.39
09-Feb-24	43.51	6.01	0	49.52
10-Feb-24	24.89	4.16	0	29.05
11-Feb-24	0	0	0	0
12-Feb-24	102.25	32.52	0	134.77
13-Feb-24	83.34	21.09	0	104.43
14-Feb-24	91.35	14.83	0	106.18
15-Feb-24	86.82	9.54	0	96.36
16-Feb-24	90.75	39.96	0	130.71
17-Feb-24	76.4	15.86	0	92.26
19-Feb-24	144.55	27.68	0	172.23
20-Feb-24	87.71	11.89	1.11	100.71
24-Feb-24	178.39	25.15	0	203.54
Grand Total				1762.02

Scheduling details after applying ISTS (POC) and State loss

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
01-Feb-24	0	0	0	0
02-Feb-24	0	0	0	0
03-Feb-24	0	0	0	0
04-Feb-24	0	0	0	0
05-Feb-24	0	0	0	0
06-Feb-24	87.68	19.95	0	107.63
07-Feb-24	113.33	24.83	0	138.16
08-Feb-24	124.69	153.29	1.23	279.21
09-Feb-24	42.13	5.82	0	47.95
10-Feb-24	24.09	4.03	0	28.12
11-Feb-24	0	0	0	0
12-Feb-24	99	31.48	0	130.48
13-Feb-24	80.68	20.42	0	101.1
14-Feb-24	88.45	14.35	0	102.8
15-Feb-24	84.05	9.24	0	93.29
16-Feb-24	87.86	38.68	0.01	126.55
17-Feb-24	73.97	15.36	0	89.33
19-Feb-24	139.95	26.8	0	166.75
20-Feb-24	84.92	11.51	1.07	97.5
24-Feb-24	172.72	24.34	0	197.06
Grand Total				1705.93

Scheduling details after applying ISTS (POC) Loss, State Loss, Distribution Loss and Other Loss if any (at Ex-bus)

*Computer generated report signature not required.

Form II - Gross Energy Consumption				
	BEST Undertaking. Mumbai.			
	March- 2024			
1	**Gross Consumption**		**Quantum (Mus)**	**Remarks**
O	Own Generation			
	Source 1		Nil	BEST not having own generation
	Source 2		Nil	
	Source N		Nil	
	Sub Total (1)		**Nil**	
P	Purchaase from other Generating Company			
	TATA Power Co (G) & Manikaran Power Ltd. Excluding Hydro		338.230717	
	Sub Total (2)		**338.23**	
S	Sale to other Licensee / Intermediaries			
	Source 1		**Nil**	
	Sub Total (3)		**0**	
	Total GEC for The Month (O+P-S)		**338.23**	
2	**RPO Obligation (22.00 % of GEC)**		**74.41**	





Form III - Renewable Energy Procurement				
	BEST Undertaking. Mumbai.			
	March- 2024			
	RE Sources Detail (SOLAR)			
A	Own Generation			BEST not having own RE generation
	RE-1		0	
		Sub Total (A)	**0**	
B	Purchase from other RE Source / Licensee			
1	Walwhan Solar MH Limited	Solar PV	1.112481	Long Term PPA
2	Solar Energy purchased from Power Exchange		1.953530	
3	RE Generated from Net metered consumers		1.433641	
		Sub Total (B)	**4.499652**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		0	
		Sub Total (D)	**0**	
	Total GEC for The Month (A+B+C)-(D)		**4.499652**	
	RE Sources Detail (Non Solar)			
A	Own Generation		Quantam (Mus)	Remarks
	RE-1		Nil	BEST not having own RE generation
		Sub Total (A)	**Nil**	
B	RE Source (Type of RE)	Source	Quantam (Mus)	Remarks
1	Non Solar Energy purchased from Power Exchange		0.319170	
		Sub Total (B)	**0.319170**	
C	Purchase through REC		**0.00**	
D	RE Sold to other Person		**Nil**	
	Total GEC for The Month (A+B+C)-(D)		**0.319170**	

NOTE: *- 1. Above Energy as per Generation Credit Note, Joint meter reading certified by MSEDCL/MSETCL & Yet to be Accounted in FBSM bill.*

2. WE hereby declare that the gross energy consumption & R.E procurement data submitted above does not includes the gross energy & R.E procurement data of CPP / OA consumers on our network

INDIAN ENERGY EXCHANGE

Certificate of Purchase of Renewable Energy in Green-Day Ahead Market

For the Month of : March-2024 **Issued on :** 01/04/2024

Portfolio Name: **BEST**

This is certified that BEST has purchased 2350.23 MWh (at regional periphery) of Renewable Energy for the period 01/03/2024 to 31/03/2024 through Indian Energy Exchange Limited in Green-Day Ahead Market.

Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
2020.16	303.2	26.87	2350.23

This certificate represented hereby is issued on non-transferable and non-tradable basis and shall be held subject to Orders and Regulations of Honorable Central Electricity Regulatory Commission as amended from time to time and the Bye-laws, Rules and Business Rules of Indian Energy Exchange Limited.

Amit Kumar
Sr VP Market Operations

B.E.S. & T. Undertaking बेस्ट Power Purchase Dept.

*Computer generated report signature not required.

IEX
INDIAN ENERGY EXCHANGE

Annexure 1- (Date Wise Scheduling Details)

Participant ID	**W2MH0BST0000**
Participant Name	**Brihanmumbai Electric Supply & Transport (BEST)**
Portfolio ID	**W2MH0BST0001**
Portfolio Name	**BEST**

Scheduling details at Regional Periphery (Traded)

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
11-Mar-24	0	0	0	0
12-Mar-24	0	0	0	0
13-Mar-24	0	0	0	0
27-Mar-24	384.87	56.14	2.49	443.5
28-Mar-24	473.45	51.23	5.32	530
29-Mar-24	539.81	60.7	4.49	605
30-Mar-24	415.1	120.07	12.81	547.98
31-Mar-24	206.93	15.06	1.76	223.75
Grand Total				2350.23

Scheduling details after applying ISTS (POC) loss

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
11-Mar-24	0	0	0	0
12-Mar-24	0	0	0	0
13-Mar-24	0	0	0	0
27-Mar-24	372.16	54.3	2.41	428.87
28-Mar-24	457.84	49.53	5.14	512.51
29-Mar-24	522.01	58.69	4.35	585.05
30-Mar-24	401.4	116.11	12.38	529.89
31-Mar-24	200.12	14.55	1.71	216.38
Grand Total				2272.7

Scheduling details after applying ISTS (POC) and State loss

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
11-Mar-24	0	0	0	0
12-Mar-24	0	0	0	0
13-Mar-24	0	0	0	0

*Computer generated report signature not required.

B.E.S. & T. Undertaking Power Purchase Dept.

27-Mar-24	360.33	52.57	2.33	415.23
28-Mar-24	443.26	47.96	4.97	496.19
29-Mar-24	505.41	56.82	4.21	566.44
30-Mar-24	388.63	112.41	12	513.04
31-Mar-24	193.74	14.1	1.65	209.49
Grand Total				2200.39

Scheduling details after applying ISTS (POC) Loss, State Loss, Distribution Loss and Other Loss if any (at Ex-bus)

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
11-Mar-24	0	0	0	0
12-Mar-24	0	0	0	0
13-Mar-24	0	0	0	0
27-Mar-24	360.33	52.57	2.33	415.23
28-Mar-24	443.26	47.96	4.97	496.19
29-Mar-24	505.41	56.82	4.21	566.44
30-Mar-24	388.63	112.41	12	513.04
31-Mar-24	193.74	14.1	1.65	209.49
Grand Total				2200.39

*Computer generated report signature not required.

Compliance as per regulation 4.1(a) of MERC (Terms and Conditions for Determination of RE Tariff) Regulation 2015 for FY 2023-24

Sr. No.	Name of RE Generator	Date of Comm.	Contract Period		Type of Source	Details of source wise RE Contracted Capacity in MW				
			From	To		Qtr- I	Qtr-2	Qtr-3	Qtr-4	FY 2023-24
1	M/s. Walwhan Solar MH Limited.	04.10.13	25 years PPA		Solar-PV	20.00	20.00	20.00	20.00	20.00
	Total					**20.00**	**20.00**	**20.00**	**20.00**	**20.00**

Compliance as per Regulation 4.1(b) of MERC (Terms and Conditions for Determination of RE Tariff) Regulation 2015 for FY 2023-24.

Sr. No.	Name of RE Generator	Date of Commissioning	Contract Period		Type of Source	Details of Purchase of RE in Mus				
			From	To		Qtr-I	Qtr-2	Qtr-3	Qtr-4	FY 2023-24
1	M/s. Walwhan Solar MH Limited.	04.10.13	25 years PPA		Solar-PV	9.44	7.09	7.97	7.00	31.50
2	Solar Power purchased from power Exchange (IEX)	-	-	-		0.00	0.00	0.00	3.33	3.33
3	Non SolarSolar Power purchased from power Exchange (IEX)	-	-	-		0.00	0.00	0.00	0.75	0.75
4	Solar Energy Generation from Net Metered Consumers	-	01.04.23	31.03.24		3.83	2.88	3.12	3.53	13.35
Total Mus						**13.27**	**9.97**	**7.97** 11.09	**7.00** 14.6	**48.93**





Quarterly updated details of Registered OA consumers having Contract demand 1MVA & above to be submitted by DISCOMs / SLDC to MEDA

Discom:- BEST Undertaking. Mumbai

FY- *2023-24*

Sr. No	Name of OA consumer	Address / location of OA consumer	Email-id / Contact details	Consumer No.	Capacity of Open Access (in MW) & period for Open Access	OA consumer contract demand (in KVA)	Consumer Voltage level (in KV)	Name & address of Generator Unit	Source of generation (specify fuel type/technology)	Generation Voltage level (in KV)	Energy wheeled under Open Access (Grossed up for losses) (in MWh)
1	**NIL**										
2											
3											
4											
N											

Note: DISCOMs/ SLDC needs to submit above updated details for the quarter by first week of next quarter to MEDA.

Say: for April- June quarter-First week of July
for July- September quarter-First week of October for October- December quarter-First week of January for January- March quarter-First week of April

Quarterly updated details of Registered Self Use/CPPs above 1 MW to be submitted by DISCOM / PWD (Electrical) to MEDA

Discom:- BEST Undertaking. Mumbai

FY- *2023-24*

Sr. No	Name of CPP unit (Self Use)	Address / Location of Self Use / CPP unit	Email-id / Contact details	Self Use CPP installed & generation capacity (in MW)	Registration No.	Registration date (DD/MM/YYYY)	Date of Commissioning (DD/MM/YYYY)	Source of generation (specify fuel type / technology)	Voltage level of grid connection) (in KV)	Grid connection status **(whether synchronised for parallel operation or not)**	Gross Energy Consumption from own generation (from CPP unit) (in MWh)	Host DISCOM (not necessary if location of CPP specified)	Consumer number	Meter location and meter type (marked on the Single Line Diagram to be provided)
1	**NIL**													
2														
3														
4														

Note: DISCOMs / PWD (Electrical) needs to submit above updated details for the quarter by first week of next quarter to MEDA.

Say: for April- June quarter-First week of July
for July- September quarter-First week of October for October- December quarter-First week of January for January- March quarter-First week of April

THE BRIHANMUMBAI ELECTRIC SUPPLY & TRANSPORT UNDERTAKING * INTERNAL AUDIT DEPARTMENT *

B.E.S. & T. Undertaking * बेस्ट * Power Purchase Dept.

o/c.

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SPM-1

Free Press Journal

7/02/2022

The Brihanmumbai Electric Supply & Transport Undertaking
(OF THE BRIHANMUMBAI MAHANAGARPALIKA)

NOTICE INVITING E-TENDER

Brihanmumbai Electric Supply & Transport Undertaking (BEST) invites bids for purchase of power on short term basis for the month of April, 2022 to June, 2022 through National e-bidding process.

The bid document for participation can be downloaded through DEEP e-portal of **www.mstcecommerce.com** from **10:00 hrs of 07.02.2022.** Bids must be submitted online through this portal on or before **17:00 hrs of 11.02.2022**. Any corrigendum will be published on the referred website only.

PRO/DEPM/119/2022

General Manager
BEST Undertaking

Business Standard

7/02/2022

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(OF THE BRIHANMUMBAI MAHANAGARPALIKA)

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PRO/DEPM/119/2022

General Manager
BEST Undertaking

THE BRIHANMUMBAI ELECTRIC SUPPLY AND TRANSPORT UNDERTAKING
(OF THE BRIHANMUMBAI MAHANAGAR PALIKA)

Tender No: BEST/Short/21-22/ET/125 & BEST/Short/21-22/RA/117

Bid Document

For

Purchase of Power

Through

E-Tendering and E-Reverse Auction Basis

By

Brihanmumbai Electric Supply & Transport Undertaking

Date: 07.02.2022

INVITATION FOR e-TENDER

Sr. No.	Event	Date/Time
1.	Publication of Bid Document/ Activation of Event	**07.02.2022 at 10:00 hrs.**
2.	Last date of submission of Bids including EMD	**11.02.2022 at 17:00 hrs.**
3.	Opening of Non-financial Technical Bids	**14.02.2022 at 10:00 hrs**
4.	Opening of IPOs	**16.02.2022 at 10:00 hrs**
5.	Start of e-Reverse Auction	**16.02.2022 at 12:00 hrs**

Bids to be submitted through	**DEEP e-bidding portal at www.mstcecommerce.com**
Office inviting Bids and place of submission of EMD	**Divisional Engineer,** **Power Management Department,** **BEST Undertaking,** **1st Floor, Multi-storied Building Annex.** **BEST Marg, Colaba, Mumbai-400001** **Tel:- 022-22799555** **e-mail:- depower@bestundertaking.com**

1. INTRODUCTION AND BACKGROUND:-

Brihanmumbai Electric Supply & Transport Undertaking, here in after referred to as the **"BEST",** a Distribution Licensee supplying electricity in the Mumbai City is inviting bids for procurement of power under Short Term arrangement for the month of April, 2022 to June, 2022 to meet its demand as per Terms and Conditions of this Bid Document (**Annexure-I**).

Bids are invited from various trading licensees / generators / state utilities / CPPs / Distribution licensees / SEBs for purchase of power. The power would be procured in line with" Guide lines for short-term (i.e. for a period of more than one day to one year) Procurement of Power by Distribution Licensees through Tariff based bidding process" issued by Government of India - Ministry of Power under Section 63 of the Electricity Act, 2003 and as amended from time to time. The responsibility of the Successful Bidder(s) would be to supply power to BEST as per the terms and conditions of the Bid Document.

All the interested Bidders shall participate in the bidding process by downloading Bid Document from DEEP e-bidding Portal. The link of e-bidding Portal is **www.mstcecommerce.com**. Bidder needs to register on the e-bidding portal on MSTC website.

2. E-bidding FEE:-

All the Bidders would be able to participate in the e-bidding events on making payment of the requisite fees of Rs.500 per MW per requisition for the total capacity sought for that particular requisition for which a Bidder is willing to bid to PFC Consulting Limited (PFCCL). The requisite fee plus applicable taxes shall be deposited through the portal by e-Payment Gateway provided by MSTC Ltd. After the completion of the bidding process, only successful Bidder(s) will have to pay these charges for the quantum allocated to each Bidder. The balance amount will be refunded by PFCCL within seven (7) working days without any interest. The fee deposited by non-selected Bidder(s) will also be refunded by PFCCL within seven (7) working days of completion of the event without any interest.

3. Quantum of Power:-

BEST invites bids for purchase of firm power under Short Term Open Access arrangement for the month of April, 2022 to June, 2022 from various sources. The Bidder(s) shall supply power as mentioned below to BEST:

Requisition No.	Contract Period		Slot/ Time (Hrs.)			Quantum (in MW)	Minimum Bid Quantity (in MW)	Delivery Point
	From	To	From		To			
1	01-Apr-22	30-Apr-22	09:00	To	17:00	100	20	Maharashtra STU Periphery
2	01-May-22	31-May-22	09:00	To	17:00	100	20	Maharashtra STU Periphery
3	01-Jun-22	30-Jun-22	09:00	To	17:00	100	20	Maharashtra STU Periphery

The Bidder(s) should be capable to supply power to BEST during the contracted period at the delivery point, for which the responsibility will be of the Bidder(s). Bidder/s shall ensure necessary infrastructure/ground work in this regard, while participating in the Bid.

4. Qualification Criteria:-

a. All the generators/state utilities /CPPs /Distribution Licensees /SEBs and trading licensees having valid trading license from Appropriate Commission are qualified to participate in the bidding process.

b. The Bidder must quote not less than Minimum Bid Quantity, as mentioned in the table above, from single source of generation.

c. If Bidder being an electricity trading licensee, then the trader(s) should submit a valid license from CERC/SERC for Inter-state /Intra-state trading of electricity. The trader shall also attach a photocopy of the same along with the Bid.

5. Submission of Bid:-

The Bidders shall submit their Bids on-line, through DEEP e-bidding portal only.

A) Non-Financial Bid Comprising of:

a) Acceptance to Terms and Conditions of Bid document (**Annexure-II**).

b) Bid Security (EMD) in the form of Bank Guarantee issued by any Nationalized/Scheduled Bank.

c) Source from which Bidder shall supply power shall be mentioned.

d) In case Bidder is Trader, scanned copy of valid Trading license from appropriate Commission should also be provided.

e) Copy of the authorization received from the Generator (in case of trader).

f) Board resolution/Authorization for signing the Bid document.

B) Financial Bid:-

Bidders shall be required to submit separate non-financial technical Bids and Financial Bids i.e. Initial Price Offer (IPO) as per the following time-table:-

Event	**Date and time**
Date of publication of Bid document / Activation of Event	**07.02.2022 at 10:00 hrs.**
Submission of Bid (online Digitally signed non-financial technical bid & IPOs)	**11.02.2022 at 17:00 hrs.**
Opening of Non-Financial Technical Bids	**14.02.2022 at 10:00 hrs**
Clarification, if any, sought from bidders	**15.02.2022 at 17:00 hrs**
Opening of IPOs	**16.02.2022 at 10:00 hrs**
Start of e-Reverse Auction	**16.02.2022 at 12:00 hrs**
Submission of Application for Open Access	**As per Open Access procedure/regulations**
Approval and Obtaining SLDC consent by the seller/purchaser.	

Note: BEST may extend the timelines of Bid with intimation to all Bidders through DEEP e-bidding portal only.

The Bidders are required to upload scanned copy of the EMD along with the Bid and the original copy of EMD to be sent so as to reach the address as given below on or before **17:00 hrs of 11.02.2022**:

Divisional Engineer,
Power Management Department,
BEST Undertaking,
1st Floor, Multi-storied Building Annex.
BEST Marg, Colaba,
Mumbai-400001.
Tel:- 022-22799555

6. BIDDING PROCESS:-

a. The Bidder shall use one Digital Signature to submit bid through one login and for each e-bidding event shall comprise of two parts i.e. e-Tender and e-Reverse Auction. An event may have multiple requisitions (i.e. independent requirements of power at different time or places). To participate in the event, each Bidder will have to specify the source of power for that particular bid. Each bid will have only one price per requisition accompanied by the total quantum of power the Bidder intends to supply and minimum threshold quantum acceptable to the Bidder. However, the Bidder shall have the option to choose the requisition of an event in which it intends to participate. Each of the Bids will have to be signed by the Digital signature of the Bidder.

b. Each login the bidder may submit only one price bid from one source. However, against each requisition the Bidder have the option to bid multiple bids from separate login either from same or different sources.

c. The Bidder shall quote the single tariff at delivery point up to three (3) decimals which shall include capacity charge, energy charge, trading margin (in case of Bidder being a Trader) and all taxes, duties, cess, levies etc. Open Access charges up to delivery point shall be borne by the Bidder. The price quoted shall not change in case if any tax/ duty/ levy/cess/charges become applicable after the submission of Bids. The tariff should be constant and there shall be no escalation during the contractual period.

d. Each event of the auction would require independent Digital Signature of the Bidder.

e. Bidders shall be required to submit separate non-financial technical Bid and Financial Bids i.e. Initial Price Offer (IPO) through e-bidding portal.

f. The Bidders can revise their IPOs before date and time of submission of Bid Document.

g. After acceptance of the non-financial technical Bids, the Financial Bids shall be opened as per schedule given in Event time table.

h. In the event, if two or more Bidders quote the same amount of Tariff during IPO and e-Reverse Auction stage, the time of submission of Bid will be the deciding factor for their ranking.

i. The elimination of the Bidders shall be done by the following method:

1) After the opening of Initial Price Offers, the system will rank the Bidders according to their price bids. The Bidder with the highest price bid in IPO stage will be called the H1 Bidder. The system will then analyze all the quantities offered by the Bidders in the IPO stage. If the total quoted quantity is greater than twice the Requisitioned Quantity, the Highest Bidder (H1) will be eliminated provided that the total quoted quantity after elimination is not less than or equal to twice the Requisitioned Quantity.

2) The Elimination process will be done for each of the requisition separately.

3) The shortlisted Bidder after elimination will be intimated individually by system

generated emails only.

j. The Reverse auction will start within 120 minutes of opening of Initial Price Offers and shall continue for a period of next 120 minutes.

k. Provided that during the last 10 (ten) minutes before the scheduled close time of e-Reverse auction, if a price bid is received which is lower than the lowest prevailing price bid recorded in the system during e-Reverse auction, the close time of e- Reverse auction will be automatically extended by 10 (ten) minutes from the time of the last price bid received. This process of auto-extension will continue till there is a period of 10 (ten) minutes during which no price bid are received which is lower than the prevailing lowest price bid.

l. During the Reverse Auction the Bidders will have the option of reducing the tariff quoted by them in decrements of one paisa or multiples thereof and to increase the quantum quoted by them by 1 MW or multiples thereof. During the Reverse Auction the prevailing Lowest Tariff would be visible to all the Bidders.

m. The Bidders will have the option to increase the quantum of power upto corresponding to the value of EMD submitted along with IPO, but decrease the Tariff during the e-Reverse Auction process.

7. Contract Documents:-

BEST shall intimate to Bidder(s) regarding award of contract for supply of power (whose Bid has been accepted) through a Letter of Intent (LoI).

8. Compliance to the Terms & Conditions:-

The Bidders are advised to ensure that the Bid is fully compliant with the requirements specified and terms and conditions contained in the Bid Document. No deviation from these conditions is permissible and a Bid with any deviation shall be summarily rejected.

9. Earnest Money Deposit (EMD):-

a. The Bidder shall be required to submit EMD of Rs. 30,000 per MW per Month (for 30 days, 24 hours and same shall be reduced on pro-rata basis) of offered capacity in the form of Bank Guarantee (Format Enclosed-**Annexure-III**) issued by any Nationalized/Scheduled Bank in favour of “The General Manager, Brihanmumbai Electric

Supply & Transport Undertaking" payable at Mumbai, **valid till 31.03.2022**.

Example: For a requirement of 2 MW for 15 days for 4 hours, the EMD shall be = Rs. 30,000 x 2 MW x (15 days/30 days) x (4 hrs/24 hrs) = Rs. 5000/-

All costs/expenses/charges associated with the bidding, including bank guarantee etc. shall be borne by the Bidder. The validity of the EMD shall be extended by the Bidder if required by BEST.

BEST's bank details are as follows:

Name: BEST Undertaking

Account No.: 0106261008935

Name of Bank: Canara Bank

Branch name: Colaba

IFSC Code: CNRB0000106

b. The EMD shall be forfeited,

- If Bidder withdraws or modifies bid during Bid Validity Period.
- If Bidder fails to supply power after issue of Letter of Intent (LoI).
- Bidder failure in performing its contractual obligations.
- For Non submission of Contract Performance Guarantee by successful bidder.

c. The EMD of successful Bidder shall be released after submission of Contract Performance Guarantee as per Clause No. 10 below.

d. The EMD of unsuccessful bidder shall be released within 15 days from date of expiry of Bid validity period.

e. If it is observed that EMD of Bidder(s) has not been submitted or is less than the specified amount, the bid shall be rejected and Financial Bid submitted by such a Bidder shall not be opened.

No interest shall be paid on the Earnest Money Deposit.

10. Contract Performance Guarantee (CPG):-

a. Successful bidders are required to produce CPG within 7 days from date of Issue of Letter of Intent (LoI) to successful bidder for an amount of Rs 2 Lac per MW per Month (for 30 days, 24 hours) of contract period or part thereof. The CPG for the procurement of power on hourly basis shall be calculated on pro-rata basis as per the example given above for calculating EMD.

b. CPG to be issued by Nationalized/ Scheduled bank and valid for the period of contract and 1 month post expiry of contract. All costs/expenses/charges associated with CPG shall be borne by the Bidder. Refer Clause 9 above for BEST's bank details.

c. In case of CPG submission delay within stipulated period, Bid security i.e. EMD shall be forfeited.

d. CPG to be released after 30 days of completion of contract period.

e. The CPG provided by the successful bidder shall be forfeited for not performing the contractual obligations.

11. BEST's right- Acceptance/Rejection of Bid:-

This Bid document may be withdrawn or cancelled by BEST at any time without assigning any reasons thereof. BEST further reserves the right, at its complete discretion, to reject any or all of the Bids without assigning any reasons whatsoever and without incurring any liability on any account. The entire bidding process is subject to approval of Maharashtra Electricity Regulatory Commission.

12. Modification of the Bid Document:-

BEST reserves the right to modify any part of the Bid Document by issuing one or more amendments prior to the last date of submission of the Bid ("Amendment").

Any Amendment shall form part of the Bid Document, and shall be binding on bidders.

Any corrigendum/ clarifications with the Bid document and/or the Bidding process shall be published on the DEEP e-bidding portal only.

13. Bid Validity Period:-

The validity period of offer of Bidder shall be till **31.03.2022.**

14. Governing Law:-

All matters arising out of or in conjunction with the Bid Document and/or the bidding process shall be governed by and construed in accordance with Indian Law and the courts of Mumbai, Maharashtra shall have exclusive jurisdiction.

15. Condition Precedent:-

The Award of Contract i.e. Letter of Intent (LoI) is subject to approval, clearances, and permissions from all authorities i.e. Maharashtra State Electricity Regulatory Commission, RLDC / SLDCs etc.

16. Disclaimer:-

Neither BEST nor its employees or consultants shall be liable to any Bidder or any other person under any law including the law of contract, tort, the principles of restitution or unjust enrichment or otherwise for any loss, expense or damage which may arise, or be incurred, or suffered, in connection with the Bid, or any matter that may be deemed to form part of the Bid document or any other information supplied by or on behalf of BEST or its employees or consultants. For the avoidance of doubt it is expressly clarified that this Bid Document is an offer to Bid and is subject to the award of Letter of Intent (LoI) by BEST.

****

Annexure-I

General Terms and Conditions

1. Quantum:-

BEST invites bids for purchase of firm power under Short Term Open Access arrangement. The Bidder(s) shall supply power as mentioned below to BEST:

Requisition No.	Contract Period		Slot/ Time (Hrs.)			Quantum (in MW)	Minimum Bid Quantity (in MW)	Delivery Point
	From	To	From		To			
1	01-Apr-22	30-Apr-22	09:00	To	17:00	100	20	Maharashtra STU Periphery
2	01-May-22	31-May-22	09:00	To	17:00	100	20	Maharashtra STU Periphery
3	01-Jun-22	30-Jun-22	09:00	To	17:00	100	20	Maharashtra STU Periphery

2. Delivery Point:-

The interface of Transmission network of Maharashtra State (i.e. Maharashtra STU Periphery).

3. Open Access Charges, transmission Losses and other Charges:-

All Open Access charges i.e. Transmission charges & losses, POC injection /withdrawal charges and losses, reliability support charges, Scheduling & operating charges of RLDC/SLDC, RLDC application fee or any other charges/fees upto delivery point shall be borne by the Bidder. The Open Access charges beyond delivery point (i.e. Maharashtra State Scheduling charges and Application charges) shall also be borne by the Bidder. Any revision in these charges if become applicable after the submission of Bids shall be on account of the Bidder.

BEST is a Long-Term Transmission System user of Maharashtra State. Hence,

Maharashtra State transmission (InSTS) charges and losses are not applicable. Therefore, bidders while quoting need not factor Maharashtra State Transmission charges and Losses.

BEST does not have any Interstate LTOA/MTOA contract. Same may be factored in while quoting tariff and during application for Open Access.

If the power is being supplied through alternate source, additional charges and losses if any, due to cancellation of existing corridor and booking of new corridor etc., shall be to the account of the Bidder.

In case of reduction or cancellation of open access schedule, the defaulting party will bear all open access charges thereof in accordance with MERC (Transmission Open Access) Regulations, 2016 / procedure for Scheduling of bilateral transaction by CTU dated 28.01.2008 and subsequent amendments from time to time.

4. Open Access and Scheduling:-

After receipt of Letter of Intent (LoI) for supply of power, the Bidder has to apply for booking of transmission corridor for full contracted quantum for contracted period of supply for which is issued and acknowledge the acceptance of same. Any revision in contracted quantum by the Supplier will not be accepted. There will be no liability on payment for BEST to pay the excess energy supplied by the Supplier on its own accord.

The Bidder shall book for open access on firm basis upto delivery point in accordance with procedure of bilateral transaction based on CERC's Open Access Regulations, 2008/ MERC (Transmission Open Access) Regulations, 2016 with amendments from time to time. Any liability on account of open access or any clarification on open access upto and beyond the delivery point will not come under purview of BEST.

BEST shall have the right to surrender/cancel open access at any time due to any unforeseen circumstances. Bidder shall have to respond immediately on request from

BEST and arrange to surrender/cancel open access.

Both BEST and the Bidder shall schedule this power in full except in case of Force Majeure. The scheduling and dispatch of the power shall be coordinated with respective RLDCs/SLDCs as per the relevant provisions of IEGC/State Grid Code Regulations, 2020, frame work of MERC's Deviation Settlement Mechanism (DSM) and decisions of RLDCs, SLDCs and RPCs.

Final Energy accounting shall be as per the REA/SEA issued by the concerned RLDC/RPC/SLDC.

5. Tariff:-

Bidder shall quote firm price (Rs./kWh) at delivery point for each contracted period mentioned in the bid document and shall be inclusive of capacity charges, variable charges, trading margin, all taxes, duties, levy, cess etc. imposed by Central/State governments / Statutory authorities, etc..

The Tariff shall not change during contractual period if any tax / duty / levy / cess / charges / fees become applicable after the submission of bids.

Bidder shall quote the single tariff at delivery point up to three decimals.

In case Bidder being trader, should ensure that trading margin charged should be as per norm of appropriate regulatory commission.

6. Supply from alternative sources:-

In case of failure of the generation source, Bidder shall have to supply power from alternative source(s) with intimation to BEST. The supply from the alternative source(s), if any, would be made at the same tariff at which supplier has contracted power with BEST. Any additional liability in supply of power from alternative source(s) shall be borne by the Bidder.

7. Billing Cycle:-

Bidder(s) shall raise Provisional weekly energy bills based on daily schedule issued by Maharashtra SLDC / WRLDC. The blockwise energy schedules shall be rounded off to nearest second decimal point. The Final bill to be issued based on the REA published by the WRPC for Inter-state power and SEA based on DSM issued by MSLDC for Intra-state power. After receipt of REA of WRPC/ SEA statement of MSLDC, Final bill shall be raised by the Bidder for necessary adjustments.

8. Payment:-

Energy Bill:

BEST shall make payment to Bidder(s) in Bidder(s) bank account by RTGS within thirty (30) days from the receipt of correct bill, which will be the due date.

BEST will be eligible for prompt payment rebate @ 2% on energy bill amount, if the payment is made within seven (7) days (Excluding Sundays and Bank holidays) from the receipt of correct energy bill, through email/courier.

Compensation Bill:-

For any Compensation payable by BEST/Bidder, invoice shall be raised by Bidder/BEST as the case may be and payment shall be made within 30 days from the date of receipt of correct bill.

In case the due date falls on Sunday/ Bank holiday, then the next working day would be considered as due date. This is applicable to all above referred Bills.

Surcharge on delayed payment (if any) for all above Bills shall be as follows:

1.25% per month on all outstanding payments after the 30th day from the date of receipt of correct bill. The surcharge shall be calculated on a day-to-day basis for each day of the delay after due date.

9. Compensation Clause for failure to Supply/ Off-take the Quoted capacity:-

Both the parties would ensure that actual scheduling does not deviate by more than 15% of the contracted power as per the approved open access on monthly basis or actual period (if period is less than a month) during Contracted period.

Without prejudice to provision of force majeure, if Bidder fails to supply contracted quantum of energy as per approved open access on monthly basis in the Contracted period, Bidder shall pay compensation to BEST @ 20% of tariff per kWh for the quantum of energy that falls short beyond permitted deviation of 15 % in the Contracted period.

In case BEST defaults in off take of contracted quantum of energy as per approved open access on monthly basis in the Contracted period, BEST shall pay to Bidder @ 20% of tariff per kWh for the quantum of energy that falls short beyond permitted deviation of 15% in the Contracted period.

Allowable reduction in quantum of power, if required, shall be uniformly spread over the month as far as possible.

Compensation on account of shortfall in supply/Off-take will be settled separately on monthly basis and either party shall raise invoice to claim compensation. For any Compensation payable by BEST/Bidder as above, invoice shall be raised by Bidder/BEST as the case may be within 1st week after completion of the month and payment shall be made within 30 days from the date of receipt of invoice.

Bidder must apply for Open access for full contracted capacity. If the Bidder does not apply for open access for full quantity, then this would be treated as default in supply of power by the Bidder and compensation provision will apply.

10. Force Majeure:

A "Force Majeure Event" shall mean any event or circumstance or combination of events or circumstances (not otherwise constituting an Indian political Event)that adversely affects, prevents or delays any party in the performance of its obligation in accordance with the terms of this Agreement, but only if and to the extent that (i) such events and circumstances are not within the reasonable control of the affected party, and (ii) such events or circumstances could not have been prevented through employment of Prudent Utility Practices.

Neither party shall be in breach of its obligations pursuant to this understanding to the extent that the performance of its obligation was prevented, hindered or delayed due to Force Majeure Event, and without in any way prejudicing the obligation of either Party to make payments of amounts accrued due prior to the occurrence of the event of Force Majeure, which shall be payable on the original Due Date.

Force Majeure events shall include but not limited to:

a) Act of war, invasion, armed conflict, blockade, revolution, riot, insurrection or civil commotion, terrorism, sabotage, fire, explosion or criminal damage;

b) Act of God, including fire, lightning, cyclone, typhoon, flood, tidal wave, storm, earthquake, landslide, epidemic, pandemic or similar cataclysmic event;

c) Any curtailment/suspension/non-availability of transmission capacity by intervening SLDCs and/or RLDCs;

d) Any restriction imposed by any RLDCs and including generation constraints/equipment breakdown / Islanding / accidents;

e) Regulatory intervention in the matter of power trading as also orders from CERC/ SERCs/ Appellate Tribunal of Electricity/High Courts/ Supreme Court particularly related to rates at which power can be sold/ purchased/traded. This will also include regulations / orders already issued but yet to be conclusively enforced. Any directive by Government of Maharashtra not to export power outside Maharashtra state boundary.

11. Change in Law:-

Since the tender is invited for short term period at firm price, any variation in price due to any reasons what so ever, including change in Law, will not be applicable.

12. Details of the Bidder(s) (In case of the Bidder being a trading licensee):-

In case the Bidder is trading licensee, Agreement with the seller/generator shall be attached with the Bid.

13 Bid Validity:-

The validity period of offer of Bidder shall be till **31.03.2022.**

14 BEST's Rights:

BEST reserves its right to accept or reject any Offer whether fully or partially without assigning any reasons pursuant to this Bid. The Bidder on the other hand binds himself to sell power in part or whole at the option of the BEST.

15. Resolution of Dispute:-

Any dispute or differences arising under, out of, or in connection with this Bid document shall be subjected to exclusive jurisdiction of competent court at Mumbai only. In any event BEST shall not be responsible for any dispute between the Bidder (in case of bidder being the trading licensee) and the Generator.

16. Arbitration:

Subject to the statutory provisions for arbitration under the Electricity Act, 2003, all other differences or disputes between the parties arising out of or in connection with this Bid document shall be settled through Arbitration subject to the provisions of the Arbitration and Conciliation Act, 1996. The venue for Arbitration shall be at Mumbai.
Notwithstanding any legal dispute, disagreement or difference, the parties here to, continue to perform the respective obligations under the terms of this agreement.

17. Condition Precedent:-

The Letter of Intent (LoI) is subject to approval, clearances and permissions from all authorities i.e. Maharashtra Electricity Regulatory Commission (MERC), RLDC/ SLDCs.

18. Acceptance of Offer:-

BEST reserves the right to reject any or all the Bids without assigning any reasons what so ever. It is also not binding on BEST to disclose any analysis report on offers. Once the acceptance of the offer is conveyed, the Bidder(s) would be bound to supply the power as per the contract. BEST reserves the right to enter into Letter of Intent (LoI) with one or more of the Suppliers.

****

Annexure-II

To be given on the official letter head of the Bidder

Acceptance of Terms and Conditions of Bid Document
(To be signed by the authorized person of the bidder)

We/I have carefully gone through the Bid Document No. ……..…….. dated…….and satisfied ourselves/myself and hereby confirm that our/my offer strictly conforms to the requirements of the Bid Document and all the terms and conditions are acceptable to us.

Signature :-

Name :-

Status :-

Whether Authorized Yes/No

Power of Attorney of Bidding Company
Authorizing the signatory to sign the bid

Name & Seal of Bidding Company

Format of Covering Letter

(The covering letter should be on letter head of bidding company/ lead member of the bidding consortium)

Date……..

From…… (Insert Name and address of bidding company)
…….
Tel No :-
Fax:-
Email address :

To,
The General Manager,
The Brihanmumbai Electric Supply & Transport Undertaking,
BEST Bhavan, BEST Marg,
Post Box No. 192,
Mumbai- 400 001.

Sub: Bid for Purchase of power by BEST on short term Basis i.e. for the period from…….. to…….through e-Tender & e-Reverse Auction process in response to Bid Document No. ……. dated ……..

Dear Sir,

We, the undersigned, ……..(insert name of the bidder) having read, examined and understood in detail the Bid document for purchase of power by BEST on short term basis i.e. for the period from…….. to…….through E-tendering process hereby submit our bid.

a. We give unconditional acceptance to the Bid Document No…..……dated ……(insert date), attached thereto, issued by the BEST.
In token of our acceptance to the Bid Document, the same have been initiated by us and enclosed to the bid. We shall ensure provisions of the Bid Document shall be binding on us.

b. EMD:
We have enclosed the EMD of Rs…….(insert amount), in the form of Bank Guarantee dated …….. drawn on ……(insert name of Bank) and payable at Mumbai.
The offered quantum of power by us is …….MW(insert total capacity offered).

c. We have submitted our financial bid strictly as per Bid Document without any deviations, conditions and without mentioning any assumptions or notes for the financial bid in the said format.

d. Acceptance:-
We hereby unconditionally and irrevocably agree and accept that the decision made by the BEST in respect of any matter regarding or arising out of the Bid shall be binding on us. We hereby expressly waive any and all claim in respect of Bid process.

We confirm that there are no litigations or disputes against us, which materially affect our ability to fulfill our obligations with regard to supply of power.

e. Contact person:
Details of contact person are furnished as under:
Name ……
Designation……..
Company…….
Address…….
Phone Nos ……
Fax Nos……..
Email Address…….

f. It is confirm that our bid is consistent with all the requirements of submissions as stated in the Bid Document and subsequent communications from BEST.

g. The information submitted in our bid is complete, strictly as per the requirement stipulated in the Bid Document and is correct to the best of our knowledge and understanding. We would be solely responsible for any errors or omissions in our bid.

h. We confirm that all the terms and conditions of our Bid are valid for acceptance for a period of ……days from the bid deadline (i.e. till……..day of……2022).

i. We confirm that we have not taken any deviations so as to be deemed non responsive with respect to the provisions of this Bid Document.

Dated ……..day of……2022

Thanking You.

Your's Faithfully,

(name , designation and signature of authorized person in whose name power of attorney/Board Resolution is issued by the Bidder)

Annexure-III

DRAFT FORMAT OF THE BANK GURANTEE FOR EMD

(The Bank Guarantee should be executed on a non-judicial stamp paper of appropriate value as per Stamp Act relevant to place of execution along with a Confirmatory Letter from the Regional office of the Bank concerned in enclosed format.)

To,
The General Manager,
The Brihanmumbai Electric Supply & Transport Undertaking,
BEST Bhavan, BEST Marg,
Post Box No. 192,
Mumbai- 400 001.

In consideration of _____ (name of Bidder to be inserted) agreeing to undertake the obligations under the terms and conditions of Bid Document No:_____ dated_____ signed by_____(name of bidder to be inserted) having its office at _____ .The_____ (Insert Guarantor Bank Name) having its registered office at _____ hereinafter referred to as "Guarantor Bank" hereby agrees unequivocally, irrevocably and unconditionally to pay to BEST Undertaking having its office at BEST Bhavan, BEST Marg, Mumbai-400001 forthwith on demand in writing from the General Manager, BEST Undertaking or any Officer authorized by it in this behalf, any amount up to and not exceeding Rupees_____ Only with respect to the offered Capacity of_____MW as per the terms and conditions of the Bid Document No. _____dated_____.

This guarantee shall be valid and binding on the Guarantor Bank upto and including_____(Insert date of validity of EMD) and shall in no event not be terminable by notice or any change in the constitution of the Bank or the term of the Bid Document No._____ dated_____ signed by_____ or by any other reasons whatsoever and our liability hereunder shall not be impaired or discharged by any extension of time or variations or alternations made, given, or agreed with or without our knowledge or consent, by or between parties to the respective agreement.

Our liability under this Guarantee is restricted to Rs._____(Rs._____/-) only. Our Guarantee shall remain in force until _____. BEST Undertaking shall be entitled to invoke this Guarantee up to _____, by issuance of a written demand to invoke this guarantee.

The Guarantor Bank hereby expressly agrees that it shall not require any proof in addition to the written demand from BEST Undertaking, made in any format, raised at the above mentioned address of the Guarantor Bank, in order to make the said payment to BEST Undertaking.

The Guarantor Bank shall make payment hereunder on first demand without restriction or

conditions and notwithstanding any objection by_____ (name of Bidder to be inserted). The Guarantor Bank shall not require BEST Undertaking to justify the invocation of this BANK GUARANTEE, nor shall the Guarantor Bank have any recourse against the Procurer(s) in respect of any payment made hereunder.

The Guarantor Bank represents that this BANK GUARANTEE has been established in such form and with such content that it is fully enforceable in accordance with its terms as against the Guarantor Bank in the manner provided herein.

This BANK GUARANTEE shall not be affected in any manner by reason of merger, amalgamation, restructuring, liquidation, winding up, dissolution or any other change in the constitution of the Guarantor Bank.

This BANK GUARANTEE shall be a primary obligation of the Guarantor Bank and accordingly BEST Undertaking shall not be obliged before enforcing this BANK GUARANTEE to take any action in any court or arbitral proceedings against_____ (name of Bidder to be inserted)to make any claim against or any demand on the _____ (name of Bidder to be inserted)or to give any notice to or to enforce any security held by BEST Undertaking or to exercise, levy or enforce any distress, diligence or other process against_____(name of Bidder to be inserted).

The Guarantor Bank acknowledges that this BANK GUARANTEE is not personal to BEST Undertaking and may be assigned, in whole or in part, (whether absolutely or by way of security) by BEST Undertaking to any entity to whom it is entitled to assign its rights and obligations under the Bid document.

The Guarantor Bank hereby agrees and acknowledges that BEST Undertaking shall have a right to invoke this Bank Guarantee either in part or in full, as it may deem fit.

Notwithstanding anything contained hereinabove, our liability under this Guarantee is restricted to Rs._____ (Rs _____/-) only and it shall remain in force until_____.

This BANK GUARANTEE shall be extended from time to time for such period, as may be desired by_____ (name of Bidder to be inserted). We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only if BEST Undertaking serves upon us a written claim or demand.

This BANK GUARANTEE shall be interpreted in accordance with the laws of India and the courts at Mumbai shall have exclusive jurisdiction.

In witness whereof the Bank, through its authorized officer, has set its hand and stamp on

his_____ day of_____ at_____.

Witness :-

(1) _____ The Duly Constituted Attorney
(Signature)

_____ _____
(Name of the witness) (Signature)

_____ _____
(Address of the witness) (Name & Designation of the person)

For _____
(Name of the Bank)

(2) _____
(Signature)

_____ _____
(Name of the witness) (Name of the Bidder)

_____
(Address of the witness)

The Bank and the said Messrs.
Witness: _____
_____
(Signature)

_____
(Name of the witness)

_____
(Address of the witness)

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Bid Sheet

Select Type	Medium Term Bid Sheet
Select Event	BEST/Short/21-22/RA/117
Event Ref.	BEST/Short/21-22/RA/117
Period :	16/02/2022 12:00:00 To 16/02/2022 14:00:00

Sl.No.	Item Name	Quantity (UOM):	Description	Bidder Ref. No.	Booking Quantity	Booking Amount	Booking Time	Source of power / details of generating station from where power is intended to be supplied
1	1 (Maharashtra STU Periphery)	100.0(MW)	From 01.04.2022:09.00 to 30.04.2022:17.00	Tata Power Trading Company Limited/74212	**100**	**5.4**	16/02/2022 13:48	Jindal power Limited (JPL)
				PTC India Limited/74494	**20**	**6**	IPO 11/02/2022 12:07:17	Jaypee Nigrie Super Thermal Power Plant (JNSTPP)located in Madhya Pradesh in Western Region
				PTC India Limited/74493	**20**	**6.1**	IPO 11/02/2022 12:14:33	Jaypee Bina Thermal Power Plant (JBTPP)located in Madhya Pradesh in Western Region

Bucket Filling

Sl.No.	Bidder Ref. No.	Quantity	Price	Event Type
1	Tata Power Trading Company Limited/74212	100	5.4	RA

Sl.No.	Item Name	Quantity (UOM):	Description	Bidder Ref. No.	Booking Quantity	Booking Amount	Booking Time	Source of power / details of generating station from where power is intended to be supplied
2	2 (Maharashtra STU Periphery)	100.0(MW)	From 01.05.2022:09.00 to 31.05.2022:17.00	Tata Power Trading Company Limited/74212	**100**	**5.16**	16/02/2022 13:52	Jindal power Limited (JPL)
				Dhariwal Infrastructure Limited/84368	**60**	**4.95**	IPO 10/02/2022 19:47:01	DHARIWAL INFRASTRUCTURE LIMITED, UNIT I OF 300 MW CONNECTED TO MSETCL
				PTC India Limited/74494	**20**	**6**	IPO 11/02/2022 12:07:17	Jaypee Nigrie Super Thermal Power Plant (JNSTPP)located in Madhya Pradesh in Western Region
				PTC India Limited/74493	**20**	**6.1**	IPO 11/02/2022 12:14:33	Jaypee Bina Thermal Power Plant (JBTPP)located in Madhya Pradesh in Western Region
Bucket Filling								
Sl.No.	Bidder Ref. No.	Quantity	Price	Event Type				
1	Dhariwal Infrastructure Limited/84368	60	4.95	IPO				
2	Tata Power Trading Company Limited/74212	40	5.16	RA				

Sl.No.	Item Name	Quantity (UOM):	Description	Bidder Ref. No.	Booking Quantity	Booking Amount	Booking Time	Source of power / details of generating station from where power is intended to be supplied
3	3 (Maharashtra STU Periphery)	100.0(MW)	From 01.06.2022:09.00 to 30.06.2022:17.00	Tata Power Trading Company Limited/74212	**100**	**5.16**	16/02/2022 13:52	Jindal power Limited (JPL)
				Dhariwal Infrastructure Limited/84368	**60**	**4.75**	IPO 10/02/2022 19:47:01	DHARIWAL INFRASTRUCTURE LIMITED, UNIT I OF 300 MW CONNECTED TO MSETCL
				PTC India Limited/74494	**20**	**6**	IPO 11/02/2022 12:07:17	Jaypee Nigrie Super Thermal Power Plant (JNSTPP)located in Madhya Pradesh in Western Region
				PTC India Limited/74493	**20**	**6.1**	IPO 11/02/2022 12:14:33	Jaypee Bina Thermal Power Plant (JBTPP)located in Madhya Pradesh in Western Region

Bucket Filling

Sl.No.	Bidder Ref. No.	Quantity	Price	Event Type
1	Dhariwal Infrastructure Limited/84368	60	4.75	IPO
2	Tata Power Trading Company Limited/74212	40	5.16	RA

Reverse Auction Participated Bidders Details

Sl.No.	Bidder Ref. No.	Company Name	Contact Person	Email
1	Tata Power Trading Company Limited/74212	Tata Power Trading Company Limited	ANUJESH SHAHI	tptclmarketing@tatapower.com

Before the
MAHARASHTRA ELECTRICITY REGULATORY COMMISSION
World Trade Centre, Centre No.1, 13th Floor, Cuffe Parade, Mumbai 400005.
Tel. 022 22163964/65/69 Fax 22163976
Email: mercindia@merc.gov.in
Website: www.merc.gov.in

Case No. 46 of 2022

Case of Brihanmumbai Electric Supply and Transport Undertaking for the approval of tariff discovered through competitive bidding process for short term bilateral power purchase for the period from April 2022 to June 2022

Coram
Sanjay Kumar, Chairperson
Mukesh Khullar, Member

Brihanmumbai Electric Supply and Transport Undertaking: - Petitioner

Appearance
For Petitioner: - Shri. N.N Chougule (Rep)

ORDER

Date: 6 April, 2022

1. Brihanmumbai Electric Supply and Transport Undertaking (**BEST**) has filed this Case on 11 March, 2022 under Sections 63 of the Electricity Act, 2003 (**EA, 2003**) read with Regulations 22 of MYT Tariff Regulations, 2019 for the approval of tariff discovered through competitive bidding process for short term bilateral power purchase for the period from April 2022 to June 2022.

2. **BEST's main prayers are as under:**

   a. *Hon'ble Commission may accord approval for tariff discovered through competitive bidding process undertaken by BEST for short term bilateral power purchase for the period April'2022 to June'2022;*

   b. *Hon'ble Commission may accord approval for power procurement from short term sources at the rate of Rs 5/kWh for FY 2022-23;*

3. **BEST in its Petition has stated as follows:**

3.1 The Commission, vide its MYT Order in Case No. 324 of 2019 dated 30 March, 2020 has approved power procurement and cost of such procurement for FY2022-23 from various sources, including Renewable power for BEST. Details of the same are as below:

Particulars	MYT Petition			Approved in this Order		
	Quantum (MU)	Total Cost (Rs.Cr.)	Avg. Rate (Rs./kWh)	Quantum (MU)	Total Cost (Rs.Cr.)	Avg. Rate (Rs./kWh)
TPC-G	3,567.89	1,566.55	4.39	3,510.94	1,660.96	4.73
Walwahan solar Energy Maharashtra (Erstwhile Welsun)	31.50	26.96	8.56	31.50	26.96	8.56
Manikaran Power Limited (Medium term)	744.60	332.03	4.46	744.60	332.03	4.46
Solar Energy	312.61	102.85	3.29	307.74	89.25	2.90
Non-Solar Energy				500.37	143.61	2.87
Bilateral Power Purchase	498.35	199.34	4.00	0.00	0.00	4.00
REC Non-solar	507.38	171.68	3.38	-	-	-
Standby charges	-	102.64	-	-	98.53	-
Transmission Charges	-	280.85	-	-	256.72	-
MSLDC Charges	-	1.45	-	-	1.27	-
Total Power Purchase	**5,154.96**	**2,784.35**	**5.40**	**5,095.15**	**2,609.33**	**5.12**

3.2 The Commission has considered the entire purchase towards Renewable Purchase Obligations (RPO) for FY 2022-23 through existing contracted Renewable Energy (RE) (solar) source and purchase of RE power from competitive bidding route and has approved ‘zero’ quantum for power purchase from short term sources in FY 2022-23.

3.3 The Commission vide its Order dated 26 April, 2021 in Case No. 16 of 2021 has accorded its approval to procurement of 400 MW wind-solar hybrid power by BEST from Solar Energy Corporation Limited (SECI) at tariff of Rs. 2.48/kWh discovered through competitive bidding for 25 years. The actual power flow from these projects is anticipated to commence from February 2023. Thus, quantum of RE power through competitive bidding route, as approved by the Commission in MYT Order of BEST, will not be available for considerable period in FY 2022-23. It will be therefore necessary to purchase energy required to meet any shortfall against planned/breakdown outages of contracted sources or in the event of increase in demand over anticipated projection.

3.4 BEST has made discreet enquiries with RE generators/traders for the participation in competitive bidding for short-term RE power purchase to be undertaken by BEST; however, no favourable response was received from the generators/traders as most of them are having tie-up with other utilities Also, the average Daily cleared volume under trading of RE (Solar & Non-solar) power under Green Term Ahead Market (GTAM) (mostly on day-ahead contingency basis) and Green Day Ahead Market (GDAM) on Power exchange is around 12 MU, which is quite low vis-vis daily average volume of around 230 MU under DAM/RTAM segment. Further, sell quantum of RE power on

GTAM/GDAM is quite lower than buy bids; therefore, market always tilts in seller's favour. However, BEST has made efforts to procure RE power in FY 2021-22 through bidding on Green market on power exchange in addition to procurement of certain quantum of Renewable Energy Certificates (REC)s to meet its RPO target.

3.5 BEST's overall demand and subsequent revenue recovery has been affected due to Covid pandemic, the availability of working capital (cash flow) on day-to-day basis has also been impacted. On account of all these issues, it has become difficult to purchase high-cost RECs to meet specified RPO target. As power from SECI's 400 MW Hybrid RE project is anticipated to flow from February 2023 onwards and in order to reduce tariff cost of BEST's electricity consumers, BEST requests the Commission to waive off RPO for FY 2021-22 and FY 2022-23

3.6 BEST has allocation of 90 MW from TPC's Unit-7 (180 MW) gas based generating unit. In recent years, due to change in priority for the power sector, the allocation of Administered Price Mechanism (APM) gas to TPC's Trombay units from Gas Authority of India Limited (GAIL) has considerably reduced. This has resulted into lower generation from TPC's Unit-7 as seen from Plant Load Factor (PLF) of the plant in current fiscal year as tabulated below:

Month	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sept-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22
PLF	76%	57%	84%	58%	9%*	64%	79%$	71%	68%	19%	65%

**Unit was under planned outage, $ Mostly operated on APM gas+ RLNG*

This generating unit during its service is operated on APM gas at average level of 110 MW. It is anticipated that the trend of lower generation from this generating unit may be likely to prevail in ensuing period due to lower APM gas availability and therefore, anticipated shortfall from this source to BEST will be around up to 40 MW.

3.7 Since March 2020, BEST's demand has drastically reduced due to outbreak of Covid-19 pandemic. However, after lifting of restrictions placed in Mumbai under Government of Maharashtra's Covid-19 guidelines, the economic activities are anticipated to get momentum pushing up the electricity demand. Considering this factor and the period of April to June2022 being summer season, BEST's demand will likely rise as was experienced during the month of October 2021.The recorded peak demand of BEST in current fiscal year is 803 MW (October 2021).The anticipated demand of BEST during day peak time in ensuing summer season will be around 850 MW.

3.8 Considering anticipated rise in demand in summer season vis-a-vis anticipated lower generation from contracted TPC Unit-7, there will be shortfall in the availability against BEST's anticipated demand during daytime in summer period; therefore, power on short-term basis needs to be procured.

3.9 Considering volatility in the short-term market, particularly during high demand summer season and as experienced during recent month of September/ October 2021, it is necessary to tie-up power with bilateral contracts to ensure reliability to meet the anticipated demand in summer season. BEST has invited e-tender (BEST/Short/21-22/ET/125 & BEST/Short/21-22/RA/117 dated 7 February, 2022) for bilateral power purchase of 100 MW each for time slot of 09:00 to 17:00 hrs for the period April 2022 to June 2022 on DEEP portal on 7 February, 2022.

3.10 This e-tender is in line with Ministry of Power's guidelines dated 30 March, 2016 for short-term procurement of power by Discoms through tariff-based bidding. The outcome of the bidding process is summarized below:

Period	Time slot	Bid quantum in MW	Successful bidders(source)	Allotted quantum in MW	Rate in Rs./kWh
1st to 30thApril' 2022	09:00 to 17:00 Hrs.	100	Tata Power Trading Company Ltd. (Jindal Power,CG)	100	5.40
1st to 31stMay' 2022		100	Dhariwal Infrastructure Ltd. (DIL, Chandrapur)	60	4.95
			Tata Power Trading Company Ltd. (Jindal Power,CG)	40	5.16
1st to 30thJune' 2022		100	Dhariwal Infrastructure Ltd. (DIL, Chandrapur)	60	4.75
			Tata Power Trading Company Ltd. (Jindal Power,CG)	40	5.16

3.11 After considering the discovered rate and allocated quantity to successful bidders, the estimated average rate of power purchase cost for total 73 MU for three-month period will be Rs.5.12/kWh. The discovered tariff is nearly in line with results of bids floated on DEEP portal by other utilities for aforesaid period.

3.12 Further, in the meeting with State Discoms/Gencos in the month of February2022, Maharashtra State Load Despatch Centre (MSLDC) / Western Regional Load Despatch Centre (WRLDC) has communicated that Ministry of Power has given certain directives to Load Dispatch Centres to ensure proper Load-Generation balance in view of India's peak power demand crossing 200 GW. MSLDC has given directives that in view of rise in State level demand in February 2022 and anticipated rise in demand during ensuing summer season; particularly national level high demand month of April, all State Discoms should ensure adequate resource planning to meet its demand.

3.13 Considering all the above aspects, BEST intends to procure total allocated bid quantum at discovered tariff through competitive bidding for the period April 2022 to June 2022 to ensure reliability of power supply during summer season. Accordingly, Letter of Intent (LoI) / Power Purchase Agreement (PPA) is issued to the successful bidders on 3 March, 2022.

3.14 Due to substantial increase in price of imported coal coupled with foreign currency fluctuations, actual cost of coal based thermal generation from its contracted TPC's Unit-5 and Unit-8 has sharply increased. The Variable charge of these generating units, which was at Rs.3.31/kWh in January 2021 has now sharply shot up to Rs. 7.35/kWh in February 2022. TPC has earlier indicated that though prices of imported coal have dropped from peak level in November 2021, the coal prices are anticipated to remain on higher side in ensuing period. Further, prevailing geopolitical crises will have impact on prices of imported coal and natural gas in ensuing period.

3.15 Under Intra-state Deviation Settlement Mechanism (DSM) framework, utility-wise decentralized scheduling of power is implemented. In order to optimize the power purchase cost by Discom, alternate cheaper power can be arranged in lieu of scheduling costly power from contracted generating units above its technical minimum level; BEST is currently adopting this approach for scheduling its power and shall continue this approach in ensuing period in order to optimize its power purchase cost.

3.16 The Commission, vide BEST MYT Order dated 30 March, 2020 in Case No. 324 of 2019, has approved tariff of Rs. 4.00/kWh for the power purchase from Bilateral source in FY 2020-21 and FY 2021-22. The approved tariff was in line with the then prevailing trend of short term power prices during FY 2019-20. Since then Inter-State short term open access charges has substantially increased. Further, during FY 2019-20 and FY 2021-22 (upto August2021), power market was subdued due to low demand at national level. Thereafter, on sharp rise in overall demand in the country on opening of economic activities and demand-supply imbalance arising out shortage of domestic coal for power generation coupled with high prices of imported coal, energy price on short term market have faced volatility. Considering pricing trend on Power exchange in recent months, results of competitive bids floated on DEEP portal by various utilities for short term power purchase for ensuing period in FY 2022-23 as well as likely impact of inflationary pressure on energy prices arising out of global crisis in ensuing period, the average tariff of power purchase from short term sources is likely to be around Rs. 5.00/kWh.

3.17 Further MoP Guidelines dated 30 March, 2016 mandates the Licensee to file the Petition before the Commission, if the quantum of power procured and tariff determined are not within the blanket approval granted by the Appropriate Commission in Annual Revenue Requirement (ARR) of the respective year.

3.18 In view of above, it is requested to approve short term power purchase.

4. **At the time of E-hearing held on 25 March, 2022**:

BEST reiterated the submission made in the Petition and requested the Commission to approve the short-term power purchase of 100 MW per month for the period from April 2022 to June 2022 considering the anticipated shortfall, at the tariff of Rs 5/kWh discovered through competitive bidding route.

Commission's Analysis and Ruling:

5. Present petition has been filed by the BEST seeking approval for short-term power procurement of 100 MW during the period of 9.00 to 17.00 hrs in the month of April 2022 to June 2022 on account of anticipated shortfall and further seeking adoption of the tariff discovered through competitive bidding.

6. BEST in its Petition has summarised the reasons for such short-term power procurement. BEST while supporting the procurement stated that the Commission in the MYT Tariff Order has considered RE power through competitive bidding for FY 2022-23 and has not considered any short-term power for FY 2022-23. However, as per actual schedule of tied up sources, the RE power will not be available in FY 2022-23. Further, BEST is anticipating reduction in supply for FY 2022-23 from gas based TPC Unit 7 on account of availability of gas in the market and pricing for the same. Further increase in cost of imported coal has led to increase in variable cost of contracted sources. All these have necessitated BEST to optimise its power procurement cost. Also, BEST has anticipated that its demand will reach 850 MW in the summer season as was experienced in October 2021 from the existing level of 803 MW. Therefore, considering the volatility in the market and to meet the anticipated demand, BEST has initiated the short-term power procurement. BEST has carried out the bidding on DEEP portal and requested the Commission to approve the same as per the provisions of MYT Regulations, 2019 and as per the MoP guidelines. Further, as power from contracted RE sources will not be available for most of FY 2022-23, BEST has also requested Commission to waive off RPO for FY 2021-22 and FY 2022-23.

7. Considering the submissions made in the matter, the Commission frames following issues to be addressed in the Petition:

   a. Whether approval of the Commission for the procurement of short-term power is required?

   b. Whether the additional short term power purchase by BEST is justified?

   c. Whether the discovered tariff is consistent with the market trend?

   d. Whether exemption from RPO as sought by BEST be granted?

   The Commission is addressing these issues in following paragraphs.

8. **Issue A: - Whether approval of the Commission for the procurement of short-term power is required?**

8.1 The Commission notes the provisions under MYT Regulations, 2019 for the additional power procurement are as follows:

"22.1 The Distribution Licensee may undertake additional power procurement during the year, over and above the power procurement plan for the Control Period approved by the Commission, in accordance with this Regulation.

22.2 Where there has been an unanticipated increase in the demand for electricity or a shortfall or failure in the supply of electricity from any approved source of supply during the Year or when the sourcing of power from existing tied-up sources becomes costlier than other available alternative sources, the Distribution Licensee may enter into additional agreement or arrangement for procurement of power.

22.3 Any variation, during the first or second block of six months of a Year, in the quantum or cost of power procured, including from a source other than a previously approved source, that is expected to be in excess of five per cent of that approved by the Commission, shall require its prior approval:

Provided that the five per cent limit shall not apply to variation in the cost of power procured on account of changes in the price of fuel for own generation or the fixed or variable cost of power purchase that is allowed to be recovered in accordance with Regulation 10."

Thus, in cases where there is an anticipated shortfall in fulfilling the demand and to optimise the power purchase cost, licensee can procure additional power subject to the variation of excess of five percent in the quantum or cost of power procured during the first or second block of six months of a Year from the sources other than approved by the Commission.

8.2 Further Ministry of Power's Guidelines dated 30 March 2016 notified under Section 63 of the Electricity Act 2003 for short-term procurement of power by Distribution Licensees through tariff-based bidding process stipulate as follows:

"11.4 If the quantum of power procured and tariff determined are within the blanket approval granted by the Appropriate Commission in Annual Revenue Requirement (ARR) of the respective year, then the same will be considered to have been adopted by the Appropriate Commission.

In all other cases, the Procurer(s) shall submit a petition to the Appropriate Commission for adoption of tariff within 2 days from the date of signing of PPA. Appropriate Commission should communicate the decision within 7 days from the date of submission of petition."

Thus if the quantum of power procured and the tariff determined are not within the blanket approval specified by the Commission in ARR/ Tariff Order, it necessitates the Commission to approve the additional power procurement and to adopt the tariff discovered through competitive bidding process.

8.3 The Commission notes that, it has not approved any short-term procurement for FY 2022-23 in the tariff Order and as per the submissions of BEST; the approved RE power would not be available in FY 2022-23. As the source of power is different than approved by the Commission in MYT Tariff Order, it fulfils the criteria specified in MYT Regulations, 2019 and in the MoP Guidelines dated 30 March, 2016. Hence it is ruled that the approval of the Commission for additional procurement of power is required.

9. **Issue B: - Whether the additional short term power purchase by BEST is justified?**

9.1 The Commission notes the submission of BEST stating that as per the approved sources in the MYT Tariff Order it has entered into the agreement with SECI for the procurement of 400 MW wind-solar hybrid power at tariff of Rs. 2.48/kWh. Same has been approved by the Commission in its Order in Case No 16 of 2021 dated 26 April 2021. Due to time period required for commissioning of the project, power from such source will not available during FY 2022-23. BEST has also enquired with the RE generators / traders for the supply of short-term power through competitive bidding, but no favourable response has been received. Further, considering the possibility of reduction in power supply from TPC Unit -7 due to low availability of APM Gas and increased consumer demand witnessed after opening up of Covid -19 restrictions, the BEST has decided to procure short term power of 100 MW for the period of 9.00 to 17.00 hrs for the month of April to June 2022.

9.2 In view of the above justification submitted by BEST, the Commission is inclined to approve an additional short-term power procurement to meet anticipated shortfall in approved sources and anticipated increase in consumer demand.

9.3 Having ruled as above, the Commission would like to note that MYT Order was issued on 30 March, 2020 and the Commission has considered RE power as per RPO targets in ARR from FY 2022-23 onwards. Thus, BEST had 24 months for contracting such RE power. But BEST has delayed the process and 400 MW wind-hybrid PSA is approved on 26 April, 2021 which has led to unavailability of RE power in most of FY 2022-23 as against projected in MYT Order. Had BEST expedited the process, such situation would not have arisen. Further, it is also important to note that BEST's short-term power requirement is for the period of 9.00 to 17.00 hrs which is coinciding with solar energy generation window. As solar power is now available at much cheaper tariff than conventional sources, BEST should have taken efforts to contract such cheap power. Considering all these aspects, the Commission directs BEST Undertaking to review its power procurement planning in holistic manner so as to source cheapest available power to meet load requirement of its consumers. Such holistic study should be completed within 3 months clearly stipulating action to be taken in timebound manner. Copy of such Report shall be submitted to the Commission within 3 months from date of this Order.

10. **Issue C: - Whether the discovered tariff is consistent with the market trend?**

10.1 The Commission notes that BEST has undertaken the short term power procurement as per the competitive guidelines of MoP dated 30 March, 2016 by floating the bid on DEEP portal on 7 February, 2022 for supply of 100 MW for the period from April 2022 to June 2022 from 9:00 AM to 17:00 AM . The Tariff discovered after E-RA is as follows:

Period	Time slot	Bid quantum in MW	Successful bidders(source)	Allotted quantum in MW	Tariff in Rs./kWh
1st to 30thApril 2022	09:00 to 17:00 Hrs.	100	Tata Power Trading Company Ltd. (Jindal Power,CG)	100	5.40
1st to 31stMay 2022		100	Dhariwal Infrastructure Ltd. (DIL, Chandrapur)	60	4.95
			Tata Power Trading Company Ltd. (Jindal Power,CG)	40	5.16
1st to 30thJune 2022		100	Dhariwal Infrastructure Ltd. (DIL, Chandrapur)	60	4.75
			Tata Power Trading Company Ltd. (Jindal Power,CG)	40	5.16

The weighted average power purchase tariff is coming as Rs 5.12 /kWh.

10.2 In order to assess the competitiveness of the tariff discovered by BEST in the present bidding the Commission referred to recent discovered tariff on DEEP Portal by other Distribution Licensees in Maharashtra and same is tabulated below:

Sr No	Particulars	Period	Availability	Quantum of Power in MW	Discovered tariff in Rs/ kWh
1	TPC-D	1.4.2022 to 30.04.2022	6:00 to 18:00	75	4.96
		1.04.2022 to 30.04.2022	18:00 to 24:00	25	10
		1.05.2022 to 31.05.2022	6:00 to 18:00	75	4.96
		1.05.2022 to 31.05.2022	18:00 to 24:00	25	10
		1.06.2022 to 15.06.2022	6:00 to 18:00	75	4.96
		1.06.2022 to 15.06.2022	18:00 to 24:00	25	10
		15.06.2022 to 30.06.2022	6:00 to 18:00	50	4.96
2	MSEDCL	1.3.2022 to 31.03.2022	0:00 to 24:00	250	6.99
		1.4.2022 to 30.04.2022	0:00 to 24:00	250	6.99
		1.5.2022 to 31.05.2022	0:00 to 24:00	370	6.99
3	AEML-D	1.1.2022 to 31.1.2022	7:00 to 22:00	50	5
				50	5
				50	6.38
		1.2.2022 to 28.2.2022	17:00 to 24:00	50	8.68
		1.3.2022 to 31.3.2022	18:00 to 24:00	50	8.68
		1.3.2022 to 31.3.2022	7:00 to 24:00	50	5
				50	5

From the above it is observed that the discovered tariff is consistent with the current market trend.

10.3 The Commission notes that BEST has carried out the process of procurement of Short-Term Power in accordance with Competitive Bidding Guidelines and tariff discovered is reflective of current market situations.

10.4 Section 63 of the EA, 2003 mandates the Commission to adopt the tariff if such tariff has been determined through transparent process of bidding in accordance with the guidelines issued by the Central Government.

10.5 In view of the foregoing, the Commission notes that tariff discovered by BEST fulfils mandates and requirements for adoption as set out in Section 63 of the EA, 2003 and MYT Regulations, 2019. Accordingly, the Commission adopts Power Procurement with weighted average tariff of Rs 5.12 /kWh and quantum for BEST undertaking for the period from April, 2022 to June, 2022 as follows:

Period	Time slot	Bid quantum in MW	Successful bidders(source)	Allotted quantum in MW	Tariff in Rs./kWh
1st to 30thApril 2022	09:00 to 17:00 Hrs.	100	Tata Power Trading Company Ltd. (Jindal Power,CG)	100	5.40
1st to 31stMay 2022		100	Dhariwal Infrastructure Ltd. (DIL, Chandrapur)	60	4.95
			Tata Power Trading Company Ltd. (Jindal Power,CG)	40	5.16
1st to 30thJune 2022		100	Dhariwal Infrastructure Ltd. (DIL, Chandrapur)	60	4.75
			Tata Power Trading Company Ltd. (Jindal Power,CG)	40	5.16
Weighted average cost					5.12

10.6 The Commission also notes that PPAs initialed with the successful bidders are in line with the Standard Bidding documents issued by MoP. Based on these submissions, the Commission approves PPAs signed with above successful bidders at the tariff and for the quantum mentioned in above table in Para 10.5. BEST shall submit copies of final PPAs for records of the Commission.

10.7 Having approved short-term power procurement as above, it is important to note that such short-term power procurement at average tariff of Rs. 5.12/kWh is against RE power approved in the Tariff Order at the tariff of Rs. 2.87 – 2.90/kWh and hence there would be increase in power purchase expenses which will have to be passed on to consumers as per Fuel Adjustment Charge mechanism stipulated in MYT Regulations and subsequent guidelines issued by the Commission in that respect.

10.8 Further, above average tariff of Rs. 5.12/kWh discovered through competitive bidding shall act as ceiling tariff for procurement of short-term power through competitive bidding process for FY 2022-23. Any tariff discovered below such ceiling shall be considered as deemed adopted as per provisions of competitive bidding guidelines notified by the Central Government for short-term power procurement.

11. Issue d: Whether exemption from RPO as sought by BEST can be granted?

11.1 BEST in its Petition has stated that it has made efforts to procure RE power in FY 2021-22 through bidding on Green market on power exchange in addition to procurement of

certain quantum of RECs to meet its RPO target. Further COVID 19 situations have impacted the availability of working capital (cash flow) on day-to-day basis and it has become difficult to purchase RECs at high rates to meet specified RPO target. As power from SECI's 400 MW Hybrid RE project is anticipated to flow from February 2023 onwards and in order to reduce tariff cost of BEST's electricity consumers, BEST has requested the Commission to waive off RPO for FY 2021-22 and FY 2022-23.

11.2 In this regard, the Commission notes that as per RPO verification proceedings undertaken by the Commission, BEST has fulfilled its cumulative RPO targets till FY 2019-20. Thus, it is observed that BEST has good record of complying with RPO targets in past period. In present petition, BEST has requested for waiving off of RPO target for FY 2021-22 and FY 2022-23. The Commission has never waived off RPO targets but has allowed concerned obligated entity to fulfill the same on cumulative basis at future date. But such decision is also to be taken during the proceedings of RPO compliance and cannot be part of the present proceedings. The Commission is aware that RPO Regulations 2019 have stipulated penalty for not complying with the RPO targets. But the same can be reconsidered if Obligated Entity through its efforts and track record is able to justify with reasons their request for non-levy of such penalty.

11.3 As highlighted in the earlier paragraph, BEST's load curve is suitable for absorbing Solar power which can be used to meet RPO shortfall on cumulative basis. Therefore, BEST should try to meet its RPO target on cumulative basis and shall file petition to the Commission for waiver of penalty in appropriate proceedings.

12. Hence, following Order:

ORDER

1. **Case No. 46 of 2022 is partly allowed.**
2. **Under Section 63 of the Electricity Act, 2003, the Commission adopts Short Term Power Procurement for the period from April 2022 to June 2022 by as Brihanmumbai Electric Supply and Transport Undertaking as stated in para 10.5 above.**
3. **Brihanmumbai Electric Supply and Transport Undertaking, to submit copies of Final PPAs to the Commission for records.**

Sd/-
(Mukesh Khullar)
Member

Sd/-
(Sanjay Kumar)
Chairperson

(Abhijit Deshpande)
Secretary

Free Press Journal
27/6/2022

DEPM 27/6/22

(47)

DEPM
Inward No. 111
Dt: 27/6/2022

The Brihanmumbai Electric Supply & Transport Undertaking
(OF THE BRIHANMUMBAI MAHANAGARPALIKA)

Notice Inviting e-Tender

Brihanmumbai Electric Supply & Transport Undertaking (BEST) invites bids for purchase of power on short term basis for the month from August, 2022 to December, 2022 through National e-bidding process.

The bid document for participation can be downloaded through DEEP e-portal of **www.mstcecommerce.com** from **10:00 hrs of 27.06.2022.** Bids must be submitted online through this portal on or before **17:00 hrs of 01.07.2022.** Any corrigendum will be published on the referred website only.

PRO/DEPM/47/2022

General Manager
BEST Undertaking

Business Standard
27/6/2022

The Brihanmumbai Electric Supply & Transport Undertaking
(OF THE BRIHANMUMBAI MAHANAGARPALIKA)

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PRO/DEPM/47/2022

General Manager
BEST Undertaking

B. Std

THE BRIHANMUMBAI ELECTRIC SUPPLY AND TRANSPORT UNDERTAKING
(OF THE BRIHANMUMBAI MAHANAGAR PALIKA)

Tender No: BEST/Short/22-23/ET/97 & BEST/Short/22-23/RA/97

Bid Document

For

Purchase of Power

Through

E-Tendering and E-Reverse Auction Basis

By

Brihanmumbai Electric Supply & Transport Undertaking

Date: 27.06.2022

INVITATION FOR e-TENDER

Sr. No.	Event	Date/Time
1.	Publication of Bid Document/ Activation of Event	**27.06.2022 at 10:00 hrs.**
2.	Last date of submission of Bids including EMD	**01.07.2022 at 17:00 hrs.**
3.	Opening of Non-financial Technical Bids	**05.07.2022 at 10:00 hrs**
4.	Opening of IPOs	**08.07.2022 at 10:00 hrs**
5.	Start of e-Reverse Auction	**08.07.2022 at 12:00 hrs**

Bids to be submitted through	**DEEP e-bidding portal at www.mstcecommerce.com**
Office inviting Bids and place of submission of EMD	**Divisional Engineer,** **Power Management Department,** **BEST Undertaking,** **1st Floor, Multi-storied Building Annex.** **BEST Marg, Colaba, Mumbai-400001** **Tel:- 022-22799555** **e-mail:- depower@bestundertaking.com**

1. INTRODUCTION AND BACKGROUND:-

Brihanmumbai Electric Supply & Transport Undertaking, here in after referred to as the **"BEST",** a Distribution Licensee supplying electricity in the Mumbai City is inviting bids for procurement of power under Short Term arrangement for the month of August, 2022 to 15th December, 2022 to meet its demand as per Terms and Conditions of this Bid Document (**Annexure-I**).

Bids are invited from various Trading licensees / Generators / State Utilities / CPPs / Distribution licensees / SEBs for purchase of power. The power would be procured in line with" Guide lines for short-term (i.e. for a period of more than one day to one year) Procurement of Power by Distribution Licensees through Tariff based bidding process" issued by Government of India - Ministry of Power under Section 63 of the Electricity Act, 2003 and as amended from time to time. The responsibility of the Successful Bidder(s) would be to supply power to BEST as per the Terms and Conditions of the Bid Document.

All the interested Bidders shall participate in the bidding process by downloading Bid Document from DEEP e-bidding Portal. The link of e-bidding Portal is **www.mstcecommerce.com**. Bidder needs to register on the e-bidding portal on MSTC website.

2. E-bidding FEE:-

All the Bidders would be able to participate in the e-bidding events on making payment of the requisite fees of Rs.500 per MW per requisition for the total capacity sought for that particular requisition for which a Bidder is willing to bid to PFC Consulting Limited (PFCCL). The requisite fee plus applicable taxes shall be deposited through the portal by e-Payment Gateway provided by MSTC Ltd. After the completion of the bidding process, only successful Bidder(s) will have to pay these charges for the quantum allocated to each Bidder. The balance amount will be refunded by PFCCL within seven (7) working days without any interest. The fee deposited by non-selected Bidder(s) will also be

refunded by PFCCL within seven (7) working days of completion of the event without any interest.

3. Quantum of Power:-

BEST invites bids for purchase of firm power under Short Term Open Access arrangement for the month of August, 2022 to 15th December, 2022 from various sources. The Bidder(s) shall supply power as mentioned below to BEST:

Requisition No.	Contract Period		Slot/ Time (Hrs.)			Quantum (in MW)	Minimum Bid Quantity (in MW)	Delivery Point
	From	To	From		To			
1.	01-Aug-22	31-Aug-22	10:00	To	18:00	50	20	Maharashtra STU Periphery
2.	01-Sept-22	30-Sept-22	10:00	To	18:00	50	20	Maharashtra STU Periphery
3.	01-Oct-22	31-Oct-22	00:00	To	24:00	50	20	Maharashtra STU Periphery
4.	01-Oct-22	31-Oct-22	10:00	To	19:00	100	20	Maharashtra STU Periphery
5.	01-Nov-22	30-Nov-22	10:00	To	19:00	80	20	Maharashtra STU Periphery
6.	01-Dec-22	15-Dec-22	10:00	To	19:00	100	20	Maharashtra STU Periphery

The Bidder(s) should be capable to supply power to BEST during the contracted period at the delivery point, for which the responsibility will be of the Bidder(s). Bidder/s shall ensure necessary infrastructure/ground work in this regard, while participating in the Bid.

4. Qualification Criteria:-

a. All the Generators/State Utilities /CPPs /Distribution Licensees /SEBs and trading licensees having valid trading license from Appropriate Commission are qualified to participate in the bidding process.

b. The Bidder must quote not less than Minimum Bid Quantity, as mentioned in the table above, from single source of generation.

c. If Bidder being an electricity trading licensee, then the trader(s) should submit a valid license from CERC/SERC for Inter-state /Intra-state trading of electricity. The trader shall also attach a photocopy of the same along with the Bid.

5. Submission of Bid:-

The Bidders shall submit their Bids on-line, through DEEP e-bidding portal only.

A) Non-Financial Bid Comprising of:

a) Acceptance to Terms and Conditions of Bid document (**Annexure-II**).

b) Bid Security (EMD) in the form of Bank Guarantee issued by any Nationalized/Scheduled Bank.

c) Source from which Bidder shall supply power shall be mentioned.

d) In case Bidder is Trader, scanned copy of valid Trading license from appropriate Commission should also be provided.

e) Copy of the authorization received from the Generator (in case of trader).

f) Board resolution/Authorization for signing the Bid document.

B) Financial Bid:-

Bidders shall be required to submit separate Non-Financial Technical Bids and Financial Bids i.e. Initial Price Offer (IPO) as per the following time-table:-

Event	**Date and time**
Date of publication of Bid document / Activation of Event	**27.06.2022 at 10:00 hrs.**
Submission of Bid (online Digitally signed Non-Financial Technical bid & IPOs)	**01.07.2022 at 17:00 hrs.**
Opening of Non-Financial Technical Bids	**05.07.2022 at 10:00 hrs**
Clarification, if any, sought from bidders	**06.07.2022 at 17:00 hrs**
Opening of IPOs	**08.07.2022 at 10:00 hrs**
Start of e-Reverse Auction	**08.07.2022 at 12:00 hrs**
Submission of Application for Open Access	**As per Open Access procedure/regulations**
Approval and Obtaining SLDC consent by the seller/purchaser.	

Note: BEST may extend the timelines of Bid with intimation to all Bidders through DEEP e-bidding portal only.

The Bidders are required to upload scanned copy of the EMD along with the Bid and the original copy of EMD to be sent so as to reach the address as given below on or before **17:00 hrs of 01.07.2022**:

Divisional Engineer,
Power Management Department,
BEST Undertaking,
1st Floor, Multi-storied Building Annex.
BEST Marg, Colaba,
Mumbai-400001.
Tel:- 022-22799555

6. BIDDING PROCESS:-

a. The Bidder shall use one Digital Signature to submit bid through one login and for each e-bidding event shall comprise of two parts i.e. e-Tender and e-Reverse Auction. An event may have multiple requisitions (i.e. independent requirements of power at

different time or places). To participate in the event, each Bidder will have to specify the source of power for that particular bid. Each bid will have only one price per requisition accompanied by the total quantum of power the Bidder intends to supply and minimum threshold quantum acceptable to the Bidder. However, the Bidder shall have the option to choose the requisition of an event in which it intends to participate. Each of the Bids will have to be signed by the Digital signature of the Bidder.

b. Each login the bidder may submit only one price bid from one source. However, against each requisition the Bidder have the option to bid multiple bids from separate login either from same or different sources.

c. The Bidder shall quote the single tariff at delivery point up to three (3) decimals which shall include capacity charge, energy charge, trading margin (in case of Bidder being a Trader) and all taxes, duties, cess, levies etc. Open Access charges up to and beyond the delivery point shall be borne by the Bidder. The price quoted shall not change in case if any tax/ duty/ levy/cess/charges become applicable after the submission of Bids. The tariff should be constant and there shall be no escalation during the contractual period.

d. Each event of the auction would require independent Digital Signature of the Bidder.

e. Bidders shall be required to submit separate Non-Financial Technical Bid and Financial Bids i.e. Initial Price Offer (IPO) through e-bidding portal.

f. The Bidders can revise their IPOs before date and time of submission of Bid Document.

g. After acceptance of the Non-Financial Technical Bids, the Financial Bids shall be opened as per schedule given in event time table.

h. In the event, if two or more Bidders quote the same amount of Tariff during IPO and e-Reverse Auction stage, the time of submission of Bid will be the deciding factor for their ranking.

i. The elimination of the Bidders shall be done by the following method:

1) After the opening of Initial Price Offers, the system will rank the Bidders according to their price bids. The Bidder with the highest price bid in IPO stage will be

called the H1 Bidder. The system will then analyze all the quantities offered by the Bidders in the IPO stage. If the total quoted quantity is greater than twice the Requisitioned Quantity, the Highest Bidder (H1) will be eliminated provided that the total quoted quantity after elimination is not less than or equal to twice the Requisitioned Quantity.

2) The Elimination process will be done for each of the requisition separately.

3) The shortlisted Bidder after elimination will be intimated individually by system generated emails only.

j. The Reverse auction will start within 120 minutes of opening of Initial Price Offers and shall continue for a period of next 120 minutes.

k. Provided that during the last 10 (ten) minutes before the scheduled close time of e-Reverse auction, if a price bid is received which is lower than the lowest prevailing price bid recorded in the system during e-Reverse auction, the close time of e- Reverse auction will be automatically extended by 10 (ten) minutes from the time of the last price bid received. This process of auto-extension will continue till there is a period of 10 (ten) minutes during which no price bid are received which is lower than the prevailing lowest price bid.

l. During the Reverse Auction the Bidders will have the option of reducing the tariff quoted by them in decrements of one paisa or multiples thereof and to increase the quantum quoted by them by 1 MW or multiples thereof. During the Reverse Auction the prevailing Lowest Tariff would be visible to all the Bidders.

m. The Bidders will have the option to increase the quantum of power upto corresponding to the value of EMD submitted along with IPO, but decrease the Tariff during the e-Reverse Auction process.

7. Contract Documents:-

BEST shall intimate to Bidder(s) regarding award of contract for supply of power (whose Bid has been accepted) through a Letter of Intent (LoI).

8. Compliance to the Terms & Conditions:-

The Bidders are advised to ensure that the Bid is fully compliant with the requirements specified and Terms and Conditions contained in the Bid Document. No deviation from these conditions is permissible and a Bid with any deviation shall be summarily rejected.

9. Earnest Money Deposit (EMD):-

a. The Bidder shall be required to submit EMD of Rs. 30,000 per MW per month (for 30 days, 24 hours and same shall be reduced on pro-rata basis) of offered capacity in the form of Bank Guarantee (Format Enclosed-**Annexure-III**) issued by any Nationalized/Scheduled Bank in favour of "The General Manager, Brihanmumbai Electric Supply & Transport Undertaking" payable at Mumbai, **valid till 31.08.2022**.

Example: For a requirement of 2 MW for 15 days for 4 hours, the EMD shall be = Rs. 30,000 x 2 MW x (15 days/30 days) x (4 hrs/24 hrs) = Rs. 5000/-

All costs/expenses/charges associated with the bidding, including bank guarantee etc. shall be borne by the Bidder. The validity of the EMD shall be extended by the Bidder if required by BEST.

BEST's bank details are as follows:

Name: BEST Undertaking

Account No.: 0106261008935

Name of Bank: Canara Bank

Branch name: Colaba

IFSC Code: CNRB0000106

b. The EMD shall be forfeited,

- If Bidder withdraws or modifies bid during Bid Validity Period.
- If Bidder fails to supply power after issue of Letter of Intent (LoI).
- Bidder failure in performing its contractual obligations.
- For Non submission of Contract Performance Guarantee by successful bidder.

c. The EMD of successful Bidder shall be released after submission of Contract Performance Guarantee as per Clause No. 10 below.

d. The EMD of unsuccessful bidder shall be released within 15 days from date of expiry of Bid validity period.

e. If it is observed that EMD of Bidder(s) has not been submitted or is less than the specified amount, the bid shall be rejected and Financial Bid submitted by such a Bidder shall not be opened.

No interest shall be paid on the Earnest Money Deposit.

10. Contract Performance Guarantee (CPG):-

a. Successful bidders are required to produce CPG within 7 days from date of Issue of Letter of Intent (LoI) to successful bidder for an amount of Rs 2 Lac per MW per Month (for 30 days, 24 hours) of contract period or part thereof. The CPG for the procurement of power on hourly basis shall be calculated on pro-rata basis as per the example given above for calculating EMD.

b. CPG to be issued by Nationalized/ Scheduled bank and valid for the period of contract and 1 month post expiry of contract. All costs/expenses/charges associated with CPG shall be borne by the Bidder. Refer Clause 9 above for BEST's bank details.

c. In case of CPG submission delay within stipulated period, Bid security i.e. EMD shall be forfeited.

d. CPG to be released after 30 days of completion of contract period.

e. The CPG provided by the successful bidder shall be forfeited for not performing the contractual obligations.

11. BEST's right- Acceptance/Rejection of Bid:-

This Bid document may be withdrawn or cancelled by BEST at any time without assigning any reasons thereof. BEST further reserves the right, at its complete discretion, to reject any or all of the Bids without assigning any reasons whatsoever and without

incurring any liability on any account. The entire bidding process is subject to approval of Maharashtra Electricity Regulatory Commission.

12. Modification of the Bid Document:-

BEST reserves the right to modify any part of the Bid Document by issuing one or more amendments prior to the last date of submission of the Bid ("Amendment").

Any Amendment shall form part of the Bid Document, and shall be binding on bidders.

Any corrigendum/ clarifications with the Bid document and/or the Bidding process shall be published on the DEEP e-bidding portal only.

13. Bid Validity Period:-

The validity period of offer of Bidder shall be till **31.08.2022.**

14. Governing Law:-

All matters arising out of or in conjunction with the Bid Document and/or the bidding process shall be governed by and construed in accordance with Indian Law and the courts of Mumbai, Maharashtra shall have exclusive jurisdiction.

15. Condition Precedent:-

The Award of Contract i.e. Letter of Intent (LoI) is subject to approval, clearances, and permissions from all authorities i.e. Maharashtra State Electricity Regulatory Commission, RLDC / SLDCs etc.

16. Disclaimer:-

Neither BEST nor its employees or consultants shall be liable to any Bidder or any other person under any law including the law of contract, tort, the principles of restitution or unjust enrichment or otherwise for any loss, expense or damage which may arise, or be incurred, or suffered, in connection with the Bid, or any matter that may be deemed to

form part of the Bid document or any other information supplied by or on behalf of BEST or its employees or consultants. For the avoidance of doubt it is expressly clarified that this Bid Document is an offer to Bid and is subject to the award of Letter of Intent (LoI) by BEST.

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Annexure-I

General Terms and Conditions

1. Quantum:-

BEST invites bids for purchase of firm power under Short Term Open Access arrangement. The Bidder(s) shall supply power as mentioned below to BEST:

Requisition No.	Contract Period		Slot/ Time (Hrs.)			Quantum (in MW)	Minimum Bid Quantity (in MW)	Delivery Point
	From	To	From		To			
1.	01-Aug-22	31-Aug-22	10:00	To	18:00	50	20	Maharashtra STU Periphery
2.	01-Sept-22	30-Sept-22	10:00	To	18:00	50	20	Maharashtra STU Periphery
3.	01-Oct-22	31-Oct-22	00:00	To	24:00	50	20	Maharashtra STU Periphery
4.	01-Oct-22	31-Oct-22	10:00	To	19:00	100	20	Maharashtra STU Periphery
5.	01-Nov-22	30-Nov-22	10:00	To	19:00	80	20	Maharashtra STU Periphery
6.	01-Dec-22	15-Dec-22	10:00	To	19:00	100	20	Maharashtra STU Periphery

2. Delivery Point:-

The Interface of Transmission network of Maharashtra State (i.e. Maharashtra STU Periphery).

3. Open Access Charges, transmission Losses and other Charges:-

All Open Access charges i.e. Transmission charges & losses, POC injection /withdrawal charges and losses, reliability support charges, Scheduling & operating charges of RLDC/SLDC, RLDC application fee or any other charges/fees upto delivery point shall

be borne by the Bidder. The Open Access charges beyond delivery point (i.e. Maharashtra State Scheduling charges and Application charges) shall also be borne by the Bidder. Any revision in these charges if become applicable after the submission of Bids shall be on account of the Bidder.

BEST is a Long-Term Transmission System user of Maharashtra State. Hence, Maharashtra State transmission (InSTS) charges and losses are not applicable. Therefore, bidders while quoting need not factor Maharashtra State Transmission charges and Losses.

BEST does not have any Interstate LTOA/MTOA contract. Same may be factor into while quoting tariff and during application for Open Access.

If the power is being supplied through alternate source, additional charges and losses if any, due to cancellation of existing corridor and booking of new corridor etc., shall be to the account of the Bidder.

In case of reduction or cancellation of open access schedule, the defaulting party will bear all open access charges thereof in accordance with MERC (Transmission Open Access) Regulations, 2016 / procedure for Scheduling of bilateral transaction by CTU dated 28.01.2008 and subsequent amendments from time to time.

4. Open Access and Scheduling:-

After receipt of Letter of Intent (LoI) for supply of power, the Bidder has to apply for booking of transmission corridor for full contracted quantum for contracted period of supply for which is issued and acknowledge the acceptance of the same. Any revision in contracted quantum by the Supplier will not be accepted. There will be no liability on payment for BEST to pay the excess energy supplied by the Supplier on its own accord.

The Bidder shall book for open access on firm basis upto delivery point in accordance with procedure of bilateral transaction based on CERC’s Open Access Regulations, 2008/

MERC (Transmission Open Access) Regulations, 2016 with amendments from time to time. Any liability on account of open access or any clarification on open access upto and beyond the delivery point will not come under purview of BEST.

BEST shall have the right to surrender/cancel open access at any time due to any unforeseen circumstances. Bidder shall have to respond immediately on request from BEST and arrange to surrender/cancel open access.

Both BEST and the Bidder shall schedule this power in full except in case of Force Majeure. The scheduling and dispatch of the power shall be coordinated with respective RLDCs/SLDCs as per the relevant provisions of IEGC/State Grid Code Regulations, 2020, frame work of MERC's Deviation Settlement Mechanism (DSM) and decisions of RLDCs, SLDCs and RPCs.

Final Energy accounting shall be as per the REA/SEA issued by the concerned RLDC/RPC/SLDC.

5. Tariff:-

Bidder shall quote firm price (Rs./kWh) at delivery point for each contracted period mentioned in the bid document and shall be inclusive of capacity charges, variable charges, trading margin, all taxes, duties, levy, cess etc. imposed by Central/State governments / Statutory authorities, etc..

The Tariff shall not change during contractual period if any tax / duty / levy / cess / charges / fees become applicable after the submission of bids.

Bidder shall quote the single tariff at delivery point up to three decimals.

In case Bidder being trader, should ensure that trading margin charged should be as per norm of appropriate regulatory commission.

6. Supply from alternative sources:-

In case of failure of the generation source, Bidder shall have to supply power from alternative source(s) with intimation to BEST. The supply from the alternative source(s), if any, would be made at the same tariff at which supplier has contracted power with BEST. Any additional liability in supply of power from alternative source(s) shall be borne by the Bidder.

7. Billing Cycle:-

Bidder(s) shall raise Provisional weekly energy bills based on daily schedule issued by Maharashtra SLDC / WRLDC. The blockwise energy schedules shall be rounded off to nearest second decimal point. The Final bill to be issued based on the REA published by the WRPC for Inter-state power and SEA based on DSM issued by MSLDC for Intra-state power. After receipt of REA of WRPC/ SEA statement of MSLDC, Final bill shall be raised by the Bidder for necessary adjustments.

8. Payment:-

Energy Bill:

BEST shall make payment to Bidder(s) in Bidder(s) bank account by RTGS within thirty (30) days from the receipt of correct bill, which will be the due date.

BEST will be eligible for prompt payment rebate @ 2% on energy bill amount, if the payment is made within seven (7) days (Excluding Sundays and Bank holidays) from the receipt of correct energy bill, through email/courier.

Compensation Bill:-

For any Compensation payable by BEST/Bidder, invoice shall be raised by Bidder/BEST as the case may be and payment shall be made within 30 days from the date of receipt of correct bill.

In case the due date falls on Sunday/ Bank holiday, then the next working day would be considered as due date. This is applicable to all above referred Bills.

Surcharge on delayed payment (if any) for all above Bills shall be as follows:

1.25% per month on all outstanding payments after the 30th day from the date of receipt of correct bill. The surcharge shall be calculated on a day-to-day basis for each day of the delay after due date.

9. Compensation Clause for failure to Supply/ Off-take the Quoted capacity:-

Both the parties would ensure that actual scheduling does not deviate by more than 15% of the contracted power as per the approved open access on monthly basis or actual period (if period is less than a month) during Contracted period.

Without prejudice to provision of force majeure, if Bidder fails to supply contracted quantum of energy as per approved open access on monthly basis in the Contracted period, Bidder shall pay compensation to BEST @ 20% of tariff per kWh for the quantum of energy that falls short beyond permitted deviation of 15 % in the Contracted period.

In case BEST defaults in off take of contracted quantum of energy as per approved open access on monthly basis in the Contracted period, BEST shall pay to Bidder @ 20% of tariff per kWh for the quantum of energy that falls short beyond permitted deviation of 15% in the Contracted period.

Allowable reduction in quantum of power, if required, shall be uniformly spread over the month as far as possible.

Compensation on account of shortfall in supply/Off-take will be settled separately on monthly basis and either party shall raise invoice to claim compensation. For any Compensation payable by BEST/Bidder as above, invoice shall be raised by

Bidder/BEST as the case may be within 1st week after completion of the month and payment shall be made within 30 days from the date of receipt of invoice.

Bidder must apply for Open access for full contracted capacity. If the Bidder does not apply for open access for full quantity, then this would be treated as default in supply of power by the Bidder and compensation provision will apply.

In case the Seller fails to offer the contracted power as per the Agreement to BEST and sells this power without BEST's consent to any other party, BEST shall be entitled to claim damages from the Seller for an amount equal to the higher of : (a) twice the Tariff as per the PPA for the corresponding contracted power ; and (b) the entire sale revenue accrued from Third Parties on account of sale of this contracted power. These damages shall be in addition to Compensation as mentioned above, for failure to supply the contracted capacity.

Further a complaint to this effect will be made by BEST to the concerned load dispatch centre. The Bidder/Seller shall be debarred from participating in power exchanges and also from scheduling of this power in any short term/ medium term *I* long term contracts from that generating station for a period of three months from the establishment of default, in the complaint. The period of debarment shall increase to six months for second default and shall be one year for each successive default.

10. Force Majeure:

A "Force Majeure Event" shall mean any event or circumstance or combination of events or circumstances (not otherwise constituting an Indian political Event)that adversely affects, prevents or delays any party in the performance of its obligation in accordance with the terms of this Agreement, but only if and to the extent that (i) such events and circumstances are not within the reasonable control of the affected party, and (ii) such events or circumstances could not have been prevented through employment of Prudent Utility Practices.

Neither party shall be in breach of its obligations pursuant to this understanding to the extent that the performance of its obligation was prevented, hindered or delayed due to Force Majeure Event, and without in any way prejudicing the obligation of either Party to make payments of amounts accrued due prior to the occurrence of the event of Force Majeure, which shall be payable on the original Due Date.

Force Majeure events shall include but not limited to:

a) Act of war, invasion, armed conflict, blockade, revolution, riot, insurrection or civil commotion, terrorism, sabotage, fire, explosion or criminal damage;

b) Act of God, including fire, lightning, cyclone, typhoon, flood, tidal wave, storm, earthquake, landslide, epidemic, pandemic or similar cataclysmic event;

c) Any curtailment/suspension/non-availability of transmission capacity by intervening SLDCs and/or RLDCs;

d) Any restriction imposed by any RLDCs;

e) Regulatory intervention in the matter of power trading as also orders from CERC/ SERCs/ Appellate Tribunal of Electricity/High Courts/ Supreme Court particularly related to rates at which power can be sold/ purchased/traded. This will also include regulations / orders already issued but yet to be conclusively enforced. Any directive by Government of Maharashtra not to export power outside Maharashtra state boundary.

11. Change in Law:-

Since the tender is invited for short term period at firm price, any variation in price due to any reasons what so ever, including change in Law, will not be applicable.

12. Details of the Bidder(s) (In case of the Bidder being a trading licensee):-

In case the Bidder is trading licensee, Agreement with the seller/generator shall be attached with the Bid.

13 Bid Validity:-

The validity period of offer of Bidder shall be till **31.08.2022.**

14 BEST's Rights:

BEST reserves its right to accept or reject any Offer whether fully or partially without assigning any reasons pursuant to this Bid. The Bidder on the other hand binds himself to sell power in part or whole at the option of the BEST.

15. Resolution of Dispute:-

Any dispute or differences arising under, out of, or in connection with this Bid document shall be subjected to exclusive jurisdiction of competent court at Mumbai only. In any event BEST shall not be responsible for any dispute between the Bidder (in case of bidder being the trading licensee) and the Generator.

16. Arbitration:

Subject to the statutory provisions for arbitration under the Electricity Act, 2003, all other differences or disputes between the parties arising out of or in connection with this Bid document shall be settled through Arbitration subject to the provisions of the Arbitration and Conciliation Act, 1996. The venue for Arbitration shall be at Mumbai.
Notwithstanding any legal dispute, disagreement or difference, the parties here to, continue to perform the respective obligations under the terms of this agreement.

17. Condition Precedent:-

The Letter of Intent (LoI) is subject to approval, clearances and permissions from all authorities i.e. Maharashtra Electricity Regulatory Commission (MERC), RLDC/ SLDCs.

18. Acceptance of Offer:-

BEST reserves the right to reject any or all the Bids without assigning any reasons what so ever. It is also not binding on BEST to disclose any analysis report on offers. Once the

acceptance of the offer is conveyed, the Bidder(s) would be bound to supply the power as per the contract. BEST reserves the right to enter into Letter of Intent (LoI) with one or more of the Suppliers.

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Annexure-II

To be given on the official letter head of the Bidder

Acceptance of Terms and Conditions of Bid Document
(To be signed by the authorized person of the bidder)

We/I have carefully gone through the Bid Document No. ……..…….. dated…….and satisfied ourselves/myself and hereby confirm that our/my offer strictly conforms to the requirements of the Bid Document and all the terms and conditions are acceptable to us.

Signature :-

Name :-

Status :-

Whether Authorized Yes/No

Power of Attorney of Bidding Company
Authorizing the signatory to sign the bid

Name & Seal of Bidding Company

Format of Covering Letter

(The covering letter should be on letter head of bidding company/ lead member of the bidding consortium)

Date……..

From…… (Insert Name and address of bidding company)
…….
Tel No :-
Fax:-
Email address :

To,
The General Manager,
The Brihanmumbai Electric Supply & Transport Undertaking,
BEST Bhavan, BEST Marg,
Post Box No. 192,
Mumbai- 400 001.

Sub: Bid for Purchase of power by BEST on short term Basis i.e. for the period from…….. to…….through e-Tender & e-Reverse Auction process in response to Bid Document No. ……. dated ……..

Dear Sir,

We, the undersigned, ……..(insert name of the bidder) having read, examined and understood in detail the Bid document for purchase of power by BEST on short term basis i.e. for the period from…….. to…….through E-tendering process hereby submit our bid.

a. We give unconditional acceptance to the Bid Document No…..……dated ……(insert date), attached thereto, issued by the BEST.
In token of our acceptance to the Bid Document, the same have been initiated by us and enclosed to the bid. We shall ensure provisions of the Bid Document shall be binding on us.

b. EMD:
We have enclosed the EMD of Rs…….(insert amount), in the form of Bank Guarantee dated …….. drawn on ……(insert name of Bank) and payable at Mumbai.
The offered quantum of power by us is …….MW(insert total capacity offered).

c. We have submitted our financial bid strictly as per Bid Document without any deviations, conditions and without mentioning any assumptions or notes for the financial bid in the said format.

d. Acceptance:-
We hereby unconditionally and irrevocably agree and accept that the decision made by the BEST in respect of any matter regarding or arising out of the Bid shall be binding on us. We hereby expressly waive any and all claim in respect of Bid process.

We confirm that there are no litigations or disputes against us, which materially affect our ability to fulfill our obligations with regard to supply of power.

e. Contact person:
Details of contact person are furnished as under:
Name ……
Designation……..
Company…….
Address…….
Phone Nos ……
Fax Nos……..
Email Address…….

f. It is confirm that our bid is consistent with all the requirements of submissions as stated in the Bid Document and subsequent communications from BEST.

g. The information submitted in our bid is complete, strictly as per the requirement stipulated in the Bid Document and is correct to the best of our knowledge and understanding. We would be solely responsible for any errors or omissions in our bid.

h. We confirm that all the terms and conditions of our Bid are valid for acceptance for a period of ……days from the bid deadline (i.e. till……..day of……2022).

i. We confirm that we have not taken any deviations so as to be deemed non responsive with respect to the provisions of this Bid Document.

Dated ……..day of……2022

Thanking You.

Your’s Faithfully,

(name , designation and signature of authorized person in whose name power of attorney/Board Resolution is issued by the Bidder)

Annexure-III

DRAFT FORMAT OF THE BANK GURANTEE FOR EMD

(The Bank Guarantee should be executed on a non-judicial stamp paper of appropriate value as per Stamp Act relevant to place of execution along with a Confirmatory Letter from the Regional office of the Bank concerned in enclosed format.)

To,
The General Manager,
The Brihanmumbai Electric Supply & Transport Undertaking,
BEST Bhavan, BEST Marg,
Post Box No. 192,
Mumbai- 400 001.

In consideration of _____ (name of Bidder to be inserted) agreeing to undertake the obligations under the terms and conditions of Bid Document No:_____ dated_____ signed by_____(name of bidder to be inserted) having its office at _____ .The_____ (Insert Guarantor Bank Name) having its registered office at _____ hereinafter referred to as "Guarantor Bank" hereby agrees unequivocally, irrevocably and unconditionally to pay to BEST Undertaking having its office at BEST Bhavan, BEST Marg, Mumbai-400001 forthwith on demand in writing from the General Manager, BEST Undertaking or any Officer authorized by it in this behalf, any amount up to and not exceeding Rupees_____ Only with respect to the offered Capacity of_____MW as per the terms and conditions of the Bid Document No. _____dated_____.

This guarantee shall be valid and binding on the Guarantor Bank upto and including_____(Insert date of validity of EMD) and shall in no event not be terminable by notice or any change in the constitution of the Bank or the term of the Bid Document No._____ dated_____ signed by_____ or by any other reasons whatsoever and our liability hereunder shall not be impaired or discharged by any extension of time or variations or alternations made, given, or agreed with or without our knowledge or consent, by or between parties to the respective agreement.

Our liability under this Guarantee is restricted to Rs._____(Rs._____/-) only. Our Guarantee shall remain in force until _____. BEST Undertaking shall be entitled to invoke this Guarantee up to _____, by issuance of a written demand to invoke this guarantee.

The Guarantor Bank hereby expressly agrees that it shall not require any proof in addition to the written demand from BEST Undertaking, made in any format, raised at the above mentioned address of the Guarantor Bank, in order to make the said payment to BEST Undertaking.

The Guarantor Bank shall make payment hereunder on first demand without restriction or conditions and notwithstanding any objection by_____ (name of Bidder to be inserted). The Guarantor Bank shall not require BEST Undertaking to justify the invocation of this BANK GUARANTEE, nor shall the Guarantor Bank have any recourse against the Procurer(s) in respect of any payment made hereunder.

The Guarantor Bank represents that this BANK GUARANTEE has been established in such form and with such content that it is fully enforceable in accordance with its terms as against the Guarantor Bank in the manner provided herein.

This BANK GUARANTEE shall not be affected in any manner by reason of merger, amalgamation, restructuring, liquidation, winding up, dissolution or any other change in the constitution of the Guarantor Bank.

This BANK GUARANTEE shall be a primary obligation of the Guarantor Bank and accordingly BEST Undertaking shall not be obliged before enforcing this BANK GUARANTEE to take any action in any court or arbitral proceedings against_____ (name of Bidder to be inserted)to make any claim against or any demand on the _____ (name of Bidder to be inserted)or to give any notice to or to enforce any security held by BEST Undertaking or to exercise, levy or enforce any distress, diligence or other process against_____(name of Bidder to be inserted).

The Guarantor Bank acknowledges that this BANK GUARANTEE is not personal to BEST Undertaking and may be assigned, in whole or in part, (whether absolutely or by way of security) by BEST Undertaking to any entity to whom it is entitled to assign its rights and obligations under the Bid document.

The Guarantor Bank hereby agrees and acknowledges that BEST Undertaking shall have a right to invoke this Bank Guarantee either in part or in full, as it may deem fit.

Notwithstanding anything contained hereinabove, our liability under this Guarantee is restricted to Rs._____ (Rs _____/-) only and it shall remain in force until_____.

This BANK GUARANTEE shall be extended from time to time for such period, as may be desired by_____ (name of Bidder to be inserted). We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only if BEST Undertaking serves upon us a written claim or demand.

This BANK GUARANTEE shall be interpreted in accordance with the laws of India and the courts at Mumbai shall have exclusive jurisdiction.

In witness whereof the Bank, through its authorized officer, has set its hand and stamp on his_____ day of_____ at_____.

Witness :-

(1) _____ The Duly Constituted Attorney
(Signature)
_____ _____
(Name of the witness) (Signature)
_____ _____
(Address of the witness) (Name & Designation of the person)

For _____
(Name of the Bank)

(2) _____
(Signature)
_____ _____
(Name of the witness) (Name of the Bidder)
_____
(Address of the witness)

The Bank and the said Messrs.
Witness: _____
_____
(Signature)
_____
(Name of the witness)
_____
(Address of the witness)

Bid Sheet

Select Type :	Medium Term Bid Sheet
Select Event :	BEST/Short/22-23/RA/97
Event Ref. No. :	BEST/Short/22-23/RA/97
Period :	08/07/2022 12:00:00 To 08/07/2022 14:00:00

Sl.No.	Item Name	Quantity (UOM):	Description	Bidder Ref. No.	Booking Quantity	Booking Amount	Booking Time	Source of power / details of generating station from where power is intended to be supplied
1	1 (Maharashtra STU Periphery)	50.0(MW)	From 01.08.2022:10.00 to 31.08.2022:18.00	Tata Power Trading Company Limited/74213	20	5.85	08/07/2022 14:09	Prayagraj Power Generation Company Limited (PPGCL)
				Adani Enterprises Ltd/335680	50	5.86	08/07/2022 14:08	Raipur Energen Limited (REL)
				Tata Power Trading Company Limited/74174	50	7.68	08/07/2022 13:47	Jindal Power Limited (JPL)

Bucket Filling

Sl.No.	Bidder Ref. No.	Quantity	Price	Event Type
1	Tata Power Trading Company Limited/74213	20	5.85	RA
2	Adani Enterprises Ltd/335680	30	5.86	RA

Sl.No.	Item Name	Quantity (UOM):	Description	Bidder Ref. No.	Booking Quantity	Booking Amount	Booking Time	Source of power / details of generating station from where power is intended to be supplied
2	2 (Maharashtra STU Periphery)	50.0(MW)	From 01.09.2022:10.00 to 30.09.2022:18.00	Tata Power Trading Company Limited/74213	20	7.5	08/07/2022 13:54	Prayagraj Power Generation Company Limited (PPGCL)
				Tata Power Trading Company Limited/74174	50	7.68	08/07/2022 13:56	Jindal Power Limited (JPL)
				Adani Enterprises Ltd/335680	50	7.98	08/07/2022 13:53	Raipur Energen Limited (REL)

Bucket Filling

Sl.No.	Bidder Ref. No.	Quantity	Price	Event Type
1	Tata Power Trading Company Limited/74213	20	7.5	RA
2	Tata Power Trading Company Limited/74174	30	7.68	RA

Sl.No.	Item Name	Quantity (UOM):	Description	Bidder Ref. No.	Booking Quantity	Booking Amount	Booking Time	Source of power / details of generating station from where power is intended to be supplied
3	3 (Maharashtra STU Periphery)	50.0(MW)	From 01.10.2022:00.00 to 31.10.2022:24.00	Tata Power Trading Company Limited /74187	25	8.66	08/07/2022 14:21	Jindal India Thermal Power Limited (JITPL)
				MANIKARAN POWER LIMITED/102094	25	8.66	08/07/2022 14:21	BLA Power Private Limited Unit-2, Village Niwari, PO Khursipar, Tehsil Gadarwara, Narsinghpur, Madhya Pradesh-487551
				Tata Power Trading Company Limited/74174	50	8.72	08/07/2022 14:12	Jindal Power Limited (JPL)
				Adani Enterprises Ltd/335680	20	9.56	IPO 01/07/2022 15:59:20	Raipur Energen Limited (REL)

Bucket Filling

Sl.No.	Bidder Ref. No.	Quantity	Price	Event Type
1	Tata Power Trading Company Limited /74187	25	8.66	RA
2	MANIKARAN POWER LIMITED/102094	25	8.66	RA

Sl.No.	Item Name	Quantity (UOM):	Description	Bidder Ref. No.	Booking Quantity	Booking Amount	Booking Time	Source of power / details of generating station from where power is intended to be supplied
4	4 (Maharashtra STU Periphery)	100.0(MW)	From 01.10.2022:10.00 to 31.10.2022:19.00	Tata Power Trading Company Limited/74213	20	7.5	08/07/2022 13:58	Prayagraj Power Generation Company Limited (PPGCL)
				Tata Power Trading Company Limited/74174	100	7.68	08/07/2022 13:58	Jindal Power Limited (JPL)

Bucket Filling

Sl.No.	Bidder Ref. No.	Quantity	Price	Event Type
1	Tata Power Trading Company Limited/74213	20	7.5	RA
2	Tata Power Trading Company Limited/74174	80	7.68	RA

Sl.No.	Item Name	Quantity (UOM):	Description	Bidder Ref. No.	Booking Quantity	Booking Amount	Booking Time	Source of power / details of generating station from where power is intended to be supplied
5	5 (Maharashtra STU Periphery)	80.0(MW)	From 01.11.2022:10.00 to 30.11.2022:19.00	Tata Power Trading Company Limited/74213	20	7.29	08/07/2022 14:06	Prayagraj Power Generation Company Limited (PPGCL)
				MANIKARAN POWER LIMITED/102094	25	7.3	08/07/2022 14:02	BLA Power Private Limited Unit-2, Village Niwari, PO Khursipar, Tehsil Gadarwara, Narsinghpur, Madhya Pradesh-487551
				Tata Power Trading Company Limited/74174	80	7.68	08/07/2022 13:49	Jindal Power Limited (JPL)

Bucket Filling

Sl.No.	Bidder Ref. No.	Quantity	Price	Event Type
1	Tata Power Trading Company Limited/74213	20	7.29	RA
2	MANIKARAN POWER LIMITED/102094	25	7.3	RA
3	Tata Power Trading Company Limited/74174	35	7.68	RA

Sl.No.	Item Name	Quantity (UOM):	Description	Bidder Ref. No.	Booking Quantity	Booking Amount	Booking Time	Source of power / details of generating station from where power is intended to be supplied
6	6 (Maharashtra STU Periphery)	100.0(MW)	From 01.12.2022:10.00 to 15.12.2022:19.00	Tata Power Trading Company Limited/74213	20	7.29	08/07/2022 14:06	Prayagraj Power Generation Company Limited (PPGCL)
				MANIKARAN POWER LIMITED/102094	25	7.3	08/07/2022 14:02	BLA Power Private Limited Unit-2, Village Niwari, PO Khursipar, Tehsil Gadarwara, Narsinghpur, Madhya Pradesh-487551
				Tata Power Trading Company Limited/74174	100	7.68	08/07/2022 13:50	Jindal Power Limited (JPL)

Bucket Filling

Sl.No.	Bidder Ref. No.	Quantity	Price	Event Type
1	Tata Power Trading Company Limited/74213	20	7.29	RA
2	MANIKARAN POWER LIMITED/102094	25	7.3	RA
3	Tata Power Trading Company Limited/74174	55	7.68	RA

Reverse Auction Participated Bidders Details

Sl.No.	Bidder Ref. No.	Company Name	Contact Person	Email
1	Tata Power Trading Company Limited/74174	Tata Power Trading Company Limited	ANUJESH SHAHI	tptclmarketing@tatapower.com
2	Tata Power Trading Company Limited /74187	Tata Power Trading Company Limited	ANUJESH SHAHI	tptclmarketing@tatapower.com
3	Tata Power Trading Company Limited/74213	Tata Power Trading Company Limited	ANUJESH SHAHI	tptclmarketing@tatapower.com

Sl.No.	Item Name	Quantity (UOM):	Description	Bidder Ref. No.	Booking Quantity	Booking Amount	Booking Time	Source of power / details of generating station from where power is intended to be supplied
4	MANIKARAN POWER LIMITED/102094	MANIKARAN POWER LIMITED	PRAVIN LEE ABRAHAM	bilateral.del@manikaranpowerltd.in				
5	Adani Enterprises Ltd/335680	Adani Enterprises Ltd	GUNJAN RAMU THAKRE	gunjan.thakre@adani.com				

Before the
MAHARASHTRA ELECTRICITY REGULATORY COMMISSION
World Trade Centre, Centre No.1, 13th Floor, Cuffe Parade, Mumbai 400005.
Tel. 022 22163964/65/69 Fax 22163976
Email: mercindia@merc.gov.in Website: www.merc.gov.in

Case No. 151 of 2022

Petition of Brihanmumbai Electric Supply & Transport Undertaking (BEST) seeking approval for Tariff discovered through Competitive Bidding for Short -term bilateral Power purchase for the period August, 2022 to December, 2022.

Coram
Sanjay Kumar, Chairperson
I. M. Bohari, Member
Mukesh Khullar, Member

Brihanmumbai Electric Supply and Transport Undertaking: Petitioner

Appearance:

For Petitioner: Shri. N.N Chougule (Rep)

ORDER

Date: 24 August, 2022

1. Brihanmumbai Electric Supply and Transport Undertaking (**BEST**) has filed this Case on 21 July, 2022 under Sections 63 of the Electricity Act, 2003 (**EA, 2003)** seeking approval for Tariff discovered through Competitive Bidding for Short -Term bilateral Power Purchase for the period August, 2022 to December, 2022.

2. **BEST's main prayers are as under:**

   a) To admit the present Petition.

   b) Hon'ble Commission may consider expediting hearing in the present Petition;

   c) Hon'ble Commission may accord approval for tariff discovered through competitive bidding process undertaken by BEST for short term bilateral power purchase for the period from August, 2022 to December, 2022;

   d) Hon'ble Commission may accord approval for power procurement from short term sources at the rate of Rs 8.00/kWh for FY 2022-23;
   ……."

3. **BEST in its Petition has stated as follows:**

3.1 The Commission, vide its MYT Order in Case No. 324 of 2019 dated 30 March, 2020 has approved power procurement and cost of such procurement for FY2022-23 from various sources, including Renewable power. Details of the same are as below:

Particulars	MYT Petition			Approved in the Order		
	Quantum (MU)	Total Cost (Rs. Cr.)	Avg. Rate (Rs. / kWh)	Quantum (MU)	Total Cost (Rs. Cr.)	Avg. Rate (Rs. / kWh)
TPC-G	3,567.89	1,566.55	4.39	3,510.94	1,660.96	4.73
Walwahan solar Energy Maharashtra (Erstwhile Welsun)	31.50	26.96	8.56	31.50	26.96	8.56
Manikaran PowerLimited (Medium term)	744.60	332.03	4.46	744.60	332.03	4.46
Solar Energy	312.61	102.85	3.29	307.74	89.25	2.90
Non-Solar Energy				500.37	143.61	2.87
Bilateral PowerPurchase	498.35	199.34	4.00	0.00	0.00	4.00
REC Non-solar	507.38	171.68	3.38	-	-	-
Standby charges	-	102.64	-	-	98.53	-
Transmission Charges	-	280.85	-	-	256.72	-
MSLDC Charges	-	1.45	-	-	1.27	-
Total Power Purchase	**5,154.96**	**2,784.35**	**5.40**	**5,095.15**	**2,609.33**	**5.12**

3.2 After approval of the Commission vide Order dated 26 April, 2021 in Case No. 16 of 2021, BEST and Solar Energy Corporation of India (SECI) have entered into PSA for procurement of 400 MW Wind-Solar hybrid power by BEST from SECI at Tariff of Rs. 2.48/kWh discovered through competitive bidding for 25 years. Actual power flow from this project is anticipated to commence from February, 2023. Further additional 300 MW standalone solar PSA will be executed by BEST with SECI to meet the future obligation.

3.3 Since March, 2020, BEST's demand had drastically reduced arising out of COVID-19 pandemic. However, after lifting of restrictions on account of Covid-19, the economic activities are anticipated to increase the electricity demand. Considering this factor and the period of August, 2022 to December, 2022, BEST's demand is likely to increase.

3.4 BEST's peak demand in current financial year (FY 2022-23) was 890 MW in April, 2022. BEST's anticipated demand at day peak time will be approximately 861 MW during ensuing period. As per its Long/Medium term PPA, the ex-bus availability of its peak availability is 763 MW.

3.5 BEST has allocation of 90 MW from TPC's Unit-7 (180 MW) gas based generating unit. In recent years, due to change in priority for the power sector, the allocation of APM gas to TPC's Trombay Units from GAIL has considerably reduced. This has resulted into lower generation from TPC's Unit-7 as seen from Plant Load Factor (PLF) of the plant as tabulated below:

Month	Aug-21	Sept-21	Oct - 21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22
PLF	9%	64%	79%	71%	68%	19%	65%	44%	72%	47%

3.6 It is anticipated that the trend of lower generation from the Unit- 7 may prevail in ensuing period due to lower availability of APM gas and therefore, the anticipated shortfall from this source to BEST will be up to 40 MW.

3.7 TPC's Hydro resource is limited and is required to be used in the evening and night periods where the rates of the Power Exchange are on higher side. Thus, during day peak, availability of hydro is low.

3.8 Considering the volatility in the short-term power market, particularly during high demand season and as experienced during month of April and May, 2022, it is necessary to tie-up bilateral contracts to ensure reliability to meet the anticipated demand in ensuing period.

3.9 Therefore, BEST invited e-tender for bilateral power purchase for quantum of 50 MW to 150 MW at different time slots (00:00 to 24:00 hrs (RTC), 10:00 to 18:00 hrs and 10:00 to 19:00 hrs) for the period from August, 2022 to December, 2022 on DEEP portal on 27 June, 2022.

3.10 This e-tender is in line with Ministry of Power's Guidelines dated 30 March, 2016 for short-term procurement of power by Distribution Companies through tariff-based competitive bidding. The validity of bid offer is till 31 August 2022. Detail of this e-tendering process with price discovery after Reverse Auction is annexed with the Petition. The outcome of the bidding process is summarized below:

Sr No	Contract Period From - To	Slot/Time (Hrs.)	Bid Quantum in MW	Successful Bidder	Source	Rate in Rs./ kWh	Allotted Quantum in MW
1	01-Aug-22 to 31-Aug-22	10:00 to 18:00	50	Tata Power Trading Co. Ltd (TPTCL)	Prayagraj Power Generation Co. Ltd. (PPGCL)	5.85	20
				Adani Enterprises Ltd	Raipur Energen Ltd. (REL)	5.86	30
2	01-Sep-22 to 30-Sept-22	10:00 to 18:00	50	TPTCL	PPGCL	7.50	20
				TPTCL	Jindal Power Ltd (JPL)	7.68	30
3	01-Oct-22 to 31-Oct-22	00:00 to 24:00 (RTC)	50	TPTCL	Jindal India Thermal Power Ltd. (JITPL)	8.66	25
				Manikaran Power Ltd. (MPL)	BLA Power Pvt Ltd.	8.66	25
4	01-Oct-22 to 31-Oct-22	10:00 to 19:00	100	TPTCL	PPGCL	7.50	20
				TPTCL	JPL	7.68	80
5	01-Nov-22 to 30-Nov-22	10:00 to 19:00	80	TPTCL	PPGCL	7.29	20
				MPL	BLA Power Pvt Ltd	7.30	25
				TPTCL	JPL	7.68	35
6	01-Dec-22 to 15-Dec-22	10:00 to 19:00	100	TPTCL	PPGCL	7.29	20
				MPL	BLA Power Pvt. Ltd.	7.30	25
				TPTCL	JPL	7.68	55

3.11 After considering the discovered price and allocated quantity to successful bidders, the

estimated average rate of power purchase cost for total 124.60 MU for the period from 1 August, 2022 to 15 December, 2022 will be Rs.7.72/kWh. The discovered price is in line with the results of bids floated on DEEP portal by other Utilities for aforesaid period.

3.12 BEST intends to procure total allocated bid quantum at discovered price through competitive bidding for the period from August, 2022 to December, 2022 to ensure reliability of power supply during ensuing period.

3.13 Accordingly, LoI/draft PPA is issued to the successful bidders within the timeframe as specified in MoP Guidelines on 19 July, 2022.

3.14 Any shortfall of the power in the availability thereon on real-time basis will be met through power purchase through power exchange platform.

3.15 The Commission, vide its Order in Case No. 46 of 2022 dated 6 April, 2022, has approved rate of Rs. 5.12/kWh for the power purchase from Bilateral source in FY 2022-23. The relevant para is reproduced as under:

> *"10.8 Further, above average tariff of Rs. 5.12/kWh discovered through competitive bidding shall act as ceiling tariff for procurement of short-term power through competitive bidding process for FY 2022-23. Any tariff discovered below such ceiling shall be considered as deemed adopted as per provisions of competitive bidding guidelines notified by the Central Government for short-term power procurement."*

3.16 Further, Ministry of Power's Guidelines dated 30 March, 2016 for short-term procurement of power by Distribution Companies through tariff-based bidding process stipulate that if the quantum of power procured and tariff determined are within the blanket approval granted by the Commission in ARR of the respective year, then the same will be considered to have been adopted by the Commission. In all other cases, the Procurer(s) have to submit a Petition to the Commission for adoption of tariff.

3.17 Though the discovered rates of Short-term Bilateral Power Purchase for the period from August, 2022 to December, 2022 are higher than the Commission's approved rate, these discovered rates are lower than the variable cost (about Rs.10.5/kWh) of TPC-G's Unit-5/Unit-8.

3.18 The MoP has given directions vide Notification No.23/13/2021-R&R (Pt-1) dated 5 May, 2022 to coal based Generating companies that they should mandatorily use 10% of imported coal for blending purpose. This has resulted into increase of the fuel cost and subsequently higher quotes for this tender. The coal shortage issue is not likely to get resolved in near future. Thus, rates seem to be in anticipation to the future coal availability scenario.

3.19 In the past, power exchange rates surged to the capping rates. Even after quoting at ceiling rates the bids were not fully cleared. It resulted in curtailment of the drawal schedule. Hence it was decided to purchase the shortfall quantum through competitive bidding process of

DEEP portal. This power, though it is at a higher rates will avoid the precarious conditions arising out of uncertainty in the power exchange market.

3.20 Any shortfall over and above this will be met through RTM/DAM/TAM segment where BEST will ensure that short term power purchase is done in economical and judicious manner.

3.21 In view of above, it is requested to approve the tariff discovered through Competitive Bidding for Short -term bilateral Power purchase for the period August, 2022 to December, 2022.

4. At the time of E-hearing held on 29 July, 2022:

4.1 BEST reiterated the submission made in the Petition. BEST stated that it conducted the competitive bidding process for short term power procurement on DEEP portal for the period of August, 2022 to December, 2022 and requests the Commission to adopt the same.

4.2 In order to decide the Petition, the Commission directed BEST to clarify the following:

a) Whether the demand projections are as per approved demand projections in MYT Order in Case No. 324 of 2019 or there is any deviation from approved projections?

b) Details of demand supply position for last 3 years for the months under consideration along with availability from contracted sources and short-term power procured during that period shall be submitted.

c) Basis on which it has projected outages of contracted generating units. Details of generator outages for the previous 3 years of the same month also needs to be provided along with reasons for such outages.

d) Considering transmission constraint to bring power into Mumbai from outside, BEST shall clarify whether it envisages any difficulties with proposed power procurement quantum?

4.3 Considering urgency of the matter as highlighted in the Petition, BEST was directed to submit above details on priority within 3 days.

5. BEST in its submission dated 2 August, 2022 has stated as under:

5.1. The clarification to the queries of the Commission raised during e-hearing on 29 July, 2022 are as under:

5.2. <u>Query 1: BEST to clarify whether the demand projections are as per approved demand projections in MYT Order in Case No. 324 of 2019 or there is any deviation from approved projections</u>**?**

a) During MYT Petition, BEST had submitted 973.23 MW Peak Demand and 4726.99

MU Energy Sales projection for FY 2022-23. The Commission has approved the same and projected the 5095.15 MU Energy requirements at G<>T interface for FY 2022-23.

b) Since March, 2020, BEST's demand drastically reduced because of COVID-19 pandemic. However, after lifting of restrictions placed in Mumbai under Government of Maharashtra's COVID-19 Guidelines, the economic activities are anticipated to increase the electricity demand. Considering this factor and the period of August, 2022 to December, 2022, BEST's demand is anticipated to rise.

c) BEST's peak demand in FY 2022-23 is 890 MW in April, 2022. BEST's anticipated Demand at day peak time will be approximately 861 MW during ensuing period. For demand prediction for each month of the period from August, 2022 to December, 2022, the successive peak demands (excluding particular spikes in demand) of corresponding month in previous three years from year 2017 to year 2019 were considered.

d) For the months of September, 2022 and December, 2022, average of respective months for past three years of 2017 to 2019 works out much higher than the actual monthly demands of the corresponding months of the Year 2021. Hence, the realistic demand of three years is considered for projection.

e) Comparison of pre-pandemic demand Vs demand projection at T<>D in MW is as below:

Month/ Year	Pre-pandemic				Actual	Projected
	2017	**2018**	**2019**	**Average**	**2021**	**2022**
Jan	650.0	706.6	635.6	664.1	628.1	
Feb	731.1	752.5	663.9	715.8	637.6	
March	845.8	832.4	794.4	824.2	722.5	
April	858.4	896.8	862.3	872.5	692.2	
May	916.4	911.5	872.7	900.2	655.0	
June	916.9	938.8	927.4	927.7	684.7	
July	816.9	789.0	812.4	806.1	716.3	
Aug	808.6	785.2	798.6	797.5	695.6	**797.0**
Sept	878.5	808.6	786.0	824.4	691.7	**784.0**
Oct	868.8	892.6	851.5	871.0	778.5	**861.0**
Nov	757.7	808.5	791.3	785.9	760.9	**785.0**
Dec	713.0	719.9	760.1	731.0	652.3	**713.0**

f) The provisional transmission loss of 3.18 % for year 2022 is considered. Accordingly, the estimated peak power demand projection is considered for August, 2022 to December, 2022 which is stated as follows:

Projected peak Demand in MW	Aug, 2022	Sep, 2022	Oct, 2022	Nov, 2022	Dec, 2022
T<>D level in MW	797	784	861	785	713
G<>T level in MW	823	810	889	811	736

g) The expected MUs will be in line with approved energy requirement of 5095.15 Mus at G<>T interface for FY 22-23 in the MYT Order in Case No. 324 of 2019 as shown below:

MUs	Actual		Projected*	

Month	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total
G<>T	456	478	438	401	394	422	508	435	400	346	363	452	5094

h) As such there will not be any deviation from approved projections of the MYT Order. BEST's ex-bus generation capacity tied-up with TPC-G is 676.69 MW from Unit 5, 7, 8 and Hydro. Due to less availability of APM gas, U-7 generation is anticipated between 95 MW to 110 MW.

i) TPC-G's peak availability (excluding hydro) during August, 2022 to 15 December, 2022 period will be around 379 MW. Also, in real time hydro generation varies from 0 to 447 MW on 15-min block to block basis. Therefore, peak share of allocation from TPC's Hydro generation is 226 MW. Hence, peak hours availability considered from TPC-G is around 613 MW.

j) BEST's ex-bus generation availability of 100 MW from Manikaran (through M/s Saiwardha Power) is considered on RTC basis. Availability of up to 15 MW solar power from Walwhan energy during day hours has been considered in the availability as per typical solar pattern. Therefore, total availability of power works out to 728 MW.

k) In order to meet the power shortfall requirement, based on past experience, it is proposed to procure Bilateral power in the time slots on RTC (00:00 to 24:00 hrs), Peak day period (10:00 to 18:00 hrs.) and (10:00 to 19:00 hrs) to optimize power purchase cost.

l) The summary of the month-wise short term Bilateral power requirement is given below:

Time Slot	**Aug,22**	**Sept,22**	**Oct,22**	**Nov,22**	**Dec,22**
Estimated Peak demand (in MW)	823	810	889	811	736
Total availability (in MW)	728	728	728	728	636
Shortfall (in MW)	96	82	161	83	100
Proposed procurement					
00:00 to 24:00 Hrs, RTC (in MW)	-	-	50	-	-
10:00 to 18:00 Hrs (in MW)	50	50	-	-	-
10:00 to 19:00 Hrs (in MW)	-	-	100	80	100
Total energy requirement (in MU)	12.40	12.00	65.10	21.60	13.50
Total MU	**124.60**				

m) In the event of increase in BEST's demand over the predicted demand or in case of lesser power availability from contracted sources or in order to optimize the overall power purchase cost, the additional power will be purchased through Power exchanges.

5.3. Query 2: Details of demand supply position for last 3 years for the months under consideration along with availability from contracted sources and short-term power procured during that period shall be submitted.

a) Details of demand supply position for last 3 years for the months under consideration along with availability from contracted sources and short-term power procured during that period is as follows:

Year-2019					
Particulars	Aug-19	Sept-19	Oct-19	Nov-19	Dec-19
BEST's peak demand in MW at G<>T	826	813	877	818	786
Source-wise availability in MW					
TPC-G (Total Availability)	648	648	648	648	557
TPC-G (Actual generation)	597	409	474	426	545
Manikaran (SWPGL)	0	0	0	0	0
Short-term Bilateral	0	0	210	100	0
RE (Solar/Non-Solar)	21	20	21	19	19
Power Exchange	185	250	20	120	210

Year-2020					
Particulars	Aug-20	Sept-20	Oct-20	Nov-20	Dec-20
BEST's peak demand in MW at G<>T	580	669	697	660	664
Source-wise availability in MW					
TPC-G (Total Availability)	557	557	648	648	648
TPC-G (Actual generation)	424	316	509	519	422
Manikaran (SWPGL)	100	100	100	100	100
Short-term Bilateral	0	0	0	0	0
RE (Solar/Non-Solar)	12	9	9	13	12
Power Exchange	20	120	118	20	40

Year-2021					
Particulars	Aug-21	Sept-21	Oct-21	Nov-21	Dec-21
BEST's peak demand in MW at G<>T	718	712	804	786	674
Source-wise availability in MW					
TPC-G (Total Availability)	558	648	648	648	557
TPC-G (Actual generation)	482	448	441	488	462
Manikaran (SWPGL)	70	68	55	93	100
Short-term Bilateral	0	0	0	0	98
RE (Solar/Non-Solar)	12	14	13	11	11
Power Exchange	155	153	300	164	0

5.4. Query 3: BEST also needs to provide basis on which it has projected outages of contracted generating units. Details of generator outages for the previous 3 years of the same month also needs to be provided along with reasons for such outages.

a) Projected outages of TPC-G generating units for the period from August, 2022 to December, 2022 is considered as intimated by the generator.

b) Details of generator outages for the previous 3 years of the same months along with reasons is also submitted.

5.5. Query 4: Considering transmission constraint to bring power into Mumbai from outside, BEST shall clarify whether it envisages any difficulties with proposed power procurement quantum?

a) Considering transmission constraint to bring power into Mumbai from outside, BEST has not envisaged any difficulties with proposed power procurement quantum. Since, BEST's base transmission capacity right is 823 MW for FY 2022-23. Accordingly, BEST pays Rs 257 Crores towards transmission charges (vide MERC Order No 327 of 2019).

b) As regards Mumbai tie line, assuming 2400 MW of ATC, BEST can source power up to 551 MW from outside Mumbai. The computation of BEST's share in the ATC is given below.

	AVG CPD/NCPD (MW)	% Share in Mumbai Tie-line	Transmission Charges (Rs Cr)	ATC Share in MW
TPC-D	830	23.15%	259.0	556
BEST	823	22.95%	257.0	551
AEML-D	1545	43.08%	482.0	1034
Railway	388	10.82%	121.0	260
Total	3586	100.00%	1119.0	2400

c) During the month of April, 2022, the maximum Mumbai demand catered is 3851 MW. Out of this 2260 MW of demand was met through external sources outside Mumbai region.

d) In view of above submission and for the reasons mentioned in the main Petition, BEST revises its prayers as follows:

a) To consider the present submission under the Petition in Case No. 151 of 2022;

b) Hon'ble Commission may accord approval for tariff discovered through competitive bidding process on DEEP Portal undertaken by BEST for short term bilateral power purchase for the period from August, 2022 to December, 2022 mentioned in para 6.0 of the main petition;

c) Hon'ble Commission may adopt and approve the short term power procurement for the month of August, 2022 to December, 2022 at the discovered rate in the range of Rs. 5.85 to Rs. 8.66 per unit and the quantum in the range of 50 MW to 150 MW (the estimated average rate of power purchase cost for total 124.60 MUs for the period from 01st August'2022 to 15th December'2022 will be Rs.7.72/kWh) under competitive bidding process in DEEP portal for the Bid invited by BEST as mentioned in para 6.0 of the main petition;

d) Hon'ble Commission may accord approval for power procurement from short term sources at the rate of Rs 8.00/kWh for FY 2022-23;

6. During the E-hearing held on 5 August 2022, BEST reiterated their submissions made in the Petition and requested the Commission to approve proposed short term power procurement.

Commission's Analysis and Ruling:

7. Present petition has been filed by the BEST seeking approval for tariff discovered through Competitive Bidding for Short Term Power purchase for the period of August, 2022 to December, 2022.

8. Considering the submissions made in the matter, the Commission frames following issues for its considerations:

8.1. Provisions under which Short Term Power procurement of Distribution Licensee

requires approval of the Commission.

8.2. Whether the quantum of additional short term power procurement proposed by BEST is justified?

8.3. Whether the discovered tariff is consistent with the market trend?

The Commission is addressing these issues in following paragraphs.

9. Issue A: - Provisions under which Short Term Power procurement of Distribution Licensee requires approval of the Commission

9.1. The Commission notes that MERC MYT Regulations, 2019 which is applicable for control period of FY 2020-21 to FY 2024-25, has following provisions related to the additional power procurement by Distribution Licensee:

"*22.1 The Distribution Licensee may undertake additional power procurement during the year, over and above the power procurement plan for the Control Periodapproved by the Commission, in accordance with this Regulation.*

22.2 Where there has been an unanticipated increase in the demand for electricity or a shortfall or failure in the supply of electricity from any approved source of supply during the Year or when the sourcing of power from existing tied-up sources becomes costlier than other available alternative sources, the Distribution Licensee may enter into additional agreement or arrangement for procurement of power.

22.3 Any variation, during the first or second block of six months of a Year, in the quantum or cost of power procured, including from a source other than a previously approved source, that is expected to be in excess of five per cent of that approved bythe Commission, shall require its prior approval:

Provided that the five per cent limit shall not apply to variation in the cost of power procured on account of changes in the price of fuel for own generation or the fixed or variable cost of power purchase that is allowed to be recovered in accordance with Regulation 10."

Thus, in cases where there is an anticipated shortfall in fulfilling the demand and to optimise the power purchase cost, licensee can procure additional power subject to the variation of excess of five percent in the quantum or cost of power procured during the first or second block of six months of a Year from the sources other than approved by the Commission.

9.2. Further Ministry of Power's Guidelines dated 30 March 2016 notified under Section 63 of the Electricity Act 2003 for short-term procurement of power by Distribution Licensees through tariff-based bidding process stipulate as follows:

"11.4 If the quantum of power procured and tariff determined are within the blanket approval granted by the Appropriate Commission in Annual Revenue Requirement (ARR) of the respective year, then the same will be considered to have been adopted by the Appropriate Commission.

In all other cases, the Procurer(s) shall submit a petition to the Appropriate Commission for adoption of tariff within 2 days from the date of signing of PPA. Appropriate Commission should communicate the decision within 7 days from the date of submission of petition."

Thus, if the quantum of power procured and the tariff determined are not within the blanket approval specified by the Commission in ARR/ Tariff Order, Distribution Licensee needs to approach the Commission for approval of the additional power procurement and to adopt the tariff discovered through competitive bidding process.

9.3. In present case, the Commission notes that, it has approved following source wise power procurement quantum for FY 2022-23 to BEST under MYT Order dated 30 March 2020:

Source	TPC-G	Walwhan Solar	Manikaran	Solar Energy	Non-Solar Energy	Total
Quantum (MU)	3510.94	31.50	744.60	307.74	500.37	5095.15

Clearly, power procurement from Short Term Sources is not approved in Tariff Order. Hence, proposed short term power procurement needs to be treated as new source. Further, the Commission has indicated tariff for short term power procurement as Rs. 5.12 per unit for FY 2022-23. Tariff for proposed short term power procurement in present Petition is more than said tariff indicated in Tariff Order.

9.4. As the source of power is different and the tariff is higher than that has been approved by the Commission in MYT Tariff Order, it fulfils the criteria specified in MYT Regulations, 2019 and in the MoP Guidelines dated 30 March, 2016. Hence, prior approval of the Commission is required for proposed short term power procurement by BEST.

10. Issue B: - Whether the quantum of additional short-term power procurement proposed by BEST is justified?

10.1. The Commission notes that BEST has arrived at its demand projection based on average demand for last three years. Comparison of pre-pandemic demand and BEST's demand projection at T<>D periphery in MW is as below:

Month/ Year	Pre-pandemic				Actual	Projected
	2017	2018	2019	Average	2021	2022
Jan	650.0	706.6	635.6	664.1	628.1	
Feb	731.1	752.5	663.9	715.8	637.6	
March	845.8	832.4	794.4	824.2	722.5	

April	858.4	896.8	862.3	872.5	692.2	
May	916.4	911.5	872.7	900.2	655.0	
June	916.9	938.8	927.4	927.7	684.7	
July	816.9	789.0	812.4	806.1	716.3	
Aug	808.6	785.2	798.6	797.5	695.6	**797.0**
Sept	878.5	808.6	786.0	824.4	691.7	**784.0**
Oct	868.8	892.6	851.5	871.0	778.5	**861.0**
Nov	757.7	808.5	791.3	785.9	760.9	**785.0**
Dec	713.0	719.9	760.1	731.0	652.3	**713.0**

The Commission notes that BEST has relied upon average of past three years of 2017 to 2019 rather than actual demand recorded in 2021 for projecting demand for August to December 2022. In the opinion of the Commission as consumers demand has gradually reached pre-pandemic level, considering average demand corresponding to pre-pandemic period of 2017-2019 is appropriate approach to projecting demand for ensuing period.

10.2. Above projected demand at T< > D periphery is grossed up by intra-state transmission losses (3%) to arrive at T< > G level demand. The Commission further notes that BEST has submitted 15 minutes block wise demand supply projections for August to December 2022.

10.3. On supply side, BEST has considered the proposed plant shutdown as communicated by the generators. Further, BEST has envisaged that due to lower availability of APM gas, power availability from TPC-G's Unit 7 would be lower than its allocated share. Considering all these factors, BEST has worked out following supply shortfall for August to December 2022 and proposed to meet such shortfall through short term power procurement:

Time Slot	**Aug,22**	**Sept,22**	**Oct,22**	**Nov,22**	**Dec,22**
Estimated Peak demand (in MW)	823	810	889	811	736
Total availability (in MW)	728	728	728	728	636
Shortfall (in MW)	96	82	161	83	100
Proposed procurement					
00:00 to 24:00 Hrs, RTC (in MW)	-	-	50	-	-
10:00 to 18:00 Hrs (in MW)	50	50	-	-	-
10:00 to 19:00 Hrs (in MW)	-	-	100	80	100
Estimated total energy requirement (in Mus)	12.40	12.00	65.10	21.60	13.50
Total Mus	**124.60**				

10.4. The Commission also notes BEST's submission that even after such additional power procurement, total energy procurement in terms of 'MU' will be within the approved level in MYT Order. Although BEST has not provided specific reasons for the same, the Commission notes that this is due to non-availability of energy from RE sources as approved in tariff order. Such shortfall in renewable energy is required to be fulfilled by other sources. BEST has stated that it has entered into contract with SECI for 400 MW RE Hybrid project and is also envisaging additional RE procurement from SECI, but power

flow from these projects will not be available during FY 2022-23 (up to December 2022) and hence, BEST needs to fulfill this gap from other sources.

10.5. The Commission also notes that BEST has opted for short term bilateral contract only in few months of last three years but was regularly drawing power from power exchanges in almost every month of last three years. However, due to increased demand in power market, even at cap rate, there is no surety of clearing of the bid quantum and hence for ensuring reliable power supply, BEST has proposed to enter short term power procurement contracts for August to December 2022.

10.6. The Commission notes that proposed short term power procurement is within the total power procurement quantum approved in tariff Order. Further, such short-term power procurement (12 to 65 MU per month) will replace some part of power being procured from power exchanges (164 to 300 MU) and hence the issue of transmission constraints will not arise.

10.7. Considering above, the Commission notes that quantum of short-term power proposed by BEST for the month of August to December 2022 is justified.

11. **Issue C: - Whether the discovered tariff is consistent with the market trend?**

11.1 The Commission notes that BEST has undertaken the short term power procurement as per the competitive guidelines of MoP dated 30 March, 2016 by floating the bid on DEEPportal on 27 June, 2022 for supply of 50 to 150 MW for various time slots for the period from August, 2022 to December, 2022. The weighted average tariff discovered is bidding process is Rs 7.72 per kWh.

11.2 In order to assess the competitiveness of the tariff discovered by BEST in the present bidding the Commission has referred to recent discovered tariff on DEEP Portal by other Distribution Licensees in Maharashtra and same is tabulated below:

Sr No	Particulars	Period	Availability	Quantum of Power in MW	Discovered tariff in Rs/ kWh
1	MSEDCL	1.10.2022 to 15.10.2022	24:00	100	8.82
		16.10.2022 to 31.10.2022	24:00	275	8.68
		1.11.2022 to 15.11.2022	24:00	375	8.68
		1.3.2023 to 15.03.2023	24:00	200	8.82
		16.03.2023 to 31.03.2023	24:00	200	8.82
		1.4.2023 to 15.04.2023	24:00	200	9.03
		16.04.2023 to 30.04.2023	24:00	200	9.03
		1.5.2023 to 15.05.2023	24:00	200	9.34
		16.05.2023 to 31.05.2023	24:00	200	9.34
		1.6.2023 to 15.06.2023	24;00	350	8.75
		1.6.2023 to 15.06.2023	24:00	100	9.34
2	TPC-D	01.08.2022 to 31.08.2022	24:00	45	9.09
		1.9.2022 to 30.09.2022	24:00	70	8.98
		1.10.2022 to 31.10.2022	24:00	50	8.99
		1.10.2022 to 31.10.2022	24:00	25	10.49
		1.10.2022 to 31.10.2022	24;00	25	12

From the above it is observed that the discovered tariff is consistent with the currentmarket

trend.

11.3 The Commission notes that BEST has carried out the process of procurement of Short- Term Power in accordance with Competitive Bidding Guidelines and tariff discovered isreflective of current market situations.

11.4 Section 63 of the EA, 2003 mandates the Commission to adopt the tariff if such tariff has been determined through transparent process of bidding in accordance with the guidelines issued by the Central Government.

11.5 In view of the foregoing, the Commission notes that tariff discovered by BEST fulfils mandates and requirements for adoption as set out in Section 63 of the EA, 2003 and MYT Regulations, 2019. Accordingly, the Commission adopts Power Procurement with weighted average tariff of Rs 7.72 /kWh and quantum for BEST undertaking for the period from August, 2022 to December, 2022 as follows:

Sr No	Contract Period From - To	Slot/Time (Hrs.)	Bid Quantum in MW	Successful Bidder	Source	Rate in Rs./ kWh	Allotted Quantum in MW
1	01-Aug-22 to 31-Aug-22	10:00 to 18:00	50	Tata Power Trading Co. Ltd (TPTCL)	Prayagraj Power Generation Co. Ltd. (PPGCL)	5.85	20
				Adani Enterprises Ltd	Raipur Energen Ltd. (REL)	5.86	30
2	01-Sep-22 to 30-Sept-22	10:00 to 18:00	50	TPTCL	PPGCL	7.50	20
				TPTCL	Jindal Power Ltd (JPL)	7.68	30
3	01-Oct-22 to 31-Oct-22	00:00 to 24:00 (RTC)	50	TPTCL	Jindal India Thermal Power Ltd. (JITPL)	8.66	25
				Manikaran Power Ltd. (MPL)	BLA Power Pvt Ltd.	8.66	25
4	01-Oct-22 to 31-Oct-22	10:00 to 19:00	100	TPTCL	PPGCL	7.50	20
				TPTCL	JPL	7.68	80
5	01-Nov-22 to 30-Nov-22	10:00 to 19:00	80	TPTCL	PPGCL	7.29	20
				MPL	BLA Power Pvt Ltd	7.30	25
				TPTCL	JPL	7.68	35
6	01-Dec-22 to 15-Dec-22	10:00 to 19:00	100	TPTCL	PPGCL	7.29	20
				MPL	BLA Power Pvt. Ltd.	7.30	25
				TPTCL	JPL	7.68	55

11.6The Commission also notes that LOA initialed with the successful bidders are in line with the Standard Bidding documents issued by MoP. Based on these submissions, the Commission approves the draft PPAs to be signed with above successful bidders at the tariff and for thequantum mentioned in above table in Para 11.5. BEST shall submit copies of final PPAs for records of the Commission.

11.7 BEST has also requested to consider Rs. 8.00/kWh as ceiling tariff for all future short term

power procurement. However, as average tariff of Rs. 7.72/kWh is discovered through competitive bidding in present process, same shall act as ceiling tariff for procurement of short-term power through competitive bidding process for FY 2022-23. Any tariff discovered below such ceiling shall be considered as deemed adopted as per provisions of competitive bidding guidelines notified by the Central Government for short-term power procurement.

11.8 Having approved short-term power procurement as above, it is important to note that such short-term power procurement at average tariff of Rs. 7.72/kWh is against RE power approved in the Tariff Order at the tariff of Rs. 2.87 – 2.90/kWh and hence there would be increase in power purchase expenses which will have to be passed on to consumers as per Fuel Adjustment Charge mechanism stipulated in MYT Regulations and subsequent guidelines issued by the Commission in that respect.

12. Hence, following Order:

ORDER

1. **Case No. 151 of 2022 is partly allowed.**
2. **Short TermPower Procurement for the period from August, 2022 to December, 2022 by as Brihanmumbai Electric Supply and Transport Undertaking as stated in para 11.5 above is approved.**
3. **Brihanmumbai Electric Supply and Transport Undertaking, to submit copies of Final PPAs to the Commission for records.**

Sd/-	Sd/-	Sd/-
(Mukesh Khullar)	(I.M. Bohari)	(Sanjay Kumar)
Member	Member	Chairperson

(Abhijit Deshpande)
Secretary

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The Brihanmumbai Electric Supply & Transport Undertaking
(OF THE BRIHANMUMBAI MAHANAGARPALIKA)

NOTICE INVITING E-TENDER

Brihanmumbai Electric Supply & Transport Undertaking (BEST) invites bids for purchase of power on short term basis for the month from April, 2023 to March, 2024 through National e-bidding process.

The bid document for participation can be downloaded through DEEP e-portal of **www.mstcecommerce.com** from **10:00 hrs of 30.01.2023.** Bids must be submitted online through this portal on or before **17:00 hrs of 06.02.2023.** Any corrigendum will be published on the referred website only.

General Manager
BEST Undertaking

PRO/DEPM/162/2023

Business Standard
30/1/2023

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(OF THE BRIHANMUMBAI MAHANAGARPALIKA)

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General Manager
BEST Undertaking

PRO/DEPM/162/2023

THE BRIHANMUMBAI ELECTRIC SUPPLY AND TRANSPORT UNDERTAKING
(OF THE BRIHANMUMBAI MAHANAGAR PALIKA)

Tender No: BEST/Short/22-23/ET/247
&
BEST/Short/22-23/RA/237

Bid Document
For
Purchase of Short-term Bilateral Power
Through
E-Tendering and E-Reverse Auction Basis

By

Brihanmumbai Electric Supply & Transport Undertaking

Date: 30.01.2023

INVITATION FOR e-TENDER

Sr. No.	Event	Date/Time
1.	Publication of Bid Document/ Activation of Event	**30.01.2023 at 10:00 hrs.**
2.	Last date of submission of Bids including EMD	**06.02.2023 at 17:00 hrs.**
3.	Opening of Non-financial Technical Bids	**07.02.2023 at 10:00 hrs**
4.	Opening of IPOs	**09.02.2023 at 10:00 hrs**
5.	Start of e-Reverse Auction	**09.02.2023 at 12:00 hrs**

Bids to be submitted through	**DEEP e-bidding portal at www.mstcecommerce.com**
Office inviting Bids and place of submission of EMD	**Divisional Engineer,** **Power Management Department,** **BEST Undertaking,** **1st Floor, Multi-storied Building Annex.** **BEST Marg, Colaba, Mumbai-400001** **Tel:- 022-22799555** **e-mail:- depower@bestundertaking.com**

1. INTRODUCTION AND BACKGROUND:-

Brihanmumbai Electric Supply & Transport Undertaking, here in after referred to as the **"BEST",** a Distribution Licensee supplying electricity in the Mumbai City is inviting bids for procurement of power under Short Term arrangement for the month of April, 2023 to March, 2024 to meet its demand as per Terms and Conditions of this Bid Document (**Annexure-I**).

Bids are invited from various Trading licensees / Generators / State Utilities / CPPs / Distribution licensees / SEBs for purchase of power. The power would be procured in line with" Guide lines for short-term (i.e. for a period of more than one day to one year) Procurement of Power by Distribution Licensees through Tariff based bidding process" issued by Government of India - Ministry of Power under Section 63 of the Electricity Act, 2003 and as amended from time to time. The responsibility of the Successful Bidder(s) would be to supply power to BEST as per the Terms and Conditions of the Bid Document.

All the interested Bidders shall participate in the bidding process by downloading Bid Document from DEEP e-bidding Portal. The link of e-bidding Portal is **www.mstcecommerce.com**. Bidder needs to register on the e-bidding portal on MSTC website.

2. E-bidding FEE:-

All the Bidders would be able to participate in the e-bidding events on making payment of the requisite fees of Rs.500 per MW per requisition for the total capacity sought for that particular requisition for which a Bidder is willing to bid to PFC Consulting Limited (PFCCL). The requisite fee plus applicable taxes shall be deposited through the portal by e-Payment Gateway provided by MSTC Ltd. After the completion of the bidding process, only successful Bidder(s) will have to pay these charges for the quantum allocated to each Bidder. The balance amount will be refunded by PFCCL within seven (7) working days without any interest. The fee deposited by non-selected Bidder(s) will also be refunded by PFCCL within seven (7) working days of completion of the event without any interest.

3. Quantum of Power:-

BEST invites bids for purchase of firm power under Short Term Open Access arrangement for the month of April, 2023 to March, 2024 from various sources. The Bidder(s) shall supply power as mentioned below to BEST:

Requisition No.	Contract Period		Slot/ Time (Hrs.)			Quantum (in MW)	Minimum Bid Quantity (in MW)	Delivery Point
	From	To	From		To			
1.	01-Apr-23	30-Apr-23	00:00	To	24:00	50	20	Maharashtra STU Periphery
2.	01-Apr-23	30-Apr-23	09:00	To	18:00	75	20	Maharashtra STU Periphery
3.	01-May-23	31-May-23	00:00	To	24:00	50	20	Maharashtra STU Periphery
4.	01-May-23	31-May-23	09:00	To	18:00	100	20	Maharashtra STU Periphery
5.	01-Jun-23	30-Jun-23	00:00	To	24:00	50	20	Maharashtra STU Periphery
6.	01-Jun-23	30-Jun-23	09:00	To	18:00	75	20	Maharashtra STU Periphery
7.	01-Jul-23	31-Jul-23	09:00	To	18:00	40	20	Maharashtra STU Periphery
8.	01-Aug-23	31-Aug-23	09:00	To	18:00	50	20	Maharashtra STU Periphery
9.	01-Sept-23	30-Sept-23	09:00	To	18:00	50	20	Maharashtra STU Periphery
10.	01-Oct-23	31-Oct-23	00:00	To	24:00	50	20	Maharashtra STU Periphery
11.	01-Oct-23	31-Oct-23	09:00	To	18:00	100	20	Maharashtra STU Periphery
12.	01-Nov-23	30-Nov-23	09:00	To	18:00	40	20	Maharashtra STU Periphery
13.	01-Dec-23	31-Dec-23	09:00	To	18:00	75	20	Maharashtra STU Periphery
14.	01-Feb-24	29-Feb-24	09:00	To	18:00	50	20	Maharashtra STU Periphery

15.	01-Mar-24	31-Mar-24	09:00	To	18:00	50	20	Maharashtra STU Periphery

The Bidder(s) should be capable to supply power to BEST during the contracted period at the delivery point, for which the responsibility will be of the Bidder(s). Bidder/s shall ensure necessary infrastructure/ground work in this regard, while participating in the Bid.

4. Qualification Criteria:-

a. All the Generators/State Utilities /CPPs /Distribution Licensees /SEBs and trading licensees having valid trading license from Appropriate Commission are qualified to participate in the bidding process.

b. The Bidder must quote not less than Minimum Bid Quantity, as mentioned in the table above, from single source of generation.

c. If Bidder being an electricity trading licensee, then the trader(s) should submit a valid license from CERC/SERC for Inter-state /Intra-state trading of electricity. The trader shall also attach a photocopy of the same along with the Bid.

5. Submission of Bid:-

The Bidders shall submit their Bids on-line, through DEEP e-bidding portal only.

A) Non-Financial Bid Comprising of:

a) Acceptance to Terms and Conditions of Bid document (**Annexure-II**).

b) Bid Security (EMD) in the form of Bank Guarantee issued by any Nationalized/Scheduled Bank.

c) Source from which Bidder shall supply power shall be mentioned.

d) In case Bidder is Trader, scanned copy of valid Trading license from appropriate Commission should also be provided.

e) Copy of the authorization received from the Generator (in case of trader).

f) Board resolution/Authorization for signing the Bid document.

B) Financial Bid:-

Bidders shall be required to submit separate Non-Financial Technical Bids and Financial Bids i.e. Initial Price Offer (IPO) as per the following time-table:-

Event	**Date and time**
Date of publication of Bid document / Activation of Event	**30.01.2023 at 10:00 hrs.**
Submission of Bid (online Digitally signed Non-Financial Technical bid & IPOs)	**06.02.2023 at 17:00 hrs.**
Opening of Non-Financial Technical Bids	**07.02.2023 at 10:00 hrs**
Clarification, if any, sought from bidders	**08.02.2023 at 17:00 hrs**
Opening of IPOs	**09.02.2023 at 10:00 hrs**
Start of e-Reverse Auction	**09.02.2023 at 12:00 hrs**
Submission of Application for Open Access	**As per Open Access procedure/regulations**
Approval and Obtaining SLDC consent by the seller/purchaser.	

Note: BEST may extend the timelines of Bid with intimation to all Bidders through DEEP e-bidding portal only.

The Bidders are required to upload scanned copy of the EMD along with the Bid and the original copy of EMD to be sent so as to reach the address as given below on or before **17:00 hrs of 06.02.2023**:

Divisional Engineer,
Power Management Department,
BEST Undertaking,
1st Floor, Multi-storied Building Annex.
BEST Marg, Colaba,
Mumbai-400001.
Tel:- 022-22799555

6. BIDDING PROCESS:-

a. The Bidder shall use one Digital Signature to submit bid through one login and for each e-bidding event shall comprise of two parts i.e. e-Tender and e-Reverse Auction. An event may have multiple requisitions (i.e. independent requirements of power at different time or places). To participate in the event, each Bidder will have to specify the source of power for that particular bid. Each bid will have only one price per requisition accompanied by the total quantum of power the Bidder intends to supply and minimum threshold quantum acceptable to the Bidder. However, the Bidder shall have the option to choose the requisition of an event in which it intends to participate. Each of the Bids will have to be signed by the Digital signature of the Bidder.

b. Each login the bidder may submit only one price bid from one source. However, against each requisition the Bidder have the option to bid multiple bids from separate login either from same or different sources.

c. The Bidder shall quote the single tariff at delivery point up to three (3) decimals which shall include capacity charge, energy charge, trading margin (in case of Bidder being a Trader) and all taxes, duties, cess, levies etc. Open Access charges up to and beyond the delivery point shall be borne by the Bidder. The price quoted shall not change in case if any tax/ duty/ levy/cess/charges become applicable after the submission of Bids. The tariff should be constant and there shall be no escalation during the contractual period.

d. Each event of the auction would require independent Digital Signature of the Bidder.

e. Bidders shall be required to submit separate Non-Financial Technical Bid and Financial Bids i.e. Initial Price Offer (IPO) through e-bidding portal.

f. The Bidders can revise their IPOs before date and time of submission of Bid Document.

g. After acceptance of the Non-Financial Technical Bids, the Financial Bids shall be opened as per schedule given in event time table.

h. In the event, if two or more Bidders quote the same amount of Tariff during IPO and e-Reverse Auction stage, the time of submission of Bid will be the deciding factor for

their ranking.

i. The elimination of the Bidders shall be done by the following method:

1) After the opening of Initial Price Offers, the system will rank the Bidders according to their price bids. The Bidder with the highest price bid in IPO stage will be called the H1 Bidder. The system will then analyze all the quantities offered by the Bidders in the IPO stage. If the total quoted quantity is greater than twice the Requisitioned Quantity, the Highest Bidder (H1) will be eliminated provided that the total quoted quantity after elimination is not less than or equal to twice the Requisitioned Quantity.

2) The Elimination process will be done for each of the requisition separately.

3) The shortlisted Bidder after elimination will be intimated individually by system generated emails only.

j. The Reverse auction will start within 120 minutes of opening of Initial Price Offers and shall continue for a period of next 120 minutes.

k. Provided that during the last 10 (ten) minutes before the scheduled close time of e-Reverse auction, if a price bid is received which is lower than the lowest prevailing price bid recorded in the system during e-Reverse auction, the close time of e- Reverse auction will be automatically extended by 10 (ten) minutes from the time of the last price bid received. This process of auto-extension will continue till there is a period of 10 (ten) minutes during which no price bid are received which is lower than the prevailing lowest price bid.

l. During the Reverse Auction the Bidders will have the option of reducing the tariff quoted by them in decrements of one paisa or multiples thereof and to increase the quantum quoted by them by 1 MW or multiples thereof. During the Reverse Auction the prevailing Lowest Tariff would be visible to all the Bidders.

m. The Bidders will have the option to increase the quantum of power upto corresponding to the value of EMD submitted along with IPO, but decrease the Tariff during the e-Reverse Auction process.

7. Contract Documents:-

BEST shall intimate to Bidder(s) regarding award of contract for supply of power (whose Bid has been accepted) through a Letter of Intent (LoI).

8. Compliance to the Terms & Conditions:-

The Bidders are advised to ensure that the Bid is fully compliant with the requirements specified and Terms and Conditions contained in the Bid Document. No deviation from these conditions is permissible and a Bid with any deviation shall be summarily rejected.

9. Earnest Money Deposit (EMD):-

a. The Bidder shall be required to submit EMD of Rs. 30,000 per MW per month (for 30 days, 24 hours and same shall be reduced on pro-rata basis) of offered capacity in the form of Bank Guarantee (Format Enclosed-**Annexure-III**) issued by any Nationalized/Scheduled Bank in favour of "The General Manager, Brihanmumbai Electric Supply & Transport Undertaking" payable at Mumbai, **valid till 15.03.2023**.

Example: For a requirement of 2 MW for 15 days for 4 hours, the EMD shall be = Rs. 30,000 x 2 MW x (15 days/30 days) x (4 hrs/24 hrs) = Rs. 5000/-

All costs/expenses/charges associated with the bidding, including bank guarantee etc. shall be borne by the Bidder. The validity of the EMD shall be extended by the Bidder if required by BEST.

BEST's bank details are as follows:

Name: BEST Undertaking

Account No.: 0106261008935

Name of Bank: Canara Bank

Branch name: Colaba

IFSC Code: CNRB0000106

b. The EMD shall be forfeited,

- If Bidder withdraws or modifies bid during Bid Validity Period.

- If Bidder fails to supply power after issue of Letter of Intent (LoI).
- Bidder failure in performing its contractual obligations.
- For Non submission of Contract Performance Guarantee by successful bidder.

c. The EMD of successful Bidder shall be released after submission of Contract Performance Guarantee as per Clause No. 10 below.

d. The EMD of unsuccessful bidder shall be released within 15 days from date of expiry of Bid validity period.

e. If it is observed that EMD of Bidder(s) has not been submitted or is less than the specified amount, the bid shall be rejected and Financial Bid submitted by such a Bidder shall not be opened.

No interest shall be paid on the Earnest Money Deposit.

10. Contract Performance Guarantee (CPG):-

a. Successful bidders are required to produce CPG within 7 days from date of Issue of Letter of Intent (LoI) to successful bidder for an amount of Rs 2 Lac per MW per Month (for 30 days, 24 hours) of contract period or part thereof. The CPG for the procurement of power on hourly basis shall be calculated on pro-rata basis as per the example given above for calculating EMD.

b. CPG to be issued by Nationalized/ Scheduled bank and valid for the period of contract and 1 month post expiry of contract. All costs/expenses/charges associated with CPG shall be borne by the Bidder. Refer Clause 9 above for BEST's bank details.

c. In case of CPG submission delay within stipulated period, Bid security i.e. EMD shall be forfeited.

d. CPG to be released after 30 days of completion of contract period.

e. The CPG provided by the successful bidder shall be forfeited for not performing the contractual obligations.

11. BEST's right- Acceptance/Rejection of Bid:-

This Bid document may be withdrawn or cancelled by BEST at any time without assigning any reasons thereof. BEST further reserves the right, at its complete discretion, to reject any or all of the Bids without assigning any reasons whatsoever and without incurring any liability on any account. The entire bidding process is subject to approval of Maharashtra Electricity Regulatory Commission.

12. Modification of the Bid Document:-

BEST reserves the right to modify any part of the Bid Document by issuing one or more amendments prior to the last date of submission of the Bid ("Amendment").

Any Amendment shall form part of the Bid Document, and shall be binding on bidders.

Any corrigendum/ clarifications with the Bid document and/or the Bidding process shall be published on the DEEP e-bidding portal only.

13. Bid Validity Period:-

The validity period of offer of Bidder shall be till **15.03.2023.**

14. Governing Law:-

All matters arising out of or in conjunction with the Bid Document and/or the bidding process shall be governed by and construed in accordance with Indian Law and the courts of Mumbai, Maharashtra shall have exclusive jurisdiction.

15. Condition Precedent:-

The Award of Contract i.e. Letter of Intent (LoI) is subject to approval, clearances, and permissions from all authorities i.e. Maharashtra State Electricity Regulatory Commission, RLDC / SLDCs etc.

16. Disclaimer:-

Neither BEST nor its employees or consultants shall be liable to any Bidder or any other person under any law including the law of contract, tort, the principles of restitution or unjust enrichment or otherwise for any loss, expense or damage which may arise, or be incurred, or suffered, in connection with the Bid, or any matter that may be deemed to form part of the Bid document or any other information supplied by or on behalf of BEST or its employees or consultants. For the avoidance of doubt it is expressly clarified that this Bid Document is an offer to Bid and is subject to the award of Letter of Intent (LoI) by BEST.

****

Annexure-I

General Terms and Conditions

1. Quantum:-

BEST invites bids for purchase of firm power under Short Term Open Access arrangement. The Bidder(s) shall supply power as mentioned below to BEST:

Requisition No.	Contract Period		Slot/ Time (Hrs.)			Quantum (in MW)	Minimum Bid Quantity (in MW)	Delivery Point
	From	To	From		To			
1.	01-Apr-23	30-Apr-23	00:00	To	24:00	50	20	Maharashtra STU Periphery
2.	01-Apr-23	30-Apr-23	09:00	To	18:00	75	20	Maharashtra STU Periphery
3.	01-May-23	31-May-23	00:00	To	24:00	50	20	Maharashtra STU Periphery
4.	01-May-23	31-May-23	09:00	To	18:00	100	20	Maharashtra STU Periphery
5.	01-Jun-23	30-Jun-23	00:00	To	24:00	50	20	Maharashtra STU Periphery
6.	01-Jun-23	30-Jun-23	09:00	To	18:00	75	20	Maharashtra STU Periphery
7.	01-Jul-23	31-Jul-23	09:00	To	18:00	40	20	Maharashtra STU Periphery
8.	01-Aug-23	31-Aug-23	09:00	To	18:00	50	20	Maharashtra STU Periphery
9.	01-Sept-23	30-Sept-23	09:00	To	18:00	50	20	Maharashtra STU Periphery
10.	01-Oct-23	31-Oct-23	00:00	To	24:00	50	20	Maharashtra STU Periphery
11.	01-Oct-23	31-Oct-23	09:00	To	18:00	100	20	Maharashtra STU Periphery

12.	01-Nov-23	30-Nov-23	09:00	To	18:00	40	20	Maharashtra STU Periphery
13.	01-Dec-23	31-Dec-23	09:00	To	18:00	75	20	Maharashtra STU Periphery
14.	01-Feb-24	29-Feb-24	09:00	To	18:00	50	20	Maharashtra STU Periphery
15.	01-Mar-24	31-Mar-24	09:00	To	18:00	50	20	Maharashtra STU Periphery

2. Delivery Point:-

The Interface of Transmission network of Maharashtra State (i.e. Maharashtra STU Periphery).

3. Open Access Charges, transmission Losses and other Charges:-

All Open Access charges i.e. Transmission charges & losses, POC injection /withdrawal charges and losses, reliability support charges, Scheduling & operating charges of RLDC/SLDC, RLDC application fee or any other charges/fees upto delivery point shall be borne by the Bidder. The Open Access charges beyond delivery point (i.e. Maharashtra State Scheduling charges and Application charges) shall also be borne by the Bidder. Any revision in these charges if become applicable after the submission of Bids shall be on account of the Bidder.

BEST is a Long-Term Transmission System user of Maharashtra State. Hence, Maharashtra State transmission (InSTS) charges and losses are not applicable. Therefore, bidders while quoting need not factor Maharashtra State Transmission charges and Losses.

BEST does not have any Interstate LTOA/MTOA contract. Same may be factor into while quoting tariff and during application for Open Access.

If the power is being supplied through alternate source, additional charges and losses if any, due to cancellation of existing corridor and booking of new corridor etc., shall be to the account of the Bidder.

In case of reduction or cancellation of open access schedule, the defaulting party will bear all open access charges thereof in accordance with MERC (Transmission Open Access) Regulations, 2016 / procedure for Scheduling of bilateral transaction by CTU dated 28.01.2008 and subsequent amendments from time to time.

4. Open Access and Scheduling:-

After receipt of Letter of Intent (LoI) for supply of power, the Bidder has to apply for booking of transmission corridor for full contracted quantum for contracted period of supply for which is issued and acknowledge the acceptance of the same. Any revision in contracted quantum by the Supplier will not be accepted. There will be no liability on payment for BEST to pay the excess energy supplied by the Supplier on its own accord.

The Bidder shall book for open access on firm basis upto delivery point in accordance with procedure of bilateral transaction based on CERC's Open Access Regulations, 2008/ MERC (Transmission Open Access) Regulations, 2016 with amendments from time to time. Any liability on account of open access or any clarification on open access upto and beyond the delivery point will not come under purview of BEST.

BEST shall have the right to surrender/cancel open access at any time due to any unforeseen circumstances. Bidder shall have to respond immediately on request from BEST and arrange to surrender/cancel open access.

Both BEST and the Bidder shall schedule this power in full except in case of Force Majeure. The scheduling and dispatch of the power shall be coordinated with respective RLDCs/SLDCs as per the relevant provisions of IEGC/State Grid Code Regulations, 2020, frame work of MERC's Deviation Settlement Mechanism (DSM) and decisions of RLDCs, SLDCs and RPCs.

Final Energy accounting shall be as per the REA/SEA issued by the concerned RLDC/RPC/SLDC.

5. Tariff:-

Bidder shall quote firm price (Rs./kWh) at delivery point for each contracted period mentioned in the bid document and shall be inclusive of capacity charges, variable charges, trading margin, all taxes, duties, levy, cess etc. imposed by Central/State governments / Statutory authorities, etc..

The Tariff shall not change during contractual period if any tax / duty / levy / cess / charges / fees become applicable after the submission of bids.

Bidder shall quote the single tariff at delivery point up to three decimals.

In case Bidder being trader, should ensure that trading margin charged should be as per norm of appropriate regulatory commission.

6. Supply from alternative sources:-

In case of failure of the generation source, Bidder shall have to supply power from alternative source(s) with intimation to BEST. The supply from the alternative source(s), if any, would be made at the same tariff at which supplier has contracted power with BEST. Any additional liability in supply of power from alternative source(s) shall be borne by the Bidder.

7. Billing Cycle:-

Bidder(s) shall raise Provisional weekly energy bills based on daily schedule issued by Maharashtra SLDC / WRLDC. The blockwise energy schedules shall be rounded off to nearest second decimal point. The Final bill to be issued based on the REA published by the WRPC for Inter-state power and SEA based on DSM issued by MSLDC for Intra-

state power. After receipt of REA of WRPC/ SEA statement of MSLDC, Final bill shall be raised by the Bidder for necessary adjustments.

8. Payment:-

Energy Bill:

BEST shall make payment to Bidder(s) in Bidder(s) bank account by RTGS within thirty (30) days from the receipt of correct bill, which will be the due date.

BEST will be eligible for prompt payment rebate @ 2% on energy bill amount, if the payment is made within seven (7) days (Excluding Sundays and Bank holidays) from the receipt of correct energy bill, through email/courier.

Compensation Bill:-

For any Compensation payable by BEST/Bidder, invoice shall be raised by Bidder/BEST as the case may be and payment shall be made within 30 days from the date of receipt of correct bill.

In case the due date falls on Sunday/ Bank holiday, then the next working day would be considered as due date. This is applicable to all above referred Bills.

Surcharge on delayed payment (if any) for all above Bills shall be as follows:

1.25% per month on all outstanding payments after the 30th day from the date of receipt of correct bill. The surcharge shall be calculated on a day-to-day basis for each day of the delay after due date.

9. Compensation Clause for failure to Supply/ Off-take the Quoted capacity:-

Both the parties would ensure that actual scheduling does not deviate by more than 15% of the contracted power as per the approved open access on monthly basis or actual period (if period is less than a month) during Contracted period.

Without prejudice to provision of force majeure, if Bidder fails to supply contracted quantum of energy as per approved open access on monthly basis in the Contracted period, Bidder shall pay compensation to BEST @ 20% of tariff per kWh for the quantum of energy that falls short beyond permitted deviation of 15 % in the Contracted period.

In case BEST defaults in off take of contracted quantum of energy as per approved open access on monthly basis in the Contracted period, BEST shall pay to Bidder @ 20% of tariff per kWh for the quantum of energy that falls short beyond permitted deviation of 15% in the Contracted period.

Allowable reduction in quantum of power, if required, shall be uniformly spread over the month as far as possible.

Compensation on account of shortfall in supply/Off-take will be settled separately on monthly basis and either party shall raise invoice to claim compensation. For any Compensation payable by BEST/Bidder as above, invoice shall be raised by Bidder/BEST as the case may be within 1st week after completion of the month and payment shall be made within 30 days from the date of receipt of invoice.

Bidder must apply for Open access for full contracted capacity. If the Bidder does not apply for open access for full quantity, then this would be treated as default in supply of power by the Bidder and compensation provision will apply.

In case the Bidder/Seller fails to offer the contracted power as per the Agreement to BEST and sells this power without BEST's consent to any other party, BEST shall be entitled to claim damages from the Bidder/Seller for an amount equal to the higher of : (a) twice the Tariff as per the PPA for the corresponding contracted power ; and (b) the entire sale revenue accrued from Third Parties on account of sale of this contracted power. These damages shall be in addition to Compensation as mentioned above, for failure to supply the contracted capacity.

Further a complaint to this effect will be made by BEST to the concerned load dispatch centre. The Bidder/Seller shall be debarred from participating in power exchanges and also from scheduling of this power in any short term/ medium term / long term contracts from that generating station for a period of three months from the establishment of default, in the complaint. The period of debarment shall increase to six months for second default and shall be one year for each successive default.

10. Force Majeure:

A "Force Majeure Event" shall mean any event or circumstance or combination of events or circumstances (not otherwise constituting an Indian political Event) that adversely affects, prevents or delays any party in the performance of its obligation in accordance with the terms of this Agreement, but only if and to the extent that (i) such events and circumstances are not within the reasonable control of the affected party, and (ii) such events or circumstances could not have been prevented through employment of Prudent Utility Practices.

Neither party shall be in breach of its obligations pursuant to this understanding to the extent that the performance of its obligation was prevented, hindered or delayed due to Force Majeure Event, and without in any way prejudicing the obligation of either Party to make payments of amounts accrued due prior to the occurrence of the event of Force Majeure, which shall be payable on the original Due Date.

Force Majeure Events shall mean the occurrence of any of the following events:-

a) Act of war, invasion, armed conflict, blockade, revolution, riot, insurrection or civil commotion, terrorism, sabotage, fire, explosion or criminal damage;
b) Act of God, including fire, lightning, cyclone, typhoon, flood, tidal wave, storm, earthquake, landslide, epidemic, pandemic or similar cataclysmic event;
c) Any curtailment/suspension/non-availability of transmission capacity by intervening SLDCs and/or RLDCs;
d) Any restriction imposed by any RLDCs;

e) Regulatory intervention in the matter of power trading as also orders from CERC/ SERCs/ Appellate Tribunal of Electricity/High Courts/ Supreme Court particularly related to rates at which power can be sold/ purchased/traded. This will also include regulations / orders already issued but yet to be conclusively enforced. Any directive by Government of Maharashtra not to export power outside Maharashtra state boundary.

11. Change in Law:-

Since the tender is invited for short term period at firm price, any variation in price due to any reasons what so ever, including change in Law, will not be applicable.

12. Details of the Bidder(s) (In case of the Bidder being a trading licensee):-

In case the Bidder is trading licensee, Agreement with the seller/generator shall be attached with the Bid.

13 Bid Validity:-

The validity period of offer of Bidder shall be till **15.03.2023.**

14 BEST's Rights:

BEST reserves its right to accept or reject any Offer whether fully or partially without assigning any reasons pursuant to this Bid. The Bidder on the other hand binds himself to sell power in part or whole at the option of the BEST.

15. Resolution of Dispute:-

Any dispute or differences arising under, out of, or in connection with this Bid document shall be subjected to exclusive jurisdiction of competent court at Mumbai only. In any event BEST shall not be responsible for any dispute between the Bidder (in case of bidder being the trading licensee) and the Generator.

16. Arbitration:

Subject to the statutory provisions for arbitration under the Electricity Act, 2003, all other differences or disputes between the parties arising out of or in connection with this Bid document shall be settled through Arbitration subject to the provisions of the Arbitration and Conciliation Act, 1996. The venue for Arbitration shall be at Mumbai.

Notwithstanding any legal dispute, disagreement or difference, the parties here to, continue to perform the respective obligations under the terms of this agreement.

17. Condition Precedent:-

The Letter of Intent (LoI) is subject to approval, clearances and permissions from all authorities i.e. Maharashtra Electricity Regulatory Commission (MERC), RLDC/ SLDCs.

18. Acceptance of Offer:-

BEST reserves the right to reject any or all the Bids without assigning any reasons what so ever. It is also not binding on BEST to disclose any analysis report on offers. Once the acceptance of the offer is conveyed, the Bidder(s) would be bound to supply the power as per the contract. BEST reserves the right to enter into Letter of Intent (LoI) with one or more of the Suppliers.

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Annexure-II

To be given on the official letter head of the Bidder

Acceptance of Terms and Conditions of Bid Document
(To be signed by the authorized person of the bidder)

We/I have carefully gone through the Bid Document No. ……..…….. dated……and satisfied ourselves/myself and hereby confirm that our/my offer strictly conforms to the requirements of the Bid Document and all the terms and conditions are acceptable to us.

Signature :-

Name :-

Status :-

Whether Authorized Yes/No

Power of Attorney of Bidding Company
Authorizing the signatory to sign the bid

Name & Seal of Bidding Company

Format of Covering Letter

(The covering letter should be on letter head of bidding company/ lead member of the bidding consortium)

Date……..

From…… (Insert Name and address of bidding company)
…….
Tel No :-
Fax:-
Email address :

To,
The General Manager,
The Brihanmumbai Electric Supply & Transport Undertaking,
BEST Bhavan, BEST Marg,
Post Box No. 192,
Mumbai- 400 001.

Sub: Bid for Purchase of power by BEST on short term Basis i.e. for the period from…….. to…….through e-Tender & e-Reverse Auction process in response to Bid Document No. ……. dated ……..

Dear Sir,

We, the undersigned, ……..(insert name of the bidder) having read, examined and understood in detail the Bid document for purchase of power by BEST on short term basis i.e. for the period from…….. to…….through E-tendering process hereby submit our bid.

a. We give unconditional acceptance to the Bid Document No…..……dated ……(insert date), attached thereto, issued by the BEST.
In token of our acceptance to the Bid Document, the same have been initiated by us and enclosed to the bid. We shall ensure provisions of the Bid Document shall be binding on us.

b. EMD:
We have enclosed the EMD of Rs…….(insert amount), in the form of Bank Guarantee dated …….. drawn on ……(insert name of Bank) and payable at Mumbai.
The offered quantum of power by us is ……MW(insert total capacity offered).

c. We have submitted our financial bid strictly as per Bid Document without any deviations, conditions and without mentioning any assumptions or notes for the financial bid in the said format.

d. Acceptance:-
We hereby unconditionally and irrevocably agree and accept that the decision made by the BEST in respect of any matter regarding or arising out of the Bid shall be binding on us. We hereby expressly waive any and all claim in respect of Bid process.

We confirm that there are no litigations or disputes against us, which materially affect our ability to fulfill our obligations with regard to supply of power.

e. Contact person:
Details of contact person are furnished as under:
Name ……
Designation……..
Company…….
Address…….
Phone Nos ……
Fax Nos……..
Email Address…….

f. It is confirm that our bid is consistent with all the requirements of submissions as stated in the Bid Document and subsequent communications from BEST.

g. The information submitted in our bid is complete, strictly as per the requirement stipulated in the Bid Document and is correct to the best of our knowledge and understanding. We would be solely responsible for any errors or omissions in our bid.

h. We confirm that all the terms and conditions of our Bid are valid for acceptance for a period of ……days from the bid deadline (i.e. till……..day of……2023).

i. We confirm that we have not taken any deviations so as to be deemed non responsive with respect to the provisions of this Bid Document.

Dated ……..day of……2023

Thanking You.

Your’s Faithfully,

(name , designation and signature of authorized person in whose name power of attorney/Board Resolution is issued by the Bidder)

Annexure-III

DRAFT FORMAT OF THE BANK GURANTEE FOR EMD

(The Bank Guarantee should be executed on a non-judicial stamp paper of appropriate value as per Stamp Act relevant to place of execution along with a Confirmatory Letter from the Regional office of the Bank concerned in enclosed format.)

To,
The General Manager,
The Brihanmumbai Electric Supply & Transport Undertaking,
BEST Bhavan, BEST Marg,
Post Box No. 192,
Mumbai- 400 001.

In consideration of _____ (name of Bidder to be inserted) agreeing to undertake the obligations under the terms and conditions of Bid Document No:_____ dated_____ signed by_____(name of bidder to be inserted) having its office at _____ .The_____ (Insert Guarantor Bank Name) having its registered office at _____ hereinafter referred to as "Guarantor Bank" hereby agrees unequivocally, irrevocably and unconditionally to pay to BEST Undertaking having its office at BEST Bhavan, BEST Marg, Mumbai-400001 forthwith on demand in writing from the General Manager, BEST Undertaking or any Officer authorized by it in this behalf, any amount up to and not exceeding Rupees_____ Only with respect to the offered Capacity of_____MW as per the terms and conditions of the Bid Document No. _____dated_____.

This guarantee shall be valid and binding on the Guarantor Bank upto and including_____(Insert date of validity of EMD) and shall in no event not be terminable by notice or any change in the constitution of the Bank or the term of the Bid Document No._____ dated_____ signed by_____ or by any other reasons whatsoever and our liability hereunder shall not be impaired or discharged by any extension of time or variations or alternations made, given, or agreed with or without our knowledge or consent, by or between parties to the respective agreement.

Our liability under this Guarantee is restricted to Rs._____(Rs._____/-) only. Our Guarantee shall remain in force until _____. BEST Undertaking shall be entitled to invoke this Guarantee up to _____, by issuance of a written demand to invoke this guarantee.

The Guarantor Bank hereby expressly agrees that it shall not require any proof in addition to the written demand from BEST Undertaking, made in any format, raised at the above mentioned address of the Guarantor Bank, in order to make the said payment to BEST Undertaking.

The Guarantor Bank shall make payment hereunder on first demand without restriction or conditions and notwithstanding any objection by_____ (name of Bidder to be inserted). The Guarantor Bank shall not require BEST Undertaking to justify the invocation of this BANK GUARANTEE, nor shall the Guarantor Bank have any recourse against the Procurer(s) in respect of any payment made hereunder.

The Guarantor Bank represents that this BANK GUARANTEE has been established in such form and with such content that it is fully enforceable in accordance with its terms as against the Guarantor Bank in the manner provided herein.

This BANK GUARANTEE shall not be affected in any manner by reason of merger, amalgamation, restructuring, liquidation, winding up, dissolution or any other change in the constitution of the Guarantor Bank.

This BANK GUARANTEE shall be a primary obligation of the Guarantor Bank and accordingly BEST Undertaking shall not be obliged before enforcing this BANK GUARANTEE to take any action in any court or arbitral proceedings against_____ (name of Bidder to be inserted)to make any claim against or any demand on the _____ (name of Bidder to be inserted)or to give any notice to or to enforce any security held by BEST Undertaking or to exercise, levy or enforce any distress, diligence or other process against_____(name of Bidder to be inserted).

The Guarantor Bank acknowledges that this BANK GUARANTEE is not personal to BEST Undertaking and may be assigned, in whole or in part, (whether absolutely or by way of security) by BEST Undertaking to any entity to whom it is entitled to assign its rights and obligations under the Bid document.

The Guarantor Bank hereby agrees and acknowledges that BEST Undertaking shall have a right to invoke this Bank Guarantee either in part or in full, as it may deem fit.

Notwithstanding anything contained hereinabove, our liability under this Guarantee is restricted to Rs._____ (Rs _____/-) only and it shall remain in force until_____.

This BANK GUARANTEE shall be extended from time to time for such period, as may be desired by_____ (name of Bidder to be inserted). We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only if BEST Undertaking serves upon us a written claim or demand.

This BANK GUARANTEE shall be interpreted in accordance with the laws of India and the courts at Mumbai shall have exclusive jurisdiction.

In witness whereof the Bank, through its authorized officer, has set its hand and stamp on his_____ day of_____ at_____.

Witness :-

(1) _____ The Duly Constituted Attorney
(Signature)
_____ _____
(Name of the witness) (Signature)
_____ _____
(Address of the witness) (Name & Designation of the person)

For _____
(Name of the Bank)

(2) _____
(Signature)
_____ _____
(Name of the witness) (Name of the Bidder)
_____
(Address of the witness)

The Bank and the said Messrs.
Witness: _____
_____
(Signature)
_____
(Name of the witness)
_____
(Address of the witness)

Sl.No.	Item Name	Quantity (UOM):	Description	Bidder Ref. No.	Booking Quantity	Booking Amount	Booking Time	Source of power / details of generating station from where power is intended to be supplied
1	1 (Maharashtra STU Periphery)	50.0(MW)	From 01.04.2023:00.00 to 30.04.2023:24.00	Mittal Processors Private Limited/75253	**25**	**7.85**	IPO 06/02/2023 15:37:17	LLOYDS METALS & ENERGY LTD., Chandrapur, Maharashtra
Bucket Filling								
Sl.No.	Bidder Ref. No.	Quantity	Price	Event Type				
1	Mittal Processors Private Limited/75253	25	7.85	IPO				
2	2 (Maharashtra STU Periphery)	75.0(MW)	From 01.04.2023:09.00 to 30.04.2023:18.00					
Bucket Filling								
Sl.No.	Bidder Ref. No.	Quantity	Price	Event Type				
3	3 (Maharashtra STU Periphery)	50.0(MW)	From 01.05.2023:00.00 to 31.05.2023:24.00	Mittal Processors Private Limited/75253	**25**	**7.85**	IPO 06/02/2023 15:37:17	LLOYDS METALS & ENERGY LTD., Chandrapur, Maharashtra
Bucket Filling								
Sl.No.	Bidder Ref. No.	Quantity	Price	Event Type				
1	Mittal Processors Private Limited/75253	25	7.85	IPO				

Sl.No.	Item Name	Quantity (UOM):	Description	Bidder Ref. No.	Booking Quantity	Booking Amount	Booking Time	Source of power / details of generating station from where power is intended to be supplied
4	4 (Maharashtra STU Periphery)	100.0(MW)	From 01.05.2023:09.00 to 31.05.2023:18.00					
Bucket Filling								
Sl.No.	Bidder Ref. No.	Quantity	Price	Event Type				
5	5 (Maharashtra STU Periphery)	50.0(MW)	From 01.06.2023:00.00 to 30.06.2023:24.00	Mittal Processors Private Limited/75253	**25**	**7.85**	IPO 06/02/2023 15:37:17	LLOYDS METALS & ENERGY LTD., Chandrapur, Maharashtra
Bucket Filling								
Sl.No.	Bidder Ref. No.	Quantity	Price	Event Type				
1	Mittal Processors Private Limited/75253	25	7.85	IPO				
6	6 (Maharashtra STU Periphery)	75.0(MW)	From 01.06.2023:09.00 to 30.06.2023:18.00					
Bucket Filling								
Sl.No.	Bidder Ref. No.	Quantity	Price	Event Type				
7	7 (Maharashtra STU Periphery)	40.0(MW)	From 01.07.2023:09.00 to 31.07.2023:18.00	Manikaran Power Limited/78172	**40**	**5.9**	09/02/2023 16:25	Dhariwal Infrastructure Limited (Unit 1 with installed Capacity 300 MW) Chandrapur, Maharashtra
				Ideal Energy Projects Limited/308568	**40**	**5.9**	09/02/2023 16:25	IDEAL ENERGY PROJECTS LTD (IEPL), BELA, TAH-UMRED, DIST-NAGPUR (IPP)
Bucket Filling								
Sl.No.	Bidder Ref. No.	Quantity	Price	Event Type				
1	Ideal Energy Projects Limited/308568	40	5.9	RA				

Sl.No.	Item Name	Quantity (UOM):	Description	Bidder Ref. No.	Booking Quantity	Booking Amount	Booking Time	Source of power / details of generating station from where power is intended to be supplied
8	8 (Maharashtra STU Periphery)	50.0(MW)	From 01.08.2023:09.00 to 31.08.2023:18.00	Ideal Energy Projects Limited/308568	**50**	**6.24**	09/02/2023 14:45	IDEAL ENERGY PROJECTS LTD (IEPL), BELA, TAH-UMRED, DIST-NAGPUR (IPP)
				Mittal Processors Private Limited/75253	**25**	**6.25**	09/02/2023 14:41	LLOYDS METALS & ENERGY LTD., Chandrapur, Maharashtra
				Manikaran Power Limited/78172	**50**	**6.45**	09/02/2023 14:25	Dhariwal Infrastructure Limited (Unit 1 with installed Capacity 300 MW) Chandrapur, Maharashtra
Bucket Filling								
Sl.No.	Bidder Ref. No.	Quantity	Price	Event Type				
1	Ideal Energy Projects Limited/308568	50	6.24	RA				
9	9 (Maharashtra STU Periphery)	50.0(MW)	From 01.09.2023:09.00 to 30.09.2023:18.00	Ideal Energy Projects Limited/308568	**50**	**5.99**	09/02/2023 15:20	IDEAL ENERGY PROJECTS LTD (IEPL), BELA, TAH-UMRED, DIST-NAGPUR (IPP)
				Mittal Processors Private Limited/75253	**25**	**6**	09/02/2023 15:18	LLOYDS METALS & ENERGY LTD., Chandrapur, Maharashtra
				Manikaran Power Limited/78172	**50**	**6.4**	09/02/2023 14:25	Dhariwal Infrastructure Limited (Unit 1 with installed Capacity 300 MW) Chandrapur, Maharashtra
Bucket Filling								
Sl.No.	Bidder Ref. No.	Quantity	Price	Event Type				
1	Ideal Energy Projects Limited/308568	50	5.99	RA				

Sl.No.	Item Name	Quantity (UOM):	Description	Bidder Ref. No.	Booking Quantity	Booking Amount	Booking Time	Source of power / details of generating station from where power is intended to be supplied
10	10 (Maharashtra STU Periphery)	50.0(MW)	From 01.10.2023:00.00 to 31.10.2023:24.00	Tata Power Trading Company Limited/74174	**25**	**7.84**	09/02/2023 13:47	Jindal India Thermal Power Limited (JITPL)
				Mittal Processors Private Limited/75253	**25**	**7.84**	09/02/2023 13:53	LLOYDS METALS & ENERGY LTD., Chandrapur, Maharashtra
Bucket Filling								
Sl.No.	Bidder Ref. No.	Quantity	Price	Event Type				
1	Tata Power Trading Company Limited/74174	25	7.84	RA				
2	Mittal Processors Private Limited/75253	25	7.84	RA				
11	11 (Maharashtra STU Periphery)	100.0(MW)	From 01.10.2023:09.00 to 31.10.2023:18.00	Manikaran Power Limited/78172	**63**	**8.48**	09/02/2023 13:53	Dhariwal Infrastructure Limited (Unit 1 with installed Capacity 300 MW) Chandrapur, Maharashtra
Bucket Filling								
Sl.No.	Bidder Ref. No.	Quantity	Price	Event Type				
1	Manikaran Power Limited/78172	63	8.48	RA				

Sl.No.	Item Name	Quantity (UOM):	Description	Bidder Ref. No.	Booking Quantity	Booking Amount	Booking Time	Source of power / details of generating station from where power is intended to be supplied
12	12 (Maharashtra STU Periphery)	40.0(MW)	From 01.11.2023:09.00 to 30.11.2023:18.00	Manikaran Power Limited/74144	**25**	**8**	09/02/2023 13:35	BLA Power Private Limited Unit-1, Village Niwari, PO Khursipar, Tehsil Gadarwara, Narsinghpur, Madhya Pradesh â‥ 487551
				Mittal Processors Private Limited/75253	**25**	**6.94**	IPO 06/02/2023 15:37:17	LLOYDS METALS & ENERGY LTD., Chandrapur, Maharashtra
				Manikaran Power Limited/78172	**20**	**8.49**	IPO 06/02/2023 15:41:23	Dhariwal Infrastructure Limited (Unit 1 with installed Capacity 300 MW) Chandrapur, Maharashtra
Bucket Filling								
Sl.No.	Bidder Ref. No.	Quantity	Price	Event Type				
1	Mittal Processors Private Limited/75253	25	6.94	IPO				
2	Manikaran Power Limited/74144	15	8	RA				
13	13 (Maharashtra STU Periphery)	75.0(MW)	From 01.12.2023:09.00 to 31.12.2023:18.00	Manikaran Power Limited/74144	**25**	**8**	09/02/2023 13:36	BLA Power Private Limited Unit-1, Village Niwari, PO Khursipar, Tehsil Gadarwara, Narsinghpur, Madhya Pradesh â‥ 487551
				Mittal Processors Private Limited/75253	**25**	**6.94**	IPO 06/02/2023 15:37:17	LLOYDS METALS & ENERGY LTD., Chandrapur, Maharashtra
Bucket Filling								
Sl.No.	Bidder Ref. No.	Quantity	Price	Event Type				
1	Mittal Processors Private Limited/75253	25	6.94	IPO				
2	Manikaran Power Limited/74144	25	8	RA				

Sl.No.	Item Name	Quantity (UOM):	Description	Bidder Ref. No.	Booking Quantity	Booking Amount	Booking Time	Source of power / details of generating station from where power is intended to be supplied
14	14 (Maharashtra STU Periphery)	50.0(MW)	From 01.02.2024:09.00 to 29.02.2024:18.00	Manikaran Power Limited/78172	**25**	**7.48**	09/02/2023 13:53	Dhariwal Infrastructure Limited (Unit 1 with installed Capacity 300 MW) Chandrapur, Maharashtra
				Manikaran Power Limited/74144	**25**	**8**	09/02/2023 13:36	BLA Power Private Limited Unit-1, Village Niwari, PO Khursipar, Tehsil Gadarwara, Narsinghpur, Madhya Pradesh â·· 487551
				Mittal Processors Private Limited/75253	**25**	**6.94**	IPO 06/02/2023 15:37:17	LLOYDS METALS & ENERGY LTD., Chandrapur, Maharashtra
Bucket Filling								
Sl.No.	Bidder Ref. No.	Quantity	Price	Event Type				
1	Mittal Processors Private Limited/75253	25	6.94	IPO				
2	Manikaran Power Limited/78172	25	7.48	RA				
15	15 (Maharashtra STU Periphery)	50.0(MW)	From 01.03.2024:09.00 to 31.03.2024:18.00	Manikaran Power Limited/78172	**25**	**7.99**	09/02/2023 13:57	Dhariwal Infrastructure Limited (Unit 1 with installed Capacity 300 MW) Chandrapur, Maharashtra
				Manikaran Power Limited/74144	**25**	**8**	09/02/2023 13:36	BLA Power Private Limited Unit-1, Village Niwari, PO Khursipar, Tehsil Gadarwara, Narsinghpur, Madhya Pradesh â·· 487551
				Mittal Processors Private Limited/75253	**25**	**6.94**	IPO 06/02/2023 15:37:17	LLOYDS METALS & ENERGY LTD., Chandrapur, Maharashtra
Bucket Filling								
Sl.No.	Bidder Ref. No.	Quantity	Price	Event Type				
1	Mittal Processors Private Limited/75253	25	6.94	IPO				
2	Manikaran Power Limited/78172	25	7.99	RA				

Sl.No.	Item Name	Quantity (UOM):	Description	Bidder Ref. No.	Booking Quantity	Booking Amount	Booking Time	Source of power / details of generating station from where power is intended to be supplied
Reverse Auction Participated Bidders Details								
Sl.No.	**Bidder Ref. No.**	**Company Name**	**Contact Person**	**Email**				
1	Manikaran Power Limited/74144	Manikaran Power Limited	JASMEET SINGH KALSI	nsk@manikaranpowerltd.in				
2	Tata Power Trading Company Limited/74174	Tata Power Trading Company Limited	SUMIT SACHDEV	tptclmarketing@tatapower.com				
3	Mittal Processors Private Limited/75253	Mittal Processors Private Limited	DARAPUREDDY SRI HARI	mukeshkumar@mittalsgroup.com				
4	Manikaran Power Limited/78172	Manikaran Power Limited	JASMEET SINGH KALSI	jsk@manikaranpowerltd.in				
5	Ideal Energy Projects Limited/308568	Ideal Energy Projects Limited	SANDIP VASANTRAO KAWALE	sandip.iepl@gmail.com				

Before the
MAHARASHTRA ELECTRICITY REGULATORY COMMISSION
World Trade Centre, Centre No.1, 13th Floor, Cuffe Parade, Mumbai 400005.
Tel. 022 22163964/65/69 Fax 22163976
Email: mercindia@merc.gov.in
Website: www.merc.gov.in

Case No. 37 of 2023
IA 24 of 2023 in Case No 37 of 2023

Case of Brihanmumbai Electric Supply and Transport Undertaking for the approval of tariff discovered through competitive bidding process for short term bilateral power purchase for the period from April, 2023 to March, 2024

Coram
Sanjay Kumar, Chairperson
I.M.Bohari, Member
Mukesh Khullar, Member

Brihanmumbai Electric Supply and Transport Undertaking: - Petitioner

Appearance
For Petitioner: - Shri. N.N Chougule (Rep)

ORDER

Date: 31 March, 2023

1. Brihanmumbai Electric Supply and Transport Undertaking(**BEST**) has filed this Case on 11 March, 2022 under Sections 63 of the Electricity Act, 2003(**EA, 2003**) read with Regulations 22 of MYT Tariff Regulations, 2019 for the approval of tariff discovered through competitive bidding process for short term bilateral power purchase for the period from April, 2023 to March, 2024.

2. **BEST's main prayers are as under:**

   a. *Hon'ble Commission may accord approval for short term power purchase quantum in replacement to the RE power which is not available for FY 2023-24.*

   b. *Hon'ble Commission may accord approval for short term bilateral power purchase of 199.74 Mus quantum for the period from April'2023 to March'2024 at average tariff of Rs 7.43/KWh discovered through competitive bidding process on DEEP*

portal undertaken by BEST for this;

c. *Hon'ble Commission may accord approval for acceptance of the external offer received from M/s IEPL to supply 25 MW RTC power at Rs 7.85/KWh for April, May and June-2023 which is in line with the tender results. After including this external power purchase of 54.6 Mus at Rs 7.85/unit from M/s IEPL, the estimated average rate of power purchase cost for total 254.34 MUs for the period from 01stApril'2023 to 31st March'2024 will be Rs.7.52/kWh.*

d. *Hon'ble Commission may accord approval for additional power procurement from short term sources including power exchanges for optimization of power purchase cost and meeting any other shortfall at the average rate of Rs 7.52/kWh for FY 2023-24;*

3. BEST has filed Miscellaneous Application in IA No 24 of 2023 for urgent hearing of the matter as the power flow is to be scheduled from April 2023 to ensure power availability during the ensuing summer period.

4. **BEST in its Petition has stated as follows:**

4.1 The Commission, vide its MYT Order in Case No. 324 of 2019 dated 30 March, 2020 has approved power procurement and cost of such procurement for FY 2023-24 from various sources, including Renewable power for BEST as below:

Particulars	MYT Petition			Approved in this Order		
	Quantum (MU)	Total Cost (Rs.Cr.)	Avg. Rate (Rs./kWh)	Quantum (MU)	Total Cost (Rs.Cr.)	Avg. Rate (Rs./kWh)
TPC-G	3,608.21	1,578.69	4.38	3443.90	1669.82	4.85
Walwahan solar Energy Maharashtra (Erstwhile Welsun)	31.50	26.96	8.56	31.5	26.96	8.56
Manikaran Power Limited (Medium term)	744.60	335.24	4.50	744.60	335.24	4.50
Solar Energy	423.00	139.17	3.29	417.12	120.96	2.90
Non-Solar Energy				505.87	145.19	2.87
Bilateral Power Purchase	390.56	156.23	4.00	-	-	-
REC Non-Solar	512.31	173.35	3.38		-	-
Standby Charges	-	102.64	-		97.66	
Transmission Charges	-	297.73	-		254.91	
MSLDC Charges	-	1.64	-		1.35	
Total Power Purchase	**5,197.87**	**2,811.63**	**5.41**	**5142.99**	**2652.08**	**5.16**

4.2 The Commission has considered the entire purchase towards Renewable Purchase Obligations (RPO) for FY 2023-24 through existing contracted Renewable Energy (RE) (solar) source and purchase of RE power from competitive bidding route. Having

considered the same and after considering quantum of power purchase through other BEST's Long/Medium term sources, the Commission has approved 'zero' quantum for power purchase from short term sources in FY 2023-24.

4.3 After approval of the Commission vide Order dated 26 April, 2021 in Case No. 16 of 2021, BEST has entered into PSA with Solar Energy Corporation of India (SECI) for procurement of 400 MW wind-solar hybrid power at tariff of Rs. 2.48 per unit discovered through competitive bidding for 25 years. Also BEST has entered into additional 234 MW standalone solar PSA with SECI after approval of the Commission vide Order dated 30 November, 2022 in Case No.120 of 2022 to meet the future obligation. The actual power flow from these projects is anticipated to commence only from December 2024 and June 2025 respectively. As such, quantum of RE energy through competitive bidding route, as approved by the Commission in MYT Order of BEST, will not be available in FY 2023-24.

4.4 BEST had floated two short term RE tenders on DEEP e-bidding Portal in the month of August 2022 and January 2023 to meet the RE Obligation for FY 2022-23 and FY 2023-24. There was no response from the bidders for these tenders.

4.5 As per its Long/Medium term PPA, the ex-bus availability at peak is 763 MW. BEST has allocation of 90 MW from TPC's Unit-7 (180 MW) gas based generating unit. In recent years, due to change in priority for the power sector, the allocation of Administered Price Mechanism (APM) gas to TPC's Trombay units from Gas Authority of India Limited (GAIL) has considerably reduced. This has resulted into lower generation from TPC's Unit-7 as seen from Plant Load Factor (PLF) of the plant in current fiscal year as tabulated below:

Month	Jan-22	Feb-22	Mar-22	Apr-22	May-22	June-22	July-22	Aug-22	Sept-22	Oct-22	Nov-22
PLF	19%	66%	44%	72%	47%	28%	7%	42%	21%	58%	13%

This generating unit during its service is operated on APM gas at average level of 110 MW. It is anticipated that the trend of lower generation from this generating unit may be likely to prevail in ensuing period due to lower APM gas availability and therefore, anticipated shortfall from this source to BEST will be around 45 MW.

4.6 TPC's Hydro resource is limited and is required to be used in the evening and night periods where the rates of power exchange are on higher side. Thus, during day peak, availability of hydro is low. Due to substantial increase in imported coal and foreign currency fluctuations, actual cost of coal based thermal generation from its contracted TPC's Unit-5 and Unit-8 has sharply increased. The Variable charge of these generating units, which was at Rs.3.31 per unit in January 2021 has now sharply shoot up to Rs. 8.58 per unit in January 2023. Further, prevailing geopolitical crises will have its further impact on prices of imported coal and natural gas in ensuing period.

4.7 After lifting of restrictions placed in Mumbai under Government of Maharashtra's Covid-19 guidelines, the economic activities have increased the electricity demand.

BEST's peak demand in current fiscal year is 890 MW in April 2022. The anticipated BEST's demand at day peak time will be approximately 880 MW during FY 2023-24. Hence, the realistic demand of three years is considered for projection. Details of pre-pandemic demand, actual demand of FY 2021-22, FY 2022-23 and projection for FY 2023-24 at T<>D in MW is as below:

Month/ Year	Pre-pandemic				Actual		Projected
	2017-18	**2018-19**	**2019-20**	**Average**	**2021-22**	**2022-23**	**2023-24**
April	858	897	862	872	692	890	**860**
May	916	912	873	900	658	843	**880**
June	917	939	927	928	685	866	**874**
July	817	789	812	806	716	745	**768**
Aug	809	785	799	797	696	765	**780**
Sept	879	809	786	824	692	773	**786**
Oct	869	893	851	871	779	807	**848**
Nov	758	809	791	786	761	712	**730**
Dec	713	720	760	731	652	744	**694**
Jan	707	636	672	671	614	634	**614**
Feb	752	664	712	709	616	-	**689**
March	832	794	747	791	773	-	**784**

4.8 The provisional transmission loss of 3.18 % is considered for grossing up the demand at G<>T. Accordingly, the estimated peak power demand projection and month-wise short term bilateral power requirement for April, 2023 to March, 2024 is as follows:

Projected peak Demand (FY2023-24)	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar
T<>D level in MW	860	880	874	768	780	786	848	730	694	614	689	784
G<>T level in MW	888	909	903	793	806	812	876	754	717	634	712	810
Total availability (in MW)	718	718	718	718	718	718	718	718	626	643	643	718
Shortfall(-) /Surplus (+) (in MW)	-170	-191	-185	-75	-88	-94	-158	-36	-91	9	-69	-92
Proposed procurement												
00:00 to 24:00 Hrs, RTC (in MW)	50	50	50	0	0	0	50	0	0	0	0	0
09:00 to 18:00 Hrs (in MW)	75	100	75	40	50	50	100	40	75	0	50	50
Estimated total Power requirement (in MU)	56.3	65.1	56.3	11.2	13.9	13.5	65.1	10.8	20.9	0	13.1	13.9
Total (MU)	340.04											

4.9 In event of increase in BEST's demand over the predicted demand or in case of lesser power availability from contracted sources or to optimize the overall power purchase cost, the additional power will be purchased through Power exchanges.

4.10 Considering volatility in the short-term power market, particularly during high demand season, it is necessary to tie-up bilateral contracts to ensure reliability to meet the anticipated demand in ensuing period. BEST has invited e-tender for bilateral power purchase quantum 40 MW to 150 MW for different time slots (00:00 to 24:00 hrs (RTC) and 09:00 to 18:00 hrs) for the period from April 2023 to March 2024 on Discovery of Efficient Electricity Price (DEEP) portal on 30 January 2023. The result of the bidding process is summarized below:

Sr. No.	Contract Period	Slot / Time (Hrs.)	BEST's Bid Quantum	Successful Bidder	Source	Allotted Quantum in MW	Discovered Rate in Rs./ kWh
1	01 To 30-Apr-23	00:00 To 24:00	50	Kreate Energy (I) Pvt Ltd (KEIPL)	LMEL, Chandrapur	25	7.85
2	01 To 30-Apr-23	09:00 To 18:00	75	-	-	-	-
3	01To 31-May-23	00:00 To 24:00	50	Kreate Energy (I) Pvt Ltd (KEIPL)	LMEL, Chandrapur	25	7.85
4	01 To 31-May-23	09:00 To 18:00	100	-	-	-	-
5	01 To 30-Jun-23	00:00 To 24:00	50	Kreate Energy (I) Pvt Ltd (KEIPL)	LMEL, Chandrapur	25	7.85
6	01 To 30-Jun-23	09:00 To 18:00	75	-	-	-	-
7	01 To 31-Jul-23	09:00 To 18:00	40	Ideal Energy Projects Ltd (IEPL)	Ideal Energy Projects Ltd, Nagpur	40	5.90
8	01 To 31-Aug-23	09:00 To 18:00	50	Ideal Energy Projects Ltd (IEPL)	Ideal Energy Projects Ltd, Nagpur	50	6.24
9	01 To 30-Sep-23	09:00 To 18:00	50	Ideal Energy Projects Ltd (IEPL)	Ideal Energy Projects Ltd, Nagpur	50	5.99
10	01 To 31-Oct-23	00:00 To 24:00	50	Tata Power Trading Company Ltd (TPTCL)	JITPL, Odisha	25	7.84
				Kreate Energy (I) Pvt Ltd (KEIPL)	LMEL, Chandrapur	25	7.84
11	01 To 31-Oct-23	09:00 To 18:00	100	Manikaran Power Ltd (MPL)	DIL, Chandrapur	63	8.48
12	01 To 30-Nov-23	09:00 To 18:00	40	Kreate Energy (I) Pvt Ltd (KEIPL)	LMEL, Chandrapur	25	6.94
				Manikaran Power Ltd (MPL)	BLAPPL, Madhya Pradesh	15	8.00
13	01 To 31-Dec-23	09:00 To 18:00	75	Kreate Energy (I) Pvt Ltd (KEIPL)	LMEL, Chandrapur	25	6.94
				Manikaran Power Ltd (MPL)	BLAPPL, Madhya Pradesh	25	8.00
14	01 To 29-Feb-24	09:00 To 18:00	50	Kreate Energy (I) Pvt Ltd (KEIPL)	LMEL, Chandrapur	25	6.94
				Manikaran Power Ltd (MPL)	DIL, Chandrapur	25	7.48
15	01To 31-Mar-24	09:00 To 18:00	50	Kreate Energy (I) Pvt Ltd (KEIPL)	LMEL, Chandrapur	25	6.94
				Manikaran Power Ltd (MPL)	DIL, Chandrapur	25	7.99

After considering discovered price and allocated quantity to successful bidder, the estimated average rate of power purchase cost for total 199.74 MU for the period from 01 April, 2023 to 31March, 2024 will be Rs.7.43 per unit.

4.11 The power requirement has been worked out by estimating the shortfall by considering all the contracted generation at its full capacity. This power will replace the RE power from SECI which was supposed to flow during FY23-24 and thus will help in meeting shortfall due to RE.

4.12 The average discovered rate of Rs 7.43 per unit is less than rates of TPC thermal units. Further it is less than the tariff of Rs 7.72 per unit adopted by the Commission in Case No 151 of 2022 for the period from August, 2022 to December, 2022. Also, the discovered price through above bidding is comparable with results of the bidding from April 2023 to October 2023 on DEEP portal by other Distribution Licensees.

4.13 Considering all above aspects, BEST intends to procure total allocated bid quantum at discovered price through competitive bidding for the period from April 2023 to March 2024 to ensure reliability of power supply during ensuing period. Accordingly, LoI has been issued to the successful bidders.

4.14 Further, in view of shortfall in the tender quantity on DEEP e-bidding portal, BEST has enquired with Trader/Generators who had participated in tender about additional availability with them. After issuance of LOI to the successful bidders, as per the rates discovered through DEEP portal, a generator M/s Ideal Energy Projects Limited (IEPL) has shown willingness to supply power by matching with the tender rate. The generator has offered 25 MW RTC power during the months of April, May & Jun 2023 at Rs 7.85 per unit. Details of the same are as follows:

Sr. No.	Contract Period	Slot / Time (Hrs.)	Shortfall in Bid Quantum	External offer	Total Quantum in MU	Offered Rate in Rs./ kWh
1	01-Apr-23 To 30-Apr-23	00:00 To 24:00	25	M/s Ideal energy projects limited	18	7.85
2	01-May-23 To 31-May-23	00:00 To 24:00	25	M/s Ideal energy projects limited	18.6	7.85
3	01-Jun-23 To 30-Jun-23	00:00 To 24:00	25	M/s Ideal energy projects limited	18	7.85
Total Mus					54.6	

4.15 It is observed that whenever rates touch the capping rate of Rs 12/kWh in power exchanges, partial or negligible quantum is cleared through DAM/RTM segments which results into overdrawal from the grid which subsequently affects grid security. Therefore, to ensure reliability of supply to Mumbai city, it is decided to accept the offer which in line with the results of DEEP e-bidding tender. LOI is being issued to the bidder (IEPL) with a condition of approval from the Commission.

4.16 After including this external power purchase of 54.6 MU at Rs 7.85/unit from M/s IEPL, the estimated average rate of power purchase cost for total 254.34 MU for the period from 01 April, 2023 to 31 March, 2024 will be Rs.7.52 per unit.

4.17 Under Intra-state Deviation Settlement Mechanism (DSM) framework, utility-wise decentralized scheduling of power is implemented. To optimize the power purchase cost by Discom, alternate cheaper power can be arranged in lieu of scheduling costly power from contracted generating units above its technical minimum level; keeping the view of overall grid security at the same time and as and when permitted by SLDC.

BEST is currently adopting this approach for scheduling of power and shall continue this approach in ensuing period to optimize its power purchase cost. This will considerably benefit the electricity consumers.

4.18 BEST's demand projection is not exceeding the previous peak demand. (Refer table at para.5 above). Thus, no additional transmission capacity is required for bringing the power in Mumbai. BEST pays Rs 257 Crores towards transmission charges (vide MERC Order No 327 of 2019). Accordingly, BEST's base transmission capacity right is 828 MW for FY 2023-24. During the month of April, 2022, the maximum Mumbai demand catered is 3851 MW. Out of this 2260 MW of demand was met through external sources outside Mumbai region.

4.19 As regards Mumbai tie-line, as per STU's submission with proposed addition in the transmission capacity, the total ATC for FY 2023-24 with reliability margin of 500 MW will be 3215 MW. The ATC allocation amongst all the discoms in proportion to Base TCR will ensure sufficient tie line capacity allocation to BEST for bringing the short-term power from outside Mumbai.

4.20 In view of above it is requested to adopt the tariff discovered through competitive bidding and approve short term power purchase.

5. During the E-hearing held on 23 March 2023, BEST reiterated their submissions made in the Petition and requested the Commission to approve proposed short term power procurement.

6. **BEST in its additional submission dated 24 March 2023 has stated as follows:**

6.1 E-bidding process was conducted on DEEP Portal and only eligible traders/Generators are allowed to participate on DEEP portal. M/s Kreate Energy (I) Private Limited (KEIPL), had confirmed that till date they hold a valid trading license and no regulatory commission had taken adverse action against them.

6.2 In view of shortfall in the tender quantum on DEEP e-bidding portal, BEST has enquired with Trader/Generators who had participated in tender about additional power availability with them to take advantage of lower discovered prices. IEPL has offered 25 MW RTC power during the months of April, May & Jun 23 at Rs 7.85 per unit which is discovered rate in tender on DEEP Portal for these respective months.

6.3 Another e-bid was floated on DEEP portal for the same time period and the rates discovered are much higher. The Comparative Statement is given below:

Month	New rates discovered for peaking power (09:00 to 18:00 hrs) in Rs/kWh	RTC rate of M/s IEPL as per old discovered rate in Rs/kWh
April'2023	10.25 to 10.70	7.85
May'2023	9.98 to 10.50	7.85
June'2023	8.98 to 10.50	7.85

6.4 As this power is a mandatory requirement for BEST, to avoid costly power from Power Exchange, to maintain grid security and to ensure reliability of supply to Mumbai city, BEST has decided to accept the offer from IEPL.

Commission's Analysis and Ruling:

7. Present petition has been filed by the BEST seeking approval for short-term power procurement for the period from April 2023 to March 2024 on account of anticipated shortfall and further seeking adoption of the tariff discovered through competitive bidding. BEST has also requested to approve the short-term power procurement of 25 MW for the period of April to June 2023 as an external offer received from the generator who is willing to match the rates discovered in the bidding process.

8. BEST in its Petition has summarised the reasons for such short-term power procurement. BEST while supporting the procurement stated that the Commission in the MYT Tariff Order amongst other sources has considered RE power through competitive bidding for FY 2023-24. However, as per actual schedule of tied up sources, the RE power will not be available in FY 2023-24. Further, BEST is anticipating reduction in supply for FY 2023-24 from gas based TPC Unit 7 on account of reduced availability of gas in the market and higher pricing for the same. Further increase in cost of imported coal has led to increase in variable cost of contracted sources. All these have necessitated BEST to optimise its power procurement cost. Therefore, considering the volatility in the market and to meet the anticipated demand, BEST has initiated the short-term power procurement. BEST has carried out the bidding on DEEP portal and requested the Commission to approve the same as per the provisions of MYT Regulations, 2019 and as per the MoP guidelines.

9. Considering the submissions made in the matter, the Commission frames following issues for its considerations:

   a. Provisions under which short term power procurement of Distribution Licensee requires approval of the Commission.

   b. Whether the quantum of additional short term power procurement proposed by BEST is justified??

   c. Whether the discovered tariff is consistent with the market trend?

   d. Whether PPA with IEPL for additional quantum which is based on offer outside bidding process can be allowed?

   The Commission is addressing these issues in following paragraphs.

10. **Issue A: - Provisions under which short term power procurement of Distribution Licensee requires approval of the Commission**.

10.1 The Commission notes the provisions under MYT Regulations, 2019 for the additional power procurement are as follows:

"22.1 The Distribution Licensee may undertake additional power procurement during the year, over and above the power procurement plan for the Control Period approved by the Commission, in accordance with this Regulation.

22.2 Where there has been an unanticipated increase in the demand for electricity or a shortfall or failure in the supply of electricity from any approved source of supply during the Year or when the sourcing of power from existing tied-up sources becomes costlier than other available alternative sources, the Distribution Licensee may enter into additional agreement or arrangement for procurement of power.

22.3 Any variation, during the first or second block of six months of a Year, in the quantum or cost of power procured, including from a source other than a previously approved source, that is expected to be in excess of five per cent of that approved by the Commission, shall require its prior approval:

Provided that the five per cent limit shall not apply to variation in the cost of power procured on account of changes in the price of fuel for own generation or the fixed or variable cost of power purchase that is allowed to be recovered in accordance with Regulation 10."

Thus, in cases where there is an anticipated shortfall in fulfilling the demand and to optimise the power purchase cost, licensee can procure additional power. Prior approval of the Commission is required if variation in quantum or cost is excess of five percent during the first or second block of six months of a Year.

10.2 Further Ministry of Power's Guidelines dated 30 March 2016 notified under Section 63 of the Electricity Act 2003 for short-term procurement of power by Distribution Licensees through tariff-based bidding process stipulate as follows:

"11.4 If the quantum of power procured and tariff determined are within the blanket approval granted by the Appropriate Commission in Annual Revenue Requirement (ARR) of the respective year, then the same will be considered to have been adopted by the Appropriate Commission.

In all other cases, the Procurer(s) shall submit a petition to the Appropriate Commission for adoption of tariff within 2 days from the date of signing of PPA. Appropriate Commission should communicate the decision within 7 days from the date of submission of petition."

Thus, if the quantum of power procured and the tariff determined are not within the blanket approval specified by the Commission in ARR/ Tariff Order, it necessitates the Commission to approve the additional power procurement and to adopt the tariff discovered through competitive bidding process.

10.3 The Commission notes the approved source wise quantum of power procurement for FY 2023-24 as per MYT Order in Case No 325 of 2019 is as follows:

Source	TPC-G	Walwahan Solar	Manikaran	Solar energy	Non solar Energy	Total
Quantum (MU)	3443.90	31.5	744.60	417.12	505.87	5142.99

As estimated power availability from other sources was sufficient to meet projected sales of BEST for FY 2023-24, the Commission has not included power from short term sources in above MYT Order. Therefore, rate for such short term power procurement is also not stated in MYT Order.

10.4 As explained in earlier paragraph, Distribution Licensees are allowed to procure power from short term sources for meeting shortfall in generation or increased demand. However, as rate for the same is not mentioned in the MYT Order, provision of Guidelines of Short-Term power procurement, as per which tariff discovered can be considered as deemed adopted if it is lower than rate approved in Tariff Order, does not become applicable here. Therefore, said Tariff discovered by the BEST for short term power procurement needs to be adopted by this Commission. Hence, prior approval of the Commission is required for proposed short term power procurement by BEST.

10.5 Having ruled as above, the Commission would like to clarify that under Muti Year Tariff frame work, BEST has already filed a Mid Term Review Petition seeking review of projections for FY 2023-24 to FY 2024-25 based on actual performance in past years. Said Petition is sub-judice before the Commission. When the Commission issues its Order on MTR Petition, approved power procurement mix and its tariff may undergo change for FY 2023-24 and FY 2024-25 wherein issue of non-availability of generation from RE sources will be addressed appropriately. But as power procurement proposed in present Petition is to be started from 1 April 2023 and some time period is required for completing procedural requirement, the Commission has decided to evaluate this petition based on approved parameters in MYT Order dated 30 March 2020.

11. **Issue B: - Whether the quantum of additional short term power procurement proposed by BEST is justified?**

11.1 The Commission notes that BEST has arrived at its demand projection based on realistic demand of the three years. BEST peak demand in the current year is 890 MW in April, 2022 and anticipated day time peak demand is projected to be 880 MW in FY 2023-24.

11.2 On supply side, BEST has considered all the contracted generation at its full capacity with its planned outages and non-availability of projected RE power. Further, BEST

has envisaged that due to lower availability of APM gas, power availability from TPC-G's Unit 7 would be lower than its allocated share. Also due to variation in the imported coal market, BEST has envisaged supply of costly power from TPC-G Unit 5 and Unit 8. Considering all these factors, BEST has worked out supply shortfall of 40 to 100 MW from April 2023 to March 2024 and proposed to meet such shortfall through short term power procurement.

11.3 The Commission notes that even with such additional short term power procurement, the total energy procurement in terms of 'MU' is within the level approved in MYT Order. This is mainly due to non-availability of power from RE sources as envisaged in MYT Order. BEST has taken efforts for short term RE procurement on DEEP portal in August, 2022 and January, 2023 but had not received any bid. Hence BEST needs to fulfil this gap from the other sources.

11.4 The Commission notes that proposed short term power procurement is within the total power procurement quantum approved in tariff Order. Further projected peak demand is not exceeding the previous year demand. Hence the issue of transmission constraints will not arise for such short-term power procurement.

11.5 Considering above, quantum of short-term power proposed by BEST from April, 2023 to March, 2024 is justified.

12. **Issue C: - Whether the discovered tariff is consistent with the market trend?**

12.1 The Commission notes that BEST has undertaken the short-term power procurement as per the competitive bidding guidelines of MoP dated 30 March, 2016 by floating the bid on DEEP portal on 30 January, 2023 for supply of 40 to 150 MW for various time slots for the period from April, 2023 to March, 2024. The weighted average tariff discovered in bidding process is Rs 7.43 per unit.

12.2 To assess the competitiveness of the tariff discovered by BEST in the present bidding the Commission has referred to recent discovered tariff on DEEP Portal by other Distribution Licensees in Maharashtra and same is tabulated below: -

Sr No	Particulars	Period	Availability	Quantum of Power in MW	Discovered rate in Rs/ kWh
1	TPC-D	1.4.2023 to 30.04.2023	RTC	50 MW	14
		1.05.2023 to 31.05.2023	RTC	50 MW	14
		1.06.2023 to 15.06.2023	RTC	50 MW	14
2	BEST	1.4.2023 to 30.04.2023	9:00 to 18:00	13MW	10.25
				50 MW	10.25
				50 MW	10.7
		1.05.2023 to 31.05.2023	9:00 to 18:00	13 MW	9.98
				50 MW	9.98
				10 MW	10
				50 MW	10.5
		1.06.2023 to 15.06.2023	9:00 to 18:00	13 MW	8.98
				50 MW	8.98
				10 MW	10.0

Sr No	Particulars	Period	Availability	Quantum of Power in MW	Discovered rate in Rs/ kWh
				50 MW	10.5
		1.10.2023 to 31.10.2023	9:00 to 18:00	37 MW	10.5
		1.12.2023 to 31.12.2023	9:00 to 18:00	25 MW	10.5

12.3 It is observed that BEST itself has received higher rates in the tenders floated for fulfilling the gap of the earlier tender. Also, the Commission in its Order in Case No 151 of 2022 has approved the tariff of Rs 7.72 per unit for the bilateral power purchase from August, 2022 to December, 2022. Present weighted average of discovered tariff of Rs 7.43 per unit is less than above approved rate.

12.4 At the same time, the Commission notes that at present the day ahead rates being discovered on Power Exchange is in the rage of Rs 4 to Rs 6 per unit which is much lower than discovered rate. But BEST has contended that in high demand season, rate on power exchange may vary and also there is no guarantee of clearing 100% of bid quantity. Hence, for ensuring reliable supply to its consumers, BEST has opted for short term power procurement on DEEP portal.

12.5 The Commission notes that BEST has carried out the process of procurement of Short-Term Power in accordance with Competitive Bidding Guidelines and tariff discovered is reflective of tariff being discovered on DEEP Portal.

12.6 Section 63 of the EA, 2003 mandates the Commission to adopt the tariff if such tariff has been determined through transparent process of bidding in accordance with the guidelines issued by the Central Government.

12.7 In view of the foregoing, the Commission notes that tariff discovered by BEST fulfils mandates and requirements for adoption as set out in Section 63 of the EA, 2003 and MYT Regulations, 2019. Accordingly, the Commission adopts Power Procurement with weighted average tariff of Rs 7.43 per unit and quantum for BEST undertaking for the period from April,2023 to March, 2024 as follows

Sr. No.	Contract Period	Slot / Time (Hrs.)	Successful Bidder	Source	Quantum (MW)	Tariff (Rs./ kWh)
1	01 To 30-Apr-23	00:00 To 24:00	Kreate Energy (I) Pvt Ltd (KEIPL)	LMEL, Chandrapur	25	7.85
2	01To 31-May-23	00:00 To 24:00	Kreate Energy (I) Pvt Ltd (KEIPL)	LMEL, Chandrapur	25	7.85
3	01 To 30-Jun-23	00:00 To 24:00	Kreate Energy (I) Pvt Ltd (KEIPL)	LMEL, Chandrapur	25	7.85
4	01 To 31-Jul-23	09:00 To 18:00	Ideal Energy Projects Ltd (IEPL)	Ideal Energy Projects Ltd, Nagpur	40	5.90
5	01 To 31-Aug-23	09:00 To 18:00	Ideal Energy Projects Ltd (IEPL)	Ideal Energy Projects Ltd, Nagpur	50	6.24
6	01 To 30-Sep-23	09:00 To 18:00	Ideal Energy Projects Ltd (IEPL)	Ideal Energy Projects Ltd, Nagpur	50	5.99
7	01 To 31-Oct-23	00:00 To 24:00	Tata Power Trading Company Ltd (TPTCL)	JITPL, Odisha	25	7.84

Sr. No.	Contract Period	Slot / Time (Hrs.)	Successful Bidder	Source	Quantum (MW)	Tariff (Rs./ kWh)
			Kreate Energy (I) Pvt Ltd (KEIPL)	LMEL, Chandrapur	25	7.84
8	01 To 31-Oct-23	09:00 To 18:00	Manikaran Power Ltd (MPL)	DIL, Chandrapur	63	8.48
9	01 To 30-Nov-23	09:00 To 18:00	Kreate Energy (I) Pvt Ltd (KEIPL)	LMEL, Chandrapur	25	6.94
			Manikaran Power Ltd (MPL)	BLAPPL, Madhya Pradesh	15	8.00
10	01 To 31-Dec-23	09:00 To 18:00	Kreate Energy (I) Pvt Ltd (KEIPL)	LMEL, Chandrapur	25	6.94
			Manikaran Power Ltd (MPL)	BLAPPL, Madhya Pradesh	25	8.00
11	01 To 29-Feb-24	09:00 To 18:00	Kreate Energy (I) Pvt Ltd (KEIPL)	LMEL, Chandrapur	25	6.94
			Manikaran Power Ltd (MPL)	DIL, Chandrapur	25	7.48
12	01To 31-Mar-24	09:00 To 18:00	Kreate Energy (I) Pvt Ltd (KEIPL)	LMEL, Chandrapur	25	6.94
			Manikaran Power Ltd (MPL)	DIL, Chandrapur	25	7.99

12.8 The Commission also notes that LOAs initialed with the successful bidders are in line with the Standard Bidding documents issued by MoP. Based on these submissions, the Commission approves the draft PPAs to be signed with above successful bidders at the tariff and for the quantum mentioned in above table in Para 11.5. BEST shall submit copies of final PPAs for records of the Commission.

12.9 Having allowed above power procurement, the Commission notes that in the past some of the Distribution Licensees in the State have suffered due to non-honouring of short Term PPA by Trader/Generator. BEST shall remain vigilant to avoid such incidences in future. It shall take all the necessary actions to avoid such situation considering the likelihood of a very tight demand supply situation during peak season.

13. **Issue d: Whether PPA with IEPL for additional quantum which is based on offer outside bidding process can be allowed ?**

13.1 BEST has submitted that in view of the shortfall in the tendering quantity on DEEP portal, it has enquired with the generators that participated in the tender about additional availability with them. In reply BEST has received offer from IEPL to supply 25 MW RTC power during April to June 2023 by matching the discovered rate of Rs. 7.85 per unit.

13.2 The Commission observes that IEPL in the original bidding process has quoted for the time blocks of 9:00 to 18:00 for the month of July 2023 (40MW @ Rs 5.90 per unit), August 2023 (50MW @ Rs 6.24 per unit) and September, 2023 (50 MW @ Rs 5.90 per unit) and has not quoted for any power to be supplied during April to June 2023. Hence, the said offer cannot be considered as part of bidding process.

13.3 BEST in its submission has itself called it as external offer but still has justified it for approval on the ground that it has not got required quantum of power during bidding process and IEPL has agreed to match discovered tariff which is lower than tariff discovered by the BEST in separate bidding process for same period.

13.4 In this regard, the Commission notes that its power to adopt tariff under Section 63 of the Electricity Act 2003 is limited to tariff discovered based on transparent competitive bidding process as per competitive bidding guidelines stipulated by the Govt. of India. Offer of IEPL, which is outside bidding process, cannot be considered as bid discovered as per competitive bidding guideline and hence the Commission cannot adopt such tariff submitted post bidding process.

13.5 In view of above, the Commission is rejecting the request of BEST for procurement of RTC power from IEPL which was not part of bidding process. For fulfilling its power requirement, if required, BEST may initiate fresh bidding process and IEPL can participate in the same which will be the correct process as envisaged under the Electricity Act, 2003.

14. BEST has also requested to allow procuring additional short term power from sources including power exchange for meeting demand of its consumers. In this regard, the Commission notes that Distribution Licensee needs to take all efforts to meet their consumer demand in most optimum manner. Therefore, BEST is free to procure additional power if required, from power exchanges or other short term sources as per competitive bidding guidelines and the Regulatory provisions governing such procurement.

15. Hence, following Order:

ORDER

1. **Case No. 37 of 2023 is partly allowed.**
2. **Under Section 63 of the Electricity Act, 2003, the Commission adopts Short Term Power Procurement for the period from April 2023 to March, 2024 by as Brihanmumbai Electric Supply and Transport Undertaking as stated in para 12.7 above.**
3. **Brihanmumbai Electric Supply and Transport Undertaking, to submit copies of Final PPAs to the Commission for records.**

Sd/-	**Sd/-**	**Sd/-**
(Mukesh Khullar)	**(I.B.Bohari)**	**(Sanjay Kumar)**
Member	**Member**	**Chairperson**

(Abhijit Deshpande)
Secretary

Free Press Journal

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The Brihanmumbai Electric Supply & Transport Undertaking
(OF THE BRIHANMUMBAI MAHANAGARPALIKA)

Notice Inviting e-Tender

Brihanmumbai Electric Supply & Transport Undertaking (BEST) invites bids for purchase of power on short term basis for the months April-2023, May-2023, June-2023, October-2023 and December-2023 through National e-bidding process.

The bid document for participation can be downloaded through DEEP e-portal of **www.mstcecommerce.com** from 10:00 hrs of 03.03.2023. Bids must be submitted online through this portal on or before 17:00 hrs of 11.03.2023. Any corrigendum will be published on the referred website only.

General Manager
BEST Undertaking

PRO/DEPM/192/2023

FPJ

Business Standard

31/3/2023

The Brihanmumbai Electric Supply & Transport Undertaking
(OF THE BRIHANMUMBAI MAHANAGARPALIKA)

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General Manager
BEST Undertaking

PRO/DEPM/192/2023

Business Standard 31/03/2023

THE BRIHANMUMBAI ELECTRIC SUPPLY AND TRANSPORT UNDERTAKING
(OF THE BRIHANMUMBAI MAHANAGAR PALIKA)

Tender No: BEST/Short/23-24/ET/11
(In Continuation with tender no. BEST/Short/23-24/ET/1)
&
BEST/Short/23-24/RA/11

Bid Document

For

Purchase of Short-term Bilateral Power

Through

E-Tendering and E-Reverse Auction Basis

By

Brihanmumbai Electric Supply & Transport Undertaking

Date: 10.03.2023

INVITATION FOR e-TENDER
No: BEST/Short/23-24/ET/11
(In Continuation with tender no. BEST/Short/23-24/ET/1)

Sr. No.	Event	Date/Time
1.	Publication of Bid Document/ Activation of Event	**10.03.2023 at 13:00 hrs.**
2.	Last date of submission of Bids including EMD	**13.03.2023 at 17:00 hrs.**
3.	Opening of Non-financial Technical Bids	**14.03.2023 at 10:00 hrs**
4.	Opening of IPOs	**15.03.2023 at 10:00 hrs**
5.	Start of e-Reverse Auction	**15.03.2023 at 12:00 hrs**

Bids to be submitted through	**DEEP e-bidding portal at www.mstcecommerce.com**
Office inviting Bids and place of submission of EMD	**Divisional Engineer,** **Power Management Department,** **BEST Undertaking,** **1st Floor, Multi-storied Building Annex.** **BEST Marg, Colaba, Mumbai-400001** **Tel:- 022-22799555** **e-mail:- depower@bestundertaking.com**

1. INTRODUCTION AND BACKGROUND:-

Brihanmumbai Electric Supply & Transport Undertaking, here in after referred to as the **"BEST",** a Distribution Licensee supplying electricity in the Mumbai City is inviting bids for procurement of power under Short Term arrangement for the month of April'2023, May'2023, June'2023, October'2023 and December'2023 to meet its demand as per Terms and Conditions of this Bid Document (**Annexure-I**).

Bids are invited from various Trading licensees / Generators / State Utilities / CPPs / Distribution licensees / SEBs for purchase of power. The power would be procured in line with" Guide lines for short-term (i.e. for a period of more than one day to one year) Procurement of Power by Distribution Licensees through Tariff based bidding process" issued by Government of India - Ministry of Power under Section 63 of the Electricity Act, 2003 and as amended from time to time. The responsibility of the

Successful Bidder(s) would be to supply power to BEST as per the Terms and Conditions of the Bid Document.

All the interested Bidders shall participate in the bidding process by downloading Bid Document from DEEP e-bidding Portal. The link of e-bidding Portal is **www.mstcecommerce.com**. Bidder needs to register on the e-bidding portal on MSTC website.

2. E-bidding FEE:-

All the Bidders would be able to participate in the e-bidding events on making payment of the requisite fees of Rs.500 per MW per requisition for the total capacity sought for that particular requisition for which a Bidder is willing to bid to PFC Consulting Limited (PFCCL). The requisite fee plus applicable taxes shall be deposited through the portal by e-Payment Gateway provided by MSTC Ltd. After the completion of the bidding process, only successful Bidder(s) will have to pay these charges for the quantum allocated to each Bidder. The balance amount will be refunded by PFCCL within seven (7) working days without any interest. The fee deposited by non-selected Bidder(s) will also be refunded by PFCCL within seven (7) working days of completion of the event without any interest.

3. Quantum of Power:-

BEST invites bids for purchase of firm power under Short Term Open Access arrangement for the month of April'2023, May'2023, June'2023, October'2023 and December'2023 from various sources. The Bidder(s) shall supply power as mentioned below to BEST:

Requisition No.	Contract Period		Slot/ Time (Hrs.)			Quantum (in MW)	Minimum Bid Quantity (in MW)	Delivery Point
	From	To	From		To			
1.	01-Apr-23	30-Apr-23	09:00	To	18:00	75	10	Maharashtra STU Periphery
2.	01-May-23	31-May-23	09:00	To	18:00	100	10	Maharashtra STU Periphery
3.	01-Jun-23	30-Jun-23	09:00	To	18:00	75	10	Maharashtra STU Periphery
4.	01-Oct-23	31-Oct-23	09:00	To	18:00	37	10	Maharashtra STU Periphery
5.	01-Dec-23	31-Dec-23	09:00	To	18:00	25	10	Maharashtra STU Periphery

The Bidder(s) should be capable to supply power to BEST during the contracted period at the delivery point, for which the responsibility will be of the Bidder(s). Bidder/s shall ensure necessary infrastructure/ground work in this regard, while participating in the Bid.

4. Qualification Criteria:-

a. All the Generators/State Utilities /CPPs /Distribution Licensees /SEBs and trading licensees having valid trading license from Appropriate Commission are qualified to participate in the bidding process.

b. The Bidder must quote not less than Minimum Bid Quantity, as mentioned in the table above, from single source of generation.

c. If Bidder being an electricity trading licensee, then the trader(s) should submit a valid license from CERC/SERC for Inter-state /Intra-state trading of electricity. The trader shall also attach a photocopy of the same along with the Bid.

5. Submission of Bid:-

The Bidders shall submit their Bids on-line, through DEEP e-bidding portal only.

A) Non-Financial Bid Comprising of:

a) Acceptance to Terms and Conditions of Bid document (**Annexure-II**).

b) Bid Security (EMD) in the form of Bank Guarantee issued by any Nationalized/Scheduled Bank.

c) Source from which Bidder shall supply power shall be mentioned.

d) In case Bidder is Trader, scanned copy of valid Trading license from appropriate Commission should also be provided.

e) Copy of the authorization received from the Generator (in case of trader).

f) Board resolution/Authorization for signing the Bid document.

B) Financial Bid:-

Bidders shall be required to submit separate Non-Financial Technical Bids and Financial Bids i.e. Initial Price Offer (IPO) as per the following time-table:-

Event	**Date and time**
Date of publication of Bid document / Activation of Event	**10.03.2023 at 13:00 hrs.**
Submission of Bid (online Digitally signed Non-Financial Technical bid & IPOs)	**13.03.2023 at 17:00 hrs.**
Opening of Non-Financial Technical Bids	**14.03.2023 at 10:00 hrs**
Clarification, if any, sought from bidders	**14.03.2023 at 17:00 hrs**
Opening of IPOs	**15.03.2023 at 10:00 hrs**
Start of e-Reverse Auction	**15.03.2023 at 12:00 hrs**
Submission of Application for Open Access	**As per Open Access procedure/regulations**
Approval and Obtaining SLDC consent by the seller/purchaser.	

Note: BEST may extend the timelines of Bid with intimation to all Bidders through DEEP e-bidding portal only.

The Bidders are required to upload scanned copy of the EMD along with the Bid and the original copy of EMD to be sent so as to reach the address as given below on or before **17:00 hrs of 13.03.2023**:

Divisional Engineer,
Power Management Department,
BEST Undertaking,
1st Floor, Multi-storied Building Annex.
BEST Marg, Colaba,
Mumbai-400001.
Tel:- 022-22799555

6. BIDDING PROCESS:-

a. The Bidder shall use one Digital Signature to submit bid through one login and for each e-bidding event shall comprise of two parts i.e. e-Tender and e-Reverse Auction. An event may have multiple requisitions (i.e. independent requirements of power at different time or places). To participate in the event, each Bidder will have to specify the source of power for that particular bid. Each bid will have only one

price per requisition accompanied by the total quantum of power the Bidder intends to supply and minimum threshold quantum acceptable to the Bidder. However, the Bidder shall have the option to choose the requisition of an event in which it intends to participate. Each of the Bids will have to be signed by the Digital signature of the Bidder.

b. Each login the bidder may submit only one price bid from one source. However, against each requisition the Bidder have the option to bid multiple bids from separate login either from same or different sources.

c. The Bidder shall quote the single tariff at delivery point up to three (3) decimals which shall include capacity charge, energy charge, trading margin (in case of Bidder being a Trader) and all taxes, duties, cess, levies etc. Open Access charges up to and beyond the delivery point shall be borne by the Bidder. The price quoted shall not change in case if any tax/ duty/ levy/cess/charges become applicable after the submission of Bids. The tariff should be constant and there shall be no escalation during the contractual period.

d. Each event of the auction would require independent Digital Signature of the Bidder.

e. Bidders shall be required to submit separate Non-Financial Technical Bid and Financial Bids i.e. Initial Price Offer (IPO) through e-bidding portal.

f. The Bidders can revise their IPOs before date and time of submission of Bid Document.

g. After acceptance of the Non-Financial Technical Bids, the Financial Bids shall be opened as per schedule given in event time table.

h. In the event, if two or more Bidders quote the same amount of Tariff during IPO and e-Reverse Auction stage, the time of submission of Bid will be the deciding factor for their ranking.

i. The elimination of the Bidders shall be done by the following method:

1) After the opening of Initial Price Offers, the system will rank the Bidders according to their price bids. The Bidder with the highest price bid in IPO stage will be called the H1 Bidder. The system will then analyze all the quantities offered by the Bidders in the IPO stage. If the total quoted quantity is greater than twice the Requisitioned Quantity, the Highest Bidder (H1) will be eliminated provided that the

total quoted quantity after elimination is not less than or equal to twice the Requisitioned Quantity.

2) The Elimination process will be done for each of the requisition separately.

3) The shortlisted Bidder after elimination will be intimated individually by system generated emails only.

j. The Reverse auction will start within 120 minutes of opening of Initial Price Offers and shall continue for a period of next 120 minutes.

k. Provided that during the last 10 (ten) minutes before the scheduled close time of e-Reverse auction, if a price bid is received which is lower than the lowest prevailing price bid recorded in the system during e-Reverse auction, the close time of e- Reverse auction will be automatically extended by 10 (ten) minutes from the time of the last price bid received. This process of auto-extension will continue till there is a period of 10 (ten) minutes during which no price bid are received which is lower than the prevailing lowest price bid.

l. During the Reverse Auction the Bidders will have the option of reducing the tariff quoted by them in decrements of one paisa or multiples thereof and to increase the quantum quoted by them by 1 MW or multiples thereof. During the Reverse Auction the prevailing Lowest Tariff would be visible to all the Bidders.

m. The Bidders will have the option to increase the quantum of power upto corresponding to the value of EMD submitted along with IPO, but decrease the Tariff during the e-Reverse Auction process.

7. Contract Documents:-

BEST shall intimate to Bidder(s) regarding award of contract for supply of power (whose Bid has been accepted) through a Letter of Intent (LoI).

8. Compliance to the Terms & Conditions:-

The Bidders are advised to ensure that the Bid is fully compliant with the requirements specified and Terms and Conditions contained in the Bid Document. No deviation from these conditions is permissible and a Bid with any deviation shall be summarily rejected.

9. Earnest Money Deposit (EMD):-

a. The Bidder shall be required to submit EMD of Rs. 30,000 per MW per month (for 30 days, 24 hours and same shall be reduced on pro-rata basis) of offered capacity in the form of Bank Guarantee (Format Enclosed-**Annexure-III**) issued by any Nationalized/Scheduled Bank in favour of "The General Manager, Brihanmumbai Electric Supply & Transport Undertaking" payable at Mumbai, **valid till 31.03.2023**.

Example: For a requirement of 2 MW for 15 days for 4 hours, the EMD shall be = Rs. 30,000 x 2 MW x (15 days/30 days) x (4 hrs/24 hrs) = Rs. 5000/-

All costs/expenses/charges associated with the bidding, including bank guarantee etc. shall be borne by the Bidder. The validity of the EMD shall be extended by the Bidder if required by BEST.

BEST's bank details are as follows:

Name: BEST Undertaking

Account No.: 0106261008935

Name of Bank: Canara Bank

Branch name: Colaba

IFSC Code: CNRB0000106

b. The EMD shall be forfeited,

- If Bidder withdraws or modifies bid during Bid Validity Period.
- If Bidder fails to supply power after issue of Letter of Intent (LoI).
- Bidder failure in performing its contractual obligations.
- For Non submission of Contract Performance Guarantee by successful bidder.

c. The EMD of successful Bidder shall be released after submission of Contract Performance Guarantee as per Clause No. 10 below.

d. The EMD of unsuccessful bidder shall be released within 15 days from date of expiry of Bid validity period.

e. If it is observed that EMD of Bidder(s) has not been submitted or is less than the specified amount, the bid shall be rejected and Financial Bid submitted by such a

Bidder shall not be opened.

No interest shall be paid on the Earnest Money Deposit.

10. Contract Performance Guarantee (CPG):-

a. Successful bidders are required to produce CPG within 7 days from date of Issue of Letter of Intent (LoI) to successful bidder for an amount of Rs 2 Lac per MW per Month (for 30 days, 24 hours) of contract period or part thereof. The CPG for the procurement of power on hourly basis shall be calculated on pro-rata basis as per the example given above for calculating EMD.

b. CPG to be issued by Nationalized/ Scheduled bank and valid for the period of contract and 1 month post expiry of contract. All costs/expenses/charges associated with CPG shall be borne by the Bidder. Refer Clause 9 above for BEST's bank details.

c. In case of CPG submission delay within stipulated period, Bid security i.e. EMD shall be forfeited.

d. CPG to be released after 30 days of completion of contract period.

e. The CPG provided by the successful bidder shall be forfeited for not performing the contractual obligations.

11. BEST's right- Acceptance/Rejection of Bid:-

This Bid document may be withdrawn or cancelled by BEST at any time without assigning any reasons thereof. BEST further reserves the right, at its complete discretion, to reject any or all of the Bids without assigning any reasons whatsoever and without incurring any liability on any account. The entire bidding process is subject to approval of Maharashtra Electricity Regulatory Commission.

12. Modification of the Bid Document:-

BEST reserves the right to modify any part of the Bid Document by issuing one or more amendments prior to the last date of submission of the Bid ("Amendment").

Any Amendment shall form part of the Bid Document, and shall be binding on bidders.

Any corrigendum/ clarifications with the Bid document and/or the Bidding process shall be published on the DEEP e-bidding portal only.

13. Bid Validity Period:-

The validity period of offer of Bidder shall be till **31.03.2023.**

14. Governing Law:-

All matters arising out of or in conjunction with the Bid Document and/or the bidding process shall be governed by and construed in accordance with Indian Law and the courts of Mumbai, Maharashtra shall have exclusive jurisdiction.

15. Condition Precedent:-

The Award of Contract i.e. Letter of Intent (LoI) is subject to approval, clearances, and permissions from all authorities i.e. Maharashtra State Electricity Regulatory Commission, RLDC / SLDCs etc.

16. Disclaimer:-

Neither BEST nor its employees or consultants shall be liable to any Bidder or any other person under any law including the law of contract, tort, the principles of restitution or unjust enrichment or otherwise for any loss, expense or damage which may arise, or be incurred, or suffered, in connection with the Bid, or any matter that may be deemed to form part of the Bid document or any other information supplied by or on behalf of BEST or its employees or consultants. For the avoidance of doubt it is expressly clarified that this Bid Document is an offer to Bid and is subject to the award of Letter of Intent (LoI) by BEST.

****

Annexure-I

General Terms and Conditions

1. Quantum:-

BEST invites bids for purchase of firm power under Short Term Open Access arrangement. The Bidder(s) shall supply power as mentioned below to BEST:

Requisition No.	Contract Period		Slot/ Time (Hrs.)			Quantum (in MW)	Minimum Bid Quantity (in MW)	Delivery Point
	From	To	From		To			
1.	01-Apr-23	30-Apr-23	09:00	To	18:00	75	10	Maharashtra STU Periphery
2.	01-May-23	31-May-23	09:00	To	18:00	100	10	Maharashtra STU Periphery
3.	01-Jun-23	30-Jun-23	09:00	To	18:00	75	10	Maharashtra STU Periphery
4.	01-Oct-23	31-Oct-23	09:00	To	18:00	37	10	Maharashtra STU Periphery
5.	01-Dec-23	31-Dec-23	09:00	To	18:00	25	10	Maharashtra STU Periphery

2. Delivery Point:-

The Interface of Transmission network of Maharashtra State (i.e. Maharashtra STU Periphery).

3. Open Access Charges, transmission Losses and other Charges:-

All Open Access charges i.e. Transmission charges & losses, POC injection /withdrawal charges and losses, reliability support charges, Scheduling & operating charges of RLDC/SLDC, RLDC application fee or any other charges/fees upto delivery point shall be borne by the Bidder. The Open Access charges beyond delivery point (i.e. Maharashtra State Scheduling charges and Application charges) shall also be borne by the Bidder. Any revision in these charges if become applicable after the submission of Bids shall be on account of the Bidder.

BEST is a Long-Term Transmission System user of Maharashtra State. Hence, Maharashtra State transmission (InSTS) charges and losses are not applicable. Therefore, bidders while quoting need not factor Maharashtra State

Transmission charges and Losses.

BEST does not have any Interstate LTOA/MTOA contract. Same may be factor into while quoting tariff and during application for Open Access.

If the power is being supplied through alternate source, additional charges and losses if any, due to cancellation of existing corridor and booking of new corridor etc., shall be to the account of the Bidder.

In case of reduction or cancellation of open access schedule, the defaulting party will bear all open access charges thereof in accordance with MERC (Transmission Open Access) Regulations, 2016 / procedure for Scheduling of bilateral transaction by CTU dated 28.01.2008 and subsequent amendments from time to time.

4. Open Access and Scheduling:-

After receipt of Letter of Intent (LoI) for supply of power, the Bidder has to apply for booking of transmission corridor for full contracted quantum for contracted period of supply for which is issued and acknowledge the acceptance of the same. Any revision in contracted quantum by the Supplier will not be accepted. There will be no liability on payment for BEST to pay the excess energy supplied by the Supplier on its own accord.

The Bidder shall book for open access on firm basis upto delivery point in accordance with procedure of bilateral transaction based on CERC's Open Access Regulations, 2008/ MERC (Transmission Open Access) Regulations, 2016 with amendments from time to time. Any liability on account of open access or any clarification on open access upto and beyond the delivery point will not come under purview of BEST.

BEST shall have the right to surrender/cancel open access at any time due to any unforeseen circumstances. Bidder shall have to respond immediately on request from BEST and arrange to surrender/cancel open access.

Both BEST and the Bidder shall schedule this power in full except in case of Force Majeure. The scheduling and dispatch of the power shall be coordinated with

respective RLDCs/SLDCs as per the relevant provisions of IEGC/State Grid Code Regulations, 2020, frame work of MERC's Deviation Settlement Mechanism (DSM) and decisions of RLDCs, SLDCs and RPCs.

Final Energy accounting shall be as per the REA/SEA issued by the concerned RLDC/RPC/SLDC.

5. Tariff:-

Bidder shall quote firm price (Rs./kWh) at delivery point for each contracted period mentioned in the bid document and shall be inclusive of capacity charges, variable charges, trading margin, all taxes, duties, levy, cess etc. imposed by Central/State governments / Statutory authorities, etc..

The Tariff shall not change during contractual period if any tax / duty / levy / cess / charges / fees become applicable after the submission of bids.

Bidder shall quote the single tariff at delivery point up to three decimals.

In case Bidder being trader, should ensure that trading margin charged should be as per norm of appropriate regulatory commission.

6. Supply from alternative sources:-

In case of failure of the generation source, Bidder shall have to supply power from alternative source(s) with intimation to BEST. The supply from the alternative source(s), if any, would be made at the same tariff at which supplier has contracted power with BEST. Any additional liability in supply of power from alternative source(s) shall be borne by the Bidder.

7. Billing Cycle:-

Bidder(s) shall raise Provisional weekly energy bills based on daily schedule issued by Maharashtra SLDC / WRLDC. The blockwise energy schedules shall be rounded off to nearest second decimal point. The Final bill to be issued based on the REA published by the WRPC for Inter-state power and SEA based on DSM issued by

MSLDC for Intra-state power. After receipt of REA of WRPC/ SEA statement of MSLDC, Final bill shall be raised by the Bidder for necessary adjustments.

8. Payment:-

Energy Bill:

BEST shall make payment to Bidder(s) in Bidder(s) bank account by RTGS within thirty (30) days from the receipt of correct bill, which will be the due date.

BEST will be eligible for prompt payment rebate @ 2% on energy bill amount, if the payment is made within seven (7) days (Excluding Sundays and Bank holidays) from the receipt of correct energy bill, through email/courier.

Compensation Bill:-

For any Compensation payable by BEST/Bidder, invoice shall be raised by Bidder/BEST as the case may be and payment shall be made within 30 days from the date of receipt of correct bill.

In case the due date falls on Sunday/ Bank holiday, then the next working day would be considered as due date. This is applicable to all above referred Bills.

Surcharge on delayed payment (if any) for all above Bills shall be as follows:

1.25% per month on all outstanding payments after the 30th day from the date of receipt of correct bill. The surcharge shall be calculated on a day-to-day basis for each day of the delay after due date.

9. Compensation Clause for failure to Supply/ Off-take the Quoted capacity:-

Both the parties would ensure that actual scheduling does not deviate by more than 15% of the contracted power as per the approved open access on monthly basis or actual period (if period is less than a month) during Contracted period.

Without prejudice to provision of force majeure, if Bidder fails to supply contracted quantum of energy as per approved open access on monthly basis in the Contracted

period, Bidder shall pay compensation to BEST @ 20% of tariff per kWh for the quantum of energy that falls short beyond permitted deviation of 15 % in the Contracted period.

In case BEST defaults in off take of contracted quantum of energy as per approved open access on monthly basis in the Contracted period, BEST shall pay to Bidder @ 20% of tariff per kWh for the quantum of energy that falls short beyond permitted deviation of 15% in the Contracted period.

Allowable reduction in quantum of power, if required, shall be uniformly spread over the month as far as possible.

Compensation on account of shortfall in supply/Off-take will be settled separately on monthly basis and either party shall raise invoice to claim compensation. For any Compensation payable by BEST/Bidder as above, invoice shall be raised by Bidder/BEST as the case may be within 1st week after completion of the month and payment shall be made within 30 days from the date of receipt of invoice.

Bidder must apply for Open access for full contracted capacity. If the Bidder does not apply for open access for full quantity, then this would be treated as default in supply of power by the Bidder and compensation provision will apply.

In case the Bidder/Seller fails to offer the contracted power as per the Agreement to BEST and sells this power without BEST's consent to any other party, BEST shall be entitled to claim damages from the Bidder/Seller for an amount equal to the higher of : (a) twice the Tariff as per the PPA for the corresponding contracted power ; and (b) the entire sale revenue accrued from Third Parties on account of sale of this contracted power. These damages shall be in addition to Compensation as mentioned above, for failure to supply the contracted capacity.

Further a complaint to this effect will be made by BEST to the concerned load dispatch centre. The Bidder/Seller shall be debarred from participating in power exchanges and also from scheduling of this power in any short term/ medium term / long term contracts from that generating station for a period of three months from the

establishment of default, in the complaint. The period of debarment shall increase to six months for second default and shall be one year for each successive default.

10. Force Majeure:

A "Force Majeure Event" shall mean any event or circumstance or combination of events or circumstances (not otherwise constituting an Indian political Event) that adversely affects, prevents or delays any party in the performance of its obligation in accordance with the terms of this Agreement, but only if and to the extent that (i) such events and circumstances are not within the reasonable control of the affected party, and (ii) such events or circumstances could not have been prevented through employment of Prudent Utility Practices.

Neither party shall be in breach of its obligations pursuant to this understanding to the extent that the performance of its obligation was prevented, hindered or delayed due to Force Majeure Event, and without in any way prejudicing the obligation of either Party to make payments of amounts accrued due prior to the occurrence of the event of Force Majeure, which shall be payable on the original Due Date.

Force Majeure Events shall mean the occurrence of any of the following events:-

a) Act of war, invasion, armed conflict, blockade, revolution, riot, insurrection or civil commotion, terrorism, sabotage, fire, explosion or criminal damage;

b) Act of God, including fire, lightning, cyclone, typhoon, flood, tidal wave, storm, earthquake, landslide, epidemic, pandemic or similar cataclysmic event;

c) Any curtailment/suspension/non-availability of transmission capacity by intervening SLDCs and/or RLDCs;

d) Any restriction imposed by any RLDCs;

e) Regulatory intervention in the matter of power trading as also orders from CERC/ SERCs/ Appellate Tribunal of Electricity/High Courts/ Supreme Court particularly related to rates at which power can be sold/ purchased/traded. This will also include regulations / orders already issued but yet to be conclusively enforced. Any directive by Government of Maharashtra not to export power outside Maharashtra state boundary.

11. Change in Law:-

Since the tender is invited for short term period at firm price, any variation in price due to any reasons what so ever, including change in Law, will not be applicable.

12. Details of the Bidder(s) (In case of the Bidder being a trading licensee):-

In case the Bidder is trading licensee, Agreement with the seller/generator shall be attached with the Bid.

13 Bid Validity:-

The validity period of offer of Bidder shall be till **31.03.2023.**

14 BEST's Rights:

BEST reserves its right to accept or reject any Offer whether fully or partially without assigning any reasons pursuant to this Bid. The Bidder on the other hand binds himself to sell power in part or whole at the option of the BEST.

15. Resolution of Dispute:-

Any dispute or differences arising under, out of, or in connection with this Bid document shall be subjected to exclusive jurisdiction of competent court at Mumbai only. In any event BEST shall not be responsible for any dispute between the Bidder (in case of bidder being the trading licensee) and the Generator.

16. Arbitration:

Subject to the statutory provisions for arbitration under the Electricity Act, 2003, all other differences or disputes between the parties arising out of or in connection with this Bid document shall be settled through Arbitration subject to the provisions of the Arbitration and Conciliation Act, 1996. The venue for Arbitration shall be at Mumbai. Notwithstanding any legal dispute, disagreement or difference, the parties here to, continue to perform the respective obligations under the terms of this agreement.

17. Condition Precedent:-

The Letter of Intent (LoI) is subject to approval, clearances and permissions from all authorities i.e. Maharashtra Electricity Regulatory Commission (MERC), RLDC/ SLDCs.

18. Acceptance of Offer:-

BEST reserves the right to reject any or all the Bids without assigning any reasons what so ever. It is also not binding on BEST to disclose any analysis report on offers. Once the acceptance of the offer is conveyed, the Bidder(s) would be bound to supply the power as per the contract. BEST reserves the right to enter into Letter of Intent (LoI) with one or more of the Suppliers.

****

Annexure-II

To be given on the official letter head of the Bidder

Acceptance of Terms and Conditions of Bid Document
(To be signed by the authorized person of the bidder)

We/I have carefully gone through the Bid Document No. ……..…….. dated…….and satisfied ourselves/myself and hereby confirm that our/my offer strictly conforms to the requirements of the Bid Document and all the terms and conditions are acceptable to us.

Signature :-

Name :-

Status :-

Whether Authorized Yes/No

Power of Attorney of Bidding Company
Authorizing the signatory to sign the bid

Name & Seal of Bidding Company

Format of Covering Letter

(The covering letter should be on letter head of bidding company/ lead member of the bidding consortium)

Date……..

From…… (Insert Name and address of bidding company)
…….
Tel No :-
Fax:-
Email address :

To,
The General Manager,
The Brihanmumbai Electric Supply & Transport Undertaking,
BEST Bhavan, BEST Marg,
Post Box No. 192,
Mumbai- 400 001.

Sub: Bid for Purchase of power by BEST on short term Basis i.e. for the period from…….. to…….through e-Tender & e-Reverse Auction process in response to Bid Document No. ……. dated ……..

Dear Sir,

We, the undersigned, ……..(insert name of the bidder) having read, examined and understood in detail the Bid document for purchase of power by BEST on short term basis i.e. for the period from…….. to…….through E-tendering process hereby submit our bid.

a. We give unconditional acceptance to the Bid Document No…..……dated ……(insert date), attached thereto, issued by the BEST.
In token of our acceptance to the Bid Document, the same have been initiated by us and enclosed to the bid. We shall ensure provisions of the Bid Document shall be binding on us.

b. EMD:
We have enclosed the EMD of Rs…….(insert amount), in the form of Bank Guarantee dated …….. drawn on ……(insert name of Bank) and payable at Mumbai.
The offered quantum of power by us is ……MW(insert total capacity offered).

c. We have submitted our financial bid strictly as per Bid Document without any deviations, conditions and without mentioning any assumptions or notes for the financial bid in the said format.

d. Acceptance:-

We hereby unconditionally and irrevocably agree and accept that the decision made by the BEST in respect of any matter regarding or arising out of the Bid shall be binding on us. We hereby expressly waive any and all claim in respect of Bid process.

We confirm that there are no litigations or disputes against us, which materially affect our ability to fulfill our obligations with regard to supply of power.

e. Contact person:

Details of contact person are furnished as under:
Name ……
Designation……..
Company…….
Address…….
Phone Nos ……
Fax Nos……..
Email Address…….

f. It is confirm that our bid is consistent with all the requirements of submissions as stated in the Bid Document and subsequent communications from BEST.

g. The information submitted in our bid is complete, strictly as per the requirement stipulated in the Bid Document and is correct to the best of our knowledge and understanding. We would be solely responsible for any errors or omissions in our bid.

h. We confirm that all the terms and conditions of our Bid are valid for acceptance for a period of ……days from the bid deadline (i.e. till……..day of……2023).

i. We confirm that we have not taken any deviations so as to be deemed non responsive with respect to the provisions of this Bid Document.

Dated ……..day of……2023

Thanking You.

Your's Faithfully,

(name , designation and signature of authorized person in whose name power of attorney/Board Resolution is issued by the Bidder)

Annexure-III

DRAFT FORMAT OF THE BANK GURANTEE FOR EMD

(The Bank Guarantee should be executed on a non-judicial stamp paper of appropriate value as per Stamp Act relevant to place of execution along with a Confirmatory Letter from the Regional office of the Bank concerned in enclosed format.)

To,
The General Manager,
The Brihanmumbai Electric Supply & Transport Undertaking,
BEST Bhavan, BEST Marg,
Post Box No. 192,
Mumbai- 400 001.

In consideration of _____ (name of Bidder to be inserted) agreeing to undertake the obligations under the terms and conditions of Bid Document No:_____ dated_____ signed by_____(name of bidder to be inserted) having its office at _____ .The_____ (Insert Guarantor Bank Name) having its registered office at _____ hereinafter referred to as "Guarantor Bank" hereby agrees unequivocally, irrevocably and unconditionally to pay to BEST Undertaking having its office at BEST Bhavan, BEST Marg, Mumbai-400001 forthwith on demand in writing from the General Manager, BEST Undertaking or any Officer authorized by it in this behalf, any amount up to and not exceeding Rupees_____ Only with respect to the offered Capacity of_____MW as per the terms and conditions of the Bid Document No. _____dated_____.

This guarantee shall be valid and binding on the Guarantor Bank upto and including_____(Insert date of validity of EMD) and shall in no event not be terminable by notice or any change in the constitution of the Bank or the term of the Bid Document No._____ dated_____ signed by_____ or by any other reasons whatsoever and our liability hereunder shall not be impaired or discharged by any extension of time or variations or alternations made, given, or agreed with or without our knowledge or consent, by or between parties to the respective agreement.

Our liability under this Guarantee is restricted to Rs._____(Rs._____/-) only. Our Guarantee shall remain in force until _____. BEST Undertaking shall be entitled to invoke this Guarantee up to _____, by issuance of a written demand to invoke this guarantee.

The Guarantor Bank hereby expressly agrees that it shall not require any proof in addition to the written demand from BEST Undertaking, made in any format, raised at the above mentioned address of the Guarantor Bank, in order to make the said payment to BEST Undertaking.

The Guarantor Bank shall make payment hereunder on first demand without restriction or conditions and notwithstanding any objection by_____ (name of Bidder to be inserted). The Guarantor Bank shall not require BEST Undertaking to justify the

invocation of this BANK GUARANTEE, nor shall the Guarantor Bank have any recourse against the Procurer(s) in respect of any payment made hereunder.

The Guarantor Bank represents that this BANK GUARANTEE has been established in such form and with such content that it is fully enforceable in accordance with its terms as against the Guarantor Bank in the manner provided herein.

This BANK GUARANTEE shall not be affected in any manner by reason of merger, amalgamation, restructuring, liquidation, winding up, dissolution or any other change in the constitution of the Guarantor Bank.

This BANK GUARANTEE shall be a primary obligation of the Guarantor Bank and accordingly BEST Undertaking shall not be obliged before enforcing this BANK GUARANTEE to take any action in any court or arbitral proceedings against_____ (name of Bidder to be inserted)to make any claim against or any demand on the _____ (name of Bidder to be inserted)or to give any notice to or to enforce any security held by BEST Undertaking or to exercise, levy or enforce any distress, diligence or other process against_____(name of Bidder to be inserted).

The Guarantor Bank acknowledges that this BANK GUARANTEE is not personal to BEST Undertaking and may be assigned, in whole or in part, (whether absolutely or by way of security) by BEST Undertaking to any entity to whom it is entitled to assign its rights and obligations under the Bid document.

The Guarantor Bank hereby agrees and acknowledges that BEST Undertaking shall have a right to invoke this Bank Guarantee either in part or in full, as it may deem fit.

Notwithstanding anything contained hereinabove, our liability under this Guarantee is restricted to Rs._____ (Rs _____/-) only and it shall remain in force until_____.

This BANK GUARANTEE shall be extended from time to time for such period, as may be desired by_____ (name of Bidder to be inserted). We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only if BEST Undertaking serves upon us a written claim or demand.

This BANK GUARANTEE shall be interpreted in accordance with the laws of India and the courts at Mumbai shall have exclusive jurisdiction.

In witness whereof the Bank, through its authorized officer, has set its hand and stamp on his_____ day of_____ at_____.

Witness :-

(1) _____ The Duly Constituted Attorney

(Signature)

_____ _____

(Name of the witness) (Signature)

_____ _____

(Address of the witness) (Name & Designation of the person)

For

_____

(Name of the Bank)

(2) _____

(Signature)

_____ _____

(Name of the witness) (Name of the Bidder)

_____

(Address of the witness)

The Bank and the said Messrs.

Witness: _____

_____

(Signature)

_____

(Name of the witness)

_____

(Address of the witness)

Bid Sheet

Select Event: BEST/Short/23-24/RA/11

Event Ref. BEST/Short/23-24/RA/11

Period : 15/03/2023 12:00:00 To 15/03/2023 14:08:35

Sl.No.	Item Name	Quantity (UOM):	Description	Bidder Ref. No.	Booking Quantity	Booking Amount	Booking Time	Source of power / details of generating station from where power is intended to be supplied
1	1 (Maharastra STU Periphery)	75.0(MW)	From 01.04.2023:09.00 to 30.04.2023:18.00	MANIKARAN POWER LIMITED/102094	50	10.25	15/03/2023 13:58	DB Power Limited, (2 x 600 MW) Village Baradarha,District Janjgir- Champa, Chhattisgarh (in WR)
				Tata Power Trading Company Limited/74212	50	10.7	15/03/2023 13:40	Prayagraj Power Generation Company Limited (PPGCL)
				Dhariwal Infrastructure Limited/84368	13	10.25	IPO 13/03/2023 14:26:02	DHARIWAL INFRASTRUCTURE LIMITED, UNIT I OF 300 MW CONNECTED TO MSETCL

Bucket Filling

Sl.No.	Bidder Ref. No.	Quantity	Price	Event Type
1	Dhariwal Infrastructure Limited/84368	13	10.25	IPO
2	MANIKARAN POWER LIMITED/102094	50	10.25	RA
3	Tata Power Trading Company Limited/74212	12	10.7	RA

Sl.No.	Item Name	Quantity (UOM):	Description	Bidder Ref. No.	Booking Quantity	Booking Amount	Booking Time	Source of power / details of generating station from where power is intended to be supplied
2	2 (Maharastra STU Periphery)	100.0(MW)	From 01.05.2023:09.00 to 31.05.2023:18.00	Dhariwal Infrastructure Limited/84368	13	9.98	15/03/2023 13:18	DHARIWAL INFRASTRUCTURE LIMITED, UNIT I OF 300 MW CONNECTED TO MSETCL
				MANIKARAN POWER LIMITED/102094	50	9.98	15/03/2023 13:58	DB Power Limited, (2 x 600 MW) Village Baradarha,District Janjgir- Champa, Chhattisgarh (in WR)
				Tata Power Trading Company Limited/74212	50	10.5	15/03/2023 13:40	Prayagraj Power Generation Company Limited (PPGCL)
				Tata Power Trading Company Limited /74187	10	10	IPO 13/03/2023 15:28:11	Govt. of Himachal Pradesh (GoHP) share of Power in Various Hydro Electric Power Plants located in Himachal Pradesh

Bucket Filling

Sl.No.	Bidder Ref. No.	Quantity	Price	Event Type
1	Dhariwal Infrastructure Limited/84368	13	9.98	RA
2	MANIKARAN POWER LIMITED/102094	50	9.98	RA
3	Tata Power Trading Company Limited /74187	10	10	IPO
4	Tata Power Trading Company Limited/74212	27	10.5	RA

Sl.No.	Item Name	Quantity (UOM):	Description	Bidder Ref. No.	Booking Quantity	Booking Amount	Booking Time	Source of power / details of generating station from where power is intended to be supplied
3	3 (Maharastra STU Periphery)	75.0(MW)	From 01.06.2023:09.00 to 30.06.2023:18.00	Dhariwal Infrastructure Limited/84368	**13**	**8.98**	15/03/2023 13:18	DHARIWAL INFRASTRUCTURE LIMITED, UNIT I OF 300 MW CONNECTED TO MSETCL
				MANIKARAN POWER LIMITED/102094	**50**	**8.98**	15/03/2023 13:59	DB Power Limited, (2 x 600 MW) Village Baradarha,District Janjgir- Champa, Chhattisgarh (in WR)
				Tata Power Trading Company Limited/74212	**50**	**10.5**	15/03/2023 13:41	Prayagraj Power Generation Company Limited (PPGCL)
				Tata Power Trading Company Limited /74187	**10**	**10**	IPO 13/03/2023 15:28:11	Govt. of Himachal Pradesh (GoHP) share of Power in Various Hydro Electric Power Plants located in Himachal Pradesh

Bucket Filling

Sl.No.	Bidder Ref. No.	Quantity	Price	Event Type
1	Dhariwal Infrastructure Limited/84368	13	8.98	RA
2	MANIKARAN POWER LIMITED/102094	50	8.98	RA
3	Tata Power Trading Company Limited /74187	10	10	IPO
4	Tata Power Trading Company Limited/74212	2	10.5	RA

4	4 (Maharastra STU Periphery)	37.0(MW)	From 01.10.2023:09.00 to 31.10.2023:18.00	Tata Power Trading Company Limited/74212	**37**	**10.5**	IPO 13/03/2023 15:20:54	Prayagraj Power Generation Company Limited (PPGCL)

Bucket Filling

Sl.No.	Bidder Ref. No.	Quantity	Price	Event Type
1	Tata Power Trading Company Limited/74212	37	10.5	IPO

Sl.No.	Item Name	Quantity (UOM):	Description	Bidder Ref. No.	Booking Quantity	Booking Amount	Booking Time	Source of power / details of generating station from where power is intended to be supplied
5	5 (Maharastra STU Periphery)	25.0(MW)	From 01.12.2023:09.00 to 31.12.2023:18.00	Tata Power Trading Company Limited/74212	**25**	**10.5**	IPO 13/03/2023 15:20:54	Prayagraj Power Generation Company Limited (PPGCL)

Bucket Filling

Sl.No.	Bidder Ref. No.	Quantity	Price	Event Type
1	Tata Power Trading Company Limited/74212	25	10.5	IPO

Reverse Auction Participated Bidders Details

Sl.No.	Bidder Ref. No.	mpany Na	Contact Person	Email
1	Tata Power Trading Company Limited/74212	Tata Power Tra	SUMIT SACHDEV	tptclmarketing@tatapower.com
2	Dhariwal Infrastructure Limited/84368	Dhariwal Infras	PULAK NANDY	pulak.nandy@rp-sg.in
3	MANIKARAN POWER LIMITED/102094	MANIKARAN PC	PRAVIN LEE ABRAHAM	bilateral.del@manikaranpowerltd.in

Before the
MAHARASHTRA ELECTRICITY REGULATORY COMMISSION
World Trade Centre, Centre No.1, 13th Floor, Cuffe Parade, Mumbai 400005.
Tel. 022 22163964/65/69 Fax 22163976
Email: mercindia@merc.gov.in
Website: www.merc.gov.in

Case No 44 of 2023

Case of Brihanmumbai Electric Supply and Transport Undertaking seeking review of the Order passed by the Commission in Case No 37 of 2023 dated 31 March 2023.

Coram
Sanjay Kumar, Chairperson
I.M.Bohari, Member
Mukesh Khullar, Member

Brihanmumbai Electric Supply and Transport Undertaking: - Petitioner

Appearance
For Petitioner: - Dr. R.D.Patsute (Rep)

ORDER

Date: 28 April, 2023

1. Brihanmumbai Electric Supply and Transport Undertaking(**BEST**) has filed this Petition on 3 April, 2023 seeking review of the Order passed by the Commission in Case No 37 of 2023 dated 31 March, 2023 under Section 61 and 62 of Electricity Act, 2003 (EA, 2003) read with Regulation 28 of MERC (Transaction of Business and Fees and Charges) Regulations, 2022; Regulation 22 of MERC (Multi-Year Tariff) Regulations, 2019 and Ministry of Power's Guidelines dated 30 March, 2016 for short term procurement of power by Distribution Licensees.

2. **BEST's main prayers are as under:**

   a. *Hon'ble Commission may accord approval for quantum and price discovered as tabulated in Para 1.5 above through short term power purchase e-tender vide BEST/Short/23-24/ET/11 and BEST/Short/23-24/RA/11 as prayed in the amendment / additional submission made in Petition in Case No. 37/AP/2023;*

b. *Hon'ble Commission may accord approval for short term bilateral power purchase quantum of 285.44 MUs for the period from April,2023 to March,2024 as tabulated in Para 5.0 above at average tariff of Rs 8.21/kWh discovered through competitive bidding process on DEEP portal undertaken by BEST;*

c. *Hon'ble Commission may accord approval for additional power procurement from short term sources including power exchanges for optimization of power purchase cost and meeting any other shortfall at the average rate of Rs 8.21/kWh for FY 2023-24;*

3. **BEST in its Petition has stated as follows:**

3.1 BEST has filed Petition under Case No. 37/AP/2023 on 6 March, 2023 and sought approval for average rates discovered through short term bilateral power purchase tender dated 30 January, 2023 with average rate of power purchase as Rs 7.43 per unit for 199.74 MU. Further BEST also sought approval for power purchase through external offer from M/s Ideal Energy Projects Limited (IEPL) of 25 MW RTC power for April 2023 to June 2023 at Rs 7.85per unit for 54.60 MU.

3.2 BEST had invited new e-tender dated 10 March, 2023 on Discovery of Efficient Electricity Price (DEEP) bidding portal for bilateral power purchase quantum of 25 MW to 100 MW for time slots 09:00 to 18:00 hrs for the months of April 2023, May 2023, June 2023, October 2023 and December 2023 as the response for requisitioned bid quantum was not received for these months for day peak period of 09:00 hrs to 18:00 hrs. The result of the bidding process is summarized below:

Sr. No.	Contract Period	Slot / Time (Hrs.)	BEST's Bid Quantum	Successful Bidder	Source	Allotted Quantum in MW	Discovered Rate in Rs./ kWh
1	01-Apr-23 To 30-Apr-23	09:00 To 18:00	75	Dhariwal Infrastructure Limited (DIL)	Dhariwal Infrastructure Limited (DIL)	13	10.25
				Manikaran Power Limited (MPL)	DB Power Ltd, Chhattisgarh	50	10.25
				Tata Power Trading Company Limited (TPTCL)	Prayagraj Power Generation Company Ltd, Uttar Pradesh	12	10.70
2	01-May-23 To 31-May-23	09:00 To 18:00	100	Dhariwal Infrastructure Limited (DIL)	Dhariwal Infrastructure Limited (DIL)	13	9.98
				Manikaran Power Limited (MPL)	DB Power Ltd, Chhattisgarh	50	9.98
				Tata Power Trading Company Limited (TPTCL)	Govt.of Himachal Pradesh, Hydro	10	10.00
				Tata Power Trading Company Limited (TPTCL)	Prayagraj Power Generation Company Ltd, Uttar Pradesh	27	10.50
3	01-Jun-23 To 30-Jun-23	09:00 To 18:00	75	Dhariwal Infrastructure Limited (DIL)	Dhariwal Infrastructure Limited (DIL)	13	8.98

Sr. No.	Contract Period	Slot / Time (Hrs.)	BEST's Bid Quantum	Successful Bidder	Source	Allotted Quantum in MW	Discovered Rate in Rs./ kWh
				Manikaran Power Limited (MPL)	DB Power Ltd, Chhattisgarh	50	8.98
				Tata Power Trading Company Limited (TPTCL)	Govt.of Himachal Pradesh, Hydro	10	10.00
				Tata Power Trading Company Limited (TPTCL)	Prayagraj Power Generation Company Ltd, Uttar Pradesh	2	10.50
4	01-Oct-23 to 31-Oct-23	09:00 To 18:00	37	Tata Power Trading Company Limited (TPTCL)	Prayagraj Power Generation Company Ltd, Uttar Pradesh	37	10.50
5	01-Dec-23 To 31-Dec-23	09:00 To 18:00	25	Tata Power Trading Company Limited (TPTCL)	Prayagraj Power Generation Company Ltd, Uttar Pradesh	25	10.50

3.3 After considering discovered price and allocated quantity to successful bidders, the estimated average rate of power purchase cost for total **85.70 MU** for the months of April, 2023, May, 2023, June, 2023, October, 2023 and December, 2023 will be **Rs.10.02 per unit.**

3.4 Accordingly, LoI were issued to the successful bidders within the timeframe as specified in MoP Guidelines. After considering the short-term power purchase through both the e-tenders and external offer of M/s IEPL, the average rate along with the total cost and quantum for FY 2023-24 is tabulated as under:

Total power purchase through short-term bilateral sources in FY 2023-24		
Total Power purchase quantum	MUs	340.04
Estimated Power purchase cost	Rs. In Crs.	277.18
Avg. Rate of Power purchase	Rs./kWh	8.15

3.5 Accordingly, BEST made amendment / additional submission with revised prayers in the above petition in Case No. 37 of 2023 on 16 March, 2023.The revised prayers in said submission were as follows:

a. To consider the present submission under the Petition in Case No. 37/AP/ 2023;

b. Hon'ble Commission may accord approval for short term power purchase quantum in replacement to the RE power which is not available for FY 2023-24.

c. Hon'ble Commission may accord approval for short term bilateral power purchase of 340.04 MUs quantum for the period from April'2023 to March'2024 as tabulated in Para 4.3 and 4.4 above at average tariff of Rs 8.15/KWh discovered through competitive bidding process on DEEP portal undertaken and through external offer received by BEST;

d. Hon'ble Commission may accord approval for additional power procurement from short term sources including power exchanges for optimization of power purchase cost and meeting any other shortfall at the average rate of Rs 8.15/kWh for FY 2023-24;

3.6 The Commission held E-hearing on 23 March, 2023. During the hearing, BEST made the submissions of the Petition and requested the Commission to approve proposed short term power procurement. Based on the queries raised by the Commission during the E-hearing, BEST submitted its additional submission on 24 March, 2023.

3.7 Thereafter, the Commission has issued Order dated 31 March, 2023 in Case No. 37 of 2023 and IA 24 of 2023 in Case No 37 of 2023. In the said Order, the Commission noted that the proposed short term power procurement is within the total power procurement quantum approved in MYT Tariff Order. Further projected peak demand is not exceeding the previous year demand. Hence, the issue of transmission constraints will not arise for such short-term power procurement.

3.8 Further, the Commission noted that tariff discovered by BEST fulfils mandates and requirements for adoption as set out in Section 63 of the EA, 2003 and MYT Regulations, 2019. Accordingly, the Commission adopted Power Procurement with weighted average tariff of Rs 7.43 per unit and quantum for BEST undertaking for the period from April, 2023 to March, 2024 as per the tender vide tender no BEST/Short/22-23/ET/247 and BEST/Short/22-23/RA/237 floated on DEEP portal.

3.9 The Commission has rejected the request of BEST for procurement of RTC power from IEPL which was not part of bidding process. For fulfilling its power requirement, the commission directed to initiate fresh bidding process for which interested bidders along with IEPL can participate in the transparent bidding process as envisaged under the EA, 2003.

3.10 However, it is observed that the consideration of BEST's amendment / additional submission dated 16 March, 2023 along with the revised prayers is not duly reflected in the Order. Therefore, BEST is filing this Review Application as per the provisions under EA, 2003 and MERC (Transaction of Business and Fees and Charges) Regulations, 2022.

3.11 After considering both the short-term power purchase e-tenders and excluding the external offer from IEPL as directed by the Commission, the average rate along with the total cost and quantum for FY 2023-24 is tabulated as under:

Total power purchase through short-term bilateral sources in FY 2023-24		
Total Power purchase quantum	MU	285.44
Estimated Power purchase cost	Rs. In Crs.	234.32
Avg. Rate of Power purchase	Rs./kWh	8.21

3.12 In view of above it is requested to allow the review Petition and further requested to adopt the weighted average rate of Rs 8.21 per unit discovered through competitive bidding and approve the short-term power purchase from April 2023 to May 2024.

4. During the E-hearing held on 11 April, 2023, BEST has requested to adopt the rate of Rs 10.02 per unit discovered through the competitive bidding to meet anticipated shortfall in demand for the month of April, May and June, October and December, 2023 and approve the proposed short term power procurement. The Commission directed BEST to submit the cost effectiveness of the proposed power procurement in comparison with the power sources approved in the MTR Order in Case No 212 of 2022.

5. **BEST in its additional submission dated 11 April, 2023 has submitted as below:**

5.1 BEST has proposed to procure power from the various sources at the respective discovered rates for the months of April, May, June, October and December, 2023 in line with the short term competitive bidding guidelines of MoP.

5.2 The requirement of 85.70 MU at the rate of Rs.10.02 per unit is required to meet the peak power during the aforesaid months. The power requirement has been worked out by estimating the shortfall by considering all the contracted generation as approved in the MTR Order at its full capacity. The Power requirement for months of April-May-June and October, December 2023 is as shown in the following table:

Particulars	Apr 2023	May 2023	Jun 2023	Oct 2023	Dec 2023
Demand at G<>T level (in MW)	888	909	903	876	717
Total availability*****(in MW)	718	718	718	718	626
Shortfall(-) /Surplus (+) (in MW)	-170	-191	-185	-158	-91
00:00 to 24:00 Hrs, RTC (in MW)	50	50	50	50	0
09:00 to 18:00 Hrs (in MW)	75	100	75	100	75
Day Ahead basis (in MW) (Power Exchange)	**45**	**41**	**60**	**8**	**16**

* *Tied up capacity of TPC-G, Manikaran and Walwhan is utilized to its fullest.*

5.3 E-bidding process was conducted on DEEP Portal and only eligible traders/generators are allowed to participate on DEEP portal. This power is required to meet summer peak of the system. To avoid costly power from Power Exchange, to maintain grid security and to ensure reliability of power supply to Mumbai city, it is necessary to procure this power as proposed. Additional requirements will be met from the power exchanges as proposed.

Commission's Analysis and Ruling:

6. BEST has approached the Commission through the review Petition for combined power purchase of 285.44 MU at the weighted average rate of Rs 8.21 per unit discovered

through the competitive bidding carried out vide the tenders published in January, 2023 and March 2023 excluding the external tie up with IEPL.

7. Regulation 28 of MERC (Transaction of Business and Fees and Charges) Regulations, 2022 governing reviews specifies as follows:

"28. Review of decisions, directions, and orders:

(a) Any person aggrieved by a direction, decision or order of the Commission, from which (i) no appeal has been preferred or (ii) from which no appeal is allowed, may, upon the discovery of new and important matter or evidence which, after the exercise of due diligence, was not within his knowledge or could not be produced by him at the time when the direction, decision or order was passed or on account of some mistake or error apparent from the face of the record, or for any other sufficient reasons, may apply for a review of such order, within Forty-Five (45) days of the date of the direction, decision or order, as the case may be, to the Commission…."

Thus, the ambit of review is limited, it cannot be an appeal in disguise, and this Petition is required to be evaluated accordingly.

8. The Commission notes that while finalizing the impugned Order dated 31 March 2023 in Case No 37 of 2023, the revised submission by BEST dated 16 March 2023 through which it has requested adoption of tariff discovered vide tender dated 10 March 2023, was inadvertently not considered. Thus, there is an error apparent on the face of record. Accordingly, in subsequent paragraph, the Commission is considering such submission on its merits.

9. The Commission notes that out of short-term bilateral power purchase quantum of 285.44 MU for the period from April, 2023 to March, 2024, the Commission has already accorded its approval for 199.74 MU at weighted average tariff of Rs. 7.43 per unit vide impugned Order dated 31 March 2023. Therefore, in present proceeding, only issue that remains is adoption of weighted average tariff of Rs.10.02 per unit for 85.70 MU discovered under tender dated 10 March 2023

10. It is also important to note that on 31 March 2023, the Commission has issued MTR Order for BEST wherein based on details submitted by BEST and considering realistic market conditions, the Commission has approved following power purchase expenses to BEST for FY 2023-24:

Particulars	Quantum (MU)	Cost (Rs. Cr)	Rate (Rs/kWh)
Long term / Medium term sources			
TPC-G	3231.37	2293.36	7.10
Past Gap of TPC-G		(200.50)	
Walwhan Solar MH Ltd	31.59	27.04	8.56
Manikaran Power Ltd	746.64	324.76	4.35
Short Term Sources			
Solar Energy	430.43	210.91	4.90
Non-Solar Energy	506.01	247.95	4.90
New Contract RTC/Bilateral	198.58	147.54	7.43

Stand By Charges		94.03	
Past Period Pool Imbalance		61.97	
Intra State Transmission Charges		232.10	
MSLDC Charges		0.93	
Total	**5144.61**	**3440.08**	**6.69**

Considering above power purchase expenses approved for FY 2023-24, during the hearing held in this matter on 11 April 2023, the Commission directed BEST to submit cost effectiveness of short-term power purchase proposed in present Petition. In reply BEST submitted that it has projected the demand requirement considering all the resources approved in the MTR Order operating to its the full capacity and is still in deficit of power for meeting the anticipated peak demand during April to June, 2023; October, 2023 and December, 2023. BEST has submitted its demand supply requirement as follows:

Particulars	Apr 2023	May 2023	Jun 2023	Oct 2023	Dec 2023
Demand at G<>T level (in MW)	888	909	903	876	717
Total availability*****(in MW)	718	718	718	718	626
Shortfall(-) /Surplus (+) (in MW)	-170	-191	-185	-158	-91
00:00 to 24:00 Hrs, RTC (in MW)	50	50	50	50	0
09:00 to 18:00 Hrs (in MW)	75	100	75	100	75
Day Ahead basis (in MW) (Power Exchange)	**45**	**41**	**60**	**8**	**16**

**Tied up capacity of TPC-G, Manikaran and Walwhan is utilized to its fullest*

In this regard, the Commission notes that in above projections for availability, BEST has considered only long term contracted sources, whereas the Commission in MTR Order has also allowed short term power procurement from RE Sources and conventional sources. BEST can procure such short-term power from either competitive bidding under Section 63 of the EA 2003 as per competitive bidding guidelines notified by the Central Government or power procurement through power exchanges.

11. In present case, BEST has undertaken the short-term power procurement as per the competitive bidding guidelines of MoP dated 30 March, 2016 by floating the bid on DEEP portal on 10 March, 2023 for supply of 25 to 100 MW in the time slot of 0900 to 1800 Hrs for the period from April, 2023 to June, 2023, October, 2023 and December, 2023 The weighted average tariff discovered in bidding process is Rs 10.02 per unit.

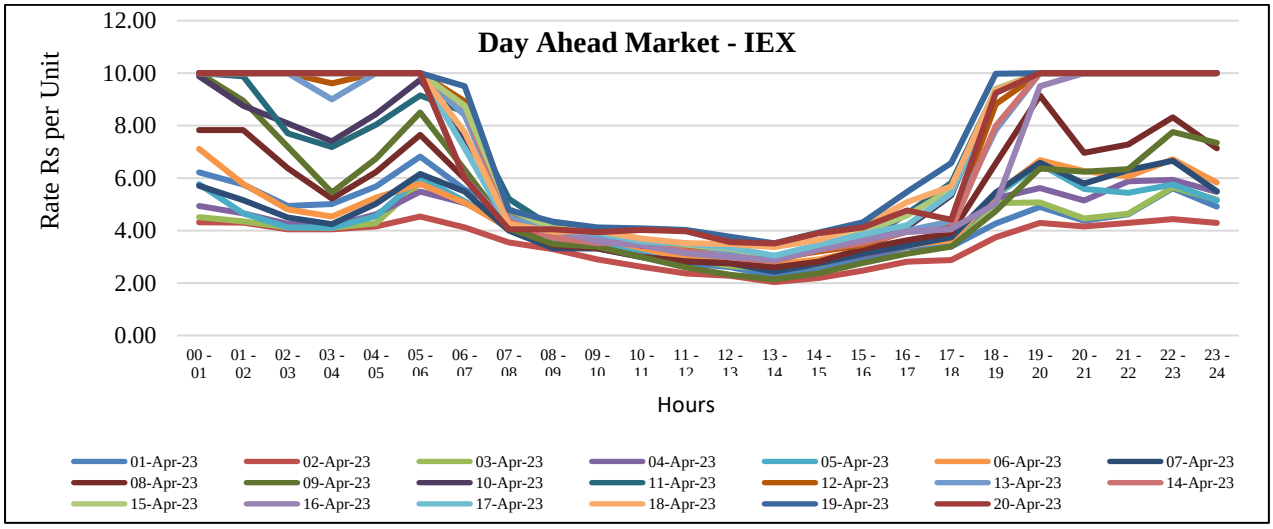
12. To assess the competitiveness of the tariff discovered by BEST in the present bidding the Commission has referred to recent discovered tariff on DEEP Portal by other Distribution Licensees in Maharashtra and same is tabulated below.

Sr No	Particulars	Period	Availability	Quantum of Power in MW	Discovered rate in Rs/ kWh
1	TPC-D	1.4.2023 to 30.04.2023	RTC	50 MW	14
		1.05.2023 to 31.05.2023	RTC	50 MW	14
		1.06.2023 to 15.06.2023	RTC	50 MW	14
2	BEST	10.4.2023 to 30.04.2023	RTC	25MW	8.64
		1.05.2023 to 31.05.2023	RTC	25 MW	8.64

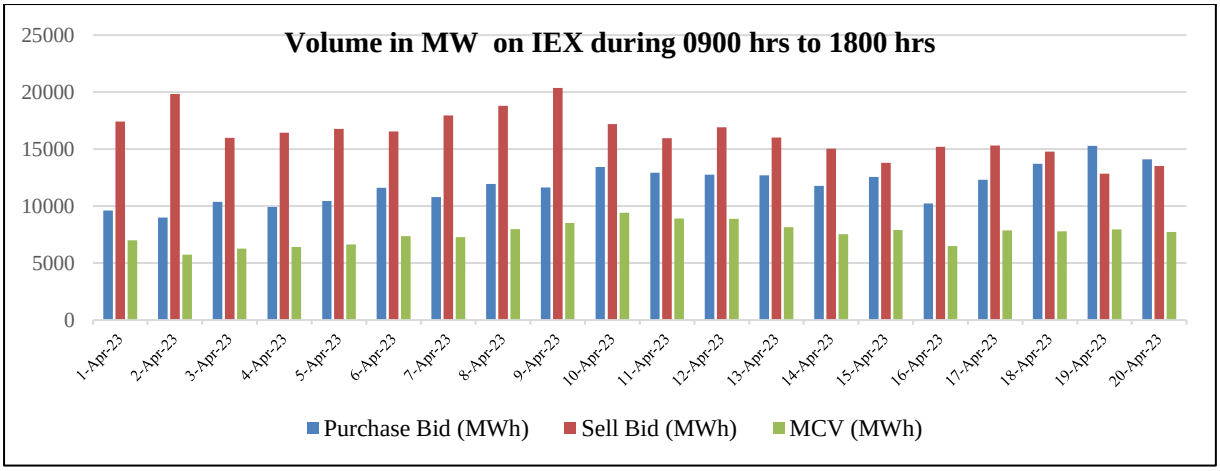
Sr No	Particulars	Period	Availability	Quantum of Power in MW	Discovered rate in Rs/ kWh
		1.06.2023 to 15.06.2023	RTC	25 MW	8.64
3	KRC DISCOMs	1.05.2023 to 31.05.2023	8:00 to 22:00 Hrs	8 MW	8.75
		1.06.2023 to 30.06.2023		5 MW	9.25
		1.08.2023 to 31.08.2023		4 MW	9
		1.09.2023 to 30.09.2023			
		1.10.2023 to 31.10.2023			

Considering above rates being discovered on DEEP Portal, rates discovered by BEST seems to be reflective of rate on DEEP Portal.

13. However, the Commission notes that before going ahead with such power procurement, BEST needs to consider other available option such as power exchanges for short term power procurement. The Commission notes that proposed power procurement in present case is for the period of 0900 hrs to 1800 hrs. The Commission notes that rate being discovered on Day Ahead Market of IEX is much lower than proposed power procurement rate of Rs 10.02 per unit. Following graph shows hourly Day Ahead rate on IEX for the period of 1 to 20 April 2023:



As can be seen from above, during period when BEST require power i.e. 0900 to 1800 hrs, rate on IEX is around Rs 3 to 4 per unit which is much lower than rate of Rs 10.02 per unit proposed in present case. The Commission has also analysed the quantum of power available during above time period on IEX in following graph.



As can be seen from the above, market clearance volume is lower than sell bid during 0900 hrs to 1800 hrs. Hence, it can be fairly assumed that BEST's demand of 25 to 100 MW can be served through IEX. There might be chances that generator quoting for sell of power are bidding above the market clearance rate and hence not getting cleared. But maximum rate they can quote is Rs 10 per unit which is ceiling imposed by CERC. Hence, if BEST opts for procurement of such power through power exchanges, probability of it getting at rate lower than Rs 10.02 per unit proposed in present Petition is much more.

14. Further, BEST stated that it has considered full capacity of its long term contracted sources before going for short term bidding. The Commission notes that one of BEST's contracted source i.e. TPC-G has two beneficiary i.e. BEST and TPC-D. Although, BEST is considering and utilising its full contracted capacity, there might be instances when other beneficiary is not using its allocation to fullest. In such circumstances, BEST may enter into appropriate arrangement with TPC-G/TPC-D to source the power from un-utilised capacity of TPC-G. BEST can sources additional power from TPC-G instead of procuring the short term power so as to optimise its power procurement expenses to that extent if the variable cost of TPC-G works out to be lower than Rs 10.02 per unit.

15. In view of above analysis, the Commission is not inclined to allow proposed power procurement in present Petition. But considering the fact that BEST has already started power flow under proposed contract for the month of April 2023 from 1 April 2023 and BEST would require some time to align its power procurement based on cheaper sources such as power exchanges / additional power from TPC-G, the Commission deems it fit to approve power procurement only for the month of April 2023. For remaining period, BEST shall first consider procuring power from cheaper sources such as IEX/ additional power from TPC-G and only after exhausting such option, BEST may go for power procurement at higher prices.

16. The Commission is aware that Section 63 of the EA, 2003 mandates the Commission to adopt the tariff if such tariff has been determined through transparent process of bidding in accordance with the guidelines issued by the Central Government. However,

it is important to note that Distribution Licensee needs to procure power from cheapest available sources. In present case it is clearly visible that cheaper option of procuring power through Power Exchange in available with BEST. Hence, the Commission in above para has directed BEST to evaluate possibility of procuring cheaper power from exchange / TPC-G additional capacity.

17. Hence, following Order:

ORDER

1. **Review in Case No 44 of 2023 is partly allowed.**

2. **Under Section 63 of the Electricity Act, 2003, the Commission adopts Short Term Power Procurement for April 2023 by as Brihanmumbai Electric Supply and Transport Undertaking as follows:**

Contract Period	Slot / Time (Hrs.)	BEST's Bid Quantum	Successful Bidder	Source	Allotted Quantum in MW	Discovered Rate in Rs./ kWh
01-Apr-23 To 30-Apr-23	09:00 To 18:00	75	Dhariwal Infrastructure Limited (DIL)	Dhariwal Infrastructure Limited (DIL)	13	10.25
			Manikaran Power Limited (MPL)	DB Power Ltd, Chhattisgarh	50	10.25
			Tata Power Trading Company Limited (TPTCL)	Prayagraj Power Generation Company Ltd, Uttar Pradesh	12	10.70

3. **For the remaining period, Brihanmumbai Electric Supply and Transport Undertaking, shall evaluate option of procuring cheaper power through sources such as power exchanges/ additional power from TPC-G before going for costly power procurement.**

Sd/-	Sd/-	Sd/-
(Mukesh Khullar)	(I. B. Bohari)	(Sanjay Kumar)
Member	Member	Chairperson

(Abhijit Deshpande)
Secretary

इंडियन बैंक Indian Bank
इलाहाबाद ALLAHABAD
आज़ादी का अमृत महोत्सव

(A Government of India Undertaking)
(Corporate Office: P B No 5555, 254-260, AvvaiShanmugamSalai, Royapettah, Chennai 600 014)
TREASURY BRANCH, Allahabad Bank Bldg. 1st Floor, 37, Mumbai Samachar Marg, Fort Mumbai 23
Tel: DOM FO: 022- 49343370 / 361 DOM BO : 022-49343344/ 346 MIS : 022-49343351/352
FxFO: 022-4933381 / 369 FX BO : 49343321 / 322 Admn: 022-49343341 / 339 Fax : 022 – 22671822
Website: www.indianbank.co.in E Mail : domestictreasury@indianbank.co.in SWIFT : IDIBINBBTSY

To
THE BRIHAN MUMBAI ELECTRIC SUPPLY &
TRANSPORT UNDERTAKING
BEST BHAVAND BEST MARG
P O BOX NO 192 COLABA

DATE :- 24.04.2024

Dear Sir,
Sub: Government Securities held on your behalf in our Constituent Account.

This is to certify that, we are holding in our SGL Constituents A/c with RBI-PDO, Mumbai, the following securities as on 31.03.2024 on account of THE BRIHAN MUMBAI ELECTRIC SUPPLY & TRANSPORT UNDERTAKING

Name of the CSGL account holder : Indian Bank
CSGL Account No. SG20077

ISIN NO	Security Name	FACE VALUE	Maturity Date
IN0020120062	8.30% GOVT STOCK 2042	1000000.00	31/12/2042
IN1220180245	8.45% ASSAM SDL 2029	46000000.00	06/03/2029
IN1620150186	8.21% HARYANA UDAY BOND 2026	50000000.00	31/03/2026
IN1620160045	8.18% HARYANA UDAY BOND 2025	26000000.00	15/06/2025
IN1620170127	8.2% HARYANA SDL 2028	36000000.00	07/02/2028
IN1720220111	7.87% HIMACHAL PR SGS 2035	50000000.00 Fy-22-23	09/11/2035 - 30/11/22
IN2020210174	7.14% KERALA SDL 2035	71200000.00	29/12/2035
IN2220210248	6.91% MAHARASHTRA SDL 2033	12000000.00	15/09/2033
IN2920130183	10.03% RAJASTHAN SPL BOND 2028	10000000.00	18/10/2028
IN2920130183	10.03% RAJASTHAN SPL BOND 2028	33000000.00	18/10/2028
IN2920160123	8.19% RAJASTHAN UDAY BOND 2026	5000000.00	23/06/2026
IN2920180196	8.84% RAJASTHAN SDL 2028	10000000.00	12/09/2028
IN2920220042	7.83% RAJASTHAN SDL 2032	50000000.00 - Fy. 22-23	22/06/2032 - 28-6-22
IN3120220170	7.79% TAMILNADU SGS 2032	74000000.00 Fy-22-23	04/10/2032 20-10-22
IN3420170109	7.73% WESTBENGAL SDL 2032	60000000.00	08/11/2032
IN3420220300	7.89% WESTBENGAL SGS 2040	50000000.00 Fy. 23-24	29/03/2040 6-7-23
IN3420220318	7.85% WESTBENGAL SGS 2042	28000000.00 Fy 23-24	29/03/2042 6-7-23

nd Total: FV 61,22,00,000

For INDIAN BANK

ASSISTANT GENERAL MANAGER

25/04/24

EJob : Cpfrep9 B.E.S. & T. Undertaking Date : 27/11/2024 Page No : 1

List Of Total Investments Against ECF From 01/04/2022 To 31/03/2024

F
P

Comp Bond	Date Of Recv. Safe Purchase On	Bond Name Custody No.		Category	Face Value	Purchace Cost	YTM	YTP	Maturity Date & Percentage	PutCall Date & Percentage	Mode	Int. Payment Dates
21	28/06/2022	07.83% RAJASTHAN SDL 2032	2022-23	15	50000000.00	50120000.00	7.946	0.000	22/06/2032 100.000		H	22/12,22/06
22	20/10/2022	07.79% TAMILNADU SGS 2032		15	74000000.00	74394050.00	7.860	0.000	04/10/2032 100.000		H	04/04,04/10
23	30/11/2022	07.87% HP SDL 2035		15	50000000.00	50950000.00	7.781	0.000	09/11/2035 100.000		H	09/05,09/11
24	06/07/2023	7.85% WB SDL 2042	2023-24	15	28000000.00	28960400.00	7.640	0.000	29/03/2042 100.000		H	29/09,29/03
25	06/07/2023	7.89% west bengal sdl 2040		15	50000000.00	51803500.00	7.650	0.000	29/03/2040 100.000		H	29/09,29/03
Total :					252000000.00	256227950.00						

Annexure - 13

EC Trade Report (Buy/Sell)

Date: 10-Jul-24

Trade Date	10-Jul-24
Participant ID	W2MH0BST0000
Participant Name	Brihanmumbai Electric Supply & Transport (BEST)
Portfolio ID	W2MH0BST0001
Portfolio Name	BEST Undertaking
State	Maharashtra
Registration Number	MH0MBESTWR01IE
Financial Year	2024-25

Trade Obligation(Rs.)	31872000.00
Net Exchange Fees	0.00
Exchange Fees IGST/UTGST	0.00
Exchange Fees SGST	0.00
Exchange Fees CGST	0.00
GST On Buy Trade	5736960.00
GST On Sell Trade	0.00
TCS Amount	0.00
TDS Amount	0.00
Funds Pay-In	37608960.00
Funds Pay-Out	0.00

Section A - Total (B+C)

Certificate Number	Certificate for Financial Year	Symbol	Invoice (Rs.)	Charges & Taxes (Rs.)	Pay-In Amount (Rs.)	Pay-Out Amount (Rs.)
C-IEX_REC000233	249000	REC	31872000.00	5736960.00	37608960.00	0.00

Section B - Trade Details

Certificate Number	Certificate for Financial Year	Buy/Sell	Symbol	Rate (Rs.)	Quantity	Invoice (Rs.)
C-IEX_REC000233	249000	Buy	REC	128.00	249000.00	31872000.00

Section C - Charges and Taxes Details

Certificate Number	Buy/Sell	Symbol	Exchange Fees (Rs.)	Discount on Exchange Fees (Rs.)	Rebate on Exchange Fees (Rs.)	Net Exchange Fees (Rs.)	IGST/UTGST on Exchange Fees (Rs.)	SGST on Exchange Fees (Rs.)	CGST on Exchange Fees (Rs.)	GST on Trade (Rs.)	TCS (Rs.)	TDS (Rs.)	Charges & Taxes Total
C-IEX_REC000233	Buy	REC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5736960.00	0.00	0.00	5736960.00

** This is a computer generated report*

Certificate of Purchase of Renewable Energy Certificate

INDIAN ENERGY EXCHANGE LTD.

Certificate of Purchase of REC(s)

Certificate Number : C-IEX_REC000233 **Issued On: 10-Jul-2024**

BEST Undertaking

Number of Certificates: 249000

This certifies that BEST Undertaking is the holder of 249000 non transferable Renewable energy certificate(s) bought on 10-Jul-2024 , through Indian Energy Exchange Limited.

This certificate represented hereby is issued and shall be held subject to all the provisions of the regulations of Honorable CERC as amended from time to time and the Bye-laws, Rules and Business Rules of Indian Energy Exchange Limited.

This is a computer-generated statement hence doesn't require signature.

POWER EXCHANGE INDIA LIMITED

Certificate of Purchase of REC(s)

Number C - PXMB07241515 **Issued On - 10-JUL-2024**

Serial No. - PXI/ 10072024/REC/01515

Number of Certificates - 248500

This certifies that BEST is the holder of 248500 non transferable Renewable Energy Certificate(s) bought on 10-JUL-2024, through *Power Exchange India Limited.*

This certificate represented hereby is issued and shall be held subject to all the provisions of the regulations of Honorable CERC as amended from time to time and the Bye - laws, Rules and Business Rule of *Power Exchange India Limited.*

Power Exchange India Limited

Regd. Office: Power Exchange India Ltd.9th Floor, 901 ,Sumer Plaza,Marol Maroshi Road,Marol Andheri (East),Mumbai 400 059, India.

CIN:- U74900MH2008PLC179152, Phone no.+ 91 22 4009 6667/87, Fax: + 91 22 40096690/33, Website: www.powerexindia.in

Email : pxi_mktops@pxil.co.in

Note: - This is a computer generated statement hence doesn't require signature.

Auction date: 10-Jul-2024

REC Obligation Report Without GST

Clearing Member ID	Trading Member ID	AM ID	CA Client ID	REC Type	Certificates Traded	Clearing Price(Rs. / Certificate)	Trade Value (Rs.)	Regulatory Fees (Rs.)	Exchange Transaction Charges				Tax Collection at Source (TCS)			Tax Deduction at Source (TDS)			Net Obligation (Rs.)
									Transaction Charges (Rs.)	CGST (Rs)	SGST (Rs)	IGST (Rs)	CGST (Rs)	SGST (Rs)	IGST (Rs)	CGST (Rs)	SGST (Rs)	IGST (Rs)	
S1020	S1020	NA	MH0MBESTWR01PE	REC	248500	128.00	31808000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	31808000.00
	Total						31808000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	31808000.00
Total							31808000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	31808000.00
Net Obligation							31808000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	31808000.00

REC Obligation Report With GST

Clearing Member ID	Trading Member ID	AM ID	CA Client ID	REC Type	Certificates Traded	Clearing Price (Rs. / Certificate)	Trade Value (Rs.)	GST on Trade Value (Rs)			Total GST on Trade Value (Rs)	Net Obligation without GST on Trade Value(Rs.)	Net Obligation with GST on Trade Value (Rs)
								CGST (Rs)	SGST (Rs)	IGST (Rs)	A	B (Please refer above table)	(A+B)
S1020	S1020	NA	MH0MBESTWR01PE	REC	248500	128.00	31808000.00	14400.00	14400.00	5696640.00	5725440.00	31808000.00	37533440.00
	Total						31808000.00	14400.00	14400.00	5696640.00	5725440.00	31808000.00	37533440.00
Total							31808000.00	14400.00	14400.00	5696640.00	5725440.00	31808000.00	37533440.00
Net Obligation							31808000.00	14400.00	14400.00	5696640.00	5725440.00	31808000.00	37533440.00

Note 1:- Tax Collection at Source (TCS) is as per Ministry of Finance, Government of India, (Department of Revenue), Central Board of Indirect Taxes and Customs notification no 51/2018 - Central Tax dt. 13 September 2018. This is a system generated report and does not require signature.

Note 2:- Tax Deduction at Source (TDS) is applicable based on Ministry of Finance, Government of India ,(Department of Revenue), Central Board of Indirect Taxes and Customs vide their notification no 50/2018 - Central tax dated 13 September 2018. This is a system generated report and does not require signature.

Participant Report - EC

Date: 31-Jul-24

Trade Date	31-Jul-24
Participant ID	W2MH0BST0000
Participant Name	Brihanmumbai Electric Supply & Transport (BEST)
Selected Portfolio	1

Trade Obligation(Rs.)	41148000.00
Net Exchange Fees	0.00
Exchange Fees IGST/UTGST	0.00
Exchange Fees SGST	0.00
Exchange Fees CGST	0.00
GST On Buy Trade	7406640.00
GST On Sell Trade	0.00
TCS Amount	0.00
TDS Amount	0.00
Funds Pay-In	48554640.00
Funds Pay-Out	0.00

Section A - Total (B+C)

Portfolio ID	Portfolio ID NLDC	Symbol	Invoice (Rs.)	Charges & Taxes (Rs.)	Pay-In Amount (Rs.)	Pay-Out Amount (Rs.)
W2MH0BST0001	MH0MBESTWR01IE	REC	41148000.00	7406640.00	48554640.00	0.00

Section B - Trade Details

Portfolio ID	Portfolio ID NLDC	Buy/Sell	Symbol	Rate (Rs.)	Quantity	Invoice (Rs.)
W2MH0BST0001	MH0MBESTWR01IE	Buy	REC	120.00	342900.00	41148000.00

Section C - Charges and Taxes Details

Portfolio ID	Buy/Sell	Symbol	Exchange Fees (Rs.)	Discount on Exchange Fees (Rs.)	Rebate on Exchange Fees (Rs.)	Net Exchange Fees (Rs.)	IGST/UTGST on Exchange Fees (Rs.)	SGST on Exchange Fees (Rs.)	CGST on Exchange Fees (Rs.)	GST on Trade (Rs.)	TCS (Rs.)	TDS (Rs.)	Charges & Taxes Total
W2MH0BST0001	Buy	REC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7406640.00	0.00	0.00	7406640.00

EC Trade Report (Buy/Sell)

Date: 31-Jul-24

Trade Date	31-Jul-24
Participant ID	W2MH0BST0000
Participant Name	Brihanmumbai Electric Supply & Transport (BEST)
Portfolio ID	W2MH0BST0001
Portfolio Name	BEST Undertaking
State	Maharashtra
Registration Number	MH0MBESTWR01IE
Financial Year	2024-25

Trade Obligation(Rs.)	41148000.00
Net Exchange Fees	0.00
Exchange Fees IGST/UTGST	0.00
Exchange Fees SGST	0.00
Exchange Fees CGST	0.00
GST On Buy Trade	7406640.00
GST On Sell Trade	0.00
TCS Amount	0.00
TDS Amount	0.00
Funds Pay-In	48554640.00
Funds Pay-Out	0.00

Section A - Total (B+C)

Certificate Number	Certificate for Financial Year	Symbol	Invoice (Rs.)	Charges & Taxes (Rs.)	Pay-In Amount (Rs.)	Pay-Out Amount (Rs.)
C-IEX_REC000274	591900	REC	41148000.00	7406640.00	48554640.00	0.00

Section B - Trade Details

Certificate Number	Certificate for Financial Year	Buy/Sell	Symbol	Rate (Rs.)	Quantity	Invoice (Rs.)
C-IEX_REC000274	591900	Buy	REC	120.00	342900.00	41148000.00

Section C - Charges and Taxes Details

Certificate Number	Buy/Sell	Symbol	Exchange Fees (Rs.)	Discount on Exchange Fees (Rs.)	Rebate on Exchange Fees (Rs.)	Net Exchange Fees (Rs.)	IGST/UTGST on Exchange Fees (Rs.)	SGST on Exchange Fees (Rs.)	CGST on Exchange Fees (Rs.)	GST on Trade (Rs.)	TCS (Rs.)	TDS (Rs.)	Charges & Taxes Total
C-IEX_REC000274	Buy	REC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7406640.00	0.00	0.00	7406640.00

Certificate of Purchase of Renewable Energy Certificate

INDIAN ENERGY EXCHANGE LTD.

Certificate of Purchase of REC(s)

Certificate Number : C-IEX_REC000274 **Issued On: 31-Jul-2024**

BEST Undertaking

Number of Certificates: 342900

This certifies that BEST Undertaking is the holder of 342900 non transferable Renewable energy certificate(s) bought on 31-Jul-2024 , through Indian Energy Exchange Limited.

This certificate represented hereby is issued and shall be held subject to all the provisions of the regulations of Honorable CERC as amended from time to time and the Bye-laws, Rules and Business Rules of Indian Energy Exchange Limited.

This is a computer-generated statement hence doesn't require signature.

POWER EXCHANGE INDIA LIMITED

Certificate of Purchase of REC(s)

Number C - PXMB07241542 **Issued On - 31-JUL-2024**

Serial No. - PXI/ 31072024/REC/01542

Number of Certificates - 342100

This certifies that BEST is the holder of 342100 non transferable Renewable Energy Certificate(s) bought on 31-JUL-2024, through *Power Exchange India Limited.*

This certificate represented hereby is issued and shall be held subject to all the provisions of the regulations of Honorable CERC as amended from time to time and the Bye - laws, Rules and Business Rule of *Power Exchange India Limited.*

Power Exchange India Limited

Regd. Office: Power Exchange India Ltd.9th Floor, 901 ,Sumer Plaza,Marol Maroshi Road,Marol Andheri (East),Mumbai 400 059, India.

CIN:- U74900MH2008PLC179152, Phone no.+ 91 22 4009 6667/87, Fax: + 91 22 40096690/33, Website: www.powerexindia.in

Email : pxi_mktops@pxil.co.in

Note: - This is a computer generated statement hence doesn't require signature.

Auction date: 31-Jul-2024

REC Obligation Report Without GST

Clearing Member ID	Trading Member ID	AM ID	CA Client ID	REC Type	Certificates Traded	Clearing Price(Rs. / Certificate)	Trade Value (Rs.)	Regulatory Fees (Rs.)	Exchange Transaction Charges				Tax Collection at Source (TCS)			Tax Deduction at Source (TDS)			Net Obligation (Rs.)
									Transaction Charges (Rs.)	CGST (Rs)	SGST (Rs)	IGST (Rs)	CGST (Rs)	SGST (Rs)	IGST (Rs)	CGST (Rs)	SGST (Rs)	IGST (Rs)	
S1020	S1020	NA	MH0MBESTWR01PE	REC	342100	120.00	41052000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	41052000.00
	Total						41052000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	41052000.00
Total							41052000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	41052000.00
Net Obligation							41052000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	41052000.00

REC Obligation Report With GST

Clearing Member ID	Trading Member ID	AM ID	CA Client ID	REC Type	Certificates Traded	Clearing Price (Rs. / Certificate)	Trade Value (Rs.)	GST on Trade Value (Rs)			Total GST on Trade Value (Rs)	Net Obligation without GST on Trade Value(Rs.)	Net Obligation with GST on Trade Value (Rs)
								CGST (Rs)	SGST (Rs)	IGST (Rs)	A	B (Please refer above table)	(A+B)
S1020	S1020	NA	MH0MBESTWR01PE	REC	342100	120.00	41052000.00	0.00	0.00	7389360.00	7389360.00	41052000.00	48441360.00
	Total						41052000.00	0.00	0.00	7389360.00	7389360.00	41052000.00	48441360.00
Total							41052000.00	0.00	0.00	7389360.00	7389360.00	41052000.00	48441360.00
Net Obligation							41052000.00	0.00	0.00	7389360.00	7389360.00	41052000.00	48441360.00

Note 1:- Tax Collection at Source (TCS) is as per Ministry of Finance, Government of India, (Department of Revenue), Central Board of Indirect Taxes and Customs notification no 51/2018 - Central Tax dt. 13 September 2018. This is a system generated report and does not require signature.

Note 2:- Tax Deduction at Source (TDS) is applicable based on Ministry of Finance, Government of India ,(Department of Revenue), Central Board of Indirect Taxes and Customs vide their notification no 50/2018 - Central tax dated 13 September 2018. This is a system generated report and does not require signature.

Participant Report - EC

Date: 14-Aug-24

Trade Date	14-Aug-24
Participant ID	W2MH0BST0000
Participant Name	Brihanmumbai Electric Supply & Transport (BEST)
Selected Portfolio	1

Trade Obligation(Rs.)	37370600.00
Net Exchange Fees	0.00
Exchange Fees IGST/UTGST	0.00
Exchange Fees SGST	0.00
Exchange Fees CGST	0.00
GST On Buy Trade	6726708.00
GST On Sell Trade	0.00
TCS Amount	0.00
TDS Amount	0.00
Funds Pay-In	44097308.00
Funds Pay-Out	0.00

Section A - Total (B+C)

Portfolio ID	Portfolio ID NLDC	Symbol	Invoice (Rs.)	Charges & Taxes (Rs.)	Pay-In Amount (Rs.)	Pay-Out Amount (Rs.)
W2MH0BST0001	MH0MBESTWR01IE	REC	37370600.00	6726708.00	44097308.00	0.00

Section B - Trade Details

Portfolio ID	Portfolio ID NLDC	Buy/Sell	Symbol	Rate (Rs.)	Quantity	Invoice (Rs.)
W2MH0BST0001	MH0MBESTWR01IE	Buy	REC	118.00	316700.00	37370600.00

Section C - Charges and Taxes Details

Portfolio ID	Buy/Sell	Symbol	Exchange Fees (Rs.)	Discount on Exchange Fees (Rs.)	Rebate on Exchange Fees (Rs.)	Net Exchange Fees (Rs.)	IGST/UTGST on Exchange Fees (Rs.)	SGST on Exchange Fees (Rs.)	CGST on Exchange Fees (Rs.)	GST on Trade (Rs.)	TCS (Rs.)	TDS (Rs.)	Charges & Taxes Total
W2MH0BST0001	Buy	REC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6726708.00	0.00	0.00	6726708.00

EC Trade Report (Buy/Sell)

Date: 14-Aug-24

Trade Date	14-Aug-24
Participant ID	W2MH0BST0000
Participant Name	Brihanmumbai Electric Supply & Transport (BEST)
Portfolio ID	W2MH0BST0001
Portfolio Name	BEST Undertaking
State	Maharashtra
Registration Number	MH0MBESTWR01IE
Financial Year	2024-25

Trade Obligation(Rs.)	37370600.00
Net Exchange Fees	0.00
Exchange Fees IGST/UTGST	0.00
Exchange Fees SGST	0.00
Exchange Fees CGST	0.00
GST On Buy Trade	6726708.00
GST On Sell Trade	0.00
TCS Amount	0.00
TDS Amount	0.00
Funds Pay-In	44097308.00
Funds Pay-Out	0.00

Section A - Total (B+C)

Certificate Number	Certificate for Financial Year	Symbol	Invoice (Rs.)	Charges & Taxes (Rs.)	Pay-In Amount (Rs.)	Pay-Out Amount (Rs.)
C-IEX_REC000296	908600	REC	37370600.00	6726708.00	44097308.00	0.00

Section B - Trade Details

Certificate Number	Certificate for Financial Year	Buy/Sell	Symbol	Rate (Rs.)	Quantity	Invoice (Rs.)
C-IEX_REC000296	908600	Buy	REC	118.00	316700.00	37370600.00

Section C - Charges and Taxes Details

Certificate Number	Buy/Sell	Symbol	Exchange Fees (Rs.)	Discount on Exchange Fees (Rs.)	Rebate on Exchange Fees (Rs.)	Net Exchange Fees (Rs.)	IGST/UTGST on Exchange Fees (Rs.)	SGST on Exchange Fees (Rs.)	CGST on Exchange Fees (Rs.)	GST on Trade (Rs.)	TCS (Rs.)	TDS (Rs.)	Charges & Taxes Total
C-IEX_REC000296	Buy	REC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6726708.00	0.00	0.00	6726708.00

INDIAN ENERGY EXCHANGE LTD.

Certificate of Purchase of REC(s)

Certificate Number : C-IEX_REC000296 **Issued On: 14-Aug-2024**

BEST Undertaking

Number of Certificates: 316700

This certifies that BEST Undertaking is the holder of 316700 non transferable Renewable energy certificate(s) bought on 14-Aug-2024 , through Indian Energy Exchange Limited.

This certificate represented hereby is issued and shall be held subject to all the provisions of the regulations of Honorable CERC as amended from time to time and the Bye-laws, Rules and Business Rules of Indian Energy Exchange Limited.

This is a computer-generated statement hence doesn't require signature.

POWER EXCHANGE INDIA LIMITED

Certificate of Purchase of REC(s)

Number C - PXMB08241555 **Issued On - 14-AUG-2024**

Serial No. - PXI/ 14082024/REC/01555

Number of Certificates - 316000

This certifies that BEST is the holder of 316000 non transferable Renewable Energy Certificate(s) bought on 14-AUG-2024, through *Power Exchange India Limited.*

This certificate represented hereby is issued and shall be held subject to all the provisions of the regulations of Honorable CERC as amended from time to time and the Bye - laws, Rules and Business Rule of *Power Exchange India Limited.*

Power Exchange India Limited

Regd. Office: Power Exchange India Ltd.9th Floor, 901 ,Sumer Plaza,Marol Maroshi Road,Marol Andheri (East),Mumbai 400 059, India.

CIN:- U74900MH2008PLC179152, Phone no.+ 91 22 4009 6667/87, Fax: + 91 22 40096690/33, Website: www.powerexindia.in

Email : pxi_mktops@pxil.co.in

Note: - This is a computer generated statement hence doesn't require signature.

Auction date: 14-Aug-2024

REC Obligation Report Without GST

Clearing Member ID	Trading Member ID	AM ID	CA Client ID	REC Type	Certificates Traded	Clearing Price(Rs. / Certificate)	Trade Value (Rs.)	Regulatory Fees (Rs.)	Exchange Transaction Charges				Tax Collection at Source (TCS)			Tax Deduction at Source (TDS)			Net Obligation (Rs.)
									Transaction Charges (Rs.)	CGST (Rs)	SGST (Rs)	IGST (Rs)	CGST (Rs)	SGST (Rs)	IGST (Rs)	CGST (Rs)	SGST (Rs)	IGST (Rs)	
S1020	S1020	NA	MH0MBESTWR01PE	REC	316000	118.00	37288000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	37288000.00
	Total						37288000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	37288000.00
Total							37288000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	37288000.00
Net Obligation							37288000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	37288000.00

REC Obligation Report With GST

Clearing Member ID	Trading Member ID	AM ID	CA Client ID	REC Type	Certificates Traded	Clearing Price (Rs. / Certificate)	Trade Value (Rs.)	GST on Trade Value (Rs)			Total GST on Trade Value (Rs)	Net Obligation without GST on Trade Value(Rs.)	Net Obligation with GST on Trade Value (Rs)
								CGST (Rs)	SGST (Rs)	IGST (Rs)	A	B (Please refer above table)	(A+B)
S1020	S1020	NA	MH0MBESTWR01PE	REC	316000	118.00	37288000.00	5787.90	5787.90	6700264.20	6711840.00	37288000.00	43999840.00
	Total						37288000.00	5787.90	5787.90	6700264.20	6711840.00	37288000.00	43999840.00
Total							37288000.00	5787.90	5787.90	6700264.20	6711840.00	37288000.00	43999840.00
Net Obligation							37288000.00	5787.90	5787.90	6700264.20	6711840.00	37288000.00	43999840.00

Note 1:- Tax Collection at Source (TCS) is as per Ministry of Finance, Government of India, (Department of Revenue), Central Board of Indirect Taxes and Customs notification no 51/2018 - Central Tax dt. 13 September 2018. This is a system generated report and does not require signature.

Note 2:- Tax Deduction at Source (TDS) is applicable based on Ministry of Finance, Government of India ,(Department of Revenue), Central Board of Indirect Taxes and Customs vide their notification no 50/2018 - Central tax dated 13 September 2018. This is a system generated report and does not require signature.

Auction date: 14-Aug-2024

REC Obligation Report Without GST

Clearing Member ID	Trading Member ID	AM ID	CA Client ID	REC Type	Certificates Traded	Clearing Price(Rs. / Certificate)	Trade Value (Rs.)	Regulatory Fees (Rs.)	Exchange Transaction Charges				Tax Collection at Source (TCS)			Tax Deduction at Source (TDS)			Net Obligation (Rs.)
									Transaction Charges (Rs.)	CGST (Rs)	SGST (Rs)	IGST (Rs)	CGST (Rs)	SGST (Rs)	IGST (Rs)	CGST (Rs)	SGST (Rs)	IGST (Rs)	
S1020	S1020	NA	MH0MBESTWR01PE	REC	316000	118.00	37288000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	37288000.00
	Total						37288000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	37288000.00
Total							37288000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	37288000.00
Net Obligation							37288000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	37288000.00

REC Obligation Report With GST

Clearing Member ID	Trading Member ID	AM ID	CA Client ID	REC Type	Certificates Traded	Clearing Price (Rs. / Certificate)	Trade Value (Rs.)	GST on Trade Value (Rs)			Total GST on Trade Value (Rs)	Net Obligation without GST on Trade Value(Rs.)	Net Obligation with GST on Trade Value (Rs)
								CGST (Rs)	SGST (Rs)	IGST (Rs)	A	B (Please refer above table)	(A+B)
S1020	S1020	NA	MH0MBESTWR01PE	REC	316000	118.00	37288000.00	5787.90	5787.90	6700264.20	6711840.00	37288000.00	43999840.00
	Total						37288000.00	5787.90	5787.90	6700264.20	6711840.00	37288000.00	43999840.00
Total							37288000.00	5787.90	5787.90	6700264.20	6711840.00	37288000.00	43999840.00
Net Obligation							37288000.00	5787.90	5787.90	6700264.20	6711840.00	37288000.00	43999840.00

Note 1:- Tax Collection at Source (TCS) is as per Ministry of Finance, Government of India, (Department of Revenue), Central Board of Indirect Taxes and Customs notification no 51/2018 - Central Tax dt. 13 September 2018. This is a system generated report and does not require signature.

Note 2:- Tax Deduction at Source (TDS) is applicable based on Ministry of Finance, Government of India ,(Department of Revenue), Central Board of Indirect Taxes and Customs vide their notification no 50/2018 - Central tax dated 13 September 2018. This is a system generated report and does not require signature.

Participant Report - EC

Date: 28-Aug-24

Trade Date	28-Aug-24
Participant ID	W2MH0BST0000
Participant Name	Brihanmumbai Electric Supply & Transport (BEST)
Selected Portfolio	1

Trade Obligation(Rs.)	16100000.00
Net Exchange Fees	0.00
Exchange Fees IGST/UTGST	0.00
Exchange Fees SGST	0.00
Exchange Fees CGST	0.00
GST On Buy Trade	2898000.00
GST On Sell Trade	0.00
TCS Amount	0.00
TDS Amount	0.00
Funds Pay-In	18998000.00
Funds Pay-Out	0.00

Section A - Total (B+C)

Portfolio ID	Portfolio ID NLDC	Symbol	Invoice (Rs.)	Charges & Taxes (Rs.)	Pay-In Amount (Rs.)	Pay-Out Amount (Rs.)
W2MH0BST0001	MH0MBESTWR01IE	REC	16100000.00	2898000.00	18998000.00	0.00

Section B - Trade Details

Portfolio ID	Portfolio ID NLDC	Buy/Sell	Symbol	Rate (Rs.)	Quantity	Invoice (Rs.)
W2MH0BST0001	MH0MBESTWR01IE	Buy	REC	115.00	140000.00	16100000.00

Section C - Charges and Taxes Details

Portfolio ID	Buy/Sell	Symbol	Exchange Fees (Rs.)	Discount on Exchange Fees (Rs.)	Rebate on Exchange Fees (Rs.)	Net Exchange Fees (Rs.)	IGST/UTGST on Exchange Fees (Rs.)	SGST on Exchange Fees (Rs.)	CGST on Exchange Fees (Rs.)	GST on Trade (Rs.)	TCS (Rs.)	TDS (Rs.)	Charges & Taxes Total
W2MH0BST0001	Buy	REC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2898000.00	0.00	0.00	2898000.00

EC Trade Report (Buy/Sell)

Date: 28-Aug-24

Trade Date	28-Aug-24
Participant ID	W2MH0BST0000
Participant Name	Brihanmumbai Electric Supply & Transport (BEST)
Portfolio ID	W2MH0BST0001
Portfolio Name	BEST Undertaking
State	Maharashtra
Registration Number	MH0MBESTWR01IE
Financial Year	2024-25

Trade Obligation(Rs.)	16100000.00
Net Exchange Fees	0.00
Exchange Fees IGST/UTGST	0.00
Exchange Fees SGST	0.00
Exchange Fees CGST	0.00
GST On Buy Trade	2898000.00
GST On Sell Trade	0.00
TCS Amount	0.00
TDS Amount	0.00
Funds Pay-In	18998000.00
Funds Pay-Out	0.00

Section A - Total (B+C)

Certificate Number	Certificate for Financial Year	Symbol	Invoice (Rs.)	Charges & Taxes (Rs.)	Pay-In Amount (Rs.)	Pay-Out Amount (Rs.)
C-IEX_REC000342	1048600	REC	16100000.00	2898000.00	18998000.00	0.00

Section B - Trade Details

Certificate Number	Certificate for Financial Year	Buy/Sell	Symbol	Rate (Rs.)	Quantity	Invoice (Rs.)
C-IEX_REC000342	1048600	Buy	REC	115.00	140000.00	16100000.00

Section C - Charges and Taxes Details

Certificate Number	Buy/Sell	Symbol	Exchange Fees (Rs.)	Discount on Exchange Fees (Rs.)	Rebate on Exchange Fees (Rs.)	Net Exchange Fees (Rs.)	IGST/UTGST on Exchange Fees (Rs.)	SGST on Exchange Fees (Rs.)	CGST on Exchange Fees (Rs.)	GST on Trade (Rs.)	TCS (Rs.)	TDS (Rs.)	Charges & Taxes Total
C-IEX_REC000342	Buy	REC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2898000.00	0.00	0.00	2898000.00

INDIAN ENERGY EXCHANGE LTD.

Certificate of Purchase of REC(s)

Certificate Number : C-IEX_REC000342 **Issued On: 28-Aug-2024**

BEST Undertaking

Number of Certificates: 140000

This certifies that BEST Undertaking is the holder of 140000 non transferable Renewable energy certificate(s) bought on 28-Aug-2024 , through Indian Energy Exchange Limited.

This certificate represented hereby is issued and shall be held subject to all the provisions of the regulations of Honorable CERC as amended from time to time and the Bye-laws, Rules and Business Rules of Indian Energy Exchange Limited.

This is a computer-generated statement hence doesn't require signature.

POWER EXCHANGE INDIA LIMITED

Certificate of Purchase of REC(s)

Number C - PXMB08241568 **Issued On - 28-AUG-2024**

Serial No. - PXI/ 28082024/REC/01568

Number of Certificates - 140000

This certifies that BEST is the holder of 140000 non transferable Renewable Energy Certificate(s) bought on 28-AUG-2024, through *Power Exchange India Limited.*

This certificate represented hereby is issued and shall be held subject to all the provisions of the regulations of Honorable CERC as amended from time to time and the Bye - laws, Rules and Business Rule of *Power Exchange India Limited.*

Power Exchange India Limited

Regd. Office: Power Exchange India Ltd.9th Floor, 901 ,Sumer Plaza,Marol Maroshi Road,Marol Andheri (East),Mumbai 400 059, India.

CIN:- U74900MH2008PLC179152, Phone no.+ 91 22 4009 6667/87, Fax: + 91 22 40096690/33, Website: www.powerexindia.in

Email : pxi_mktops@pxil.co.in

Note: - This is a computer generated statement hence doesn't require signature.

Auction date: 28-Aug-2024

REC Obligation Report Without GST

Clearing Member ID	Trading Member ID	AM ID	CA Client ID	REC Type	Certificates Traded	Clearing Price(Rs. / Certificate)	Trade Value (Rs.)	Regulatory Fees (Rs.)	Exchange Transaction Charges				Tax Collection at Source (TCS)			Tax Deduction at Source (TDS)			Net Obligation (Rs.)
									Transaction Charges (Rs.)	CGST (Rs)	SGST (Rs)	IGST (Rs)	CGST (Rs)	SGST (Rs)	IGST (Rs)	CGST (Rs)	SGST (Rs)	IGST (Rs)	
S1020	S1020	NA	MH0MBESTWR01PE	REC	140000	115.00	16100000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16100000.00
	Total						16100000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16100000.00
Total							16100000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16100000.00
Net Obligation							16100000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16100000.00

REC Obligation Report With GST

Clearing Member ID	Trading Member ID	AM ID	CA Client ID	REC Type	Certificates Traded	Clearing Price (Rs. / Certificate)	Trade Value (Rs.)	GST on Trade Value (Rs)			Total GST on Trade Value (Rs)	Net Obligation without GST on Trade Value(Rs.)	Net Obligation with GST on Trade Value (Rs)
								CGST (Rs)	SGST (Rs)	IGST (Rs)	A	B (Please refer above table)	(A+B)
S1020	S1020	NA	MH0MBESTWR01PE	REC	140000	115.00	16100000.00	0.00	0.00	2898000.00	2898000.00	16100000.00	18998000.00
	Total						16100000.00	0.00	0.00	2898000.00	2898000.00	16100000.00	18998000.00
Total							16100000.00	0.00	0.00	2898000.00	2898000.00	16100000.00	18998000.00
Net Obligation							16100000.00	0.00	0.00	2898000.00	2898000.00	16100000.00	18998000.00

Note 1:- Tax Collection at Source (TCS) is as per Ministry of Finance, Government of India, (Department of Revenue), Central Board of Indirect Taxes and Customs notification no 51/2018 - Central Tax dt. 13 September 2018. This is a system generated report and does not require signature.

Note 2:- Tax Deduction at Source (TDS) is applicable based on Ministry of Finance, Government of India ,(Department of Revenue), Central Board of Indirect Taxes and Customs vide their notification no 50/2018 - Central tax dated 13 September 2018. This is a system generated report and does not require signature.

DISCOM- Annexure I

GROSS ENERGY CONSUMPTION (YEAR 2024 - 2025)				
	Reporting Quarter - I			
	Utility : BEST Undertaking.			
1	**GROSS CONSUMPTION**		**Quantum (MUs)**	**Remarks**
O	**Own Generation**			
	Source 1		0	BEST not having own generation
	Source 2		0	
	.....			
	Source N		0	
	Sub Total (1)		0	
P	**Purchase from Other generating Company / Intermediaries**			
	TATA Power Co. (G) & Manikaran Power Ltd.		1454.173198	
	Source 2		0	
	.....		0	
	Source N		0	
	Sub Total (2)		**1454.173198**	
S	**Sale to Other Licensee / intermediaries**			
	Licensee 1		0	
	Licensee 2		0	
	.....		0	
	Inter.1		0	
	Sub Total (3)		0	
	Total GEC for the Quarter - (O+P-S)		**1454.173198**	
2	**RPO Obligation (29.91% of GEC)**		**434.943204**	

Declaration: WE hereby declare that the gross energy consumption & R.E procurement data submitted above does not includes the gross energy consumption & R.E procurement data of CPP / OA consumers on our network.

30/11/2024

Divisional Engineer
Power Purchase Dept.

Sign and Seal of
authorized signatory of Company

B. E. S. & T. Undertaking
बेस्ट
Power Purchase Dept.

Sign and Seal of C.A.

DISCOM- Annexure II

RENEWABLE ENERGY PROCUREMENT (YEAR 2024-25)				
(A-Wind)				
Reporting Quarter - I				
Month:	April 2024 to June 2024			
Eligible Person Name : BEST Undertaking.				
1	**Own Generation**		**Quantum (MUs.)**	**Remarks**
	RE 1		0	BEST not having own RE generation
	RE 2		0	
	.....			
	RE...N			
	Sub Total (1)		**0**	
2	**Purchase from Other RE Sources / Licensee**			
	Source 1		0	
	Source 2		0	
	.....		0	
	.....		0	
	Source N		0	
	Sub Total (2)		**0**	
3	**Purchase through REC**		0	
	Sub Total (3)		**0**	
4	**RE Sold to other Person**			
	Party - 1		0	
	Party - 2		0	
	.....		0	
	Sub Total (4)		**0**	
	Total Procurement (1)+(2)+(3)-(4)		**0**	

Declaration: We hereby declare that the gross energy consumption & R.E procurement data submitted above does not includes the gross energy consumption & R.E procurement data of CPP / OA consumers on our network.

30/9/2024

Divisional Engineer
Power Purchase Dept.

Sign and Seal of
authorized signatory of Company

B.E.S. & T. Undertaking * Power Purchase Dept. *

Sign and Seal of C.A.

DISCOM- Annexure III

RENEWABLE ENERGY PROCUREMENT (YEAR 2024-25)				
(B-HPO)				
Reporting Quarter - I				
Month:	April 2024 to June 2024			
Eligible Person Name : BEST Undertaking.				
1	**Own Generation**		**Quantum (MUs.)**	**Remarks**
	RE 1		0	BEST not having own RE generation
	RE 2		0	
	.....			
	RE...N			
	Sub Total (1)		0	
2	**Purchase from Other RE Sources / Licensee**			
	Source 1		0	
	Source 2		0	
	.....			
	.....			
	Source N			
	Sub Total (2)		0	
3	**Purchase through REC**		0	
	Sub Total (3)		0	
4	**RE Sold to other Person**			
	Party - 1		0	
	Party - 2		0	
	.....			
	Sub Total (4)		0	
	Total Procurement (1)+(2)+(3)-(4)		0	
Declaration: WE hereby declare that the gross energy consumption & R.E procurement data submitted above does not includes the gross energy consumption & R.E procurement data of CPP / OA consumers on our network.				

30/10/2024

Divisional Engineer
Power Purchase Dept.

Sign and Seal of authorized signatory of Company

Sign and Seal of C.A.

B.E.S. & T. Undertaking
बेस्ट
Power Purchase Dept.

DISCOM- Annexure IV

RENEWABLE ENERGY PROCUREMENT (YEAR 2024-25)				
(C-Distributed RE)				
Reporting Quarter - I				
Month:	April 2024 to June 2024			
Eligible Person Name : BEST Undertaking.				
1	**Own Generation**		**Quantum (MUs.)**	**Remarks**
	RE 1		0	
	RE 2		0	BEST not having own RE generation
	.....		0	
	RE...N		0	
	Sub Total (1)		**0**	
2	**Purchase from Other RE Sources / Licensee**			
	Solar Generation of Net metered consumers		4.156737	
	Source 2		0	
	.....		0	
	.....		0	
	Source N		0	
	Sub Total (2)		**4.156737**	
3	**Purchase through REC**		0	
	Sub Total (3)		**0**	
4	**RE Sold to other Person**			
	Party - 1		0	
	Party - 2		0	
	.....		0	
	Sub Total (4)		**0**	
	Total Procurement (1)+(2)+(3)-(4)		**4.156737**	
Declaration: WE hereby declare that the gross energy consumption & R.E procurement data submitted above does not includes the gross energy consumption & R.E procurement data of CPP / OA consumers on our				

30/10/2024

Divisional Engineer
Power Purchase Dept.

Sign and Seal of
authorized signatory of Company

Sign and Seal of C.A.

B.E.S.&T. Undertaking
Power Purchase Dept.

DISCOM- Annexure V

RENEWABLE ENERGY PROCUREMENT (YEAR 2024-25)				
(D-Other)				
Reporting Quarter - I				
Month:	April 2024 to June 2024			
Eligible Person Name : BEST Undertaking.				
1	**Own Generation**		**Quantum (MUs.)**	**Remarks**
	RE 1		0	BEST not having own RE generation
	RE 2		0	
	.....		0	
	RE...N		0	
	Sub Total (1)		**0**	
2	**Purchase from Other RE Sources / Licensee**			
	Walwhan Solar MH Ltd		8.122835	
	Solar Energy from Power Exchange IEX		81.60513	
	Non Solar Energy from Power Exchange IEX		16.60437	
	Hydro Energy from Power Exchange IEX		0.9698	
	Hydro Energy from Power Exchange from TPC G		229.943616	
	Sub Total (2)		**337.245751**	
3	**Purchase through REC**		0	
	Sub Total (3)		**0**	
4	**RE Sold to other Person**			
	Party - 1			
	Party - 2			
	.....		0	
	Sub Total (4)		**0**	
	Total Procurement (1)+(2)+(3)-(4)		**337.245751**	

Declaration: WE hereby declare that the gross energy consumption & R.E procurement data submitted above does not includes the gross energy consumption & R.E procurement data of CPP / OA consumers on our network.

30/10/2024

Divisional Engineer
Power Purchase Dept.

Sign and Seal of
authorized signatory of Company

Sign and Seal of C.A.

B.E.S. & T. Undertaking * Power Purchase Dept. *

DISCOM- Annexure VI

RPO Settlement Account (Yearly) - YEAR 2024-25											
A - Wind											
Name : Eligible Person - BEST Undertaking.											
Gross Energy		RPO % Obligation (0.67 %)	RPO % Up to Previous month	RPO% Cumulative upto the month	RE purchase for the month		RE purchase up to previous Month		RE cumulative upto the month		Short if any
Consumption				-1					-2		(1-2)
MUs.		MUs.	MUs.	MUs.	MUs.		MUs.		MUs.		MUs.
Fiscal Year (2024-25)					Preferential Tariff	REC	Preferential Tariff	REC	Preferential Tariff	REC	
April	461.418943	3.0915069	0.00	3.091507	0	0	0	0	0	0	3.091507
May	512.303484	3.4324333	3.091507	6.523940	0	0	0	0	0	0	6.523940
June	480.450772	3.2190202	6.523940	9.742960	0	0	0	0	0	0	9.742960
July											
August											
September											
October											
November											
December											
January											
February											
March											
Total	**1454.173198**	**9.742960**			**0**	**0**					**9.742960**

Declaration: WE hereby declare that the gross energy consumption & R.E procurement data submitted above does not includes the gross energy consumption & R.E procurement data of CPP / OA consumers on our network.

Divisional Engineer
Power Purchase Dept.

Sign and Seal of
authorized signatory of Company

B. E. S. & T. Undertaking
बेस्ट
Power Purchase Dept.

Sign and Seal of C.A.

DISCOM- Annexure VII

RPO Settlement Account (Yearly) - YEAR 2024-25											
B-HPO											
Name : Eligible Person - BEST Undertaking											
Gross Energy		**RPO % Obligation (0.38 %)**	**RPO % Up to Previous month**	**RPO% Cumulative upto the month**	**RE purchase for the month**		**RE purchase up to previous Month**		**RE cumulative upto the month**		**Short if any**
Consumption				**-1**					**-2**		**(1-2)**
MUs.		**MUs.**	**MUs.**	**MUs.**	**MUs.**		**MUs.**		**MUs.**		**MUs.**
Fiscal Year (2024-25)					**Preferential Tariff**	**REC**	**Preferential Tariff**	**REC**	**Preferential Tariff**	**REC**	
April	461.418943	1.753392	0.00	1.753392	0	0	0	0	0	0	1.753392
May	512.303484	1.946753	1.753392	3.700145	0	0	0	0	0	0	3.700145
June	480.450772	1.825713	3.700145	5.525858	0	0	0	0	0	0	5.525858
July											
August											
September											
October											
November											
December											
January											
February											
March											
Total	**1454.173198**	**5.525858**			**0**	**0**					**5.525858**

Declaration: WE hereby declare that the gross energy consumption & R.E procurement data submitted above does not includes the gross energy consumption & R.E procurement data of CPP / OA consumers on our network.

30/10/2025

Divisional Engineer
Power Purchase Dept.

Sign and Seal of
authorized signatory of Company

B.E.S. & T. Undertaking
Power Purchase Dept.

Sign and Seal of C.A.

DISCOM- Annexure VIII

RPO Settlement Account (Yearly) - YEAR 2024-25											
C – Distributed RE											
Name : Eligible Person - BEST Undertaking											
Gross Energy		RPO % Obligation (1.50 %)	RPO % Up to Previous month	RPO% Cumulative upto the month	RE purchase for the month		RE purchase up to previous Month		RE cumulative upto the month		Short if any
Consumption				-1					-2		(1-2)
MUs.		MUs.	MUs.	MUs.	MUs.		MUs.		MUs.		MUs.
Fiscal Year (2024-25)					Preferential Tariff	REC	Preferential Tariff	REC	Preferential Tariff	REC	
April	461.4189427	6.921284	0.000000	6.921284	1.406313	0	0	0	1.406313	0	5.514971
May	512.3034838	7.684552	6.921284	14.605836	1.571223	0	1.406313	0	2.977536	0	11.628300
June	480.4507716	7.206762	14.605836	21.812598	1.179201	0	1.571223	0	4.156737	0	17.655861
July											
August											
September											
October											
November											
December											
January											
February											
March											
Total	**1454.173198**	**21.812598**			**4.156737**	**0**					**17.655861**

Declaration: WE hereby declare that the gross energy consumption & R.E procurement data submitted above does not includes the gross energy consumption & R.E procurement data of CPP / OA consumers on our network.

Divisional Engineer
Power Purchase Dept.

Sign and Seal of
authorized signatory of Company

B. E. S. & T. Undertaking
Power Purchase Dept.

Sign and Seal of C.A.

DISCOM- Annexure IX

RPO Settlement Account (Yearly) - YEAR 2024-25											
D- Other RE											
Name : Eligible Person - BEST Undertaking											
Gross Energy		**RPO % Obligation (27.35 %)**	**RPO % Up to Previous month**	**RPO% Cumulative upto the month**	**RE purchase for the month**		**RE purchase up to previous Month**		**RE cumulative upto the month**		**Short if any**
Consumption				**-1**					**-2**		**(1-2)**
MUs.		**MUs.**	**MUs.**	**MUs.**	**MUs.**		**MUs.**		**MUs.**		**MUs.**
Fiscal Year (2024-25)					**Preferential Tariff**	**REC**	**Preferential Tariff**	**REC**	**Preferential Tariff**	**REC**	
April	461.4189427	126.198081	0.00	126.198081	96.9194313	0	0	0	96.919431	0	29.278649
May	512.3034838	140.115003	126.198081	266.313084	129.358563	0	96.919431	0	226.277994	0	40.035089
June	480.4507716	131.403286	266.313084	397.716370	110.967756	0	129.358563	0	337.245751	0	60.470619
July											
August											
September											
October											
November											
December											
January											
February											
March											
Total	**1454.173198**	**397.71637**			**337.245751**	**0**					**60.470619**

Declaration: WE hereby declare that the gross energy consumption & R.E procurement data submitted above does not includes the gross energy consumption & R.E procurement data of CPP / OA consumers on our network

Divisional Engineer
Power Purchase Dept.

Sign and Seal of authorized signatory of Company

B. E. S. & T. Undertaking * Power Purchase Dept. *

Sign and Seal of C.A.

IEX
INDIAN ENERGY EXCHANGE

Certificate of Purchase of Renewable Energy in Green-Day Ahead Market

For the Month of : April-2024 **Issued on :** 01/05/2024

Portfolio Name: **BEST**

This is certified that BEST has purchased 19905.67 MWh (at regional periphery) of Renewable Energy for the period 01/04/2024 to 30/04/2024 through Indian Energy Exchange Limited in Green-Day Ahead Market.

Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
17753.51	1951.31	200.85	19905.67

This certificate represented hereby is issued on non-transferable and non-tradable basis and shall be held subject to Orders and Regulations of Honorable Central Electricity Regulatory Commission as amended from time to time and the Bye-laws, Rules and Business Rules of Indian Energy Exchange Limited.

Amit Kumar
Sr VP Market Operations

B.E.S. & T. Undertaking
बेस्ट
Power Purchase Dept.

*Computer generated report signature not required.

IEX
INDIAN ENERGY EXCHANGE

Annexure 1- (Date Wise Scheduling Details)

Participant ID	**W2MH0BST0000**
Participant Name	**Brihanmumbai Electric Supply & Transport (BEST)**
Portfolio ID	**W2MH0BST0001**
Portfolio Name	**BEST**

Scheduling details at Regional Periphery (Traded)

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
01-Apr-24	838.96	98.19	26.32	963.47
02-Apr-24	1208.9	110.22	28.12	1347.24
03-Apr-24	1642.39	177.64	25.21	1845.24
04-Apr-24	1354.31	98.74	15.95	1469
05-Apr-24	786.35	40.69	16.24	843.28
06-Apr-24	529.27	26.6	8.63	564.5
07-Apr-24	33.26	3.33	2.41	39
08-Apr-24	802.98	57.02	0	860
09-Apr-24	306.9	25.6	0	332.5
10-Apr-24	994.04	141.5	0	1135.54
11-Apr-24	451.31	66.71	0	518.02
12-Apr-24	905.41	97.23	0	1002.64
13-Apr-24	383.29	47.36	0	430.65
14-Apr-24	29.23	12.93	0.78	42.94
15-Apr-24	529.67	51.69	0	581.36
16-Apr-24	656.41	74.33	2.29	733.03
17-Apr-24	186.04	14.96	0	201
18-Apr-24	449.51	41.99	0	491.5
19-Apr-24	548.85	87.77	0	636.62
20-Apr-24	394.5	45.32	4.18	444
21-Apr-24	110.32	7.76	2.17	120.25
22-Apr-24	418.61	36.99	8.46	464.06
23-Apr-24	899.1	126.54	14.44	1040.08
24-Apr-24	737.68	89.92	3.4	831
25-Apr-24	696.92	106.65	16.09	819.66
26-Apr-24	574.93	96.6	22.5	694.03
27-Apr-24	705.12	88.39	1.24	794.75
28-Apr-24	25.12	7.88	1.31	34.31
29-Apr-24	335.71	47.43	1.11	384.25

*Computer generated report signature not required.

B.E.S. & T. Undertaking
Power Purchase Dept.

30-Apr-24	218.42	23.33	0	241.75
Grand Total				19905.67

Scheduling details after applying ISTS (POC) loss

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
01-Apr-24	807.41	94.5	25.34	927.25
02-Apr-24	1163.48	106.07	27.07	1296.62
03-Apr-24	1580.66	170.95	24.27	1775.88
04-Apr-24	1303.4	95.02	15.35	1413.77
05-Apr-24	756.81	39.16	15.62	811.59
06-Apr-24	509.37	25.6	8.31	543.28
07-Apr-24	32.01	3.2	2.32	37.53
08-Apr-24	774.34	54.97	0	829.31
09-Apr-24	295.95	24.68	0	320.63
10-Apr-24	958.56	136.44	0	1095
11-Apr-24	435.23	64.31	0	499.54
12-Apr-24	873.09	93.76	0	966.85
13-Apr-24	369.63	45.67	0	415.3
14-Apr-24	28.19	12.47	0.75	41.41
15-Apr-24	511.51	49.91	0	561.42
16-Apr-24	633.89	71.79	2.2	707.88
17-Apr-24	179.67	14.44	0	194.11
18-Apr-24	434.1	40.55	0	474.65
19-Apr-24	530.01	84.76	0	614.77
20-Apr-24	380.96	43.76	4.05	428.77
21-Apr-24	106.53	7.49	2.09	116.11
22-Apr-24	403.83	35.69	8.16	447.68
23-Apr-24	867.37	122.07	13.93	1003.37
24-Apr-24	711.65	86.75	3.28	801.68
25-Apr-24	672.31	102.88	15.53	790.72
26-Apr-24	554.63	93.2	21.7	669.53
27-Apr-24	680.23	85.27	1.2	766.7
28-Apr-24	24.24	7.59	1.27	33.1
29-Apr-24	324.68	45.87	1.07	371.62
30-Apr-24	211.23	22.57	0	233.8
Grand Total				19189.87

Scheduling details after applying ISTS (POC) and State loss

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
01-Apr-24	781.74	91.49	24.53	897.76
02-Apr-24	1126.48	102.71	26.19	1255.38
03-Apr-24	1530.38	165.52	23.51	1719.41
04-Apr-24	1261.95	92	14.86	1368.81

*Computer generated report signature not required.

B.E.S. & T. Undertaking बेस्ट Power Purchase Dept.

05-Apr-24	732.74	37.91	15.13	785.78
06-Apr-24	493.17	24.78	8.05	526
07-Apr-24	30.99	3.1	2.25	36.34
08-Apr-24	749.7	53.23	0	802.93
09-Apr-24	286.54	23.9	0	310.44
10-Apr-24	928.07	132.11	0	1060.18
11-Apr-24	421.39	62.26	0	483.65
12-Apr-24	845.34	90.77	0	936.11
13-Apr-24	357.88	44.21	0	402.09
14-Apr-24	27.29	12.08	0.72	40.09
15-Apr-24	495.23	48.33	0	543.56
16-Apr-24	613.73	69.5	2.14	685.37
17-Apr-24	173.94	13.98	0	187.92
18-Apr-24	420.3	39.26	0	459.56
19-Apr-24	513.16	82.07	0	595.23
20-Apr-24	368.85	42.37	3.92	415.14
21-Apr-24	103.15	7.25	2.03	112.43
22-Apr-24	390.98	34.55	7.9	433.43
23-Apr-24	839.8	118.18	13.5	971.48
24-Apr-24	689.02	83.99	3.18	776.19
25-Apr-24	650.94	99.6	15.03	765.57
26-Apr-24	536.99	90.24	21.01	648.24
27-Apr-24	658.62	82.56	1.15	742.33
28-Apr-24	23.47	7.36	1.22	32.05
29-Apr-24	314.35	44.41	1.04	359.8
30-Apr-24	204.51	21.85	0	226.36
Grand Total				18579.63

Scheduling details after applying ISTS (POC) Loss, State Loss, Distribution Loss and Other Loss if any (at Ex-bus)

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
01-Apr-24	781.74	91.49	24.53	897.76
02-Apr-24	1126.48	102.71	26.19	1255.38
03-Apr-24	1530.38	165.52	23.51	1719.41
04-Apr-24	1261.95	92	14.86	1368.81
05-Apr-24	732.74	37.91	15.13	785.78
06-Apr-24	493.17	24.78	8.05	526
07-Apr-24	30.99	3.1	2.25	36.34
08-Apr-24	749.7	53.23	0	802.93
09-Apr-24	286.54	23.9	0	310.44
10-Apr-24	928.07	132.11	0	1060.18
11-Apr-24	421.39	62.26	0	483.65
12-Apr-24	845.34	90.77	0	936.11
13-Apr-24	357.88	44.21	0	402.09

*Computer generated report signature not required.



IEX
INDIAN ENERGY EXCHANGE

Certificate of Purchase of Renewable Energy in Green-Day Ahead Market

For the Month of : May-2024 **Issued on :** 01/06/2024

Portfolio Name: **BEST**

This is certified that BEST has purchased 49339.07 MWh (at regional periphery) of Renewable Energy for the period 01/05/2024 to 31/05/2024 through Indian Energy Exchange Limited in Green-Day Ahead Market.

Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
40169	8656.88	513.19	49339.07

This certificate represented hereby is issued on non-transferable and non-tradable basis and shall be held subject to Orders and Regulations of Honorable Central Electricity Regulatory Commission as amended from time to time and the Bye-laws, Rules and Business Rules of Indian Energy Exchange Limited.

Amit Kumar
ED Market Operations

B.E.S. & T. Undertaking
बेस्ट
Power Purchase Dept.

*Computer generated report signature not required.

IEX
INDIAN ENERGY EXCHANGE

Annexure 1- (Date Wise Scheduling Details)

Participant ID	**W2MH0BST0000**
Participant Name	**Brihanmumbai Electric Supply & Transport (BEST)**
Portfolio ID	**W2MH0BST0001**
Portfolio Name	**BEST**

Scheduling details at Regional Periphery (Traded)

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
01-May-24	95.22	44.01	0.82	140.05
03-May-24	646.6	74.74	0.3	721.64
04-May-24	350.3	121.16	2.28	473.74
05-May-24	92.8	30.98	1.72	125.5
06-May-24	515.9	80.8	0.3	597
07-May-24	1739.49	129.45	0.28	1869.22
08-May-24	1477.68	238.75	0.69	1717.12
09-May-24	1990.8	279.36	1.85	2272.01
10-May-24	2091.61	391.34	8.68	2491.63
11-May-24	1408.99	316.29	28.22	1753.5
12-May-24	369.83	105.68	29.74	505.25
13-May-24	1745.47	155.4	39.18	1940.05
14-May-24	1688.55	183.1	7.08	1878.73
15-May-24	1659.23	149.24	3.55	1812.02
16-May-24	1581.47	244.15	6.67	1832.29
17-May-24	1977.59	154.08	3.58	2135.25
18-May-24	1382.25	157.75	12.25	1552.25
19-May-24	794.4	272.36	49.92	1116.68
20-May-24	527.62	70.37	21.13	619.12
21-May-24	1391.15	233.88	70.16	1695.19
22-May-24	2096.48	290.64	84.15	2471.27
23-May-24	1952.57	256.99	6.52	2216.08
24-May-24	2260.1	255.62	17.5	2533.22
25-May-24	2019.87	417.08	6.27	2443.22
26-May-24	819.2	612.66	5.89	1437.75
27-May-24	1951.25	906.65	55.58	2913.48
28-May-24	1339.13	1075.48	9.39	2424
29-May-24	1972.56	714.92	21.08	2708.56
30-May-24	2230.89	693.95	18.41	2943.25

*Computer generated report signature not required.

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Power Purchase Dept.

Grand Total	49339.07

Scheduling details after applying ISTS (POC) loss

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
01-May-24	92.09	42.56	0.79	135.44
03-May-24	625.32	72.27	0.29	697.88
04-May-24	338.76	117.17	2.21	458.14
05-May-24	89.75	29.96	1.66	121.37
06-May-24	499.06	78.16	0.3	577.52
07-May-24	1682.77	125.23	0.27	1808.27
08-May-24	1429.5	230.97	0.67	1661.14
09-May-24	1925.9	270.25	1.79	2197.94
10-May-24	2023.42	378.58	8.41	2410.41
11-May-24	1363.06	305.97	27.3	1696.33
12-May-24	357.78	102.23	28.76	488.77
13-May-24	1687.35	150.23	37.86	1875.44
14-May-24	1632.32	177	6.86	1816.18
15-May-24	1603.99	144.28	3.43	1751.7
16-May-24	1528.79	236.02	6.45	1771.26
17-May-24	1911.76	148.94	3.46	2064.16
18-May-24	1336.22	152.5	11.85	1500.57
19-May-24	767.95	263.29	48.27	1079.51
20-May-24	509.33	67.92	20.4	597.65
21-May-24	1342.88	225.75	67.72	1636.35
22-May-24	2023.74	280.55	81.23	2385.52
23-May-24	1884.82	248.07	6.29	2139.18
24-May-24	2181.69	246.76	16.89	2445.34
25-May-24	1949.76	402.59	6.05	2358.4
26-May-24	790.78	591.41	5.68	1387.87
27-May-24	1885.7	876.19	53.7	2815.59
28-May-24	1294.14	1039.33	9.07	2342.54
29-May-24	1906.27	690.91	20.37	2617.55
30-May-24	2155.93	670.63	17.8	2844.36
Grand Total				47682.38

Scheduling details after applying ISTS (POC) and State loss

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
01-May-24	89.15	41.21	0.77	131.13
03-May-24	605.43	69.98	0.28	675.69
04-May-24	327.99	113.44	2.13	443.56
05-May-24	86.89	29.01	1.61	117.51
06-May-24	483.19	75.67	0.28	559.14
07-May-24	1629.27	121.24	0.26	1750.77

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*Computer generated report signature not required.

08-May-24	1384.04	223.62	0.65	1608.31
09-May-24	1864.67	261.64	1.73	2128.04
10-May-24	1959.07	366.55	8.14	2333.76
11-May-24	1319.72	296.24	26.43	1642.39
12-May-24	346.39	98.98	27.84	473.21
13-May-24	1633.68	145.44	36.67	1815.79
14-May-24	1580.42	171.37	6.64	1758.43
15-May-24	1552.98	139.68	3.33	1695.99
16-May-24	1480.18	228.52	6.24	1714.94
17-May-24	1850.94	144.22	3.35	1998.51
18-May-24	1293.73	147.64	11.48	1452.85
19-May-24	743.53	254.9	46.74	1045.17
20-May-24	493.14	65.77	19.75	578.66
21-May-24	1300.18	218.57	65.56	1584.31
22-May-24	1959.37	271.63	78.65	2309.65
23-May-24	1824.89	240.18	6.09	2071.16
24-May-24	2112.31	238.91	16.36	2367.58
25-May-24	1887.76	389.78	5.86	2283.4
26-May-24	765.62	572.6	5.5	1343.72
27-May-24	1825.73	848.32	52.01	2726.06
28-May-24	1252.99	1006.28	8.79	2268.06
29-May-24	1845.65	668.94	19.72	2534.31
30-May-24	2087.38	649.3	17.23	2753.91
Grand Total				46166.01

Scheduling details after applying ISTS (POC) Loss, State Loss, Distribution Loss and Other Loss if any (at Ex-bus)

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
01-May-24	89.15	41.21	0.77	131.13
03-May-24	605.43	69.98	0.28	675.69
04-May-24	327.99	113.44	2.13	443.56
05-May-24	86.89	29.01	1.61	117.51
06-May-24	483.19	75.67	0.28	559.14
07-May-24	1629.27	121.24	0.26	1750.77
08-May-24	1384.04	223.62	0.65	1608.31
09-May-24	1864.67	261.64	1.73	2128.04
10-May-24	1959.07	366.55	8.14	2333.76
11-May-24	1319.72	296.24	26.43	1642.39
12-May-24	346.39	98.98	27.84	473.21
13-May-24	1633.68	145.44	36.67	1815.79
14-May-24	1580.42	171.37	6.64	1758.43
15-May-24	1552.98	139.68	3.33	1695.99
16-May-24	1480.18	228.52	6.24	1714.94
17-May-24	1850.94	144.22	3.35	1998.51

*Computer generated report signature not required.

B.E.S. & T. Undertaking बेस्ट Power Purchase Dept.

IEX
INDIAN ENERGY EXCHANGE

Certificate of Purchase of Renewable Energy in Green-Day Ahead Market

For the Month of : June-2024 **Issued on :** 01/07/2024

Portfolio Name: **BEST**

This is certified that BEST has purchased 33460.36 MWh (at regional periphery) of Renewable Energy for the period 01/06/2024 to 30/06/2024 through Indian Energy Exchange Limited in Green-Day Ahead Market.

Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
26585.64	6584.29	290.43	33460.36

This certificate represented hereby is issued on non-transferable and non-tradable basis and shall be held subject to Orders and Regulations of Honorable Central Electricity Regulatory Commission as amended from time to time and the Bye-laws, Rules and Business Rules of Indian Energy Exchange Limited.

Amit Kumar
ED Market Operations

B.E.S.&T. Undertaking * Power Purchase Dept. *

*Computer generated report signature not required.

IEX
INDIAN ENERGY EXCHANGE

Annexure 1- (Date Wise Scheduling Details)

Participant ID	**W2MH0BST0000**
Participant Name	**Brihanmumbai Electric Supply & Transport (BEST)**
Portfolio ID	**W2MH0BST0001**
Portfolio Name	**BEST**

Scheduling details at Regional Periphery (Traded)

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
01-Jun-24	1849.06	355.07	3.63	2207.76
02-Jun-24	660.03	253.2	6.45	919.68
03-Jun-24	1775.66	440.43	5.3	2221.39
04-Jun-24	2121.72	404	4.31	2530.03
05-Jun-24	1505.2	243.4	8.76	1757.36
06-Jun-24	1156.72	219.71	3.22	1379.65
07-Jun-24	1716.01	283.73	3.37	2003.11
08-Jun-24	856.34	251.5	6.62	1114.46
09-Jun-24	699.65	423.69	27.84	1151.18
10-Jun-24	929.03	358.96	11.41	1299.4
11-Jun-24	798.07	132.77	1.26	932.1
12-Jun-24	697.53	154.55	1.17	853.25
13-Jun-24	834.15	197.33	0.92	1032.4
14-Jun-24	919.14	289.22	3.51	1211.87
15-Jun-24	498.22	86.17	0.61	585
16-Jun-24	440.9	73.47	15.38	529.75
17-Jun-24	666.67	191.48	37.85	896
18-Jun-24	785.57	160.07	6.11	951.75
19-Jun-24	919.47	249.78	41.81	1211.06
20-Jun-24	482.88	112.43	16.94	612.25
21-Jun-24	579.5	175.69	29.04	784.23
22-Jun-24	938.01	167.74	16	1121.75
23-Jun-24	324.91	224.1	3.09	552.1
24-Jun-24	763.38	145.96	0.41	909.75
25-Jun-24	707.66	180.21	1.38	889.25
26-Jun-24	735.51	185.22	2.02	922.75
27-Jun-24	838.92	189.77	3.81	1032.5
28-Jun-24	753.15	191.78	6.65	951.58
29-Jun-24	409.02	106.49	4.99	520.5

B.E.S. & T. Undertaking
Power Purchase Dept.

*Computer generated report signature not required.

30-Jun-24	223.56	136.37	16.57	376.5
Grand Total				33460.36

Scheduling details after applying ISTS (POC) loss

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
01-Jun-24	1786.92	343.12	3.51	2133.55
02-Jun-24	637.85	244.68	6.23	888.76
03-Jun-24	1714.94	425.37	5.11	2145.42
04-Jun-24	2049.15	390.19	4.16	2443.5
05-Jun-24	1453.74	235.07	8.46	1697.27
06-Jun-24	1117.16	212.2	3.11	1332.47
07-Jun-24	1657.32	274.02	3.26	1934.6
08-Jun-24	827.08	242.89	6.39	1076.36
09-Jun-24	675.72	409.2	26.89	1111.81
10-Jun-24	896.41	346.37	11.01	1253.79
11-Jun-24	770.06	128.11	1.22	899.39
12-Jun-24	673.06	149.13	1.12	823.31
13-Jun-24	804.88	190.41	0.88	996.17
14-Jun-24	886.88	279.07	3.39	1169.34
15-Jun-24	480.75	83.13	0.59	564.47
16-Jun-24	425.41	70.89	14.85	511.15
17-Jun-24	644	184.97	36.57	865.54
18-Jun-24	758.84	154.62	5.91	919.37
19-Jun-24	888.2	241.3	40.38	1169.88
20-Jun-24	466.46	108.61	16.37	591.44
21-Jun-24	559.78	169.72	28.05	757.55
22-Jun-24	906.13	162.03	15.46	1083.62
23-Jun-24	313.88	216.47	2.98	533.33
24-Jun-24	736.43	140.82	0.39	877.64
25-Jun-24	682.68	173.85	1.33	857.86
26-Jun-24	709.54	178.68	1.95	890.17
27-Jun-24	809.29	183.05	3.68	996.02
28-Jun-24	726.53	185	6.41	917.94
29-Jun-24	394.58	102.73	4.82	502.13
30-Jun-24	215.66	131.56	15.98	363.2
Grand Total				32307.05

Scheduling details after applying ISTS (POC) and State loss

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
01-Jun-24	1730.09	332.22	3.4	2065.71
02-Jun-24	617.56	236.9	6.03	860.49
03-Jun-24	1660.4	411.84	4.95	2077.19
04-Jun-24	1984	377.77	4.03	2365.8

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*Computer generated report signature not required.

05-Jun-24	1407.51	227.59	8.2	1643.3
06-Jun-24	1081.64	205.45	3.02	1290.11
07-Jun-24	1604.63	265.3	3.15	1873.08
08-Jun-24	800.76	235.18	6.19	1042.13
09-Jun-24	654.22	396.2	26.03	1076.45
10-Jun-24	867.91	335.35	10.66	1213.92
11-Jun-24	745.57	124.04	1.18	870.79
12-Jun-24	651.66	144.38	1.09	797.13
13-Jun-24	779.28	184.35	0.86	964.49
14-Jun-24	858.69	270.2	3.27	1132.16
15-Jun-24	465.46	80.49	0.57	546.52
16-Jun-24	411.9	68.63	14.37	494.9
17-Jun-24	623.52	179.08	35.4	838
18-Jun-24	734.71	149.71	5.72	890.14
19-Jun-24	859.96	233.61	39.11	1132.68
20-Jun-24	451.64	105.15	15.84	572.63
21-Jun-24	541.98	164.32	27.16	733.46
22-Jun-24	877.3	156.89	14.97	1049.16
23-Jun-24	303.89	209.58	2.89	516.36
24-Jun-24	713.02	136.33	0.38	849.73
25-Jun-24	660.96	168.31	1.3	830.57
26-Jun-24	686.98	173	1.88	861.86
27-Jun-24	783.55	177.24	3.56	964.35
28-Jun-24	703.42	179.12	6.2	888.74
29-Jun-24	382.04	99.45	4.67	486.16
30-Jun-24	208.8	127.37	15.48	351.65
Grand Total				31279.66

Scheduling details after applying ISTS (POC) Loss, State Loss, Distribution Loss and Other Loss if any (at Ex-bus)

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
01-Jun-24	1730.09	332.22	3.4	2065.71
02-Jun-24	617.56	236.9	6.03	860.49
03-Jun-24	1660.4	411.84	4.95	2077.19
04-Jun-24	1984	377.77	4.03	2365.8
05-Jun-24	1407.51	227.59	8.2	1643.3
06-Jun-24	1081.64	205.45	3.02	1290.11
07-Jun-24	1604.63	265.3	3.15	1873.08
08-Jun-24	800.76	235.18	6.19	1042.13
09-Jun-24	654.22	396.2	26.03	1076.45
10-Jun-24	867.91	335.35	10.66	1213.92
11-Jun-24	745.57	124.04	1.18	870.79
12-Jun-24	651.66	144.38	1.09	797.13
13-Jun-24	779.28	184.35	0.86	964.49

*Computer generated report signature not required.

D.E.S. & T. Undertaking * Power Purchase Deptt. *

DISCOM- Annexure I

GROSS ENERGY CONSUMPTION (YEAR 2024 - 2025)				
	Reporting Quarter - II			
	Utility : BEST Undertaking.			
1	**GROSS CONSUMPTION**		**Quantum (MUs)**	**Remarks**
O	**Own Generation**			
	Source 1		0	BEST not having own generation
	Source 2		0	
	.....			
	Source N		0	
	Sub Total (1)		0	
P	**Purchase from Other generating Company / Intermediaries**			
	TATA Power Co. (G) & Manikaran Power Ltd.		1321.149519	
	Source 2		0	
	.....		0	
	Source N		0	
	Sub Total (2)		**1321.149519**	
S	**Sale to Other Licensee / intermediaries**			
	Licensee 1		0	
	Licensee 2		0	
	.....		0	
	Inter.1		0	
	Sub Total (3)		0	
	Total GEC for the Quarter - (O+P-S)		**1321.149519**	
2	**RPO Obligation (29.91% of GEC)**		**395.155821**	

Declaration: WE hereby declare that the gross energy consumption & R.E procurement data submitted above does not includes the gross energy consumption & R.E procurement data of CPP / OA consumers on our network.

Divisional Engineer
Power Purchase Dept.

Sign and Seal of
authorized signatory of Company

Sign and Seal of C.A.

B.E.S.& T. Undertaking ★ Power Purchase Deptt. ★

DISCOM- Annexure II

RENEWABLE ENERGY PROCUREMENT (YEAR 2024-25)				
(A-Wind)				
Reporting Quarter - II				
Month:	**July 2024 to September 2024**			
Eligible Person Name : BEST Undertaking.				
1	**Own Generation**		**Quantum (MUs.)**	**Remarks**
	RE 1		0	BEST not having own RE generation
	RE 2		0	
	.....		0	
	RE...N		0	
	Sub Total (1)		**0**	
2	**Purchase from Other RE Sources / Licensee**			
	Source 1		0	
	Source 2		0	
	.....		0	
	.....		0	
	Source N		0	
	Sub Total (2)		**0**	
3	**Purchase through REC**		**0**	
	Sub Total (3)		**0**	
4	RE Sold to other Person		0	
	Party - 1		0	
	Party - 2		0	
	.....		0	
	Sub Total (4)		**0**	
	Total Procurement (1)+(2)+(3)-(4)		**0**	

Declaration: **We hereby declare that the gross energy consumption & R.E procurement data submitted above does not includes the gross energy consumption & R.E procurement data of CPP / OA consumers on our network.**

Divisional Engineer
Power Purchase Dept.

Sign and Seal of
authorized signatory of Company

B.E.S. & T. Undertaking
Power Purchase Dept.

Sign and Seal of C.A.

DISCOM- Annexure III

RENEWABLE ENERGY PROCUREMENT (YEAR 2024-25)				
(B-HPO)				
Reporting Quarter - II				
Month:	**July 2024 to September 2024**			
Eligible Person Name : BEST Undertaking.				
1	**Own Generation**		**Quantum (MUs.)**	**Remarks**
	RE 1		0	BEST not having own RE generation
	RE 2		0	
	.....		0	
	RE...N		0	
	Sub Total (1)		**0**	
2	**Purchase from Other RE Sources / Licensee**			
	Source 1		0	
	Source 2		0	
	.....		0	
	.....		0	
	Source N		0	
	Sub Total (2)		**0**	
3	**Purchase through REC**		0	
	Sub Total (3)		**0**	
4	**RE Sold to other Person**			
	Party - 1		0	
	Party - 2		0	
	.....		0	
	Sub Total (4)		**0**	
	Total Procurement (1)+(2)+(3)-(4)		**0**	

Declaration: WE hereby declare that the gross energy consumption & R.E procurement data submitted above does not includes the gross energy consumption & R.E procurement data of CPP / OA consumers on our network.

Divisional Engineer
Power Purchase Dept.

Sign and Seal of authorized signatory of Company

Sign and Seal of C.A.

B.E.S. & T. Undertaking
बेस्ट
Power Purchase Dept.

DISCOM- Annexure IV

RENEWABLE ENERGY PROCUREMENT (YEAR 2024-25)				
(C-Distributed RE)				
Reporting Quarter - II				
Month:	July 2024 to September 2024			
Eligible Person Name : BEST Undertaking.				
1	Own Generation		Quantum (MUs.)	Remarks
	RE 1		0	
	RE 2		0	BEST not having own RE generation
	.....		0	
	RE...N		0	
	Sub Total (1)		0	
2	Purchase from Other RE Sources / Licensee			
	Solar Generation of Net metered consumers		2.960365	
	Source 2		0	
	.....		0	
	.....		0	
	Source N		0	
	Sub Total (2)		2.960365	
3	Purchase through REC		0	
	Sub Total (3)		0	
4	RE Sold to other Person			
	Party - 1		0	
	Party - 2		0	
	.....			
	Sub Total (4)		0	
	Total Procurement (1)+(2)+(3)-(4)		2.960365	
Declaration: WE hereby declare that the gross energy consumption & R.E procurement data submitted above does not includes the gross energy consumption & R.E procurement data of CPP / OA consumers on our				

Divisional Engineer
Power Purchase Dept.

Sign and Seal of authorized signatory of Company

Sign and Seal of C.A.

B.E.S. & T. Undertaking
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Power Purchase Dept.

DISCOM- Annexure V

RENEWABLE ENERGY PROCUREMENT (YEAR 2024-25)				
(D-Other)				
Reporting Quarter - II				
Month:	**July 2024 to September 2024**			
Eligible Person Name : BEST Undertaking.				
1	**Own Generation**		**Quantum (MUs.)**	**Remarks**
	RE 1		0	BEST not having own RE generation
	RE 2			
	.....			
	RE...N			
	Sub Total (1)		**0**	
2	**Purchase from Other RE Sources / Licensee**			
	Walwhan Solar MH Ltd		6.085122	
	Solar Energy from Power Exchange IEX		48.72432	
	Non Solar Energy from Power Exchange IEX		28.56561	
	Hydro Energy from Power Exchange IEX		4.65347	
	Hydro Energy Power from TPC G		252.101734	
	Sub Total (2)		**340.130256**	
3	**Purchase through REC**		2095.20	REC purchased to fulfill the cumulative shortfall of FY 2022-23 and FY 2023-24
	Sub Total (3)		**2095.20**	
4	**RE Sold to other Person**			
	Party - 1		0	
	Party - 2		0	
	.....		0	
	Sub Total (4)		**0**	
	Total Procurement (1)+(2)+(3)-(4)		**2435.330256**	
Declaration: WE hereby declare that the gross energy consumption & R.E procurement data submitted above does not includes the gross energy consumption & R.E procurement data of CPP / OA consumers on				

Divisional Engineer
Power Purchase Dept.

Sign and Seal of
authorized signatory of Company

Sign and Seal of C.A.

B. E. S. & T. Undertaking
बेस्ट
Power Purchase Dept.

RPO Settlement Account (Yearly) - YEAR 2024-25											
A - Wind											
Name : Eligible Person - BEST Undertaking.											
Gross Energy		**RPO % Obligation (0.67 %)**	**RPO % Up to Previous month**	**RPO% Cumulative upto the month**	**RE purchase for the month**		**RE purchase up to previous Month**		**RE cumulative upto the month**		**Short if any**
Consumption				**-1**					**-2**		**(1-2)**
MUs.		**MUs.**	**MUs.**	**MUs.**	**MUs.**		**MUs.**		**MUs.**		**MUs.**
Fiscal Year (2024-25)					**Preferential Tariff**	**REC**	**Preferential Tariff**	**REC**	**Preferential Tariff**	**REC**	
April	461.418943	3.091507	0.000000	3.091507	0	0	0	0	0	0	3.091507
May	512.303484	3.432433	3.091507	6.523940	0	0	0	0	0	0	6.523940
June	480.450772	3.219020	6.523940	9.742960	0	0	0	0	0	0	9.742960
July	436.611694	2.925298	9.742960	12.668259	0	0	0	0	0	0	12.668259
August	449.155440	3.009341	12.668259	15.677600	0	0	0	0	0	0	15.677600
September	435.382386	2.917062	15.677600	18.594662	0	0	0	0	0	0	18.594662
October											
November											
December											
January											
February											
March											
Total											
	2775.322717	**18.594662**			**0**	**0**					**18.594662**

Declaration: WE hereby declare that the gross energy consumption & R.E procurement data submitted above does not includes the gross energy consumption & R.E procurement data of CPP / OA consumers on our network.

Divisional Engineer
Power Purchase Dept.

Sign and Seal of
authorized signatory of Company

B.E.S. & T. Undertaking
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Power Purchase Dept.

Sign and Seal of C.A.

RPO Settlement Account (Yearly) - YEAR 2024-25

B-HPO

Name : Eligible Person - BEST Undertaking

Gross Energy Consumption		RPO % Obligation (0.38 %)	RPO % Up to Previous month	RPO% Cumulative upto the month	RE purchase for the month		RE purchase up to previous Month		RE cumulative upto the month		Short if any
				-1					-2		(1-2)
MUs.		MUs.	MUs.	MUs.	MUs.		MUs.		MUs.		MUs.
Fiscal Year (2024-25)					Preferential Tariff	REC	Preferential Tariff	REC	Preferential Tariff	REC	
April	461.418943	1.753392	0.000000	1.753392	0	0	0	0	0	0	1.753392
May	512.303484	1.946753	1.753392	3.700145	0	0	0	0	0	0	3.700145
June	480.450772	1.825713	3.700145	5.525858	0	0	0	0	0	0	5.525858
July	436.611694	1.659124	5.525858	7.184983	0	0	0	0	0	0	7.184983
August	449.155440	1.706791	7.184983	8.891773	0	0	0	0	0	0	8.891773
September	435.382386	1.654453	8.891773	10.546226	0	0	0	0	0	0	10.546226
October											
November											
December											
January											
February											
March											
Total	**2775.322717**	**10.546226**			**0.00**	**0.00**					**10.546226**

Declaration: WE hereby declare that the gross energy consumption & R.E procurement data submitted above does not includes the gross energy consumption & R.E procurement data of CPP / OA consumers on our network.

Divisional Engineer
Power Purchase Dept.

Sign and Seal of
authorized signatory of Company

B.E.S. & T. Undertaking * Power Purchase Dept. *

Sign and Seal of C.A.

RPO Settlement Account (Yearly) - YEAR 2024-25											
C – Distributed RE											
Name : Eligible Person - BEST Undertaking											
Gross Energy		RPO % Obligation (1.50 %)	RPO % Up to Previous month	RPO% Cumulative upto the month	RE purchase for the month		RE purchase up to previous Month		RE cumulative upto the month		Short if any
Consumption				-1					-2		(1-2)
MUs.		MUs.	MUs.	MUs.	MUs.		MUs.		MUs.		MUs.
Fiscal Year (2024-25)					Preferential Tariff	REC	Preferential Tariff	REC	Preferential Tariff	REC	
April	461.418943	6.921284	0.00	6.921284	1.406313	0	0	0	1.406313	0	5.514971
May	512.303484	7.684552	6.921284	14.605836	1.571223	0	1.406313	0	2.977536	0	11.628300
June	480.450772	7.206762	14.605836	21.812598	1.179201	0	1.571223	0	4.156737	0	17.655861
July	436.611694	6.549175	21.812598	28.361773	0.768239	0	1.179201	0	4.924976	0	23.436797
August	449.155440	6.737332	28.361773	35.099105	1.053844	0	0.768239	0	5.978820	0	29.120285
September	435.382386	6.530736	35.099105	41.629841	1.138282	0	1.053844	0	7.117102	0	34.512739
October											
November											
December											
January											
February											
March											
Total	**2775.322717**	**41.629841**			**7.117102**	**0**					**34.512739**

Declaration: WE hereby declare that the gross energy consumption & R.E procurement data submitted above does not includes the gross energy consumption & R.E procurement data of CPP / OA consumers on our network.

Divisional Engineer
Power Purchase Dept.

Sign and Seal of
authorized signatory of Company

B.E.S. & T. Undertaking
बेस्ट
Power Purchase Dept.

Sign and Seal of C.A.

RPO Settlement Account (Yearly) - YEAR 2024-25

D- Other RE

Name : Eligible Person - BEST Undertaking

Gross Energy		RPO % Obligation (27.35 %)	RPO % Up to Previous month	RPO% Cumulative upto the month	RE purchase for the month		RE purchase up to previous Month		RE cumulative upto the month		Short if any
Consumption				-1					-2		(1-2)
MUs.		MUs.	MUs.	MUs.	MUs.		MUs.		MUs.		MUs.
Fiscal Year (2024-25)					Preferential Tariff	REC	Preferential Tariff	REC	Preferential Tariff	REC	
April	461.418943	126.198081	0.000000	126.198081	96.919431	0.00	0.000000	0.00	96.919431	0.00	29.278649
May	512.303484	140.115003	126.198081	266.313084	129.358563	0.00	96.919431	0.00	226.277994	0.00	40.035089
June	480.450772	131.403286	266.313084	397.716370	110.967756	0.00	129.358563	0.00	337.245751	0.00	60.470619
July	436.611694	119.413298	397.716370	517.129668	105.061246	1182.50	110.967756	0.00	442.306997	1182.50	-1107.677329
August	449.155440	122.844013	517.129668	639.973681	120.504435	912.70	105.061246	1182.50	562.811432	2095.20	-2018.037751
September	435.382386	119.077083	639.973681	759.050763	114.564575	0.00	120.504435	912.70	677.376007	2095.20	-2013.525244
October											
November											
December											
January											
February											
March											
Total	**2775.322717**	**759.050763**			**677.376007**	**2095.20**					**-2013.525244**

Declaration: WE hereby declare that the gross energy consumption & R.E procurement data submitted above does not includes the gross energy consumption & R.E procurement data of CPP / OA consumers on our network

Divisional Engineer
Power Purchase Dept.

Sign and Seal of
authorized signatory of Company

B.E.S. & T. Undertaking
बेस्ट
Power Purchase Dept.

Sign and Seal of C.A.

IEX
INDIAN ENERGY EXCHANGE

Certificate of Purchase of Renewable Energy in Green-Day Ahead Market

For the Month of : July-2024 **Issued on :** 01/08/2024

Portfolio Name: **BEST**

This is certified that BEST has purchased 24870.37 MWh (at regional periphery) of Renewable Energy for the period 01/07/2024 to 31/07/2024 through Indian Energy Exchange Limited in Green-Day Ahead Market.

Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
13819.52	10207.84	843.01	24870.37

This certificate represented hereby is issued on non-transferable and non-tradable basis and shall be held subject to Orders and Regulations of Honorable Central Electricity Regulatory Commission as amended from time to time and the Bye-laws, Rules and Business Rules of Indian Energy Exchange Limited.

Amit Kumar
ED Market Operations

B.E.S. & T. Undertaking * Power Purchase Deptt. *

*Computer generated report signature not required.

IEX
INDIAN ENERGY EXCHANGE

Annexure 1- (Date Wise Scheduling Details)

Participant ID	**W2MH0BST0000**
Participant Name	**Brihanmumbai Electric Supply & Transport (BEST)**
Portfolio ID	**W2MH0BST0001**
Portfolio Name	**BEST**

Scheduling details at Regional Periphery (Traded)

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
01-Jul-24	630.3	700.34	61.58	1392.22
02-Jul-24	830.05	813.2	78.5	1721.75
03-Jul-24	917.97	608.35	68.51	1594.83
04-Jul-24	952.32	614.25	66.24	1632.81
05-Jul-24	1573.89	821.91	81.2	2477
06-Jul-24	613.95	690.27	21.58	1325.8
07-Jul-24	355.45	526.53	19.77	901.75
08-Jul-24	771.51	448.08	51.77	1271.36
09-Jul-24	665.78	263.31	45.4	974.49
10-Jul-24	647.1	193.48	37.02	877.6
11-Jul-24	376.89	157.95	32.09	566.93
12-Jul-24	265.96	112.15	11.17	389.28
15-Jul-24	357.6	140.13	18.81	516.54
16-Jul-24	399.93	245.97	21.45	667.35
18-Jul-24	388.01	153.9	20.34	562.25
19-Jul-24	337.11	146.07	3.06	486.24
20-Jul-24	136.36	98.42	0.22	235
22-Jul-24	150.97	307.34	11.19	469.5
23-Jul-24	123	359.96	6.54	489.5
24-Jul-24	194.11	246.04	11.85	452
25-Jul-24	273.7	276.47	19.33	569.5
26-Jul-24	196.25	293.95	14.44	504.64
27-Jul-24	172.48	110.56	7.01	290.05
29-Jul-24	1213.22	1301.34	74.62	2589.18
30-Jul-24	376.18	311.93	24.39	712.5
31-Jul-24	899.43	265.94	34.93	1200.3
Grand Total				24870.37

Scheduling details after applying ISTS (POC) loss

*Computer generated report signature not required.

B.E.S. & T. Undertaking * Power Purcha... Dept.

IEX
INDIAN ENERGY EXCHANGE

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
01-Jul-24	607.54	675.06	59.35	1341.95
02-Jul-24	800.08	783.83	75.68	1659.59
03-Jul-24	884.84	586.37	66.05	1537.26
04-Jul-24	917.94	592.08	63.84	1573.86
05-Jul-24	1517.07	792.25	78.26	2387.58
06-Jul-24	591.79	665.34	20.8	1277.93
07-Jul-24	342.63	507.49	19.07	869.19
08-Jul-24	743.2	431.62	49.87	1224.69
09-Jul-24	641.33	253.65	43.72	938.7
10-Jul-24	623.36	186.37	35.66	845.39
11-Jul-24	363.05	152.15	30.91	546.11
12-Jul-24	256.17	108.04	10.76	374.97
15-Jul-24	343.44	134.59	18.06	496.09
16-Jul-24	384.1	236.24	20.6	640.94
18-Jul-24	372.65	147.82	19.54	540.01
19-Jul-24	323.78	140.28	2.95	467.01
20-Jul-24	130.97	94.51	0.21	225.69
22-Jul-24	145.63	296.45	10.8	452.88
23-Jul-24	118.64	347.22	6.31	472.17
24-Jul-24	187.24	237.33	11.43	436
25-Jul-24	264	266.69	18.66	549.35
26-Jul-24	189.32	283.56	13.92	486.8
27-Jul-24	166.38	106.64	6.76	279.78
29-Jul-24	1168.57	1253.47	71.87	2493.91
30-Jul-24	362.36	300.44	23.5	686.3
31-Jul-24	866.34	256.16	33.64	1156.14
Grand Total				23960.29

Scheduling details after applying ISTS (POC) and State loss

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
01-Jul-24	588.22	653.59	57.47	1299.28
02-Jul-24	774.64	758.91	73.27	1606.82
03-Jul-24	856.69	567.72	63.95	1488.36
04-Jul-24	888.75	573.24	61.82	1523.81
05-Jul-24	1468.82	767.05	75.78	2311.65
06-Jul-24	572.96	644.19	20.14	1237.29
07-Jul-24	331.72	491.36	18.45	841.53
08-Jul-24	719.57	417.9	48.28	1185.75
09-Jul-24	620.94	245.57	42.34	908.85
10-Jul-24	603.54	180.44	34.52	818.5
11-Jul-24	351.51	147.31	29.92	528.74
12-Jul-24	248.03	104.6	10.42	363.05

*Computer generated report signature not required.

B.E.S. & T. Undertaking बेस्ट Power Purchase Dept.

15-Jul-24	332.52	130.29	17.5	480.31
16-Jul-24	371.88	228.73	19.95	620.56
18-Jul-24	360.82	143.12	18.9	522.84
19-Jul-24	313.49	135.82	2.85	452.16
20-Jul-24	126.78	91.51	0.21	218.5
22-Jul-24	140.99	287.03	10.45	438.47
23-Jul-24	114.87	336.18	6.1	457.15
24-Jul-24	181.28	229.78	11.07	422.13
25-Jul-24	255.62	258.19	18.07	531.88
26-Jul-24	183.29	274.55	13.48	471.32
27-Jul-24	161.09	103.24	6.55	270.88
29-Jul-24	1131.41	1213.61	69.59	2414.61
30-Jul-24	350.84	290.89	22.74	664.47
31-Jul-24	838.79	248.01	32.58	1119.38
Grand Total				23198.29

Scheduling details after applying ISTS (POC) Loss, State Loss, Distribution Loss and Other Loss if any (at Ex-bus)

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
01-Jul-24	588.22	653.59	57.47	1299.28
02-Jul-24	774.64	758.91	73.27	1606.82
03-Jul-24	856.69	567.72	63.95	1488.36
04-Jul-24	888.75	573.24	61.82	1523.81
05-Jul-24	1468.82	767.05	75.78	2311.65
06-Jul-24	572.96	644.19	20.14	1237.29
07-Jul-24	331.72	491.36	18.45	841.53
08-Jul-24	719.57	417.9	48.28	1185.75
09-Jul-24	620.94	245.57	42.34	908.85
10-Jul-24	603.54	180.44	34.52	818.5
11-Jul-24	351.51	147.31	29.92	528.74
12-Jul-24	248.03	104.6	10.42	363.05
15-Jul-24	332.52	130.29	17.5	480.31
16-Jul-24	371.88	228.73	19.95	620.56
18-Jul-24	360.82	143.12	18.9	522.84
19-Jul-24	313.49	135.82	2.85	452.16
20-Jul-24	126.78	91.51	0.21	218.5
22-Jul-24	140.99	287.03	10.45	438.47
23-Jul-24	114.87	336.18	6.1	457.15
24-Jul-24	181.28	229.78	11.07	422.13
25-Jul-24	255.62	258.19	18.07	531.88
26-Jul-24	183.29	274.55	13.48	471.32
27-Jul-24	161.09	103.24	6.55	270.88
29-Jul-24	1131.41	1213.61	69.59	2414.61
30-Jul-24	350.84	290.89	22.74	664.47

*Computer generated report signature not required.

T. Undertaking
Power Purchase

INDIAN ENERGY EXCHANGE

Certificate of Purchase of Renewable Energy in Green-Day Ahead Market

For the Month of : August-2024 **Issued on :** 01/09/2024

Portfolio Name: **BEST**

This is certified that BEST has purchased 26175.09 MWh (at regional periphery) of Renewable Energy for the period 01/08/2024 to 31/08/2024 through Indian Energy Exchange Limited in Green-Day Ahead Market.

Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
14179.46	10775.91	1219.72	26175.09

This certificate represented hereby is issued on non-transferable and non-tradable basis and shall be held subject to Orders and Regulations of Honorable Central Electricity Regulatory Commission as amended from time to time and the Bye-laws, Rules and Business Rules of Indian Energy Exchange Limited.

Amit Kumar
ED Market Operations

B.E.S.& T. Undertaking
बेस्ट
Power Purchase Dept.

*Computer generated report signature not required.

IEX
INDIAN ENERGY EXCHANGE

Annexure 1- (Date Wise Scheduling Details)

Participant ID	**W2MH0BST0000**
Participant Name	**Brihanmumbai Electric Supply & Transport (BEST)**
Portfolio ID	**W2MH0BST0001**
Portfolio Name	**BEST**

Scheduling details at Regional Periphery (Traded)

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
01-Aug-24	991.53	460.95	68.46	1520.94
02-Aug-24	1064.9	1238.12	48.66	2351.68
03-Aug-24	674.04	1272.1	41.38	1987.52
04-Aug-24	446.44	1733.53	106.01	2285.98
05-Aug-24	353.97	330.47	51.79	736.23
06-Aug-24	562.15	403.81	59.27	1025.23
07-Aug-24	710.12	462.68	80.2	1253
08-Aug-24	633.4	320.31	71.99	1025.7
09-Aug-24	471.57	215.66	29.06	716.29
10-Aug-24	146.25	87.27	17.98	251.5
12-Aug-24	417.65	416.51	81.38	915.54
13-Aug-24	439.36	262.59	42.05	744
14-Aug-24	756.09	231.55	28.7	1016.34
16-Aug-24	539.53	215	42.56	797.09
17-Aug-24	188.73	70.42	17.85	277
19-Aug-24	461.09	93.19	25.67	579.95
20-Aug-24	826.84	236.32	35.28	1098.44
21-Aug-24	683.87	367.49	62.19	1113.55
22-Aug-24	778.45	293.66	38.98	1111.09
23-Aug-24	839.46	326.48	20.31	1186.25
24-Aug-24	204.06	176.04	15.93	396.03
26-Aug-24	308.36	320.34	29.8	658.5
27-Aug-24	248.08	191.41	29.76	469.25
28-Aug-24	384.89	376.18	72.18	833.25
29-Aug-24	476.44	274.88	39.92	791.24
30-Aug-24	418.23	344.95	49.07	812.25
31-Aug-24	153.96	54	13.29	221.25
Grand Total				26175.09

B.E.S.&T. Undertaking * Power Purchase Dept. *

*Computer generated report signature not required.

IEX
INDIAN ENERGY EXCHANGE

Scheduling details after applying ISTS (POC) loss

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
01-Aug-24	955.05	444.01	65.95	1465.01
02-Aug-24	1025.71	1192.57	46.87	2265.15
03-Aug-24	649.25	1225.3	39.85	1914.4
04-Aug-24	430.02	1669.72	102.12	2201.86
05-Aug-24	340.84	318.21	49.88	708.93
06-Aug-24	541.28	388.84	57.08	987.2
07-Aug-24	683.8	445.52	77.23	1206.55
08-Aug-24	609.91	308.43	69.33	987.67
09-Aug-24	454.07	207.65	27.99	689.71
10-Aug-24	140.82	84.03	17.32	242.17
12-Aug-24	401.64	400.56	78.25	880.45
13-Aug-24	422.53	252.54	40.43	715.5
14-Aug-24	727.12	222.68	27.6	977.4
16-Aug-24	518.88	206.77	40.93	766.58
17-Aug-24	181.5	67.73	17.17	266.4
19-Aug-24	445.27	89.98	24.8	560.05
20-Aug-24	798.46	228.21	34.05	1060.72
21-Aug-24	660.4	354.89	60.06	1075.35
22-Aug-24	751.73	283.6	37.64	1072.97
23-Aug-24	810.66	315.26	19.62	1145.54
24-Aug-24	197.05	169.99	15.4	382.44
26-Aug-24	298.78	310.37	28.87	638.02
27-Aug-24	240.37	185.46	28.83	454.66
28-Aug-24	372.91	364.5	69.93	807.34
29-Aug-24	461.62	266.33	38.7	766.65
30-Aug-24	405.24	334.23	47.54	787.01
31-Aug-24	149.19	52.31	12.88	214.38
Grand Total				25240.11

Scheduling details after applying ISTS (POC) and State loss

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
01-Aug-24	924.69	429.88	63.85	1418.42
02-Aug-24	993.1	1154.64	45.38	2193.12
03-Aug-24	628.58	1186.35	38.59	1853.52
04-Aug-24	416.34	1616.63	98.88	2131.85
05-Aug-24	330	308.1	48.29	686.39
06-Aug-24	524.08	376.48	55.25	955.81
07-Aug-24	662.06	431.36	74.76	1168.18
08-Aug-24	590.51	298.62	67.13	956.26
09-Aug-24	439.64	201.05	27.09	667.78
10-Aug-24	136.33	81.36	16.77	234.46

B. E. S. & T. Undertaking
बेस्ट
Power Purchase Dept.

*Computer generated report signature not required.

12-Aug-24	388.87	387.82	75.77	852.46
13-Aug-24	409.1	244.51	39.13	692.74
14-Aug-24	704	215.6	26.72	946.32
16-Aug-24	502.37	200.2	39.64	742.21
17-Aug-24	175.73	65.58	16.62	257.93
19-Aug-24	431.11	87.12	24.01	542.24
20-Aug-24	773.08	220.93	32.98	1026.99
21-Aug-24	639.39	343.6	58.16	1041.15
22-Aug-24	727.83	274.56	36.46	1038.85
23-Aug-24	784.9	305.23	18.99	1109.12
24-Aug-24	190.79	164.58	14.92	370.29
26-Aug-24	289.28	300.5	27.95	617.73
27-Aug-24	232.74	179.57	27.91	440.22
28-Aug-24	361.06	352.9	67.71	781.67
29-Aug-24	446.94	257.87	37.46	742.27
30-Aug-24	392.35	323.6	46.03	761.98
31-Aug-24	144.45	50.65	12.47	207.57
Grand Total				24437.53

Scheduling details after applying ISTS (POC) Loss, State Loss, Distribution Loss and Other Loss if any (at Ex-bus)

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
01-Aug-24	924.69	429.88	63.85	1418.42
02-Aug-24	993.1	1154.64	45.38	2193.12
03-Aug-24	628.58	1186.35	38.59	1853.52
04-Aug-24	416.34	1616.63	98.88	2131.85
05-Aug-24	330	308.1	48.29	686.39
06-Aug-24	524.08	376.48	55.25	955.81
07-Aug-24	662.06	431.36	74.76	1168.18
08-Aug-24	590.51	298.62	67.13	956.26
09-Aug-24	439.64	201.05	27.09	667.78
10-Aug-24	136.33	81.36	16.77	234.46
12-Aug-24	388.87	387.82	75.77	852.46
13-Aug-24	409.1	244.51	39.13	692.74
14-Aug-24	704	215.6	26.72	946.32
16-Aug-24	502.37	200.2	39.64	742.21
17-Aug-24	175.73	65.58	16.62	257.93
19-Aug-24	431.11	87.12	24.01	542.24
20-Aug-24	773.08	220.93	32.98	1026.99
21-Aug-24	639.39	343.6	58.16	1041.15
22-Aug-24	727.83	274.56	36.46	1038.85
23-Aug-24	784.9	305.23	18.99	1109.12
24-Aug-24	190.79	164.58	14.92	370.29
26-Aug-24	289.28	300.5	27.95	617.73

*Computer generated report signature not required.

IEX
INDIAN ENERGY EXCHANGE

Certificate of Purchase of Renewable Energy in Green-Day Ahead Market

For the Month of : September-2024 **Issued on :** 01/10/2024

Portfolio Name: **BEST**

This is certified that BEST has purchased 33823.70 MWh (at regional periphery) of Renewable Energy for the period 01/09/2024 to 30/09/2024 through Indian Energy Exchange Limited in Green-Day Ahead Market.

Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
22454.78	8615.91	2753.01	33823.7

This certificate represented hereby is issued on non-transferable and non-tradable basis and shall be held subject to Orders and Regulations of Honorable Central Electricity Regulatory Commission as amended from time to time and the Bye-laws, Rules and Business Rules of Indian Energy Exchange Limited.

Amit Kumar
ED Market Operations

B. E. S. & T. Undertaking
बेस्ट
Power Purchase Dept.

*Computer generated report signature not required.

Annexure 1- (Date Wise Scheduling Details)

Participant ID	**W2MH0BST0000**
Participant Name	**Brihanmumbai Electric Supply & Transport (BEST)**
Portfolio ID	**W2MH0BST0001**
Portfolio Name	**BEST**

Scheduling details at Regional Periphery (Traded)

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
02-Sep-24	619.91	184.55	48.79	853.25
03-Sep-24	430.72	245.36	66.96	743.04
04-Sep-24	458.06	258.35	59.71	776.12
05-Sep-24	566.2	294.98	69.3	930.48
06-Sep-24	521.36	251.09	44.3	816.75
07-Sep-24	184.38	81.03	14.09	279.5
09-Sep-24	927.1	277.64	74.51	1279.25
10-Sep-24	1045.7	268.94	62.36	1377
11-Sep-24	860.88	281.92	66.2	1209
12-Sep-24	698.37	435.65	105.72	1239.74
13-Sep-24	759.56	433.54	70.15	1263.25
14-Sep-24	422.42	174.23	33.88	630.53
15-Sep-24	169.15	177.32	40.06	386.53
16-Sep-24	812.39	176.05	43.99	1032.43
17-Sep-24	489.99	108.48	33.78	632.25
18-Sep-24	743.04	245.91	106.28	1095.23
19-Sep-24	833.32	230.73	102.7	1166.75
20-Sep-24	852.84	194.78	82.38	1130
21-Sep-24	710.46	167.12	70.17	947.75
22-Sep-24	163.77	41.93	10.55	216.25
23-Sep-24	646.82	410.96	252.15	1309.93
24-Sep-24	1632.17	504.56	198.96	2335.69
25-Sep-24	1815.47	290.65	137.88	2244
26-Sep-24	289.73	200.16	123.9	613.79
27-Sep-24	1664.22	783.22	213.21	2660.65
28-Sep-24	1138	503.66	156.56	1798.22
29-Sep-24	693.15	694.8	249.3	1637.25
30-Sep-24	2305.6	698.3	215.17	3219.07
Grand Total				33823.7

*Computer generated report signature not required.

T. Undertaking
Power Purchase

IEX
INDIAN ENERGY EXCHANGE

Scheduling details after applying ISTS (POC) loss

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
02-Sep-24	599.99	178.64	47.22	825.85
03-Sep-24	416.91	237.46	64.8	719.17
04-Sep-24	443.33	250.04	57.8	751.17
05-Sep-24	548.01	285.51	67.08	900.6
06-Sep-24	504.62	243.03	42.87	790.52
07-Sep-24	178.46	78.43	13.64	270.53
09-Sep-24	897.88	268.88	72.17	1238.93
10-Sep-24	1012.79	260.46	60.39	1333.64
11-Sep-24	833.77	273.03	64.11	1170.91
12-Sep-24	676.36	421.93	102.4	1200.69
13-Sep-24	735.63	419.88	67.94	1223.45
14-Sep-24	409.1	168.74	32.82	610.66
15-Sep-24	163.83	171.73	38.79	374.35
16-Sep-24	787.35	170.62	42.64	1000.61
17-Sep-24	474.92	105.14	32.72	612.78
18-Sep-24	720.16	238.33	103	1061.49
19-Sep-24	807.64	223.63	99.54	1130.81
20-Sep-24	826.57	188.78	79.84	1095.19
21-Sep-24	688.6	161.96	68.01	918.57
22-Sep-24	158.71	40.63	10.23	209.57
23-Sep-24	625.96	397.69	244.03	1267.68
24-Sep-24	1579.43	488.27	192.54	2260.24
25-Sep-24	1756.82	281.26	133.43	2171.51
26-Sep-24	280.38	193.7	119.9	593.98
27-Sep-24	1610.5	757.93	206.33	2574.76
28-Sep-24	1101.22	487.38	151.51	1740.11
29-Sep-24	670.76	672.35	241.24	1584.35
30-Sep-24	2228.1	674.84	207.94	3110.88
Grand Total				32743

Scheduling details after applying ISTS (POC) and State loss

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
02-Sep-24	580.92	172.95	45.72	799.59
03-Sep-24	403.65	229.91	62.73	696.29
04-Sep-24	429.23	242.08	55.97	727.28
05-Sep-24	530.59	276.42	64.95	871.96
06-Sep-24	488.56	235.31	41.52	765.39
07-Sep-24	172.78	75.95	13.2	261.93
09-Sep-24	869.33	260.33	69.87	1199.53
10-Sep-24	980.55	252.19	58.48	1291.22

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Power Purchase Dept.

*Computer generated report signature not required.

11-Sep-24	807.24	264.36	62.07	1133.67
12-Sep-24	654.85	408.51	99.14	1162.5
13-Sep-24	712.23	406.53	65.78	1184.54
14-Sep-24	396.09	163.38	31.78	591.25
15-Sep-24	158.59	166.27	37.56	362.42
16-Sep-24	762.31	165.2	41.28	968.79
17-Sep-24	459.82	101.78	31.7	593.3
18-Sep-24	697.26	230.75	99.73	1027.74
19-Sep-24	781.97	216.51	96.38	1094.86
20-Sep-24	800.29	182.76	77.32	1060.37
21-Sep-24	666.71	156.81	65.84	889.36
22-Sep-24	153.65	39.34	9.9	202.89
23-Sep-24	606.05	385.05	236.27	1227.37
24-Sep-24	1529.23	472.73	186.41	2188.37
25-Sep-24	1700.96	272.32	129.17	2102.45
26-Sep-24	271.46	187.54	116.09	575.09
27-Sep-24	1559.28	733.82	199.78	2492.88
28-Sep-24	1066.21	471.88	146.69	1684.78
29-Sep-24	649.42	650.98	233.58	1533.98
30-Sep-24	2157.26	653.36	201.33	3011.95
Grand Total				31701.75

Scheduling details after applying ISTS (POC) Loss, State Loss, Distribution Loss and Other Loss if any (at Ex-bus)

Delivery Date	Solar (in MWh)	Non-Solar (in MWh)	Hydro (in MWh)	Total (in MWh)
02-Sep-24	580.92	172.95	45.72	799.59
03-Sep-24	403.65	229.91	62.73	696.29
04-Sep-24	429.23	242.08	55.97	727.28
05-Sep-24	530.59	276.42	64.95	871.96
06-Sep-24	488.56	235.31	41.52	765.39
07-Sep-24	172.78	75.95	13.2	261.93
09-Sep-24	869.33	260.33	69.87	1199.53
10-Sep-24	980.55	252.19	58.48	1291.22
11-Sep-24	807.24	264.36	62.07	1133.67
12-Sep-24	654.85	408.51	99.14	1162.5
13-Sep-24	712.23	406.53	65.78	1184.54
14-Sep-24	396.09	163.38	31.78	591.25
15-Sep-24	158.59	166.27	37.56	362.42
16-Sep-24	762.31	165.2	41.28	968.79
17-Sep-24	459.82	101.78	31.7	593.3
18-Sep-24	697.26	230.75	99.73	1027.74
19-Sep-24	781.97	216.51	96.38	1094.86
20-Sep-24	800.29	182.76	77.32	1060.37
21-Sep-24	666.71	156.81	65.84	889.36

*Computer generated report signature not required.

B.E.S.&T. Undertaking Power Purchase Dept.

IEX
INDIAN ENERGY EXCHANGE
INNOVATION TECHNOLOGY FUTURE

INDIAN ENERGY EXCHANGE LTD.

Certificate of Purchase of REC(s)

Certificate Number : C-IEX_REC000233 **Issued On: 10-Jul-2024**

BEST Undertaking

Number of Certificates: 249000

This certifies that BEST Undertaking is the holder of 249000 non transferable Renewable energy certificate(s) bought on 10-Jul-2024 , through Indian Energy Exchange Limited.

This certificate represented hereby is issued and shall be held subject to all the provisions of the regulations of Honorable CERC as amended from time to time and the Bye-laws, Rules and Business Rules of Indian Energy Exchange Limited.

This is a computer-generated statement hence doesn't require signature.

B.E.S. & T. Undertaking
बेस्ट
Power Purchase Dept.

PXIL
Transforming Power Markets

POWER EXCHANGE INDIA LIMITED

Certificate of Purchase of REC(s)

Number C - PXMB07241515 **Issued On - 10-JUL-2024**

Serial No. - PXI/ 10072024/REC/01515

Number of Certificates - 248500

This certifies that BEST is the holder of 248500 non transferable Renewable Energy Certificate(s) bought on 10-JUL-2024, through *Power Exchange India Limited.*

This certificate represented hereby is issued and shall be held subject to all the provisions of the regulations of Honorable CERC as amended from time to time and the Bye - laws, Rules and Business Rule of *Power Exchange India Limited.*

Power Exchange India Limited

Regd. Office: Power Exchange India Ltd.9th Floor, 901 ,Sumer Plaza,Marol Maroshi Road,Marol Andheri (East),Mumbai 400 059, India.

CIN:- U74900MH2008PLC179152, Phone no.+ 91 22 4009 6667/87, Fax: + 91 22 40096690/33, Website: www.powerexindia.in

Email : pxi_mktops@pxil.co.in

Note: - This is a computer generated statement hence doesn't require signature.

B.E.S. & T. Undertaking
बेस्ट
Power Purchase Dept.

Certificate of Purchase of Renewable Energy Certificate

INDIAN ENERGY EXCHANGE LTD.

Certificate of Purchase of REC(s)

Certificate Number : C-IEX_REC000274 **Issued On: 31-Jul-2024**

BEST Undertaking

Number of Certificates: 342900

This certifies that BEST Undertaking is the holder of 342900 non transferable Renewable energy certificate(s) bought on 31-Jul-2024 , through Indian Energy Exchange Limited.

This certificate represented hereby is issued and shall be held subject to all the provisions of the regulations of Honorable CERC as amended from time to time and the Bye-laws, Rules and Business Rules of Indian Energy Exchange Limited.

This is a computer-generated statement hence doesn't require signature.

B.E.S. & T. Undertaking Power Purchase Dept.

PXIL
Transforming Power Markets

POWER EXCHANGE INDIA LIMITED

Certificate of Purchase of REC(s)

Number C - PXMB07241542 **Issued On - 31-JUL-2024**

Serial No. - PXI/ 31072024/REC/01542

Number of Certificates - 342100

This certifies that BEST is the holder of 342100 non transferable Renewable Energy Certificate(s) bought on 31-JUL-2024, through *Power Exchange India Limited.*

This certificate represented hereby is issued and shall be held subject to all the provisions of the regulations of Honorable CERC as amended from time to time and the Bye - laws, Rules and Business Rule of *Power Exchange India Limited.*

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Email : pxi_mktops@pxil.co.in

Note: - This is a computer generated statement hence doesn't require signature.

B.E.S. & T. Undertaking
बेस्ट
Power Purchase Dept.

Certificate of Purchase of Renewable Energy Certificate

INDIAN ENERGY EXCHANGE LTD.

Certificate of Purchase of REC(s)

Certificate Number : C-IEX_REC000296 **Issued On:** 14-Aug-2024

BEST Undertaking

Number of Certificates: 316700

This certifies that BEST Undertaking is the holder of 316700 non transferable Renewable energy certificate(s) bought on 14-Aug-2024 , through Indian Energy Exchange Limited.

This certificate represented hereby is issued and shall be held subject to all the provisions of the regulations of Honorable CERC as amended from time to time and the Bye-laws, Rules and Business Rules of Indian Energy Exchange Limited.

This is a computer-generated statement hence doesn't require signature.

B.E.S. & T. Undertaking
Power Purchase Dept.

PXIL
Transforming Power Markets

POWER EXCHANGE INDIA LIMITED

Certificate of Purchase of REC(s)

Number C - PXMB08241555 **Issued On - 14-AUG-2024**

Serial No. - PXI/ 14082024/REC/01555

Number of Certificates - 316000

This certifies that BEST is the holder of 316000 non transferable Renewable Energy Certificate(s) bought on 14-AUG-2024, through *Power Exchange India Limited.*

This certificate represented hereby is issued and shall be held subject to all the provisions of the regulations of Honorable CERC as amended from time to time and the Bye - laws, Rules and Business Rule of *Power Exchange India Limited.*

Power Exchange India Limited

Regd. Office: Power Exchange India Ltd.9th Floor, 901 ,Sumer Plaza,Marol Maroshi Road,Marol Andheri (East),Mumbai 400 059, India.

CIN:- U74900MH2008PLC179152, Phone no.+ 91 22 4009 6667/87, Fax: + 91 22 40096690/33, Website: www.powerexindia.in

Email : pxi_mktops@pxil.co.in

Note: - This is a computer generated statement hence doesn't require signature.

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Power Purchase Dept.

Certificate of Purchase of Renewable Energy Certificate

INDIAN ENERGY EXCHANGE LTD.

Certificate of Purchase of REC(s)

Certificate Number : C-IEX_REC000342 **Issued On: 28-Aug-2024**

BEST Undertaking

Number of Certificates: 140000

This certifies that BEST Undertaking is the holder of 140000 non transferable Renewable energy certificate(s) bought on 28-Aug-2024 , through Indian Energy Exchange Limited.

This certificate represented hereby is issued and shall be held subject to all the provisions of the regulations of Honorable CERC as amended from time to time and the Bye-laws, Rules and Business Rules of Indian Energy Exchange Limited.

This is a computer-generated statement hence doesn't require signature.

B.E.S.&T. Undertaking
Power Purchase Dept.

PXIL
Transforming Power Markets

POWER EXCHANGE INDIA LIMITED

Certificate of Purchase of REC(s)

Number C - PXMB08241568

Issued On - 28-AUG-2024

Serial No. - PXI/ 28082024/REC/01568

Number of Certificates - 140000

This certifies that BEST is the holder of 140000 non transferable Renewable Energy Certificate(s) bought on 28-AUG-2024, through *Power Exchange India Limited.*

This certificate represented hereby is issued and shall be held subject to all the provisions of the regulations of Honorable CERC as amended from time to time and the Bye - laws, Rules and Business Rule of *Power Exchange India Limited.*

Power Exchange India Limited

Regd. Office: Power Exchange India Ltd.9th Floor, 901 ,Sumer Plaza,Marol Maroshi Road,Marol Andheri (East),Mumbai 400 059, India.

CIN:- U74900MH2008PLC179152, Phone no.+ 91 22 4009 6667/87, Fax: + 91 22 40096690/33, Website: www.powerexindia.in

Email : pxi_mktops@pxil.co.in

Note: - This is a computer generated statement hence doesn't require signature.

B.E.S.&T. Undertaking
Power Purchase Dept.

महाराष्ट्र विद्युत नियामक आयोग
Maharashtra Electricity Regulatory Commission

MERC/CAPEX/2023-24/0628 **Date: 22 November, 2023**

To,
The General Manager,
BEST Undertaking,
2nd Floor, Backbay Veej Bhavan
149/150, Gen J. Bhosale Marg,
Nariman Point, Mumbai 400 021.

Subject :-BEST DPR for Implementation of Smart Metering System for FY 2023-24 to FY 2024-25 Amounting to Rs 1303.16 Cr

Sir,

1. This has reference to your submitted DPR, for in principle approval to the Commission. The said scheme has been evaluated with reference to the Capex Regulations, 2022

2. I am directed to convey the 'in-principle' clearance of the scheme for the cost of Rs.1303.16 Crs under OPEX provisions of MERC (Approval of capital Invest Scheme) Regulations 2019. The particulars of the scheme as approved are outlined in the Annexure "A" and Appendix "A" attached.

3. Please note that this in-principle approval should not be construed as final approval for ARR purpose and the scheme will be open for scrutiny during the tariff determination process/ARR review, particularly in the context of actual cost incurred, scope and objective achieved etc., ex-post after implementation of the Scheme. BEST will be required to submit the status of implementation of the scheme with cost incurred till date, likely completion date, etc. along with its ARR Petition or during the tariff determination process at the appropriate time.

4. BEST should submit half yearly progress reports by 20th day of the first month of next half year giving the status of implementation of the Scheme in terms of expenditure incurred and item wise physical progress achieved during the implementation of the Scheme.

१३वा मजला, केंद्र क्र. १, जागतिक व्यापार केंद्र, कफ परेड, मुंबई - ४०० ००५.
13th Floor, Centre No. 1, World Trade Centre, Cuffe Parade, Mumbai - 400 005.
Tel.: 022-2216 3964 / 2216 3965 / 2216 3969 Fax : 022-2216 3976
E-mail : mercindia@merc.gov.in Website : www.merc.gov.in

5. Assets created after execution of the Scheme should be maintained separately in the Asset Register.

6. Immediately after completion/commissioning of the scheme, BEST should communicate to the Commission the date of completion of the scheme, actual cost incurred, escalation in cost, if any, with reasons, the scope and objectives of the scheme and to what extent they have been achieved, etc., so as to facilitate a comparison between the benefits envisaged at the in-principle clearance and the actual benefits.

7. BEST shall endeavor to complete the project within the stipulated time frame. Further, if BEST fails to initiate the work, including tendering process if any, within a period of one year from the date of in-principle approval, the scheme shall be deemed to be cancelled. Thereafter, BEST will have to take a fresh look at the scheme and be required to obtain revised in-principle approval of the Commission with justification for delay.

8. BEST to ensure that the income realization from scrap material shall be treated as per accounting principles.

9. BEST to submit the utilization report of credited equipment, if any, along with the six monthly report till all equipment's are reused.

10. Major scope of work shall be executed through competitive bidding process only.

Yours faithfully,

(Dr. Rajendra G. Ambekar)
Executive Director, MERC

Encl: Annexure "A" and Appendix "A"

Annexure A

Name of the scheme	**BEST DPR for implementation of Smart Meters from FY 2023-24 to FY 2024-25**
Estimated cost proposed by AEML-D (Revised)	Rs. **1303.16** Crore
In-principle approval accorded	Rs. **1303.16** Crore
Cost benefit	a) Release of new connections b) Addnl. Revenue generation through new connections c) Improvement in billing accuracy d) Improved service restoration and higher reliability of supply e) Outage management and real time data f) Availability of information and online services g) Improvement in quality of services h) Reduction in manual meter reading and corresponding Opex
Scope of the works in brief	Installation of following meters along with hardware and software with O & M for 10 years Single Phase Whole Current: -901212 Nos Three Phase whole current: - 168419 Nos Three Phase HT current: - 206 Nos Three phase LT-CT operated: - 6053 Nos Three phase LT-CT operated: - 3398 Nos Three phase CT/PT operated: - 1255 Nos Three phase CT/PT operated: - 133 Nos Total: - 1080676 Meters
Objectives/Justification	a) Release of new connections b) Addnl. Revenue generation through new connections c) Improvement in billing accuracy d) Improved service restoration and higher reliability of supply e) Outage management and real time data f) Availability of information and online services g) Improvement in quality of services h) Reduction in manual meter reading and corresponding Opex
Funding arrangement	Funding arrangement for execution of these schemes is 70:30 Debts: Equity, as per MYT Regulations and Grant from Central Government under RDSS.
Time frame/phasing out of expenditure	**(Amount in Rs. Crs)**

DPR Years	Total	FY 22-23	FY 23-24	FY 24-25
Capex	1303.16	463.52	660.54	179.10
Capitalization	1303.16	463.52	660.54	179.10
IDC		Nil		

Observations / Comments on Feasibility Report

1.	Prudence of Investment / Technical Justification	1. For release of new connections after installation of meters 2. For accurate meter reading of existing consumers
2.	Reasonability of Cost Estimate	BEST has carried out open tender process for allotment of the work contract and followed least cost option process
3.	Comments on Cost Benefit Analysis	i) Release of new connections ii) Addnl. Revenue generation through new connections iii) Accurate meter reading of existing consumers
4.	Discrepancy/Shortcomings Observed	Compiled by BEST
5.	Remarks/Specific Comments if any	Based on technical scrutiny and scope suggested by BEST, the scheme seems to be technically and commercially prudent.



Appendix A

Sr. No	Item Description	Gross Rate Per Unit	FY 2023-24		FY 2024-25		FY 2025-26		TOTAL	
1	2	3	6	7	8	9	10	11	12	13
PART-A	Supply, Installation, Integration, testing and commissioning of-		QTY	Amt.	Qty	Amt.	Qty	Amt.	Qty	Amt.
			Nos.	In Cr	Nos.	In Cr	Nos.	In Cr	Nos.	In Cr
1	Single Phase whole current	11011.83	140311	154.51	598751	659.33	162150	178.56	901212	992.40
2	Three Phase whole current	16441.31	168419	276.90		0		0	168419	276.9
3	Three Phase HT current	40499.49	206	0.83		0		0	206	0.83
4	Three phase LT-CT operated	20249.63	6053	12.26		0		0	6053	12.26
5	Three phase LT-CT operated	20249.63	3398	6.88		0		0	3398	6.88
6	Three phase CT/PT operated	40499.49	1255	5.08		0		0	1255	5.08
7	Three phase CT/PT operated	104141.49	133	1.39		0		0	133	1.39
	Total		319775		598751		162150		1080676	1295.7393
PART-B-Installation of DT Meters & Accessories										
8	Meter Boxes for DT meters	2012.37	3398	0.68		0		0	3398	0.68
9	LT Compact CTs of LT CT Meters (Set of 3	2515.37	6053	1.52		0		0	6053	1.52
10	LT CTs for DT metering (Ring Type)	2515.37	5610	1.41		0		0	5610	1.41
PART-C_ Specialist Man Power										3.61
11	Architecture Specialists	251552.4	12	0.30	0	0		0	12	0.3
12	Security Specialists	226394.46	12	0.27	0	0		0	12	0.27
13	Integration Specialists	226394.46	12	0.27	0	0		0	12	0.27
14	Data Base Developer- Sr.	176084.32	12	0.21	12	0.21		0	24	0.42
15	Web/ Mobile Application Developer- Sr.	176084.32	12	0.21	12	0.21		0	24	0.42
16	Core Application Developer- Sr.	201239.56	12	0.24	12	0.24		0	24	0.48
17	Data Base Developer- Jr.	150929.08	12	0.18	12	0.18	12	0.18	36	0.54
18	Web/ Mobile Application Developer- Jr.	150929.08	12	0.18	12	0.18	12	0.18	36	0.54
19	Core Application Developer- Jr.	150929.08	12	0.18	12	0.18	12	0.18	36	0.54
										3.78
	Total Cost in Crore			463.521		660.54		179.1		1303.16



Annexure - 16



The Brihanmumbai Electric Supply and Transport Undertaking (BEST)

DETAILED PROJECT REPORT
FY2022-23, FY2023-24, FY2024-25and FY2025-26
IN-PRINCIPLE CLEARANCEFOR CAPITAL INVESTMENT SCHEMES

BEST Scheme No: BEST/FY23/06

IMPLEMENTATION OF PREPAID SMART METERING PROJECT

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Abbreviation

AMI	Advanced Metering Infrastructure
AMI-SP	Advanced Metering Infrastructure-Service Provider
ABT	Availability Based Tariff
CT /PT	Current Transformer / Potential Transformer
DER	Distributed Energy Resource
DMS	Distribution Management System
DR	Demand Response
DSM	Demand Side Management
DT	Distribution Transformer
DBFOOT	Design, Built, Finance, Own, Operate & Transfer
EA	Energy Audit
GIS	Geographical Information System
HES	Head End System
HT	High Tension
LT	Low Tension
IT	Information Technology
MIS	Management Information System
NIC	Network Integration Card or Node
NTP	National Tariff Policy
NW	Network
O&M	Operation and Maintenance
PQ	Power Quality
BEST	Brihan Mumbai Electric Supply & Transport undertaking
RF	Radio Frequency
RTU	Remote Terminal Unit
SCADA	Supervisory Control and Data Acquisition
T&D	Transmission and Distribution
ToD	Time of Day
VAR	Volt Ampere Reactive
GoI	Govern of India
RDSS	Revamped Distribution Sector Scheme
AT&C	Aggregate Technical & Commercial
DISCOMs	Distribution Companies
ACS-ARR	Average cost of Supply –Aggregate Revenue Realised
TOTEX	Capital Expenditure + Operational Expenditure
CAPEX / OPEX	Capital Expenditure /Operational Expenditure
PPP	Public Private Partnership
DPR	Detail Project Report
LVCTO	Low Voltage Current Transformer Operated
MDMS	Meter Data Management System
NOMC	Network Operation Monitoring Centre
DCU /DACU	Data Concentrator Unit
ERP	Enterprise Resource Planning
OMS	Outage Management System
WPC	Wireless Planning & Co-ordination
WAN / NAN	Wide Area Network / Neighbourhood Area Network

1. INTRODUCTION:

1.1 The Government of India's initiatives like 'Make in India' and 'Smart Cities' need the efficient, reliable and continuous power supply. India's power sector in the present day is facing a lot of problems like AT & C losses, inefficient distribution and transmission system because of age old infrastructure and power theft. The advanced energy management and increased use of renewable energy resources are the foremost areas to concentrate by governments for the development of country. The government cannot take initiatives for complete change of electrical equipment across the country but there is a need for changing the way of operation and control of the electrical equipment.

1.1.1 Accordingly, Government of India (GoI) has launched the Revamped Distribution Sector Scheme (RDSS) to help DISCOMs to improve their operational efficiencies and financial sustainability by providing result-linked financial assistance to DISCOMs to strengthen supply infrastructure based on meeting pre-qualifying criteria and achieving basic minimum benchmarks. Main objective of the scheme is Reduction of AT&C losses to pan-India levels of 12-15% by 2024-25 and Reduction of ACS-ARR gap to zero by 2024-25. Also, improvement in the quality, reliability and affordability of power supply to consumers through a financially sustainable and operationally efficient distribution sector.***For details a copy of MoP letter dated 20 July, 2021 is attached (hard and soft copy) herewith as Annexure-A.***

1.2 Main components of RDSS Schemes are as follows:

1.2.1 Part A – Financial support for up gradation of the Distribution Infrastructure and Prepaid Smart Metering & System Metering.

Part B – Training & Capacity Building and other Enabling & Supporting Activities.

1.2.2 The current DPR is for "Implementation of Prepaid Smart Metering & System Metering" through AMI-SP on Design, Built, Finance, Own, Operate & Transfer (DBFOOT) basis. The DPR preparation for "Upgradation of the Distribution Infrastructure" is in progress and same will be submitted to MERC separately for obtaining in principleapproval of the Hon'ble Commission

1.2.3 Vide MoP notification dated 17th August 2021, GoI prioritised for all DISCOMS including BEST that "all the consumers (other than agricultural consumers) in areas with communication network, shall be supplied electricity with smart meters working in Prepayment Mode conforming to relevant IS, within the time".Pre-paid smartmetering and system metering are proposed to be implemented through Public Private Partnership (PPP)on OPEX basis.

1.2.4 For availing a grant of Rs. 900 or 15% of the cost per consumer (whichever is lower) under RDSS, for "Implementation of prepaid Smart Metering & System Metering" BEST have to meet pre-qualifying criteria and to achieve basic minimum benchmarks.Further to this, fast-track installation of prepaid Smart Meters by December 2023, an additional incentive of 7.5% of the cost per consumer meter or Rs. 450 (whichever is lower) shall be available to qualified states.

1.3 Introduction of BEST's Revamped Distribution Sector Scheme (RDSS) for AMI-SP:

BEST was submitted a copy of Action Plan & DPRs vide Letter Ref. No. GM/AGMES/18668/2022 dated 22.08.2022 for Loss Reduction works for Rs.2321 Crs, Modernisation & System Augmentation works for Rs. 430.63 Crs and Metering works for

Rs.708.54 Crs and Capacity building & training for Rs. 0.81 Crs, totalling Rs. 3460.98 for availing benefits of the RDSS to improve the services of the consumers. Subsequently, vide Letter No. 02:10:RDSS:2021:I:BEST dated 21.11.2022, Executive Director, for Power Finance Corporation (PFC)has informed that Monitoring Committee for RDSS constituted under Chairmanship of Secretary (power), Govt. of India, in its 13th meeting held on 28.10.2022 has approved the Action Plan and Detailed Project Report (DPRs) for Loss Reduction works and prepaid smart metering works of BEST under RDSS Scheme. For prepaid Smart Metering, out of Rs.708.54 Crs Monitoring Committee has approved only Rs. 659.17 Crs for metering infrastructure and total GBS including incentive for phase –I Rs.146.69 Crs. ***A copy of BEST's Letter and approval from PFC is enclosed as Annexure – B and for detail guidelines of RDSS Schemes kindly refer Annexure-C (only soft copy submitted).***

1.4 Brief information about the tendering process takes place in BEST for awarding turnkey contract to appoint AMI-SP for Implementation of Prepaid Smart Metering under RDSS:

1.4.1 A material is procured as per CAPEX Regulation, 2022, APENDIX-3.

Brief information about the Tender: A tender was opened on 21.07.2022 for appointment of AMI-SP for "Implementation of Prepaid Smart Metering" through open biddingprocesson Maha e-tender Portal. BEST undertaking advertised the tender in the local as well as all over Indiamedia.Initially, Notice of Inviting Tender was advertised for "appointment of full turnkey contractor (AMI-SP) to execute the project under RDSS". Due to the poor response from the bidders, multiple extensions were given. Finally, tender was opened on 21stJuly, 2022. Afteropening of the tender, it is observed that six bidders have taken part in the bidding processand it has been observed that the rates quoted by the firms, particularly towards the execution ofPrepaid smart metering project.

1.4.2 Details of offers received for appointment of AMISP:

In tender document it has been clearly mentioned that the tender evaluation shall be done on the basis of Reverse Auction Process (RAP) between the Eligible and Qualified Tenderers to appoint AMI-SP for implementation of Smart metering Pre-payment system Project. In the said tender, six bidders have taken part. Accordingly, out of Six Tenderers, Pricebid of the three eligible Tenderers has been opened and same is given in the following table.

Bidder No.	Tenderers	Gross Rate Including GST tax. (in Rs.)	Rank
1	M/s. Fluent Grid Pvt Ltd	1559,99,75,299.00	3
2	M/s. Adani Transmission Ltd (ATL)	1528,26,00,331.34	2
3	M/S. Ashoka Buildcon Ltd.	1313,16,31,180.00	1 (LAO)

As per above, offer of the Bidder No. 3 was Lowest (LAO), however, in the reverse option method, bidder 2 has matched their rates with the LAO and further reducing the Cost by 10 Crore at price of Rs. 1303.16 Crore M/s. ATL succeed to get Order. This type of contract is being awarded for the first time in the BEST Undertaking.

Accordingly, for cost estimation purpose, the cost arrived through this tender is considered.

Sr. No.	Bidder No.	Basic Cost in Rs.	Total Tax 18%	Gross Cost in Rs.
1	2	11,04,37,55,237.00	1,98,78,75,942.89	13,03,16,31,179.89

A Letter of Award (LoA) has issued to ATL and soft copy of the same is enclosed as Annexure-D.

2. Challenges in the BEST Undertaking:

2.1 Performance of any Electric distribution utility is measured over following crucialParameters.

- Cost of supply including T&D loss
- Customer services
- Management of demand curve – supply reliability
- Electricity supply quality

2.2 In the current dynamic scenario where consumers are installing roof top solar systems,updated their vision and have added following vision statements:

- Active participation of consumers in managing load curve
- Integration of distributed generation, batteries etc.
- Faster information to consumers
- Self-healing system
- Optimum utilization of asset and resources

2.3 BEST distributes electricity in the island city of Mumbai. Its area of distribution lies fromSouth Mumbai to Sion in the East and to Mahim in the West. BEST distributes power to an area spread over about 69 sq.km and provides electric supply to more than10 Lakhs consumers connected to its distribution network, comprising residential, commercialand industrial consumers, depending on the purpose of use of electricity.

2.4 Presently, BEST is not having such type of AMI infrastructure. So, the BEST is facing issues like wrong manual reading, delay in detection of defective meters, amendmentsand related disputes.

2.5 The mission of BEST undertaking is to provide economical, reliable and quality electricitysupply to all consumers connected to its network. Though BEST's present network hasstatic and few electro-mechanical meters in the system. The key challenges are to ensure that:

- Data/ information are communicated back at desired frequency in desired formats
- All desired information/ data/ events are generated
- All data/ information is processed
- All data/ information is analyzed to meet company objectives and for routineoperations
- Smart actions are taken based on data/ information analytics
- Customer Inclusion is achieved
- Asset optimization and operational efficiency
- There is improvement in Power Quality

3 Objective of the Scheme

3.1 **Objective**: To adopt technological advancements in energy metering to achieve Reduction in loss, for accurate measurement of energy, to provide improved service to consumers, to release new supply and to replace electromechanical and static metersby smart meters.

The AMI-SP will make 100% upfront capital investment and will recover its investments on long term from the gains of the projects on **OPEX basis**.

3.2 Introduction to the smart meters:

(i) After replacement of electro-mechanical meters with static meters, transition from static meters to smart meters is one of the most important steps towards improving consumer metering. Smart meters are a key component of a power supply system and play a significant role in revenue protection, quality control, compliance with regulatory requirements, consumer satisfaction and image building. The present billing system has chances of error and it is also time consuming. In the existing meter system, consumers are presented with usage information only once a month with their bill.

(ii) The smart meter is very essential to collect precise and appropriate data in a timely manner which includes gathering of data, its communication and storage. The smart meter allows the bi-directional flow of information from consumer to utility and vice versa. The data communication in real time basis allows the utilities with advantages like real time pricing, outage detection, identification of power theft, avoids meter data tampering and provides better service. With the data received in timely manner utilities shall have a better opportunity to work better with increased stability.Efficient metering practices help to maintain the financial health of a utility. These include accurate billing and prevention of power theft, which have been the focus areas for utilities. These practices also help in lowering aggregate technical and commercial losses of the utilities.

(iii) Advance metering infrastructure (AMI), automated meter reading (AMR), pre-paid meters and net meters are the key technologies of smart metering being adopted. This will help in improving metering efficiency, billing accuracy, revenue management and consumer satisfaction.

In light of the above-mentioned possibilities, BEST has reviewed its present metering system and data collection system for implementation AMI / Smart Metering. The key equipment and infrastructure required for this purpose include:

- Smart meters for data generation
- Communication infrastructure RF mesh network/ cellular network or both
- HES (Head End System) for data acquisition and Network ManagementSystem(NMS)
- Other Accessories required to integrate AMI System
- Fieldoperationsapp
- Networkoperationsmonitoringcentre

3.3 Scope of the work:

PART-A

1. Supply, installation, integration, testing and commissioning of **Single phase** whole current Smart Meter with inbuilt NIC module – (Consumer Meter, inclusive of 10 Net meters) along with Communication Solution, HES hosted on cloud, procuring all the necessary licenses, setting up NOMC with suitable backend communication and infrastructure, integration of HES with Meter Data Management system of BEST and its O&M includingdata availability (Single Phase, Qty – 901212 Nos.).

2. Supply, installation, integration, testing and commissioning of **Three phase** LT-CT operated Smart Meter with inbuilt NIC module (with Net-Metering) – DT Meter along with Communication Solution, HES hosted on cloud, procuring all the necessary licenses, setting up NOMC with suitable backend communication and infrastructure, integration of HES with Meter Data Management system of BEST and its O&M including data availability(Three Phase, Qty – 168419 Nos.).

3. Supply, installation, integration, testing and commissioning of Three Phase HT current Smart Meter with inbuilt NIC module (Inclusive of 12 nos. Existing Solar/Net Meter Consumers) – Consumer Meter along with Communication Solution, HES hosted on cloud, procuring all the necessary licenses, setting up NOMC with suitable backend communication and infrastructure, integration of HES with Meter Data Management system of BEST and its O&M including data availability (Three Phase, Qty – 206 Nos.).

4. Supply, installation, integration, testing and commissioning of three phase LT-CT operatedSmart Meter with inbuilt NIC module (Inclusive of 97 nos. Existing Solar/Net Meter Consumers) – Consumer Meter along with Communication Solution, HES hosted on cloud, procuring all the necessary licenses, setting up NOMC with suitable backend communication and infrastructure, integration of HES with Meter Data Management system of BEST and its O&M including data availability (Three Phase, Qty – 6053 Nos.).

5. Supply, installation, integration, testing and commissioning of Three phase LT-CT operated Smart Meter with inbuilt NIC module (with Net-Metering) – DT Meter along with Communication Solution, HES hosted on cloud, procuring all the necessary licenses, setting up NOMC with suitable backend communication and infrastructure, integration of HES with Meter Data Management system of BEST and its O&M including data availability (Three Phase, Qty – 3398 Nos.).

6. Supply, installation, integration, testing and commissioning of Three phase CT/PT operated Smart Meter with inbuilt NIC module – Feeder Meter (with suitable box & TTB arrangement for individual meters) along with Communication Solution, HES hosted on cloud, procuring all the necessary licenses, setting up NOMC with suitable backend communication and infrastructure, integration of HES with Meter Data Management system of BEST and its O&M including data availability (Three Phase, Qty – 1255 Nos.).

7. Supply, installation, integration, testing and commissioning of Three phase CT/PT operated Smart Meter with inbuilt NIC module (ABT Meters) (With Suitable box & TTB arrangement for individual meters) along with Communication Solution, HES hosted on cloud, procuring all the necessary licenses, setting up NOMC with suitable backend communication and infrastructure, integration of HES with Meter Data Management system of BEST and its O&M including data availability(Three Phase, Qty – 133 Nos.).

PART-B:

8. Supply and installation of Meter Boxes for DT check meters (Qty – 3398 Nos.).
9. Supply and installation of LTCTs of LT CT Meters (Set of 3 CTs) (Qty- 6053Nos.).
10. Supply and installation of LT CTs for DT metering (Ring Type) (Qty – 5610 Nos.).

PART-C-New requirement for software

11. Architecture, Security and Integration Specialists
12. Data Base Developer- Sr., Web/ Mobile Application Developer- Sr. andCore Application Developer- Sr.
13. Data Base Developer- Jr., Web/ Mobile Application Developer- Jr. and Core Application Developer- Jr.

A copy of detail scope of work is enclosed as Annexure-E.

3.4 Indicative list of meters to be replaced with Smart Meters

Sr. No.	Meter Type	Quantity(in Nos.)
1	Single Phase Meter-WC	901212
2	Three Phase Meter-WC	168419
3 #	Three Phase Meter-LTCT	6053
4	Three Phase Meter-LTCT DT Meter	3398
5	Three Phase Meter-HTMeters	206
6	Three Phase Meter –HT Feeder Meter	1255
7	Three Phase Meter-CT/PT Operated ABT Meter	133
	GRAND TOTAL	**10,80,676**

#- LTCT meters includes 97 Nos. existing Net Meters

3.5 Technical Feasibility of the Scheme:

3.5.1 **Statutory Requirement**:

As per Section 55(1) of Electricity Act 2003, it is mandatory to the Distribution Licensee to supply Electricity to the consumers after installation of Energy Meter for measurement of correct metering of the electricity supplied to the consumers. The Clause is reproduced as below:

> *"No Licensee shall supply electricity, after the expiry of two years from the appointed date, except through installation of a correct meter in accordance with the regulation to be made in this behalf by the authority."*

3.5.2 As per MYT Regulation 75.7 *"A Distribution Licensee may undertake Opex schemes for system automation, new technology and IT implementation, etc., and, such expenses may be allowed over and above normative O&M Expenses, subject to prudence check by the Commission: Provided that the Distribution Licensee shall submit detailed justification, cost benefit analysis of such schemes as against capex schemes, and savings in O&M expenses, if any"*

3.5.3 Justification of the Capital Investment Scheme (Need of Investment):

Technical Justification:

(i) Every new connection is required to be released after installing a meter as per the Electricity Act, 2003. BEST has proposed installation of smart meters in this DPR during FY 2023-24, FY 2024-25& FY 2025-26.

(ii) As per MERC (Electricity Supply Code and Standards of Performance of Distribution Licensees including Power Quality) Regulation. 2021 and Electricity (Rights of Consumers) Rules, 2020, all the new connections shall be released with the Smart Meter or Meter having at least the facility of remote reading: further to that all the existing meters whenever replaced shall be replaced only by Smart Meter or Meter having at least the facility of remote reading.

(iii) The characteristics ofmeters to be procured for new connections will conform to the CEA(InstallationandOperationofMeters)Regulations,2006.

(iv) As per MoP, Notification dated 17th August, 2021 "all the consumers (other than agricultural consumers) in areas with communication network, shall be supplied electricity with smart meters working in Prepayment Mode conforming to relevant IS, within the time" Accordingly, BEST have decided to replace all existing Energy Meters with Smart Meters working with Prepayment Mode under RDSS Project. ***A copy of SoP Regulation, 2021 &MoP2021 Notification is enclosed as Annexure- 'F'.***

(v) In line with the above technical requirements, BEST has prepared this Detailed Project Report (DPR) to replace static meters with smart meters for all consumers, along with setting up the backbone communications infrastructure and related IT systems. The communication backbone facilitates the acquisition of data from smart meters and brings it to central server. The IT/OT software installed in the server takes care of the huge data collected from the field. This data is then shared with other applications like billing, GIS, SCADA etc. and generated reports. Looking at the consumer base of more than 10 lakhs, BEST has planned to replace existing meters with smart meters.

4. Brief Description of the Pre-paid Smart Metering Project

4.1 Solution Architecture

Implementation of Smart metering technologies will enable two-way communication between the meter and the central system. Such an advanced metering infrastructure (AMI) differs from automatic meter reading (AMR) in that it enables two-way communication between the meter and the utility.

TheAMI/SmartMeteringsystemis explained below:

4.2 AdvancedMeteringInfrastructure(AMI):

This Advanced Metering Infrastructure (AMI) refers to technologies and communications systems necessary to acquire customer meter data and events on regular intervals (hourly or "n" hour basis) and allow for daily or more frequent retrieval of the data. Advanced metering can enhance a customer's ability to reduce demand in response to a higher price and the utility's ability to meter and monitor the customer electricity usage. Such metering system can also allow an electric utility to provide a variety of innovative services to benefit customers and to reduce the utility's costs of operations.AMI communicates between utility control centre and consumer

smart meters. BEST has initiated significant efforts to improve performance and energy efficiency in terms of AMI implementation initiative.

AMI or Smart Metering System establishes a mechanism for the residential, commercial and industrial customers, enabling energy audit to detect high loss, remote service disconnection /reconnection capability and consumer interactive interface.

It is a pivotal information source, which, when used effectively, can drive enterprise efficiencies and benefits throughout the distribution business, including:

Immediate Objectives	Long Term Objectives
• T&D Loss reduction o Theft detection	• Enabling value-added services
• Improved Collection o Pre-Paid and Post- Paid Options o Disconnection in case of non-payment	• Reduced capacity requirements &improved asset utilization • Increased service reliability
• Energy Audit o Online energy audit o Technical Loss analysis o Feeder Health report	• Enabling Demand Response (DR) & Smart Grid technologies
• Customer Satisfaction o Interactive Display o Auto power failure feed back o Consumption monitoring	• Improved load forecasting and modeling, system planning & engineering. • Improved transformer load management • Smart home control • DER Integration (a)

4.3 Overall System Architecture:

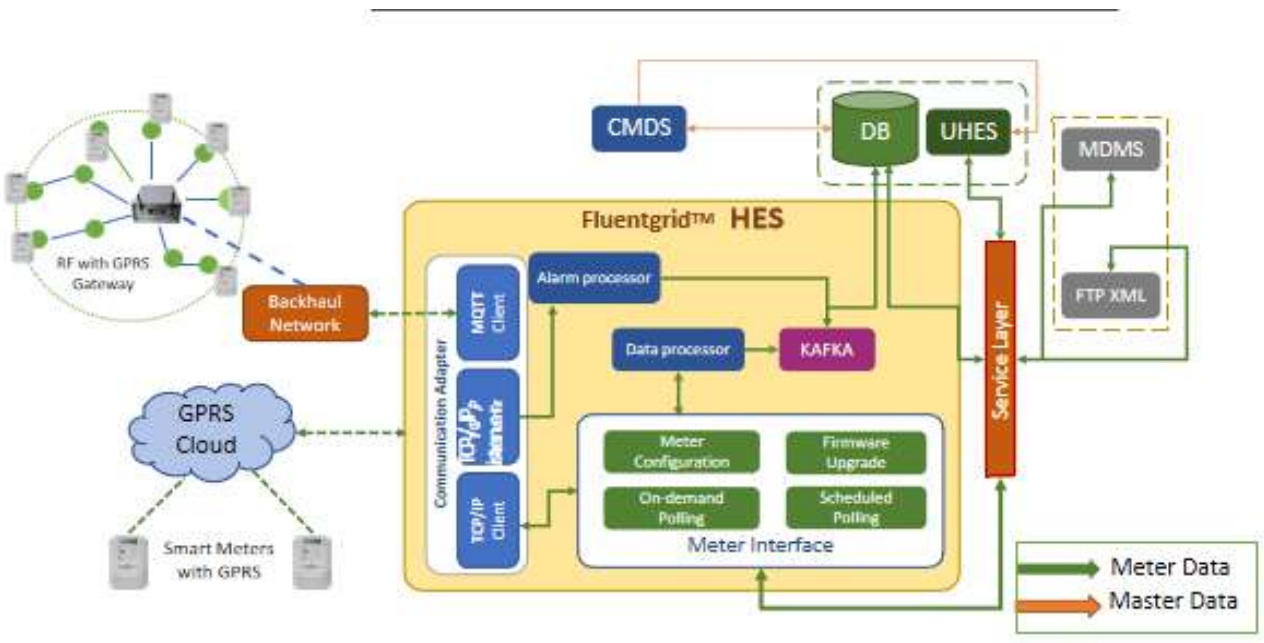


Fig-Solution Architecture (proposed and will be finalised during design phase)

4.4 BEST'sAMIProject:

- Supply, installation, integration, testing and commissioning of Smart pre-paid metering
- Communication Infrastructure to ensure the performance levels
- Head End System (HES) and deployment on Cloud
- AMI Systemintegration
- Network Operation cum Monitoring Centre with suitable backend communication infrastructure, hardware and power supply
- All the necessary software along with valid licenses relevant to the Project
- Consumer indexing on de-novo basis for contiguous electrical locations in the selected AMI area and regular updates during the contract period
- Comprehensive Consumer engagement plan in consultation with utility and implement its part of its activities as per the developed plan
- Operation, maintenance, and support services after the successful completion of the Operational Go-Live of the system

4.4.1 Proposed SmartMeteringSystemto be implemented by AMI-SP in BEST shall consist of followingkeycomponents:

I Smart Meters
II Communication Network
III Systems & Applications: Head End System (HES) and deployment on Cloud
IV AMI Integration (Para 4.2)

I. SMART METERS

Smart Meter is a composite unit consisting of metrology elements, two-way communication module(s) and control elements. It will have functions such as measurement, computation, event capturing, storing, communication and control. Smart Meter communication, it is envisaged that plug and play type communicationmodules shall be deployed in the smart meter, for any given communication technology. These modules shall be field-deployable, with corresponding communication interface modules being used in theDCU/Gateway or BTS of wide area network. The Network Interface Card (NIC) / Communication Module should be integrated with at least 3 (three) makes of meters in India to enable the respective meters to seamlessly integrate with proposed HES and/or MDM thus enabling interoperability of the system. At BEST, procurement of Smart Meters shall be as per the StandardIS16444, issued by BIS (Bureau of Indian Standards).

II. COMMUNICATION NETWORK

AMI-SP may use RF mesh network/ cellular network or a combination of both for collecting the date for smart meters. This Communication networkcomprises of a number of gateways. Network gateways shall be deployed across BESTs distribution area to provide RF coverage for end devices incorporating the communication nodes. This mesh network shall operate in

unlicensed frequency band (865-867MHz). Communication network shall also provide reliable medium for two-way communication between various nodes (Smart Meter, Gateway/Router/Access Point/DCU (wherever applicable)) & HES. RF based network should use unlicensed frequency band as permitted by WPC. Meter data shall be routed /collected by field devices like Gateway /Router/Access Point, Data Concentrator Units (DCUs) wherever applicable given the communication technology used and transported to HES through WAN back haul connectivity.

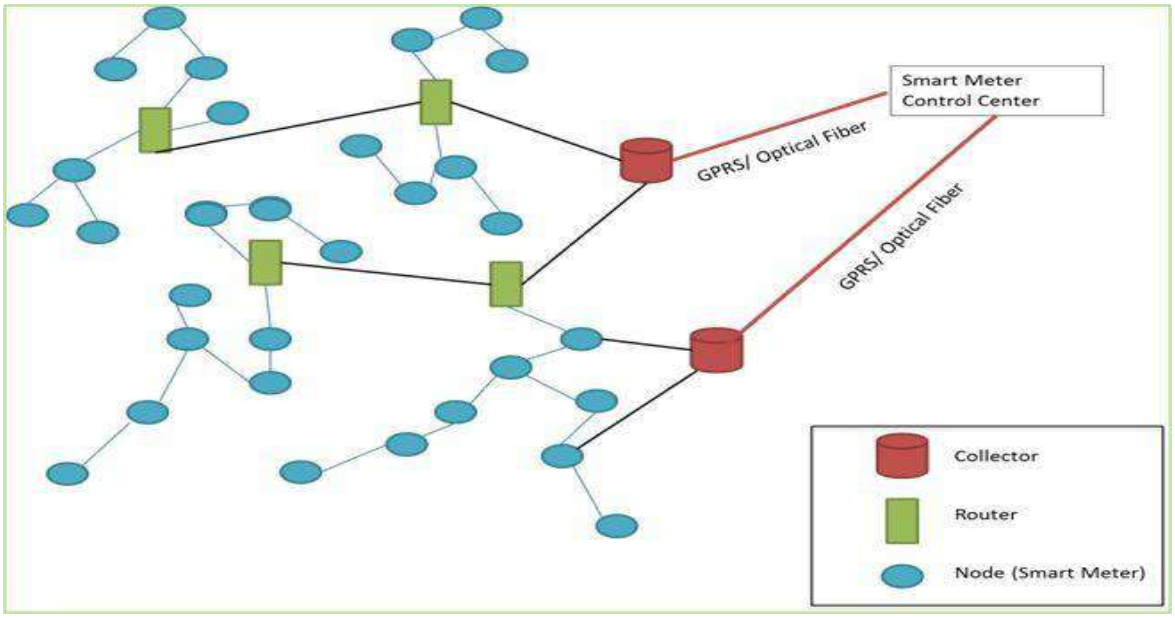


Fig. AMIMeshNetwork

The entire supplied communication infrastructure (Cellular based NIC or RF based devices (DCU /Router/access points wherever applicable) must have 4G with fallback to 2G connectivity. It should be upgradable to future communication technologies like 5G. AMI-SP shall confirm that the communication infra supplied should comply with as on date government, WPC, industry rules, standards, regulations and norms.

III. SystemsandApplications

a. HEAD ENDSYSTEM(HES) and DEPLOYMENT OF CLOUD

The main objective of HES is to acquire meter data automatically avoiding any human intervention and monitor parameters acquired from meters. HES shall exchange data with network terminals and field devices. It shall perform communication network management, field device management, device data management and processing of the data before exchanging to other systems (ERP, GIS, SCADA, and OMS etc).

HES should support various generations of cellular technologies and upcoming technologies like 5G and shall be responsible for autodiscovery of all Smart Meters once deployed in the field, the periodic collection of all meter data as well as the processing of all alarms and commands such as connect/disconnect for those meters.

HES should be able to do simultaneous communication with the entire supplied infrastructure (Cellularbased NIC or RF based devices (DCU/Router/access points

wherever applicable) on RF mesh or 4G with fall back to 2G connectivity. It should support to future communication technologies like 5G. Supplied HES along with NMS should comply with the, as on date government, WPC, industry rule, standards, regulations and norms.

DEPLOYMENT CLOUD: -CLOUDSERVICEPROVIDERS(CSP)

For implementation of AMI / Smart Metering project, a cloud-based applications shall be used. The cloud data centre shall have to comply with requirements of tier III category which applies to a concurrently maintainable site infrastructure with redundant capacity components and multiple independent distribution paths serving the critical environment. All IT equipment shallbedual powered.

DATA CENTRE UNIT (DACU)

The Data Concentrator Unit is a gateway for communication of data between the Smart Meters and the HES. The Data Concentrator Unit receives information from the Smart Meter on a scheduled /need basis and passes it on to HES.

The DCU provides the central link between Smart Meters and HES, enabling continuous/periodic meter read and control. DCU shall exchange data from Smart Meters on RF communication and with HES on WAN.

b. NetworkManagementSystem(NMS)

The Network Management System (NMS) function within the HES shall manage, monitor and control the smart meters, RF Nodes, gateways and meshed communication network and its associated devices.This module shall provide real time information about the IP network and its associated NAN/WAN modules in the field device/s.

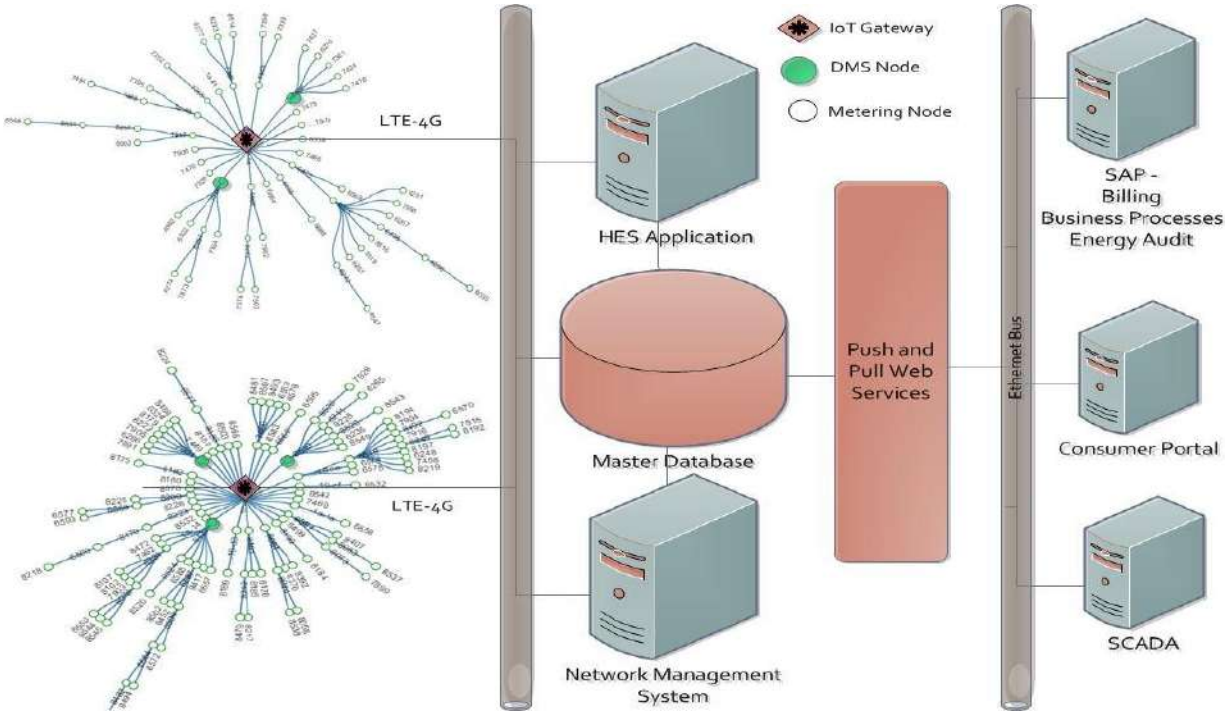


Fig. Thetypicalarchitecture of AMI system is shown above (ProposedArchitecture)

Master database should be HES database. The push and pull, SAP billing business processes Energy audit, SCADA, Consumer portal are shown only for information and are not covered under AMISP DPR

c. NETWORK COMMUNICATION

The network communications software shall use a standard network protocol such as TCP/IP, UDP etc. and shall support IPv6. The software shall link dis-similar hardware nodes such as local and remote work stations and peripheral devices into a common data communication network allowing communications among these devices. The network communication software shall include network security, security management, patch management and network services of the AMI system. Network communication software shall have scalability feature as envisaged.

d. OPERATING SYSTEM

The operating system of all the equipment of AMI application system including network equipment shall be latest version released upto six months prior to FAT. The operating system shall be hardened to provide robust security. The operating system and data file shall be placed in different disk partitions.

In order to facilitate cyber security requirement including patch management, common operating system is preferable to be used by all server nodes within the AMI application including MDM/HES servers. This is also to minimize the maintenance. All licenses for Operating System and other application software shall be supplied by the AMI-SP and shall bevalid throughout the contract period.

4.4.2 SYSTEM FEATUIRES

The following outcomes are expected once the smart metering system is implemented with the necessary software and integration:

- End to end solution for metering, load management, energy audit & MIS report generation
- Ease of maintenance of NW with real-time information
- Scalability to include LT consumers
  - Economical AMR solution (two-way communication)
  - Remote connect/ disconnect feature
  - Split metering to restrict tampering
  - On-line tamper detection and monitoring
- Customer Interface
  - Real time monitoring
  - Online profile
  - Payment and history maintenance
- Ease of monitoring & analysis as critical reports are formulated automatically

- No consumption in past 24 hours
- Energy imbalance for a group of meter
- Disconnected consumers
- Events/ Tamper report

- Automatic Meter Reading
  - Reliable Meter data
  - Prompt billing every month at fixed date
  - No intrusion at consumers premises
  - Can service customer's request for billing data as-on-time
- Remote Connect/Disconnect
  - Can disconnect/reconnect customer have based on defaults
  - Can temporarily disconnect/reconnect based on requests
  - Can use auto-disconnect if load limit exceeds
  - Useful for regulating peak demand usage
  - Facility to switch to Pre-payment
- Online Event/Tamper Detection
  - Detects and reports any meter box opening
  - Detects and reports any bypass of meter
  - Reports zero consumption users daily
- Real Time Energy Audit
  - Check-meters provide real-time periodic consumption report
  - Gives a daily input regarding loss per transformer
  - Can corroborate daily all DT consumption report with energy input in a rea
- Intelligent Load Management
  - Load limiting per connection
  - Monthly consumption limit per connection
  - Intelligent cut-off on occurrence of High voltage than limit
  - Load switch option on to control Geysers / AC & such heavy loads etc
  - Transformer level load can be monitored to avoid over loading.

5. Costing of the project

5.1 The smart metering Project components:

(i) Smart Meters-Single Phase, Three Phase, LVCTO /DT meters, HT& ABT Meters,
(ii) Meter boxes and LT Ring Type CTs for DT metering, LT CT Banks
(iii) AMI Components (iv) O&M Charges (v) Interest on debt capital and (vi) RoE

5.2 Item wise costing

Item wise pert unit cost, Qty and total cost is given in the following table:

Sr. No.	Particulars	Unit Cost Gross (in ₹)	Qty (in Nos.)	Cost(in ₹)
1	Single Phase Smart meters with installation, communication & integration	11011.83	901212	9923993337.96
2	Poly Phase Smart meters with installation, communication & integration	16441.31	168419	2769028988.89
3	Poly Phase HT current Smart Meter Consumer Meter	40499.49	206	8342894.94
4	Three phase LT-CT operated Smart Meter (inclusive of 97 nos. existing Solar/Net Consumer Meters)	20249.63	6053	122571010.4
5	LVCTO Smart Meters installation, communication & integration	20249.63	3398	68808242.74
6	CTPTO Smart Meters installation, communication & integration	40499.49	1255	50826859.95
7	CTPTO Smart DT Meters installation, communication & integration	104141.49	133	13850818.17
	TOTAL PART-A	-		**12957422153.04**
8	Supply and installation of Meter Boxes for DT check meters	2012.37	3398	6838033.26
9	Supply and installation of LT Compact CTs of LT CT Meters (3 CTs)	2515.37	6053	15225534.61
10	Supply and installation of LT CTs for DT metering (Ring Type)	2515.37	5610	14111225.7
	TOTAL PART-B	-		**36174793.57**
11	Architecture Specialists	251552.40	12	3018628.80
12	Security Specialists	226394.46	12	2716733.52
13	Integration Specialists	226394.46	12	2716733.52
14	Data Base Developer- Sr.	176084.32	24	4226023.68
15	Web/ Mobile Application Developer- Sr.	176084.32	24	4226023.68
16	Core Application Developer- Sr.	201239.56	24	4829749.44
17	Data Base Developer- Jr.	150929.08	36	5433446.88
18	Web/ Mobile Application Developer- Jr.	150929.0836	36	5433447.01
19	Core Application Developer- Jr.	150929.08	36	5433446.88
	TOTAL-C	-		**38034233.41**
	GRAND TOTAL (A+B+C)			**13031631180.02**
	GRAND TOTAL			**1303.16 Crore**

Note: 18% GST is included in the unit rate.

5.3 Phasing of the Project

Sr. No.	Item Description	Gross Rate Per Unit	FY 2023-24		FY 2024-25		FY 2025-26		TOTAL	
1	2	3	4	5	6	7	8	9	12	13
PART-A	**Supply, Installation, Integration, testing**		**QTY**	**Amt**	**QTY**	**Amt.**	**Qty**	**Amt.**	**Qty**	**Amt.**
	and commissioning of-		**Nos.**	**In Cr**	**Nos.**	**In Cr**	**Nos.**	**In Cr**	**Nos.**	**In Cr**
1	Single Phase whole current	11011.83	140311	154.51	598751	659.33	162150	178.56	901212	992.40
2	Three Phase whole current	16441.31	168419	276.90	0	0		0	168419	276.90
3	Three Phase HT current	40499.49	206	0.83	0	0		0	206	0.83
4	Three phase LT-CT operated	20249.63	6053	12.26	0	0		0	6053	12.26
5	Three phase LT-CT operated	20249.63	3398	6.88	0	0		0	3398	6.88
6	Three phase CT/PT operated	40499.49	1255	5.08	0	0		0	1255	5.080
7	Three phase CT/PT operated	104141.49	133	1.39	0	0		0	133	1.390
PART-B-Installation of DT Meters & Accessories										
8	Meter Boxes for DT meters	2012.37	3398	0.68	0	0		0	3398	0.680
9	LT Compact CTs of LT CT Meters (Set of 3 CTs)	2515.37	6053	1.53	0	0		0	6053	1.530
10	LT CTs for DT metering (Ring Type)	2515.37	5610	1.41	0	0		0	5610	1.410
PART-C_ Specialist Man Power										
11	Architecture Specialists	251552.40	12	0.30	0	0	0	0	12	0.300
12	Security Specialists	226394.46	12	0.27	0	0	0	0	12	0.270
13	Integration Specialists	226394.46	12	0.27	0	0	0	0	12	0.270
14	Data Base Developer- Sr.	176084.32	12	0.21	12	0.21		0	24	0.420
15	Web/ Mobile Application Developer- Sr.	176084.32	12	0.21	12	0.21		0	24	0.420
16	Core Application Developer- Sr.	201239.56	12	0.245	12	0.245		0	24	0.490
17	Data Base Developer- Jr.	150929.08	12	0.185	12	0.18	12	0.18	36	0.547
18	Web/ Mobile Application Developer- Jr.	150929.08	12	0.180	12	0.18	12	0.18	36	0.543
19	Core Application Developer- Jr.	150929.08	12	0.180	12	0.18	12	0.18	36	0.543
			319775	**463.52**	**598751**	**660.54**	**162150**	**179.10**	**1080676**	**1303.16**
A copy of Cost Sheet is enclosed as Annexure-G										

5.4 Funding Mechanism:

A per Section 460 II of the Mumbai Municipal Act 1888, BEST has to utilise internal funds for executing all its Capex plans. However, BEST has decided to execute the project of "Implementation of Smart Metering& System Metering" under RDSS on Design, Built, Finance, Own, Operate & Transfer (DBFOOT) basis. The detail funding arrangement, how it works is explained in the Business Model.

5.5 TOTEX (CAPEX + OPEX) Business Model

5.5.1 (i) As per Regulation 75.7 *"A Distribution Licensee may undertake Opex schemes for system automation, new technology and IT implementation, etc., and, such expenses may be allowed over and above normative O&M Expenses, subject to prudence check by the Commission: Provided that the Distribution Licensee shall submit detailed justification, cost benefit analysis of such schemes as against capex schemes, and savings in O&M expenses, if any"*

(ii) In the "Office Memorandum" of GoI dated 20th July, 2021, it is clearly mention that*"in order to attain the key objective of loss reduction in electricity distribution, the scheme envisages providing funding through Gross Budgetary support for the installation of pre-paid Smart Meters under TOTEX (CAPEX plus OPEX) pattern".*

(iii) Accordingly, BEST has decided to execute the project of "Implementation of Smart Metering" under RDSS on Design, Built, Finance, Own, Operate & Transfer (DBFOOT) basis. The scheme envisages providing funding through Gross Budgetary support for the installation of pre-paid Smart Meters under TOTEX (CAPEX plus OPEX) pattern". The project cost involves two major components: (i) Capital investment which involves cost of smart meters, meter boxes, Hardware & software, consumer indexing, training, installation, integration & commissioning of AMI solution etc. (ii) OPEX components which involves the cost for maintaining the system.

5.5.2 To execute the scheme under Revamped Distribution Sector Scheme (RDSS), BEST would have to comply (i) pre-qualification criteria set by the monitoring committee & (ii) result evaluation matrix. For availing the benefits under RDSS. BEST had submitted the Action plan &DPR for prepaid Smart Metring along with Loss Reduction works to the GoI costing Rs,708.54 Crs. however, the competent authority (Monitoring Committee) hasapproved the Action Plan & DPRs including prepaid Smart Meteringcosting Rs.659.17 Crs (against Rs.708.54 Crs), total GBS (15% on approved cost) Rs.98.88 Crs, incentive of Rs.47.82 Crs totalling Rs.146.69 Crs in the 13th meeting held on 28.10.2022 (kindly refer Annexure-B, Page No.10).

5.5.2.1 For achieving least cost of the material, BEST has followed up the procedure mentioned in CAPEX Regulation, 2022, APPENDIX-3(Guidelines for procurement of material). For appointing AMI-SP to "Implement Prepaid Smart Metering & System Metering" on BDFOOT basis, BEST advertised the tender in the local as well as all over Indiamedia.Initially, Notice of Inviting Tender was advertised for "appointment of

AMISP" under RDSS, but due to the poor response from bidders, multiple extensions were given to them. Finally, tender was opened for appointment of AMI-SP through open biddingprocesson Maha e-tender Portal on 21st July, 2022. After opening of the tender, it is observed that six bidders have taken part in the tender.However, thePricebid of only three eligible Tenderers has been opened. Tender evaluation is done on the basis of Reverse Auction process between the Eligible and Qualified Tenderers. Accordingly, the tender is awarded to M/s. ATL for Rs.1303.16 Crore.

5.5.3 In the OPEX base cost methodology, AMI-SP (ATL) has agreed to incur CAPEX during the build-up phase of 30 months and OPEX during Build-up and O&M phase i.e., total 120 months (10 years) from the date of execution of the contract. The payment due to the AMISP from AMI-IA shall be paid on monthly basis. Monthly cost is calculated as the total project cost spread over the actual recovery period, post integration of the meter. Accordingly, in this process BEST will pay to ATL on monthly basis for maximum 90 months. The payment to the AMISP shall commence only one after Operational Go-Live.

5.5.4 Considering the approved cost of Rs.659.17 Crs for replacement of 10,80,667 Nos. of meters, Competent Authority has approved GBSof Rs. 98.88 Crs, incentive of Rs.47.82 Crs, totalling Rs.146.69 Crs (as per RDSS Scheme GBS shall be 15% of the approved cost of metering including operational cost. Provided that it is not more than Rs.900 per meter for consumer metering). However, the cost arrived in the tender(i.e., 1303.16 Crs.) is on higher side than approved cost (Rs.659.17 Crs.).Therefore, as per RDSS guide lines BEST is eligible for getting GBS of Rs.98.88 Crs. for metering Scheme. While estimating the benefits, Grant amount of Rs.98.88 Crs. is deducted from the total payable amount of Rs.1303.16 Crs. Therefore, the benefits will be evaluated on balance payable amount of Rs. 1204.28 Crs. (Rs.1303.16 minus 98.88, = Rs.1204.28) is considered.***Please kindly note that incentive amount of Rs.47.82 Crs is not considered while calculating tariff impact and AMI-SP payments etc and same amount will be considered in ARR while filing the Petition for Truing up. BEST has proposed to install 10,80,676 Nos. of meters against approved10,80,667 Nos. of meters.***

5.5.5 While quoting in the tender, Adani Transmission Ltd (ATL) has not given bi-furcation between the costs of Capital items and O&M. ATL has quoted item wise for capital as well as O&M cost lum-sum. Further to this, ATL will transfer the assets at zero cost after completion of life of the meter as agreed by ATL. Thereafter, BEST will bear replacement cost of defective meters on actual basis and O&M cost of AMI system. **Payment to AMISP (M/s. ATL)by BEST shall be considered as Operational Expenditure on BEST's account.BEST has considered AMISP payment as operation expenditure while filing ARR and MTR petition.**The Assets will be in the books of Accounts of the ATL till the transfer of assets at the end of project at zero value.

5.5.6 Detail phasing of meters to be installed along with cost is to be incurred by AMISP during the build-up phase and Grant is given in the following table.

Sr. No.	Particulars	FY2023-24	FY2024-25	FY2025-26	Total
1	A	B	C	D	E=B+C+D
2	Approved cost	195.05	365.21	98.91	659.17
3	Meters to be Installed	3,19775	5,98,751	1,62,150	10,80,676
4	Total Cost (in Crs.)	463.52	660.54	179.10	1303.16
5	Grant	29.26	54.78	14.84	98.88
6	Balance Amount (4-5)	434.26	605.76	164.26	1204.28

Month wise implementation plan:

Month	FY	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15			**TOTAL**	FY-25-26		**TOTAL**
Target	**23-24**	1000	17429	18430	18430	44081	44081	44081	44081	44081	44081			**3.19.775**	M28	54049	**25-26**
Month		M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27		M29	54049	
Target	**24-25**	44081	44081	44081	44081	44084	54059	54059	54059	54059	54059	54059	54059	**5,98,751**	M30	54052	**1,62,150**

Detail calculation of phasing

	FY 23-24	**FY 24-25**	**FY 25-26**	**FY 26-27**	**FY 27-28**	**FY 28-29**	**FY 29-30**	**FY 30-31**	**FY 31-32**	**TOTAL**
Build up phase Expenditure(in Crs.)	**463.52**	**660.54**	**179.10**	-	-	-	-	-	-	**1303.16**
Grant from GoI (PFC)	**29.26**	**54.78**	**14.84**	-						**98.88**
Phasing -AMISP Payment (without Grant)	47.51	136.48	160.57	160.57	160.57	160.57	160.57	113.06	104.38	**1204.28**
Phasing -AMISP Payment (with Grant)	76.77	191.26	175.41	160.57	160.57	160.57	160.57	113.06	104.38	**1303.16**

FINANCIAL YEAR	CAPEX	Grant	Month	CUMALATIVE QTY	RATIO	QTY		Phasing for AMISP disbursement	With Grant
23-24	160.57	29.26	12	319775	0.296	319775		47.51	76.77
24-25	160.57	54.78	12	918526	0.850	598751		136.48	191.26
25-26	160.57	14.84	12	1082676	1.00	162150		160.57	175.41
26-27	**160.57**		12		1.000			**160.57**	160.57
27-28	**160.57**		12		1.000			**160.57**	160.57
28-29	**160.57**		12		1.000			**160.57**	160.57
29-30	**160.57**		12		1.000			**160.57**	160.57
30-31	**80.29**		6		1.000			**113.06**	113.06
31-32	**0.00**				1.000			104.38	104.38
32-33	0.00								
TOTAL	**1204.28**	**98-88**	**90**					**1204.28**	1303.16
	1204.28	**1303.16**		**1080676**		1080676			

5.5.7 Impact on Tariff – 100% CAPEX mode (with Grant)

Scheme Name	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	FY 29-30	FY 30-31	FY 31-32
Phasing of approved DPR	47.51	136.48	160.57	160.57	160.57	160.57	160.57	113.06	104.38
IDC	-	-	-	-	-	-	-	-	-
Total capitalisation (incl. IDC)	47.51	136.48	160.57	160.57	160.57	160.57	160.57	113.06	104.38
GFA statement									
Opening balance	-	47.51	183.99	344.56	505.13	665.70	826.27	986.84	1099.90
Addition	47.51	136.48	160.57	160.57	160.57	160.57	160.57	113.06	104.38
Closing balance	47.51	183.99	344.56	505.13	665.70	826.27	986.84	1099.90	1204.28
Equity statement									
Opening balance	-	14.25	55.20	103.37	151.54	199.71	247.88	296.05	329.97
Addition	14.25	40.94	48.17	48.17	48.17	48.17	48.17	33.92	31.31
Closing balance	14.25	55.20	103.37	151.54	199.71	247.88	296.05	329.97	361.28
Revenue expenses									
Interest on debt	1.68	8.06	17.92	27.81	26.34	25.32	24.30	21.60	20.28
Return on Equity (@17.50%)	1.10	6.08	13.87	22.30	30.73	39.16	47.59	54.78	60.48
Depreciation (Avg. rate of 9%)	2.14	10.42	23.78	38.24	52.69	67.14	81.59	93.90	103.69
Running Expenses (@2.97% of av GFA)	0.71	3.44	7.85	12.62	17.39	22.16	26.92	30.99	34.22
Income Tax (@ 0% on grossed up RoE)	-	-	-	-	-	-	-	-	-
Total (Rs. Cr)	**5.63**	**27.99**	**63.43**	**100.97**	**127.15**	**153.78**	**180.41**	**201.27**	**218.67**
Projected Sales (MU)	4,756.54	4,780.33	4,804.23	4,828.25	4,852.39	4876.65	4901.04	4925.54	4950.17
Imp. per unit of sales (Rs./unit)	0.012	0.059	0.132	0.209	0.262	0.315	0.368	0.409	0.442

The above table indicates the likely impact on tariff over a period of nine years (FY2023-24 up to FY 2031-32) when grant from GoI is considered. It can be observed that the likely impact on tariff is Rs.0.012 per unit in 2023-24 moving to Rs 0.442 per unit in 2031-32.

If the scheme is executed under OPEX, tariff impact with Grant for entire contract period is as shown below.

Total metering Scheme is considered under OPEX Plan, impact on Tariff is as shown below:											
DPR Description / DPR No.	**OPEX without Grant (Rs. Cr)**	**OPEX with Grant (Rs. Cr)**	**Grant (Rs. Crs)**	**FY 23-24**	**FY 24-25**	**FY 25-26**	**FY 26-27**	**FY 27-28**	**FY 28-29**	**FY 29-30**	**FY 30-31**	**FY 31-32**
Smart Metering / AMI (Rs. Crs)	1303.16	1204.28	98.88	47.51	136.48	160.57	160.57	160.57	160.57	160.57	113.06	104.38
Sales Units (in Mus)				4756.54	4780.33	4804.23	4828.25	4852.39	4876.65	4901.04	4925.54	4950.17
Impact on Tariff due to OPEX Scheme (in Rs.)				**0.100**	**0.286**	**0.334**	**0.333**	**0.331**	**0.329**	**0.328**	**0.23**	**0.211**

6. Cost Benefit Analysis (CBA)

The benefits of capital expenditure proposed to be incurred under this Scheme may be divided into two parts; namely- Tangible benefits which can be expressed in monetary terms and Intangible benefits are more qualitative in nature.

The expense heads under this scheme contain both developmental costs i.e., those cost incurred on pre-paid smart metering along with necessary Hardware & Software and non-developmental costs i.e., those cost incurred for maintenance of the system. Both expenses do not directly contribute to increase in the sale units. However, these expenses too are necessary for giving better service to the consumers through accurate energy measurement and billing to the consumers.

The deployment of smart metering with related infrastructure, through its ability of remote communication and data analytics, is expected tolead to many benefits for the end consumers which are listed in Para 6.1.1 under Customer Benefits. The reduction in O&M expenditure will be a step in the direction of meeting thenormative O&M expenditure as allowed from time to time in the respective tariff Orders /Regulations.

6.1 Tangible benefits due to smart metering /AMI Scheme:

The project aims to harness the capability of AMI/Smart Metering System for the benefit of BEST customers. Major benefits expected from this project are-

6.1.1 Customer Benefits

I. Improved billing accuracy

The smart meters are capable of communicating. This facility enables the system toget billing data on predefined intervals over the air. Hence the human interference iscompletely eliminated as far as meter data acquisition is concerned. Automatic data acquisition also eliminates the need to physically visit the premises to inspect the connection.

II Improved service restoration

At present consumers informs about off supply to control room of BEST. BEST deploys the crews depends on single consumer offsupply or area off supply in case of multiple complaints. Once the complete AMI system is in place, it is easier to pinpoint the location wherethe off supply / fault has occurred. Pro-active action canbe taken in cases where meter is not communicating, in such cases utility can take decision and send the maintenance staff to that particular location.

III Higher reliability of the system

The alerts triggered from field conditions such astemperature, high threshold values etc. enables the utility to take proactive actions. This reduces the probability of fault or breakdown occurrence.

IV Availability of information and online services

AMI enables two-way communication system in which lots of data and informationcan be captured from field devices like smart meters, distribution automation points,street light points, etc. The data retrieval frequency can also be set which can varyfrom as low as some minutes to daily. The consumer can view the consumptioncharges corresponding to his consumption,

through consumer portal. BEST hasalready developed the consumer portal and is in the process of integrating it with the mobile App "MI BEST" and the website www.bestundertaking.com. Consumers can view their consumption charges at any time by logging on to thewebsite or by downloading the mobile App. Hence consumers can use and analysetheir consumption pattern and find ways to optimize the same as to reduce their electricity charges.

6.1.2 Utility Benefits

I Elimination of manual meter reading

Timely meter reading and billing is always critical for any utility across the world. Lot of intermediate processes are involved in metering like scheduling the meter reads, maintaining the reading cycle and sequence, uploading the batch files in the CMRI, physical movement, meter downloading, uploading the data into the PC and then to servers, running the logics to identify the billing data abnormalities, bill preparation etc. Many of these intermediate steps will be eliminated by automatic meter data downloading.

II Improved billing and billing accuracy

Less human intervention means reduced possibility of errors. Automatic data retrieval will ensure more accurate bills. The system also enables to get on demandmeter reading. Issues like in accessibility of meter reads like consumer not available, house lock, delayed billing cycle etc. can also be addressed. Thus, the revenue leakage and non-billing issues are arrested.

III Outage management and real time data

As mentioned in the reliability section above, it is easier to identify the faults and locate the mona GIS map. Outages can be located quickly and concerned maintenance staff can reach the location in lesser time. This also helps the utility to optimally manage the distribution network. Predefined threshold values and real time data sensor data enables to take quick and proactive decisions.

IV Work and asset management

Online availability of data enables to monitor the network real-time. Asset conditions and health can be monitored on line and records are easy to maintain and retrieve. Any work created or generated can be transferred to concerned staff on the Tab or smart phone. This reduces time in registering a request and its allocation. Once the job is complete, the feedback and status update can easily be entered from the field itself.

V. Smart meters will enable BEST to remotely connect or disconnect consumers, thereby reducing the field visits required by connection or disconnection personnel. Smart Meters Deployment Strategy.

VI. In the existing billing system, about 3% meters are not read due to various reasons like meters faulty, key not available etc. The revenue can be increased by installing smart meters which can be read remotely.

VII. Billing data is to be made available by AMI-SP during the entire project period. Hence, the cost to be incurred on the meter readers will be eliminated. It will help to reduce the administrative cost.

APPENDIX-1:

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1.1.	**Name of Applicant**: BEST (Brihanmumbai Electric Supply & Transport undertaking)
1.2.	**Name of the Capital Investment Work**: Implementation of Prepaid Smart Metering Project under RDSS.
1.3.	**Nature of Opex Scheme (New):** New DPR Scheme on "Implementation of Prepaid Smart Metering" is submitted as per MERC (Approval of Capital Investment Schemes) Regulations, 2022.
1.4.	**Details of the Location**: Mumbai circle (BEST's Licensee Area)
1.6.	**Date of Approval by Competent Authority designated by the Board of Directors of the Company**: *A copy of management approval for RDSS Scheme including "Implementation of Prepaid Smart Metering" is enclosed as* ***Annexure-H.***
1.7.	**Category of DPR**: This DPR Scheme falls under Regulation 3.9 & 3.11of MERC (Approval of Capital Investment Schemes)Regulations,2022. Category are as follows: 3.9 (a) Infrastructure required for releasing new supply connections. (i) Improvement in quality of supply & reliability of distribution system. (l) Installation or Upgradation of communication and/or control equipments. (n) All metering Schemes (o) Improvement in consumer services. 3.11Implementation of Smart Meters.
1.8.	**Objective of the Capital Investment:** To adopt technological advancements in energy metering to achieve Reduction in loss, for accurate measurement of energy, to provide improved service to consumers, Improved billing and billing accuracy, Higher reliability of the system, availability of information and online services, Outage management and real time data, Work and asset management,to release new supply and to replace existing meters. The project aims to harness the capability of AMI / Smart Metering system for the benefit of BEST customers. Major benefits expected from this project are improved service restoration.
1.9.	**Need of Analysis**: As per CEA Regulations dated 17.03.2006, on Metering systems emphasising on the need to use Smart Meters. ***A Copy of CEA Regulations, dated 17.03.2006 is enclosed as Annexure-'I'.*** As per MERC (Electricity Supply Code and Standards of Performance of Distribution Licensees including Power Quality) Regulations, 2021 (Regulation No. 15), *"all the new connections shall be released with the Smart Meter having at least the facility of remote reading and all the existing meters whenever replaced shall be replaced only by Smart Meters having at least the facility of remote reading".* As per Ministry of Power, Notification dated 17th August, 2021 *"all the consumers (other than agricultural consumers) in areas with communication network, shall be supplied electricity with smart meters working in Pre-payment Mode conforming to relevant IS, within the time".* ***A Copy of MERC (ESC &SoP including Power Quality) Regulations, 2021 and MoP Notification, 2021 is enclosed as Annexure-'F'.***
1.10	**List of Identical schemes previously approved by the Commission and their progress report (5years data):**First timeBEST has planned to replace all existing meters with Smart Meters. Hence, no previous records of Smart meters Implementation Schemes.
1.11.	**State Map showing Location of the Scheme (for Transmission)**- Not Applicable
1.12.	**Brief scope and specification of work**: 1. Single Phase Meter-WC- Consumer Meter (Qty. 9,01,212 Nos.) 2. Three Phase Meter-WC- Consumer Meter (Qty. 1,68,419 Nos.) 3. Three Phase Meter-LTCT- Consumer Meter (Qty. 6,053 Nos.) 4. Three Phase Meter-LTCT-DT Meter(Qty. 3398 Nos.)

5. Three Phase Meter- HT ConsumerMeters(Qty. 206 Nos.)
6. Three Phase Meter –HT Feeder Meter (Qty. 1255 Nos.)
7. Three Phase Meter-CT/PT Operated -ABT Meter (Qty. 133 Nos.)
A copy of relevant Specification of above items is enclosed as Annexure-J

1.13. **Any Reference of Study Report / recommendation of OEM/Expert:** N.A for this DPR.

1.14. **Estimated Cost**:
Rs.1303.16 Crs. (FY 2023-24–463.52 Crs., FY 2024-25–660.54 Crsand FY 2025-26- 179.10 Crs)
IDC is not included in the costing.
A copy of Cost Sheet enclosed as Annexure-G.

1.15. **Time Frame of the expenditure:**
Project completion Period 30 months.

Financial Year	Capex Expenditure (in Rs.)	Capitalisation (in Rs.)
2023-24	463,52,10,928.90	463,52,10,928.90
2024-25	660,54,18,569.61	660,54,18,569.61
2025-26	179,10,01,681.38	179,10,01,681.38
TOTAL	**1303,16,31,179.89**	**1303,16,31,179.89**

1.16. **Funding arrangement: For FY2023-24toFY 2031-32 (for 9 years from the date of contract).**

Sources of Funds	**Amount (in Crs.)**	**Share (%)**
Debt	1204.28	92.41
Equity	-	-
Grant	98.88	7.59
Consumer Contribution/Deposit Works	-	-
Total	**1303.16**	**100**

Please kindly note that the project of Smart Metering is to be executed under RDSS on DBFOOT basis. The payment due to the AMISP from AMI-IA (BEST)shall be paid on monthly basis. Monthly cost is calculated as the total project spread over the actual recovery period, post integration of the meter. Accordingly, BEST will pay AMI-SP on monthly basis for period of maximum 90 months. The payment to the AMISP commence from only one after Operational Go-Live. The Grant is 7.59% of tender cost and 15% of PFC approved cost of Rs.659.17 Crs.

1.17 **Benefits/Impact**:
The decision of new connection and replacement of existing meters with Smart Meters is taken with the following objectives:

- By connecting new meters to release new load will increase revenue of BEST.
- Improved billing Accuracy.
- Improved Service restoration.
- Higher reliability of the system.
- Availability of information and online services.
- Elimination of manual meter reading.
- Improved Billing and Billing Accuracy.
- Outage Management and real time data.
- Work and Asset Management.
- Remotely Connect and Dis-connect the meters

For comparative purpose, impact on tariff by considering 100% CAPEX Scheme and 100% OPEX Scheme is given below:

F Y	23-24	24-25	25-26	26-27	27-28	28-29	29-31	30-31	31-32
#	0.012	0.059	0.132	0.209	0.262	0.315	0.368	0.409	0.442
&	0.100	0.286	0.334	0.333	0.331	0.329	0.328	0.23	0.211

#- 100% CAPEX Scheme -Impact on Tariff Rs. Per Unit $-100% OPEX Scheme -Impact on Tariff Rs. Per Unit

1.18.	**Overall Cost-benefit Analysis**: **For CAPEX Scheme** FY2023-24, tariff impact will be 0.012 against Opex Cost of ₹47.51 Crs. FY2024-25, tariff impact will be 0.059 against Opex Cost of ₹136.48 Crs. FY2025-26, tariff impact will be 0.132 against Opex Cost of ₹160.57 Crs. FY2026-27, tariff impact will be 0.209 against Opex Cost of ₹160.57 Crs. FY2027-28, tariff impact will be 0.262 against Opex Cost of ₹160.57 Crs. FY2028-29, tariff impact will be 0.315 against Opex Cost of ₹160.57 Crs. FY2029-30, tariff impact will be 0.368 against Opex Cost of ₹160.57 Crs. FY2030-31, tariff impact will be 0.409 against Opex Cost of ₹113.06 Crs. FY2031-32, tariff impact will be 0.442 against Opex Cost of ₹104.38 Crs. . **ForOPEX Scheme** FY2023-24, tariff impact will be 0.100 against Opex Cost of ₹47.51 Crs. FY2024-25, tariff impact will be 0.286 against Opex Cost of ₹136.48 Crs. FY2025-26, tariff impact will be 0.334 against Opex Cost of ₹160.57 Crs. FY2026-27, tariff impact will be 0.333 against Opex Cost of ₹160.57 Crs. FY2027-28, tariff impact will be 0.331 against Opex Cost of ₹160.57 Crs. FY2028-29, tariff impact will be 0.329 against Opex Cost of ₹160.57 Crs. FY2029-30, tariff impact will be 0.328 against Opex Cost of ₹160.57 Crs. FY2030-31, tariff impact will be 0.230 against Opex Cost of ₹113.06 Crs. FY2031-32, tariff impact will be 0.211 against Opex Cost of ₹104.38 Crs. Comparison of capital cost & corresponding tariff impact with above benefits, a copy of Cost Benefit Analysis is enclosed as ***Annexure-K***.

2. PART-II:

2.1	**Need of the investment**: The Government of India's initiatives like 'Make in India' and 'Smart Cities' need the efficient, reliable and continuous power supply. India's power sector in the present day is facing a lot of problems like AT & C losses, inefficient distribution and transmission system because of age old infrastructure and power theft. The advanced energy management and increased use of renewable energy resources are the foremost areas to concentrate by governments for the development of country. As per CEA Regulations dated 17.03.2006, on Metering systems emphasising on the need to use Smart meters. ***A Copy of CEA Regulations, dated 17.03.2006 is enclosed as Annexure-'H'.*** ***Vide*** MoP notification dated 17th August, 2021, GoI prioritised for all DISCOMS including BEST that "all the consumers (other than agricultural consumers) in areas with communication network, shall be supplied electricity with smart meters working in Prepayment Mode***. A Copy of MERC (Electric Supply Code & SoP including Power Quality) Regulations, 2021 and MoP Notification, 2021 is enclosed as Annexure-'F'.*** **Demand side requirement**: There is addition of new consumers due to development of Coastal Road, Mill and SRA Schemes, EV Charging, Sewree bridge, Redevelopment of Plots etc. In order to meet the requirement of new Consumers for releasing new Load, Smart Meters are required installed. • Reduction in loss, • for accurate measurement of energy, • to provide improved service to the consumers, • to release new supply, • to replace conventional/Static meters, • to replace defective meters
2.2	**Time lines of the Project:** Project shall be completed within Period 30 months from the date of contract. Adani Transmission Ltd (ATL) has agreed to incur Capital Expenditure (CAPEX) during the build-up phase of 30 months from the date of contract and OPEX during O&M phase for remaining 90 months i.e., total 120 months.The work will be commenced from the date of the contract period . Letter of Award (LoA) is issued to M/s. ATL. For execution of project contract with ATL is being initiated. **On the following basis priority is decided**: As per "MERC (Electricity Supply Code and Standards of Performance of Distribution Licensees including Power Quality) Regulations, 2021 (Regulation No. 15)", all the new connections shall be released with the Smart Meter having at least the facility of remote reading and all the existing meters whenever replaced shall be replaced only by Smart Meters having at least the facility of remote reading. As per Ministry of Power, Notification dated 17th August, 2021 "all the consumers (other than agricultural consumers) in areas with communication network, shall be supplied electricity with smart meters working in Pre-payment Mode conforming to relevant IS, within the time". ***A Copy of MERC (ESC & SoP including Power Quality) Regulations, 2021 and MoP Notification, 2021 is enclosed as Annexure-'F'.*** There is no possibility of deferring the investment. In 1st phase (1st Year) HT, CT-PT operated, LT-CT operated (including feeder meters) meters are taken for replacement and balance meters will be replaced in 2nd phase (2nd year).

2.3	**Scheme for revised approval/scope/cost**: This Scheme is New One and is submitted as per MERC (Approval of Capital Investment Schemes), Regulations 2022.
2.4	**Proposed Capital Investment Scheme**: In this DPR, capital investment is proposed to be executed as per MERC (Approval of Capital Investment Schemes) Regulations 2022, Clause No. 3.11 under TOTEX (Capex +Opex) Model. BEST has proposed to execute the said scheme under OPEX Mode.
2.5	**Technical Justification**: As per Electricity Act 2003, every new connection is required to be released after installing a correct meter for accurate Energy measurement. The Characteristics of the Energy Meters to be procured for new connections will conform relevant IS and Central Electricity Authority Regulations, 2006. ***A Copy of CEA Regulations, dated 17.03.2006 is enclosed as Annexure-'I'.*** (i)Every new connection is required to be released after installing a meter as per the Electricity Act, 2003. BEST has proposed installation of smart meters in this DPR during FY 23-24, FY 2024-25& FY 2025-26. (ii) As per MERC (Electricity Supply Code and Standards of Performance of Distribution Licensees including Power Quality) Regulation. 2021 and Electricity (Rights of Consumers) Rules, 2020, all the new connections shall be released with the Smart Meter or Meter having at least the facility of remote reading: further to that all the existing meters whenever replaced shall be replaced only by Smart Meter or Meter having at least the facility of remote reading. (iii)The characteristics of meters to be procured for new connections will confirm to the Central Electricity Authority (Installation and Operation of Meters)Regulation,2006. (iv) As per MoP, Notification dated 17th August, 2021 "all the consumers (other than agricultural consumers) in areas with communication network, shall be supplied electricity with Smart meters working in Prepayment Mode conforming to relevant IS, within the time" Accordingly, BEST have decided to replace all existing Energy Meters with Smart Meters working with Prepayment Mode. ***A copy of MERC (Electric Supply Code and SoP) Regulation, 2021 &MoP2021 Notification is enclosed as Annexure- 'F'.*** In line with the above technical requirements, BEST has prepared this Detailed Project Report (DPR) to replace existing Static and conventional meters with Smart meters for all consumers, along with setting up the backbone communications infrastructure and related IT systems. The communication backbone facilitates the acquisition of data from smart meters and brings it to central server. The IT/OT software installed in the server takes care of the huge data collected from the field. This data is then shared with other applications like billing, GIS, SCADA etc. and generated reports. Looking at the consumer base of more than 10 lakhs, BEST has planned to replace existing meters with smart meters.
2.6	**Financial Justification:** **TOTEX (CAPEX + OPEX) Business Model**

	(i) The scheme envisages providing funding through Gross Budgetary support for the installation of prepaid Smart Meters under TOTEX (CAPEX plus OPEX) pattern". The project cost involves two major components: (i) Capital investment which involves cost of smart meters, meter boxes, Hardware & software, installation, integration & commissioning of AMI solution, consumer indexing, training etc. (ii) OPEX components which involves the cost for maintaining the system. (ii) The complete scheme is to be executed under OPEX Mode. In the OPEX base cost methodology, Adani Transmission Ltd (ATL) has agreed to incur CAPEX during the build-up phase of 30 months from the date of contract and OPEX during O&M phase for balance period of 90 months i.e., total 120 months. The monthly cost is calculated as the total project cost spread over the actual recovery period, post integration of the meter. Accordingly, in this process BEST will pay to ATL on monthly basis for maximum 90 months. The payment to AMISP will start after the project goes live. (iii) While quoting in the tender, Adani Transmission Ltd (ATL) has not given bifurcation between the costs of Capital items and O&M. The Assets will be in the books of Accounts of the ATL till the transfer of assets at the end of project at zero value. • The new Smart Meters used for releasing new load will increase the revenue. • In accurate metering of energy consumption would lead to loss in revenue. By replacing faulty / conventional meters will reduce revenue losses resulting increase in revenue. • Replacement of all existing meters (Electronic/Conventional) with Smart Meters. Old assets (existing meters) will be scrapped.
2.7	**Consent of M-DNAC**: As per Electricity Act, 2003, Clause, 42(3), BEST undertaking being a local authority, hence exempted from open Access.
2.8	**Plan of other Transmission Licensees / CTU**: DPR is related to Distribution Licensees, hence Not Applicable.
2.9	**Phasing of Investment (The investment is done by ATL on DBFOOT basis)** : This capital expenditure and Capitalisation is shown for information purpose, otherwise the scheme is to be executed in OPEX Mode.
2.10	**Statutory/Safety Requirement: N.A**

Financial Year	Capex Expenditure (in Rs. Crore)	Capitalisation (in Rs. Crore)
2023-24	463.52	463.52
2024-25	660.54	660.54
2025-26	179.10	179.10
TOTAL	**1303.16**	**1303.16**

2.11 **Cost Assessment /Cost Break-up**:

Item wise costing

Item wise pert unit cost, Qty and total cost is given in the following table

Particulars	Unit Cost Gross (in ₹)	Qty (in Nos.)	Cost (in ₹)
Single Phase Smart meters with installation, communication & integration	11011.83	901212	9923993337.96
Poly Phase Smart meters with installation, communication & integration	16441.31	168419	2769028988.89
Poly Phase HT current Smart Meter Consumer Meter	40499.49	206	8342894.94
Three phase LT-CT operated Smart Meter (inclusive of 97 nos. existing Solar/Net Consumer Meters)	20249.63	6053	122571010.39
LVCTO Smart Meters installation, communication & integration	20249.63	3398	68808242.74
CTPTO Smart Meters installation, communication & integration	40499.49	1255	50826859.95
CTPTO Smart DT Meters installation, communication & integration	104141.49	133	13850818.17
TOTAL PART-A	**-**		**12957422153.04**
Supply and installation of Meter Boxes for DT check meters	2012.37	3398	6838033.26
Supply and installation of LT Compact CTs of LT CT Meters (3 CTs)	2515.37	6053	15225534.61
Supply and installation of LT CTs for DT metering (Ring Type)	2515.37	5610	14111225.70
TOTAL PART-B	**-**		**36174793.57**
Architecture Specialists	251552.40	12	3018628.80
Security Specialists	226394.46	12	2716733.52
Integration Specialists	226394.46	12	2716733.52
Data Base Developer- Sr.	176084.32	24	4226023.68
Web/ Mobile Application Developer- Sr.	176084.32	24	4226023.68
Core Application Developer- Sr.	201239.56	24	4829749.44
Data Base Developer- Jr.	150929.08	36	5433446.88
Web/ Mobile Application Developer- Jr.	150929.08	36	5433446.88
Core Application Developer- Jr.	150929.08	36	5433446.88
TOTAL-C	-		**38034233.28**
GRAND TOTAL (A+B+C)		**13031631179.89**	
GRAND TOTAL	**13031631179.89**		

Note: 18% GST is included in the unit rate.

As per Apendix-3 (Guidelines for Procurement of material) of MERC (Approval of Capital Investment Schemes) Regulations, 2022, BEST was invited and finalised tender to appoint AMI-SP for "Implementation of Prepaid Smart Metering Project" with a transparent, competitive, fair and reasonable procedure. Subsequently, ***a copy of a Letter of Award (LoA) has been issued to M/s ATL which is enclosed as Annexure-D.*** Accordingly, cost sheet is prepared by considering Unit rates for each item from issued LoA. For detail item wise calculation, a separate Excel Sheet is enclosed ***as Annexure-G.***

2.12 **Least Cost analysis /Alternatives**:

Proposal to "Implement Prepaid Smart Metering" ***A Letter of Award (LoA) has been issued to M/s ATL is enclosed as Annexure-A.***

1. As per Apendix-3 (Guidelines for Procurement of material) of MERC (Approval of Capital Investment Schemes) Regulations,2022 BEST was invited and finalised tender to appoint AMI-SP for "Implementation of Prepaid Smart Metering Project" with a transparent, competitive, fair and reasonable procedure.

2. Accordingly, the unit cost is derived from the open tender invited by advertising and following up the procure mentioned in Apendix-3. The order was placed on the technical suitable and LAO.

3. A tender was opened on 21.07.2022 for appointment of AMI-SP for "Implementation of Prepaid Smart Metering" through open bidding process on Maha e-tender Portal. BEST undertaking advertised the tender in the local as well as all over India media. Initially, Notice of Inviting Tender was advertised for "appointment of full turnkey contractor (AMI-SP) to execute the project. Due to the poor response from the bidders, multiple extensions were given. Finally, tender was opened on 21st July, 2022. After opening of the tender, it is observed that six bidders have taken part in the bidding process and it has been observed that the rates quoted by the firms, particularly towards the execution of Prepaid smart metering project.

4. Details of offers received for appointment of AMISP:

In tender document it has been clearly mentioned that the tender awarding shall be done on the basis of Reverse Auction Process (RAP) between the Eligible and

Qualified Tenderers to appoint AMI-SP for implementation of Smart metering Pre-payment system Project. In the said tender, six bidders have taken part. Out of Six Tenderers, Price bid of the three eligible Tenderers has been opened and same is given in the following table.

Bidder No.	Tenderers	Gross Rate Including GST tax. (inRs.)	Rank
1	M/s. Fluentgrid Pvt Ltd.	1559,99,75,299.00	3
2	M/s. Adani Transmission Ltd. (ATL)	1528,26,00,331.34	2
3	M/S. AshokaBuildcon Ltd.	1313,16,31,179.89	1 (LAO)

As per above, offer of the Bidder No. 3 was Lowest, however, in the reverse option, bidder 2 has matched their rates the LAO and further reducing the Cost by 10 Crore at price of Rs. 1303.16 Crore M/s. ATL succeed to won the Tender. This type of Tender/contract is being awarded for the first time in the BEST Undertaking.

Accordingly, for cost estimation purpose, the following cost arrived through this tender is considered.

(In Rs. Crs)

Sr. No.	Bidder No.	Basic Cost	Total Tax 18%	Gross Cost
1	2	11,04.37	1,98.78	13,03.16

A Letter of Award (LoA) has been issued to M/s ATL and copy of the same is enclosed as Annexure-D.

In view of above, least cost is achieved.

2.13	**If not and if Deferred Analysis**: For this case not applicable.
2.14	**Overall Cost-benefit Analysis**: Release of new load, improved billing accuracy, elimination of manual meter reading, consumer satisfaction etc. **For CAPEX Scheme** FY2023-24, tariff impact will be 0.012 against Opex Cost of ₹47.51 Crs. FY2024-25, tariff impact will be 0.059 against Opex Cost of ₹136.48 Crs. FY2025-26, tariff impact will be 0.132 against Opex Cost of ₹160.57 Crs. FY2026-27, tariff impact will be 0.209 against Opex Cost of ₹160.57 Crs. FY2027-28, tariff impact will be 0.262 against Opex Cost of ₹160.57 Crs. FY2028-29, tariff impact will be 0.315 against Opex Cost of ₹160.57 Crs. FY2029-30, tariff impact will be 0.368 against Opex Cost of ₹160.57 Crs. FY2030-31, tariff impact will be 0.409 against Opex Cost of ₹113.06 Crs. FY2031-32, tariff impact will be 0.442 against Opex Cost of ₹104.38 Crs. . **For OPEX Scheme** FY2023-24, tariff impact will be 0.100 against Opex Cost of ₹47.51 Crs. FY2024-25, tariff impact will be 0.286 against Opex Cost of ₹136.48 Crs. FY2025-26, tariff impact will be 0.334 against Opex Cost of ₹160.57 Crs. FY2026-27, tariff impact will be 0.333 against Opex Cost of ₹160.57 Crs. FY2027-28, tariff impact will be 0.331 against Opex Cost of ₹160.57 Crs. FY2028-29, tariff impact will be 0.329 against Opex Cost of ₹160.57 Crs. FY2029-30, tariff impact will be 0.328 against Opex Cost of ₹160.57 Crs. FY2030-31, tariff impact will be 0.230 against Opex Cost of ₹113.06 Crs. FY2031-32, tariff impact will be 0.211 against Opex Cost of ₹104.38 Crs. Comparison of capital cost & corresponding tariff impact with above benefits, a copy of Cost Benefit Analysis is enclosed as ***Annexure-K***.
2.15	**Methodology of Put to use of the asset and computing Percentage utilization of Project**: Following methodology of put to use of the Asset is used. 1. During the Financial Year (April to March), when the capital investment made on procurement of Energy Meters and his accessories is considered as Capital Expenditure made during that year. 2. When the meters are installed on site i.e. put to use, then the asset is capitalised.
2.16	**Constraints:** Performance of any Electric distribution utility is measured over following crucial Parameters. • Cost of supply including T&D loss • Customer services

	• Management of demand curve – supply reliability • Electricity supply quality In the current dynamic scenario where consumers are installing roof top solar systems, updated their vision and have added following vision statements: • Active participation of consumers in managing load curve • Integration of distributed generation, batteries etc. • Faster information to consumers • Self-healing system • Optimum utilization of asset and resources Presently, BEST is not having AMI infrastructure. The mission of BEST undertaking is to provide economical, reliable and quality electricity supply to all consumers connected to its network. Though BEST's present network has static and few Electro-mechanical meters in the system. The key challenges are to ensure that: • Data/ information are communicated back at desired frequency in desired formats • All desired information/ data/ events are generated • All data/ information is processed • All data/ information is analyzed to meet company objectives and for routine operations • Smart actions are taken based on data/ information analytics • Customer Inclusion is achieved • Asset optimization and operational efficiency • There is improvement in Power Quality
2.17	**Inclusion in STU Plan/License for Transmission Projects. Recommendation of the Transmission Planning Committee as provided in the Grid Code:** This is not applicable to this DPR.
2.18	**Works intended for adaptation of latest Technology/Improvement/Up gradation of Existing Infrastructure:** As per MERC (Electricity Supply Code and Standards of Performance of Distribution Licensees including Power Quality) Regulation. 2021, Electricity (Rights of Consumers) Rules, 2020 and MoP Notification, it is made mandatory that all the new connections shall be released with the Smart Meter or Meter having at least the facility of remote reading: further to that all the existing meters shall be replaced only by prepaid Smart Meter or Meter having at least the facility of remote reading. Accordingly, to implement above said regulations, BEST has prepared this Detailed Project Report (DPR) to release new connections with smart meters and also to replace all existing meters with smart meters for all consumers, along with setting up the backbone communications infrastructure and related IT systems. The communication backbone facilitates the acquisition of data from smart meters and brings it to central server. The IT/OT software installed in the server takes care of the huge data collected from the field. This data is then shared with other applications like billing, GIS, SCADA etc. and generated reports. Looking at the consumer base of more than 10 lakhs, BEST has planned to replace existing meters with smart meters.

2.19	**Upstream/Downstream arrangement:** For this DPR such arrangement is not applicable.
2.20	**Statutory Clearances and Project Layout: S**ince, smart meters are to be installed in the meter cabins which are constructed by the developer while constructing the building and in the existing meter cabins. Hence, there is no need of statutory clearances required from any other authority for this project.
2.21	**Detailed Survey**: For this project detail survey is not needed.
2.22	**Past Trend and Future projection**: First time, BEST has planned to replace all existing meters with Smart Meters by appointing AMI-SP,due to this past trend is N.A. **Future projection**: While awarding the tender to M/s ATL for implementation of Smart meter project, care is already taken.
2.23	**Detailed Justification for quantity proposed:** **Indicative list of meters to be replaced with Smart Meters**

Sr. No.	Meter Type	Quantity (in Nos.)
1	Single Phase *Smart Meter-WC	901212
2	Three Phase Smart Meter-WC	168419
3	Three Phase SmartMeter-LTCT	6053
4	Three Phase SmartMeter-LTCT DT Meter	3398
5	Three PhaseSmart Meter- HT Meters	206
6	Three Phase Smart Meter –HT Feeder Meter	1255
7	Three Phase Smart Meter-CT/PT Operated ABT Meter	133
	GRAND TOTAL	**10,80,676**

Please kindly note that smart meter quantity includes net meters.

(a) Justification for quantity proposed:

At present BEST having10,46,617 meters in the system, hence out of 10,80,676 meters 10,46,617 consumers meters, 133 ABT meters, 1255 feeder meters, 3398 DT meters and balance 29,273 meters for new connections are proposed.

2.24	**Check list of the documents appended:** 1. DPR in the MERC Format for FY2023-24 to FY2025-26 (Pg. No.1-24) 2. Pat-I and Part-II Filled Formats of Capital Investment Scheme for MERC Approval (Pg.No.25-36) 3. Annexure-A: - A Letter of MoP dated 20.07.2021 (Pg. No.37-56) 4. Annexure-B: -A copy of BEST's Letter & approval from PFC (Pg. No.57-87) 5. Annexure-C:- Guidelines if RDSS Scheme (Pg. No.88-143) 6. Annexure-D:- A Letter of ward of contract M/s ATL (Pg No. 144-162) 7. Annexure-E: - Detail scope of work. (Pg. No. 163-169) 8. Annexure-F:- MERC (ESC & SoP Regulation, 2021 and Mop Notification, 2021 (Pg. No.170-174) 9. Annexure-G: - Detail cost sheet (Pg. No 175-175) 10. Annexure-H:-A copy of Management Approval for RDSS (BCR) (Pg. No. 176-200) 11. Annexure -I:- A Copy of CEA Regulations, dated 17.03.2006.(Pg.No.201-203) 12. Annexure - J:-Specification of various items. (Pg. No. 204-355) 13. Annexure-K :- Cost benefit Analysis & Calculation Sheet (Pg.No.356-361) 14. Annexure-L:- Guidelines for procurement of materials (Pg. No.362-389) 15. Annexure-M:-Procedure for Scrapping (Pg. No .390-396) 16..Annexure –N: -Depreciation Schedule (Pg. No. 397-400)

महाराष्ट्र विद्युत नियामक आयोग
Maharashtra Electricity Regulatory Commission

MERC/CAPEX/2023-24/0023 **Date: 09 January, 2024**

To,
The General Manager,
BEST Undertaking,
2nd Floor, Backbay Veej Bhavan,
149/150, Gen J. Bhosale Marg,
Nariman Point, Mumbai 400 021.

Subject :-BEST DPR for Implementation of of various schemes under RDSS (Rs 1711.21 Crore)

Sir,

1. This has reference to your submitted DPR, for in principle approval to the Commission. The said scheme has been evaluated with reference to the Capex Regulations, 2022
2. I am directed to convey the 'in-principle' clearance of the scheme for the cost of Rs.1720.14 Crs under MERC (Approval of capital Invest Scheme) Regulations 2022. The particulars of the scheme as approved are outlined in the Annexure "A" and Appendix "A" attached.
3. Please note that this in-principle approval should not be construed as final approval for ARR purpose and the scheme will be open for scrutiny during the tariff determination process/ARR review, particularly in the context of actual cost incurred, scope and objective achieved etc., ex-post after implementation of the Scheme. BEST will be required to submit the status of implementation of the scheme with cost incurred till date, likely completion date, etc. along with its ARR Petition or during the tariff determination process at the appropriate time.
4. BEST should submit half yearly progress reports by 20th day of the first month of next half year giving the status of implementation of the Scheme in terms of expenditure incurred and item wise physical progress achieved during the implementation of the Scheme.
5. Assets created after execution of the Scheme should be maintained separately in the Asset Register.

१३वा मजला, केंद्र क्र. १, जागतिक व्यापार केंद्र, कफ परेड, मुंबई - ४०० ००५.
13th Floor, Centre No. 1, World Trade Centre, Cuffe Parade, Mumbai - 400 005.
Tel.: 022-2216 3964 / 2216 3965 / 2216 3969 Fax : 022-2216 3976
E-mail : mercindia@merc.gov.in Website : www.merc.gov.in

6. Immediately after completion/commissioning of the scheme, BEST should communicate to the Commission the date of completion of the scheme, actual cost incurred, escalation in cost, if any, with reasons, the scope and objectives of the scheme and to what extent they have been achieved, etc., so as to facilitate a comparison between the benefits envisaged at the in-principle clearance and the actual benefits.

7. BEST shall endeavor to complete the project within the stipulated time frame. Further, if BEST fails to initiate the work, including tendering process if any, within a period of one year from the date of in-principle approval, the scheme shall be deemed to be cancelled. Thereafter, BEST will have to take a fresh look at the scheme and be required to obtain revised in-principle approval of the Commission with justification for delay.

8. BEST to ensure that the income realization from scrap material shall be treated as per accounting principles.

9. BEST to submit the utilization report of credited equipment, if any, along with the six monthly report till all equipment's are reused.

10. Major scope of work shall be executed through competitive bidding process only.

Yours faithfully,

(Dr. Rajendra G. Ambekar)
Executive Director, MERC

Encl: Annexure "A" and Appendix "A"

Annexure A

<table>
<tr><td>Name of the scheme</td><td>BEST DPR for Implementation of of various schemes under RDSS</td></tr>
<tr><td>Estimated cost proposed by BEST (Revised)</td><td>Rs. 1711.21Crore</td></tr>
<tr><td>In-principle approval accorded</td><td>Rs. 1711.21 Crore</td></tr>
<tr><td>Cost benefit</td><td>a) Loss reduction
b) Addnl. Revenue generation
c) Improvement in billing accuracy
d) Improved service restoration and higher reliability of supply
e) Outage management and real time data
f) Availability of information and online services
g) Improvement in quality of services</td></tr>
<tr><td>Scope of the works in brief</td><td>
<table>
<tr><td>Particulars</td><td>Additional</td><td>Replacement</td><td>Total</td></tr>
<tr><td>Power Transformers 33/11 KV in Nos</td><td>2</td><td>18</td><td>20</td></tr>
<tr><td>33 kV, 1500 MVA Primary Switchgears in Nos</td><td>1</td><td>17</td><td>18</td></tr>
<tr><td>11 kV,350 MVA Secondary Switchgears in Nos</td><td>1</td><td>31</td><td>32</td></tr>
<tr><td>33 KV Cable in KM</td><td>20</td><td>100</td><td>120</td></tr>
<tr><td>DSS 666 Nos</td><td></td><td>666</td><td>666</td></tr>
<tr><td>Replacement of SF6 RMUs</td><td></td><td>104</td><td>104</td></tr>
<tr><td>Replacement of Oil Filled RMUs by SF6 RMUs</td><td></td><td>95</td><td>95</td></tr>
<tr><td>Replacement of Oil Type switchgears by VCB</td><td></td><td>1726</td><td>1726</td></tr>
<tr><td>11 KV Cable in KM</td><td></td><td>200</td><td>200</td></tr>
<tr><td>LV Cable in KM</td><td></td><td>50</td><td>50</td></tr>
<tr><td>Meter Boards</td><td></td><td>74666</td><td>74666</td></tr>
<tr><td>ADMS for 870 DSS</td><td>1</td><td></td><td>1</td></tr>
<tr><td>ERP IT/ OT</td><td>1</td><td></td><td>1</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><td>Objectives/Justification</td><td>a) Loss reduction
b) Additional Revenue generation
c) Improvement in billing accuracy
d) Improved service restoration and higher reliability of supply
e) Outage management and real time data
f) Availability of information and online services
g) Improvement in quality of services</td></tr>
<tr><td>Funding arrangement</td><td>Funding arrangement for execution of these schemes is 70:30 Debts: Equity, as per MYT Regulations and Grant from Central Government under RDSS.</td></tr>
<tr><td>Time frame/phasing out of expenditure</td><td>(Amount in Rs. Crs)
<table><tr><th>DPR Years</th><th>Total</th><th>FY 22-23</th><th>FY 23-24</th><th>FY 24-25</th></tr><tr><td>Capex</td><td>1711.21</td><td>429.73</td><td>736.94</td><td>544.54</td></tr><tr><td>Capitalization</td><td>1711.21</td><td>429.73</td><td>736.94</td><td>544.54</td></tr><tr><td>IDC</td><td></td><td>Nill</td><td></td><td></td></tr></table></td></tr>
</table>



Observations / Comments on Feasibility Report

1.	Prudence of Investment / Technical Justification	1. For loss reduction 2. For improvement in reliability
2.	Reasonability of Cost Estimate	BEST has carried out open tender process for allotment of the work contract and followed least cost option process
3.	Comments on Cost Benefit Analysis	a) Loss reduction b) Additional Revenue generation c) Improvement in billing accuracy d) Improved service restoration and higher reliability of supply e) Outage management and real time data f) Availability of information and online services g) Improvement in quality of services
4.	Discrepancy/Shortcomings Observed	Compiled by BEST
5.	Remarks/Specific Comments if any	Based on technical scrutiny and scope suggested by BEST, the scheme seems to be technically and commercially prudent.

Appendix A

RSS:-

Sr. No.	Name of Scheme	Cost in Cr.	FY 2023-24		FY 2024-25		FY 2025-26		Total QTY	Total Cost (in Cr.)
			QTY (in No.)	Cost (in Cr.)	QTY (in No.)	Cost (in Cr.)	QTY (in No.)	Cost (in Cr.)		
A	Installation of Additional 33/11 kV, 16 MVA T/F (1 No.) at Pratiksha Nara RSS and 33/11-6.6 kV, 16 MVA T/F at Naval Dock RSS (1 No.) (Qty.-2)	7.16	1	2.84	1	4.32			2	7.16
B	**Replacement of Transformers:**								0	
B	Replacement of 22/11 kV, 10/12.5 MVA T/Fs with 33/11 kV, 16 MVA T/Fs at RSS viz. Mahalaxmi (2 Nos.), Sitaladevi (1 No.), Mazgaon Dock (2 Nos.), Sewree (2 Nos.), Kussara (1 No.), KEM Hosp (1 No.), Naval Dock (2 Nos.) Apollo (3 Nos.), Hutatma Chowk (3 No.) & Mahim (1 No.) (Qty-18 Nos.)	49.83	0		9	24.92	9	24.92	18	49.83
C	Replacement of 33 kV, 1500 MVA Primary Switchgears viz. Mazgaon Dock (1 No.), Mumbadevi (2 Nos.), Mahim (2 Nos.), Masjid (1 No.), KEM Hospital (1 No.), Nair Hospital (1 No.), Kingsway (2 Nos.) Apollo (1 No.), Prabhadevi (2 Nos.), Nestle (1 No.), Ballard Estate (3 Nos.)& Colaba (1 No.). (Qty-18 Nos.)	4.65	5	1.29	7	1.81	6	1.55	18	4.65
D	Replacement of 11 kV, 350 MVA Secondary Switchgears viz. Mahim causeway (2 Nos.), Grant Road (4 Nos.), Mahalaxmi (1 No.), Prabhadevi (2 Nos.), Kussara (2 Nos.), Apollo (2 Nos.), Dharavi (2 Nos.), Sewree (2 Nos.), Esplanade (3 Nos.), Mahim (2 Nos.), Wadala (2 Nos.), Malbar Hill (2 Nos.), KEM Hospital (1 No.), Worli (2 Nos.), Nair Hospital (1 No.) & Mahalaxmi (2 Nos.) (Qty-32 Nos.)	38.15	7	8.35	13	15.50	12	14.31	32	38.15
E	Replacement / Laying of old /outlived 22/33 kV, 3CX300 SQ. MM Cu XLPE Cable (120 KM)	405.12	32.5	109.72	50	168.80	37.5	126.60		405.12
F	PMA Charges	3.05		0.68		1.32		1.05		3.05
	GRAND TOTAL	507.96		122.87		216.66		168.42		507.96
	MVA Added	MVA	16		70		18			
				122.87		216.66		168.42		507.96

DSS:-

Sr. No.	Name of Scheme	Cost in Cr.	FY 2023-24		FY 2024-25		FY 2025-26		Total QTY	Total Cost (in Cr.)
			QTY (in No.)	Cost (in Cr.)	QTY (in No.)	Cost (in Cr.)	QTY (in No.)	Cost (in Cr.)		
A	Replacement of DTs (Qty-666 Nos.)	**210.16**	200	63.11	233	73.52	233	73.52	666	210.16
B	Replacement of SF_6 RMUs (which are not caompatible for Distribution Automation) (Qty-104 Nos.)	**11.25**	30	3.25	34	3.68	40	4.33	104	**11.25**
C.	Replacement of Oil Filled RMUs by SF_6 RMUs caompatible for Distribution Automation) (Qty-95 Nos.)	**9.43**	29	2.88	36	3.57	30	2.98	95	**9.43**
D.	Replacement of Oil Type switchgears by VCB switchgears compaible for Distribution Automation) (Qty-396 Nos.)	**101.14**	76	19.41	160	40.86	160	40.86	396	101.14
E.	Replacement /Additional of 11 kV HV weak/old cable with 3CX240 SQ Mm XLPE cable (200 KM)	**268.35**	40	53.67	80	107.34	80	107.34	200	**268.35**
F	Replacement /Additional of 1.1 kV LV weak/old cable with 4CX300 SQ Mm XLPE cable (50 KM)	**90.61**	10	18.12	20	36.25	20	36.25	50	90.61
G	PMA Charges	**5.88**		1.36		2.26		2.26		**5.88**
	GRAND TOTAL	**696.81**		**161.80**		**267.48**		**267.54**		**696.81**

Auxiliary Components: -

DETAILS OF BREAK-UP OF TOTAL CONTRACTUAL VALUE OF INDIVIDUAL OFFER										
COST SHEET OF AUXILIARY COMPONENT ;S OF THE CONSUMER METERS										
Sr. No.	Description	Unit	Qty	Basic Rate Material	Basic Rate Labour	Gross Rate with GST	Item wise Total Cost in Rs.Cr	FY 2023-24	FY 2024-25	FY 2025-26
A	B	C	D	E	F	G =1.18*(E+F)	H =D*G			
1.01	Refurbishment of Meter Boards (1050 x 1050 X 19 mm i.e. 42"x 42") with facility to install 15 Nos. of Single Phase Meter, Wire and 63 Amps MCB.	Nos.	19190	8093.33	4034.36	14310.66	27.46			
2	Refurbishment of Meter Boards (1050 x 700 X 19 mm i.e. 42"x 28") with facility to install 4 Nos. of Three Phase Meter, Wire and 100 Amps MCB.	Nos.	26168	8749.32	3128.03	14015.28	36.68			
3	Refurbishment of 10 Way wooden Circuit Boxes for Hutment supply with facility to install 10 Nos. of Single Phase Meter, Wire and 40 Amps MCB.	Nos.	3140	15676.67	2386.80	21314.89	6.69			
4	Refurbishment of water Tight Aluminium Meter Box with Cover Type along with supply of and remaking of the cable gland.	Nos.	26168	2836.33	795.60	4285.68	11.22			
					Contractual Value		82.05	24.61	28.72	28.72
	PMA Charges						3.42	1.02	1.2	1.2
	Grand Total in Rs Cr						85.47	25.63	29.92	29.92

ADMS

SR. NO.	PARTICULARS	Gross Total with GST (in Rs Cr.)	FY 2023-24	FY 2024-25	FY 2025-26
1	SCADA/DMS Cnotrol Center : C1 - Servers / Workstation Hardware , Storage & Backup Devices, Switches, Data Centre Router, Security system (DMZ), Software for Control Centre (For Main & Standby Server) & Mandatory Spares	11.573			
2	SCADA/DI IS DR Control Centre D1 - Server/ workstation Hardware, Storage & Backup Devices, Switches, Routers,	10.724			
3	RTUs, Software for LDMS, Test Equipments for RTU & Mandatory Additional Spares	11.303			
4	FRTUs, Test Equipments for FRTU & Mandatory Additional Spares	11.024			
5	MPLS, GPRS & Mandatory Additional Spares	10.478			
6	Main Equipments - Control centre, Main Equipments - DR Centre, For RTU/Data Concentrator/Communication Eqpts. FRTU, Remote VDU location & Mandatory Additional Spares.	4.289			
7	FPI, Control/power/Communication cable for RSS and DSS and mandatory Additional Spares	25.948			
8	IED Replacement & Mandatory Additional Spares	20.747			
9	Comprehensive Facility Management System	45.704			
10	Project Management Cost (Inclusive of GST)	30.358			
	Total	**182.15**	**87.37**	**53.65**	**41.13**
	PMA Charges	**1.89**	**0.9**	**0.56**	**0.43**
	Total In Rs Cr	**184.04**	**88.27**	**54.21**	**41.56**

ERP IT/OT

ERP, BILLING SOFTWARE AND IT/OT ENABLEMENT										
									Cost in Rs.Cr	
SR. NO.	PARTICULARS	UNIT	QTY	TOTAL	FY 2023-24		FY 2024-25		FY 2025-26	
				COST	QTY	Cost	QTY	Cost	QTY	Cost
1	Part IT System Implementation Phase Cost	No.	1	162.05	-	31.02600213	-	131.02	-	
2	IT System - ATS Cost (For 2 Years)	No.	1	26.46	-		-	13.23	-	13.23
3	Cloud Service Provider (CSP) Cost (For 2 Years)	No.	1	8.15	-		-	4.07	-	4.07
4	FMS services Cost (for 2 years)	No.	1	28.12	-		-	14.06	-	14.06
5	Operations & Maintenance (O&M) Services Cost (For 2 Years)	No.	1	11.16	-		-	5.58	-	5.58
	TOTAL			235.93		31.03		167.97		36.94
7	PMA Charges			1.00		0.13		0.71		0.16
	GRAND TOTAL in Rs Cr		-	236.93		31.16		168.68		37.10

Consolidated DPR

Sr No	Particulars	Total Capex in Rs Cr	FY 2023-24	FY 2024-25	FY 2025-26
1	RSS	504.91	122.19	215.34	167.37
2	DSS	690.93	160.44	265.22	265.28
3	Auxiliary Components	82.05	24.61	28.72	28.72
4	ADMS	182.15	87.37	53.65	41.13
5	ERP	235.93	31.03	167.96	36.94
6	PMA	15.24	4.09	6.05	5.1
	Total in Rs Cr	**1711.21**	**429.73**	**736.94**	**544.54**



"सुधारित वितरण क्षेत्र योजना-सुधारणा-अधिष्ठित आणि निष्पत्ती- आधारित योजना (Revamped Distribution Sector Scheme Reforms-Based and Results-Linked)" (RDSS) राज्यात महावितरण व बेस्ट उपक्रमामार्फत राबविण्यास मान्यता देणेबाबत.

महाराष्ट्र शासन

उद्योग, ऊर्जा व कामगार विभाग

शासन निर्णय क्रमांक : संकिर्ण-२०२१/प्र.क्र.२१५/ऊर्जा-५

मादाम कामा रोड, हुतात्मा राजगुरु चौक, मंत्रालय, मुंबई- ४०० ०३२.

दिनांक : २५ ऑगस्ट, २०२२.

संदर्भ :- १. ग्रामीण विद्युतीकरण महामंडळ मर्या यांचे पत्र क्र.REC/RDSS/21-22/81, दि.१८.११.२०२१

२. बेस्ट उपक्रमाचे पत्र क्र. DO/GM/CEM/३४५००/२०२०-२१, दि.१४.१२.२०२१

३. ग्रामीण विद्युतीकरण महामंडळ मर्या यांचे पत्र क्र.REC/RDSS/21-22/निरंक, दि.०३.०१.२०२२

४. महावितरण कंपनीचे पत्र क्र. संचालक (वित्त)/मराविविकं मर्या./२०२२-२३/२१८, दि.१९.०५.२०२२

५. महावितरण कंपनीचे पत्र क्र.महावितरण/ RDSS/१५७०७, दि.१३.०६.२०२२

प्रस्तावना:-

विद्युत वितरण क्षेत्राला अधिक सक्षम करण्याकरीता केंद्र शासनाने सन २०१४ मध्ये राज्यातील ग्रामीण भागातील विद्युत पायाभूत सुविधांचे सक्षमीकरण करण्याकरीता दिनदयाळ उपाध्याय ग्राम ज्योती योजना (DDUGJY) तसेच शहरी भागातील विद्युत पायाभूत सुविधांचे सक्षमीकरण करण्याकरीता एकात्मिक ऊर्जा विकास योजना (IPDS) राबविण्यात आल्या. या दोन्ही योजनांद्वारे महावितरण कंपनीचे राज्यातील वितरण प्रणालीचे बळकटीकरण करण्यात आले. सद्यःस्थितीत या दोन्ही योजना पूर्णत्वास आल्या आहेत. या शिवाय केंद्र पुरस्कृत सौभाग्य (प्रधानमंत्री सहज बिजली हर घर योजना) योजनेद्वारे विद्युतीकरण न झालेल्या घरकुलांचे विद्युतीकरण करण्यात आले आहे. ज्या अंतर्गत ऑक्टोबर २०१७ ते दि.३१.०३.२०१९ या योजना कालावधी मध्ये राज्यातील १५,१७,९२२ घरकुलांना ग्रीड कनेक्टिव्हिटीद्वारे व ३०,५३८ घरकुलांना सौर ऊर्जेद्वारे वीज जोडण्या देण्यात आल्या आहेत.

उपरोक्त केंद्र पुरस्कृत विद्युत पायाभूत सुविधा योजना राबविल्यानंतरही एकूण तांत्रिक व वाणिज्यिक हानी (Aggregate Technical & Commercial (AT & C) Loss) तसेच सरासरी वीजपुरवठा खर्च व सरासरी प्राप्त महसूल (Average Cost of Supply वजा Average Revenue Realized (ACS वजा ARR)) या मधील अंतर (gap) जास्त असल्याचे केंद्रशासनाच्या निदर्शनास आले आहे. याकरिता वितरण कंपन्यांनी त्यांची कार्यरत कार्यक्षमता (Operational Efficiency) व आर्थिक स्थिरता (Financial Sustainability) यामध्ये सुधारणा करण्याकडे लक्ष केंद्रीत करण्याची गरज आहे असे निदर्शनास आले आहे. जेणेकरुन ग्राहकसेवा मानकांप्रमाणे ग्राहकांना सेवा मिळेल. हे साध्य करण्याकरिता सध्याच्या वितरण प्रणालीमध्ये मोठया प्रमाणावर सुधारणा करणे व अशा योजना राबविणे ज्यामध्ये वितरण हानी कमी होण्याबरोबरच वितरण कंपन्या आर्थिकदृष्टया सक्षम होतील व Operational कार्यक्षमता सुधारेल हे लक्ष्य समोर ठेवून ग्राहकांना अखंडीत, दर्जेदार, विश्वसनीय व परवडणारा वीज पुरवठा देण्याची कटीबध्दता याचे भान ठेवून केंद्र शासनाने "सुधारित वितरण क्षेत्र योजना-सुधारणा-अधिष्ठित आणि निष्पत्ती- आधारित योजना (Revamped Distribution Sector Scheme Reforms-Based and Results-Linked)" (RDSS) हा कालबध्द कार्यक्रम राबविण्याचे जाहीर केले आहे.

महाराष्ट्र राज्याकरिता पॉवर फायनान्स कॉपोरेशन (PFC) या संस्थेस सुकाणू अभिकरण (Nodal Agency) म्हणून केंद्रशासनाद्वारे नेमण्यात आले आहे.

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२. "सुधारित वितरण क्षेत्र योजना-सुधारणा-अधिष्ठित आणि निष्पत्ती-आधारित योजना (Revamped Distribution Sector Scheme Reforms-Based and Results-Linked)" (RDSS) योजनेची ठळक वैशिष्ट्ये खालीलप्रमाणे आहेत:-

(१) योजनेची उद्दिष्टे:-

(२) योजनेचे घटक : -

भाग (अ) :-

घटक (१) :- मिटरींग :-

घटक (२) वितरण पायाभुत सुविधा विषयक कामे :-

१) वितरण हानी कमी करण्याअंतर्गत कामे :-

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२) वितरण प्रणाली बळकटीकरण करण्याअंतर्गत कामेः-

घटक (३) :- प्रकल्प व्यवस्थापन (Project Management) :-

भाग (ब) :-

(३) RDSS योजनेअंतर्गत निधी व्यवस्थापनः-

(४) योजना समाप्ती दिनांक (Sunset Date):-

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३. महावितरण कंपनीद्वारे सादर करण्यात आलेल्या DPR मधील राज्यशासनाने केंद्रशासनास शिफारस केलेली कामेः-

(अ) मिटरींग कार्यक्रम (Totex Modeद्वारे)

१) RDSS योजने अंतर्गत ग्राहकांना प्रिपेड/स्मार्ट मीटरः-

.क्र.	पशील	ंख्या
१	एकूण ग्राहक संख्या (वितरण फ्रॅन्चायजी ग्राहक वगळून)	२,८१,३४,८७६
२	प्रस्तावित प्रिपेड मीटर्स (कृषीपंप ग्राहक व ग्रामीण भागातील विखुरलेले ग्राहक वगळून)	१,६६,१८,८३३
	या घटकांतर्गत खर्च-	**रु.१०,०५१ कोटी**

२) प्रिपेड मीटर्स बसविण्याचा कार्यक्रमः-

.क्र.	पशील	ालमर्यादा	ंख्या
१	टप्पा-१	डिसेंबर २०२३	९४,१९,३०२
२	टप्पा-२	मार्च २०२५	७१,९९,५३१

३) <u>वितरण रोहित्र व फिडर स्मार्ट मिटरिंग कार्यक्रम:-</u>

अ.क्र.	वितरण रोहित्र स्मार्ट मिटरिंग कार्यक्रम	संख्या
१	एकूण वितरण रोहित्र	७,७९,९५७
२	रोहित्र स्मार्ट मिटरिंग	४,०७,५०७ *
३	वितरण वाहिनी स्मार्ट मिटरींग	२७,८२६
	या घटकांतर्गत खर्च	**रु.१०५४ कोटी**

*(कृषीपंप रोहित्र, HVDS व २५ KVA पर्यंतच्या क्षमतेचे रोहित्र यांना स्मार्ट मिटर्स बसविण्यात येणार नाही.)

४) <u>वितरण रोहित्र व फिडर यांना स्मार्ट मीटर बसविण्याचा कार्यक्रम:-</u>

अ.क्र.	तपशील	कालमर्यादा	संख्या
१	टप्पा-१	डिसेंबर २०२३	२,५८,०१५ *
२	टप्पा-२	मार्च २०२५	१,७७,३१८

* यामध्ये २७,८२६ फिडर मिटर्स अंर्तभूत राहित

(ब) वितरण पायाभूत सुविधा विषयक कामे :-

(१) <u>वितरण हानी कमी करण्या अंतर्गत कामे:-</u>

अ.क्र.	कामाचा तपशील	प्रमाण	परिमाण	खर्च (रु. कोटी)
१	वाहिनी विलगीकरण	४७१२	संख्या	७११३.९१
२	एरियल बंच केबल	३०,३३२	किमी	१८२०.१५
३	उच्चदाब / लघुदाब वाहिनी अपग्रेडेशन	१९,८८४	किमी	१२९६.७०
४	मल्टी मिटर सर्विस बॉक्स	३,९८,०८०	संख्या	६३८
५	उच्च दाब वाहिनी विभाजन	९,९९७	किमी	११८०.११
६	HVDS रोहित्र	५,१७०	संख्या	३१३.७१
७	कॅपॅसीटर बॉक्स	२,०५१	संख्या	१८८.७०
८	IT/OT	-	-	८४९
९	इलेक्ट्रीक व्हेईकल चार्जिंग	२५०	संख्या	१७४
१०	कव्हर्ड कंडक्टर	३३३	स.किमी	६१.२०
११	लघुदाब उपरी तारमार्ग रुपांतरण व उच्चदाब भूमिगत वाहिनी रुपांतरण	-	किमी	३००.९०
१२	इतर कामे	-	-	२९५
		या घटकांतर्गत खर्च		**१४,२३१**

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(२) वितरण प्रणाली बळकटीकरण अंतर्गत कामे:-

.क्र.	ामाचा तपशील	माण	रिमाण	र्च रु. ोटी)
१	नवीन उपकेंद्र	३७७	संख्या	९९८
२	अतिरिक्त उपकेंद्र रोहित्र	२९९	संख्या	३४१
३	उपकेंद्र रोहित्र क्षमतावाढ	२९२	संख्या	२९८
४	उच्चदाब वाहिनी	२१,६९१	किमी	२२०४
५	उच्चदाब भूमिगत वाहिनी	४,१७१	किमी	१३७७
६	नवीन लघुदाब वाहिनी	१४,४८०	संख्या	८८३
७	नवीन वितरण रोहित्र	२९,८९३	संख्या	१२६४
८	वितरण रोहित्र क्षमतावाढ	१६,३५१	संख्या	८४३
९	SCADA/DMS	२१	संख्या	१३०२
१०	फॉल्ट पॅसेज इंडिकेटर्स	५१,१२८	संख्या	२२२.४
११	आपत्ती संवेदनक्षम क्षेत्रातील पायाभूत सुविधा	--	--	२१०३
१२	औद्योगिक क्षेत्रातील पायाभूत सुविधा	--	--	६५०
१३	संवेदनशील भागातील कामे	--	--	५४८
१४	फिडर बे	१२०४	संख्या	१७८
१५	स्विचिंग केंद्र	२२	संख्या	५७.१
१६	इतर कामे	--	--	९९६
		या घटकांतर्गत खर्च		**१४,२६६**

(क) <u>योजनेअंतर्गत प्रकल्प खर्च</u> (DPR) :-

(रु.कोटी)

अ.क्र.	**कामे**	**खर्च**
१	स्मार्ट मिटरिंग	११,१०५
२	वितरण हानी कमी करणे	१४,२३१
३	प्रणाली बळकटीकरण	१४,२६६
	एकूण	**३९,६०२**

(ड) <u>महावितरणद्वारे निश्चित केलेला व राज्यशासनाने मान्य केलेला कृती आराखडा:- AT & C Loss Reduction & ACS- ARR Gap Reduction:-</u>

	Base Year FY २०-२१	उद्दिष्टे			
		FY २१-२२	FY २२-२३	FY २३-२४	FY २४-२५
AT& C Loss %	२०.७३	१९.१६	१८.१६	१६.०९	१४.१
ACS- ARR Gap (Rs./per KWH)	१.३	०.६२	०.३५	०.२०	०.००

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(इ) कृती आराखड्याअंतर्गत भौतिक उद्दिष्टे :-

१.वितरण हानी कमी करणे:-

.क्र.	ामाचा तपशील	माण	रिमाण	ौतिक उद्दिष्टे		
				सन २२-२३	सन २३-२४	सन २४-२५
१	वाहिनी विलगीकरण	४,७१२	संख्या	४७१	२,३५६	१,८८५
२	एरियल बंच केबल	३०,३३२	किमी	३,०३३	१५,१६६	१२,१३३
३	उच्चदाब / लघुदाब वाहिनी अपग्रेडेशन	१९,८८४	किमी	१,९८८	९,९४२	७,९५४
४	मल्टी मिटर सर्विस बॉक्स	३,९८,०८०	संख्या	३९,८०८	१,९९,०४०	१,५९,२३२
५	उच्च दाब वाहिनी विभागणी	९,९९७	किमी	१,०००	४,९९९	३,९९८
६	HVDS रोहित्र	५,१७०	संख्या	५१७	२,५८५	२,०६८
७	कॅपॅसीटर बॉक्स	२,०५१	संख्या	२०५	१,०२६	८२०
८	इलेक्ट्रीक व्हेईकल चार्जिंग	२५०	संख्या	२५	१२५	१००
९	आवरीत तारमार्ग (Covered Conductor)	३३३	स.किमी	३३	१६७	१३३

२.वितरण प्रणाली बळकटीकरण:-

अ.क्र.	कामाचा तपशील	प्रमाण	परिमाण	भौतिक उद्दिष्टे			
				सन २०२२-२३	सन २०२३-२४	सन २०२४-२५	सन २०२५-२६
१	नवीन उपकेंद्र	३७७	संख्या	०	३८	१८९	१५१
२	अतिरिक्त उपकेंद्र रोहित्र	२९९	संख्या	०	३०	१५०	११९
३	उपकेंद्र रोहित्र क्षमतावाढ	२९२	संख्या	०	२९	१४६	११७
४	उच्चदाब वाहिनी	२१,६९१	स.किमी	०	२१६९	१०८४६	८६७६
५	उच्चदाब केबल	४,१७१	स.किमी	०	४१७	२०८५	१६६८
६	लघुदाब वाहिनी बदलणे	१४,४८०	संख्या	०	१४४८	७२४०	५७९२
७	नवीन वितरण रोहित्र	२९,८९३	संख्या	०	२९८९	१४९४७	११९५७
८	वितरण रोहित्र क्षमतावाढ	१६,३५१	संख्या	०	१६३५	८१७६	६५४०
९	SCADA/DMS	२१	संख्या	०	१	११	९
१०	फॉल्ट पॅसेज इंडिकेटर्स	५१,१२८	संख्या	०	५११३	२५५६४	२०४५१
११	फिडर बे	१२०४	संख्या	०	१२०	६०२	४८२
१२	स्विचिंग केंद्र	२२	संख्या	०	२	११	९

४. <u>बेस्ट उपक्रमाद्वारे सादर करण्यात आलेल्या DPR मधील राज्यशासनाने केंद्रशासनास शिफारस केलेली कामे:-</u>

(अ) <u>मिटरींग कार्यक्रम (Totex Mode द्वारे)</u>

१) RDSS योजने अंतर्गत ग्राहकांना प्रिपेड/स्मार्ट मीटर:-

अ.क्र.	तपशील	कालमर्यादा	संख्या
१	टप्पा-१	डिसेंबर २०२३	१०,६२,५९२
२	टप्पा-२	मार्च २०२५	१३,२८९
		या घटकांतर्गत खर्च	**रु.६९४.६९ कोटी**

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२) वितरण रोहित्र व फिडर स्मार्ट मिटरिंग कार्यक्रमः-

.क्र.	पशील	ालमर्यादा	ंख्या
१	टप्पा-१	डिसेंबर २०२३	४७२६*
२	टप्पा-२	मार्च २०२५	६०*
		या घटकांतर्गत खर्च	**रु.१३.८५ कोटी**

*** यामध्ये १३८८ फिडर मिटर्स अंतर्भूत आहेत.**

(ब) <u>वितरण पायाभूत सुविधाविषयक कामे:-</u>

(१) वितरण हानी कमी करण्याअंतर्गत कामे:-

(रु.कोटी)

अ.क्र.	कामाचा तपशील	प्रमाण	परिमाण	खर्च
१	संग्राही उपकेंद्रामध्ये रिलेसह ११ केव्ही स्विचगिअर्स बदलणे. (RSS)	३२	संख्या	२७.३०
२	वितरण उपकेंद्रामध्ये ११ केव्ही ओसीबी स्विचगिअर्स बदलणे. (DSS)	५६४	संख्या	११०.८३
३	संग्राही उपकेंद्रामध्ये रिलेसह ३३ केव्ही स्विचगिअर्स बदलणे.	१९	संख्या	४.०१
४	वितरण उपकेंद्रामध्ये जुने RMU बदलणे.	११८	संख्या	९.६९
५	इतर (रिले, नियंत्रण पॅनेल, पॉवर पॅक, सुटे भाग इत्यादी)	-	-	५५.७६
	या घटकांतर्गत खर्च		**"अ"**	**रु.२०७.५९ कोटी**

(२) वितरण प्रणाली बळकटीकरण अंतर्गत कामे:-

(रु.कोटी)

अ.क्र.	कामाचा तपशील	प्रमाण	परिमाण	खर्च
१	उपकेंद्राचे नुतनीकरण (अतिरिक्त रोहित्र किंवा बदलणे)	१०२१	संख्या	२८०.४७
२	नवीन उपकेंद्र स्थापित करणे	१००	संख्या	१३४.९०
३	३३ केव्ही केबल बदलणे	१२०	किमी	१९२.००
४	उच्चदाब, कमकुमवत किंवा जुनी केबल बदलणे	४१३	किमी	२०६.५०
५	लघुदाब, कमकुमवत किंवा जुनी केबल बदलणे	४००	किमी	१६०.००
६	संग्राही उपकेंद्र प्रगत करणे (SCADA & DMS)	७७	संख्या	
७	वितरण उपकेंद्र प्रगत करणे (SCADA & DMS)	१०७०	संख्या	२२३.२०
८	इंटरप्राईझ संसाधन नियोजन (ERP), एकसंधता (युनिफाइड) विद्युत प्रणाली आणि माहिती तंत्रज्ञान (IT/OT) सक्षमीकरण करणे	-	-	७१४.२६
९	इतर (नवीन संग्राही केंद्रे, अर्थिंग, बॅटरी चार्जिंग, नवीन आर.एम.यू. इत्यादी)	-	-	२०२.०८
	या घटकांतर्गत खर्च :- "ब"			**२११३.४१**
	एकूण खर्च (अ+ब)- रु. २३२१.०० कोटी			

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(३) प्रणाली आधुनिकीकरण :-

(रु.कोटी)

.क्र.	ामाचा तपशील	माण	रिमाण	र्च
१	वितरण केंद्राचे रिमॉडेलिंग	१५०	संख्या	१२२.२२
२	वितरण उपकेंद्र स्थापन करणे	१००	संख्या	१२७.७२
३	संग्राही केंद्रामधून अतिरिक्त ३३ केव्ही एच.टी. लाईन	३९	किमी	१८.३
४	नरीमन पॉईंट संग्राही केंद्र (११० केव्ही) उपकरणे बदलणे, अग्निशमन यंत्रणा, नवीन संग्राही उपकेंद्र, संग्राही उपकेंद्राची उपकरणे बदलणे, ए.डी.पी. बदलणे व इतर	-	-	१६२.३९
	या घटकांतर्गत खर्च :-रु.४३०.६३ कोटी			

(४) क्षमता निर्मिती (Capacity Building) - रु.०.८१ कोटी.

(क) योजने अंतर्गत एकूण प्रकल्प खर्च (DPR):-

(रु.कोटी)

अ.क्र.	कामे	खर्च
१	स्मार्ट मिटरिंग	७०८.५४
२	वितरण हानी कमी करणे	२३२१.००
३	प्रणाली आधुनिकीकरण	४३०.६३
४	क्षमता निर्मिती	०.८१
	एकूण खर्च	**३४६०.९८**

(ड) बेस्ट उपक्रमाद्वारे निश्चित केलेला व राज्यशासनाने मान्य केलेला कृती आराखडा:- AT & C Loss Reduction & ACS-ARR Gap Reduction :-

AT & C Loss %	Base year	उद्दिष्टे			
	FY २०-२१	FY २१-२२	FY २२-२३	FY २३-२४	FY २४-२५
	६.६४	६.६४	६.५५	६.५०	६.४५
ACS-ARR Gap (Rs./KWH)	१.११	०.१५	०.१४	०.०९	०.००

केंद्रशासनाच्या मार्गदर्शक सुचनांनुसार RDSS योजना राज्यात महावितरण व बेस्ट उपक्रमामार्फत त्यांच्या त्यांच्या कार्यक्षेत्रात राबविण्यासाठी महावितरण व बेस्ट उपक्रमामार्फत तयार करण्यात आलेला सविस्तर प्रकल्प अहवाल (DPR) व कृती आराखडा (Action Plan) राज्य शासनाच्या मान्यतेने केंद्रशासनास पाठविण्याचे विचाराधीन होते. त्याअनुषंगाने शासनाने खालीलप्रमाणे निर्णय घेतले आहेत:-

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शासन निर्णय :-

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-

- -

Confidential

DPR Action plan

www.maharashtra.gov.in या संकेतस्थळावर उपलब्ध करण्यात आला असून त्याचा सांकेतांक क्रमांक २०२२०८२५११५०३५००९१० असा आहे. हा आदेश डिजीटल स्वाक्षरीने साक्षांकीत करुन काढण्यात येत आहे.

महाराष्ट्राचे राज्यपाल यांच्या आदेशानुसार व नांवाने,

(प्र. पुं. बडगेरी)
उप सचिव, महाराष्ट्र शासन

प्रत,

१. मा.राज्यपाल यांचे प्रधान सचिव
२. मा. मुख्यमंत्री यांचे प्रधान सचिव

१० ९

३. मा. उपमुख्यमंत्री यांचे खाजगी सचिव
४. मा. विरोधी पक्षनेता, विधानसभा/विधान परिषद, विधानमंडळ सचिवालय, विधानभवन, मुंबई-३२.
५. मा.मंत्री (ऊर्जा) यांचे खाजगी सचिव
६. मा.राज्यमंत्री (ऊर्जा) यांचे खाजगी सचिव
७. मा .मुख्य सचिव, मंत्रालय, मुंबई-३२.
८. अपर मुख्य सचिव (वित्त विभाग), मंत्रालय, मुंबई-३२.
९. अपर मुख्य (नियोजन विभाग),मंत्रालय, मुंबई-३२.
१०. अपर मुख्य सचिव/प्रधान सचिव/ सचिव, सर्व मंत्रालयीन विभाग, मंत्रालय, मुंबई-३२.
११. अध्यक्ष तथा व्यवस्थापकीय संचालक, महाराष्ट्र राज्य विद्युत वितरण कंपनी, प्रकाशगड,बांद्रा, मुंबई-५१
१२. महाव्यवस्थापक, बेस्ट उपक्रम, बेस्ट भवन, बेस्ट मार्ग, कुलाबा, मुंबई-४०० ००१.
१३. महालेखापाल (लेखा व अनुज्ञेयता), महाराष्ट्र-१, मुंबई / महाराष्ट्र-२, नागपूर.
१४. महालेखापाल (लेखापरीक्षा),महाराष्ट्र-१, मुंबई.
१५. अधिदान व लेखा अधिकारी, मुंबई.
१६. निवासी लेखापरीक्षा अधिकारी, मुंबई.
१७. अवर सचिव (ऊर्जा-३), उद्योग,ऊर्जा व कामगार विभाग, मंत्रालय, मुंबई-३२.
१८. कक्ष अधिकारी, (अर्थसंकल्प/व्यय-१६), वित्त विभाग, मंत्रालय, मुंबई-३२.
१९. कक्ष अधिकारी (नियोजन विभाग),मंत्रालय, मुंबई-३२.
२०. निवड नस्ती (ऊर्जा-५), उद्योग, ऊर्जा व कामगार विभाग, मंत्रालय, मुंबई-३२.
२१. ऊर्जा विभागातील सर्व कार्यासने.

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पावर फाइनेंस कॉर्पोरेशन लिमिटेड
POWER FINANCE CORPORATION LTD.
(भारत सरकार का उपक्रम) (A Govt. of India Undertaking)
(आई.एस.ओ. 9001:2015 प्रमाणित) (ISO 9001:2015 Certified)

02:10: RDSS: 2021: I: BEST 21.11.2022

The Principal Secretary
Department of Energy, Govt. of Maharashtra,
3rd Floor, Main imarat, Madamkama Road,
Huttama Rajguru Chowk Mantralaya,
Mumbai Maharashtra - 400032

Sub: Financial assistance to BEST for implementation of Projects under Revamped Distribution Sector Scheme (RDSS) of Govt. of India in the State of Maharashtra.
Grant No. 21981001 (RDSS Metering Works)
Grant No. 21982001 (RDSS Loss Reduction Works)
Grant No. 21984S01 (RDSS PMA for Smart Metering Works) and
Grant No. 21984L01 (RDSS PMA for Loss Reduction Works)

Sir,

1. With reference to BEST letter dated 22.08.2022 regarding financial assistance under Revamped Distribution Sector Scheme (RDSS), we are pleased to convey that Monitoring Committee for RDSS constituted under the Chairmanship of Secretary (Power), Govt. of India, in its 13th meeting held on 28.10.2022 has approved the Action plan and Detailed Project Report (DPRs) for Loss Reduction works and Prepaid Smart Metering works of Brihanmumbai Electricity Supply and Transport Undertaking (BEST) under RDSS scheme as per below mentioned details:

   a) Results Evaluation Matrix for BEST as enclosed at **Annexure A** along with pre-qualifying criteria.
   b) DPR for Prepaid Smart metering works with total Project Cost of Rs. 659.17 Cr with Government Budgetary Support (GBS) of Rs. 146.69 Cr including incentive for Phase-I as per details in **Annexure B**.
   c) DPR for Infrastructure– Loss reduction works with total Project Cost of Rs. 972.88 Cr with GBS of Rs. 583.73 Cr as per details in **Annexure C**.
   d) Project Management Agency (PMA) charges of Rs. 17.07 Cr for Prepaid Smart Metering works and Infrastructure- Loss reduction works with GBS of Rs. 10.24 Cr as per details in **Annexure D**.

   Summary of approved projects cost and GBS for Projects and PMA is attached at **Appendix-I**.

2. **Funding Pattern:**

   a. The funding Pattern for BEST in the State of Maharashtra is given below:

Item Description	GBS % (Max)
Prepaid Smart metering solution at consumer, DT, and feeder level including integration of existing infrastructure	15% of the approved cost of metering including the operational cost, provided that it is not more

	than Rs. 900 per meter for consumer metering only.
Distribution Infrastructure works	60% of the approved cost of Distribution infrastructure works
PMA Charges for Metering and Infrastructure works	60% of the approved cost of PMA

b. The project cost approved by the Monitoring Committee or actual cost incurred whichever is less, shall be the eligible cost for determining the grant under the scheme for Infrastructure works and PMA Components. Any cost overrun after approval of the project by Monitoring Committee due to any reason whatsoever shall not be eligible for any grant and shall be borne by the BEST/respective State Government.

c. The release of GBS by Government of India will be subject to prescribed scheme guidelines and would be contingent to award of prepaid smart metering works & its satisfactory progress.

3. The terms and conditions of the sanction are as given below:

a) BEST to ensure implementation of the scheme in accordance with all the prescribed scheme guidelines (including SBDs).

b) <u>Prepaid Smart Metering works:</u>

i. DISCOM to submit the timelines for completing ongoing Smart Metering works. Further nodal Agency to ensure that timelines for completing Smart Metering (both Consumer and System metering) are adhered to and all consumers in the State/ DISCOM area are covered under Smart Metering within these timelines as per scheme guidelines.
ii. Funding under Metering component will be available only to Prepaid smart meters operating in prepayment mode for consumers, and in accordance with the uniform approach indicated by the Central Government, with implementation in OPEX/TOTEX mode.
iii. The Grant for smart metering works would be released in three equal yearly instalments subject to fulfilment of performance criteria including prescribed SLAs. Further, the grant per meter would also be rationalized considering exclusion of MDM from the scope of AMISP.
iv. A feeder and DT level automated online energy accounting system shall be put in place.
v. All feeders are to be metered with communicable & AMI/AMR meters by 31st December 2022, and shall be integrated with the National Feeder Monitoring System (NFMS) proposed to be put in place shortly.
vi. BEST to complete 100% DT Metering in Phase - I areas by March 2023 and in remaining areas by December 2023 to facilitate energy accounting.
vii. BEST while implementing the prepaid smart metering projects, shall ensure that the remotely readable metering at DT level; Consumer indexing; integration of feeder level data; and the consumer billing database under the AMI contracts are prioritised to be completed latest by March 2023.
viii. Prepaid Smart Meters may be installed outside the consumer premises, may be pole mounted, ground mounted panels, incoming service cables that may be armoured etc.

c) **Infrastructure works & PMA Charges:**

i. All feeders segregated for Agriculture should be solarized under the PM- KUSUM scheme of MNRE or any other similar scheme of State Government.
ii. BEST to carry out feeder level analysis to identify high loss feeders for reduction of losses through appropriate measures proposed in the DPR. The details of such feeders to be included in the DPR and submitted to Nodal Agency to verify the same. Feeder level analysis should be completed as early as possible but within 90 days of sanction.
iii. PMA charges over and above the permitted amount shall be borne by the BEST/ State Government.
iv. Also, services of PMA shall be retained up to completion of the project, without any financial implications beyond that already provided.
v. The Monitoring committee has advised nodal agency to review the tender documents already floated by the BEST in accordance with the respective SBD's. The fund release under RDSS shall be subject to compliance of RDSS guidelines and provisions of SBD's. Some minor deviations may be allowed subject to approval of Nodal Agency and Monitoring Committee.

The detailed terms & conditions of sanction letter is enclosed as **Annexure E**.

4. Result Evaluation Matrix and pre-qualifying criteria:

a) The AT&C losses and ACS-ARR Gap trajectories approved by Monitoring Committee are as given below:

Parameter	Units	Max marks	Base Year	Baseline values	Targets			
					FY 2022	FY 2023	FY 2024	FY 2025
ACS-ARR Gap								
(i) On Cash Basis	Rs./ kWh	30	2021	0.94	0.30	0.20	0.10	0
(ii) On subsidy received basis,				0.705	0.15	0.15	0.09	0
AT&C loss	%	30	2021	8.18%	8.00%	7.80%	7.60%	7.50%

b) BEST to mandatorily meet the pre-qualifying criteria and achieve the specified marks in the Evaluation Matrix based on which DPR for Modernisation & System Augmentation shall be sanctioned and grant for both loss reduction works (other than the advance for DPR for Loss Reduction) and for the Modernisation & System Augmentation works will be released.
c) BEST to ensure timely adoption of all suitable measures to meet the prequalifying criteria and to score at least 60% marks on the agreed Result Evaluation Matrix.
d) If by the end of year 2025-26, the BEST is not eligible for release of any grant, the initial advance of 10% of the grant component of the cost of DPR for Loss Reduction will have to be refunded by the DISCOM.

e) Approval of the Competent Authority shall be taken for changes in Action Plan made after approval of the Cabinet in accordance with direction of RDSS Monitoring Committee/ MOP/ Nodal Agency.

5. Fund Management:

a. BEST shall ensure that funds released under the scheme are utilized for the purpose for which it is released and will not be diverted for any other purposes whatsoever. The grant release from Nodal Agencies to the BEST shall be done through PFMS and the BEST shall use PFMS for fund flows to the lowest level as specified by the Government of India's instructions on the subject under the scheme.
b. BEST shall submit utilization certificates (UC) for the funds released during the financial year in prescribed format latest by 30th April of succeeding year in addition to the UC along with every claim.
c. For release of funds under the Scheme, BEST has to ensure updation of baseline data, physical & financial progress, Quality Monitoring, Fund Management, Asset identification through Geo-tagging, outcomes and achievements for evaluation under Result Evaluation Framework, closure, etc. on the digital platform to be developed by the Nodal Agencies.
d. For works other than metering works under Part A, counterpart funding will be provided by the BEST/ State Government. If BEST takes loan for counterpart funding, such loan will be taken from REC and PFC only. Further, counterpart funding from bilateral/multilateral funding agencies can also be leveraged for which the Government of India would extend benefits of reduced Government Guarantee fee.
e. In case loan component of the project cost is funded by the NBFCs under MoP, then in order to secure the loan, the existing TPA (Tri-partite Agreement) arrangement among Government of India, the State Government and the RBI shall be suitably amended to provide that the loan servicing payments in case of default can be recovered through RBI.

6. A Scheme Implementation Agreement will be signed between the Government of Maharashtra, BEST and Nodal Agency on behalf of MoP within 30 days of issuance of sanction letter. Copy of approved agreement format is attached at **Appendix-II**.

7. The Monitoring Committee is empowered to recall the grant released to the BEST at any stage of the scheme, in case the sanctioned works are left incomplete, or the assets could not be put to use, or funds are utilized for purposes other than those prescribed in the scheme/ as approved by the Monitoring Committee in accordance with the prescribed guidelines.

8. BEST to undertakes to seek full authorization by way of its Resolution passed in subsequent meeting of its Board / State Govt. in order to implement the RDSS Scheme on the said terms and conditions to the satisfaction of the Government of India / Nodal Agency.

9. Any unrecovered/ outstanding dues amounts of earlier Schemes of Ministry of Power, GOI shall also be allowed to be adjusted against releases in the current scheme.

10. It is requested to kindly acknowledge and accept the sanction letter within 15 days from the date of issue of this sanction letter as per the acceptance letter enclosed as **Annexure- F**.

11. The appointment of PMA and/or PIA, if any, should be in line with the RDSS Guideline and MoP letter dated 18th May 2022 & subsequent amendment thereof.

12. District wise and Project area wise bifurcation of work and project cost approved for Infrastructure – Loss reduction works etc. is to be submitted by BEST within 15 days of the issuance of the 13th MCM minutes as per the requirement of MOP/ Nodal Agency.

13. The sanction is subject to undertaking / commitment and implementation by BEST of the SOP issued by Ministry of Power as mentioned in para (o) of the decisions mentioned in minutes of 13th meeting of Monitoring Committee for RDSS.

Yours sincerely,

Encl: As Above

Saurav Kumar Shah
Executive Director
for **Power Finance Corporation**

Copy to:

1. Chairman & Managing Director, Brihanmumbai Electricity Supply and Transport Undertaking, BEST Bhawan, BEST Marg , Colaba, Mumbai, Maharashtra - 400001.
2. Joint Secretary (Distribution), MoP, Shram Shakti Bhawan, Rafi Marg, New Delhi-110001

Result Evaluation Framework for BEST (Maharashtra) **Annexure A**

S No.	Result Parameter	Units	Maximum Marks	Base Year and Baseline values (FY2021)	Targets			
					FY2022	FY2023	FY2024	FY2025
A	**Financial Stability (60% weightage; 65% in 1st year)**							
1	ACS-ARR Gap – Cash basis	Rs./ kWh	30	0.94	0.30	0.20	0.10	0.00
	ACS-ARR Gap – Subsidy received basis			0.705	0.15	0.15	0.09	0.00
2	AT&C loss	%	30	8.18	8.00	7.80	7.60	7.50
3	Outstanding/ Overdue Government Dues	Rs. Crore	15	41.43	30	20	10	0
4	Progress in putting Govt. Offices on prepaid meters (Total: 7634 Nos.)	%	15	0%	0%	5%	100%	100%
5	No. of creditor days (including payment to Gencos for supply of power)	Days Payable	5	9.5	Less than 45 days			
6	No. of debtor days	Days Receivable	5	53.5	Less than 45 days			
			100					
B	**Outcomes of Infra works (20% weightage)**							
1	Hours of supply (Urban)	Avg. Hours/ Day	20	23:53	23:54	23:55	23:56	23:57
2	%age of Feeder Level Energy accounting being published - BEE	%	20	0	0%	100%	100%	100%
3	%age of DT Level Energy accounting being published	%	20	0	0%	100%	100%	100%
4	Reliability of power supply - SAIFI (System Average Interruption Frequency Index)	Nos/ Year	20	2.63	2.50	2.25	2.0	1.50
5	Data availability in the National Feeder Monitoring System / NPP	%	20	0	0%	100%	100%	100%
			100					
C	**Infrastructure Works (10% weightage)**							
	Metering							
1	Consumer Metering [Target : 10,44,000]	%	20	0%	0%	25%	99%	100%

2	DT Metering [Target : 3356]	%	20	0	0%	100%	100%	100%
3	Feeder Metering [Target : 1239]	%	20	0	0%	100%	100%	100%
4	% of Consumers with Prepaid Smart Meters (other than Govt. Dept.)	%	15	-	-	15%	55%	100%
5	Augmentation of substations (add/ replace of DT's) – (Target : 666 Nos)	Nos	15	-	-	35	400	666
6	Replacement of weak/Old UG cables (33, 11KV & 22KV) to improve the quality of supply (Target : 373 Km)	Kms	10	-	-	35	180	373
			100					
D	**Policy and Structural Reforms (10% weightage)**							
1	SCADA	No. of Towns/ %	25	-	0	0%	100%	100%
3	ERP Implementation & Billing Module (Target: 6 Modules)	Yes/ No	25	0	0	0	3	6
4	Training of Discom Officials	Mandays	20	0	0	800	800	800
5	DT Failure rate	%	15	0.54	0.54	0.50	0.45	0.45
6	Digital Payments : as a % of total revenue collected	%	15	64%	65%	67%	70%	75%
			100					

Smart Metering DPR (BEST- Maharashtra) **Annexure – B**

Sl No.	Major Component	Item Particulars	Expected Life cycle unit cost (Rs. per meter)	Quantity (Phase I)	Quantity (Phase II)	Total Quantity	Estimated cost in Rs. Crores
				No.	No	Nos.	
(1)	(2)	(3)	(4)	(5)	(6)	(7) = (5)+(6)	(8) = (4)x(7)
1	**Consumer Metering**						
1.1		1 Phase Whole Current Smart Consumer Meter	6,000	8,90,071	11,131	9,01,202	**540.72**
1.2		3 Phase Whole Current Smart Consumer Meter	6,000	1,66,339	2,080	1,68,419	**101.05**
1.3		3 Phase LT-CT Operated Smart Consumer Meter	6,000	5,978	75	6,053	**3.63**
1.4		3 Phase CT-PT Operated HT Smart Consumer Meter	6,000	204	3	207	**0.12**
	Sub-Total			**10,62,592**	**13,289**	**10,75,881**	**645.53**
2	**DT Metering***	3 Ph LT-CT Operated DT Meter	23,000	3,356	42	3,398	**7.82**
3	**Feeder Metering**	3 Ph CT-PT Operated feeder Meter	42,000	1,239	16	1,255	**5.27**
4	**Boundary Metering**	3- phase CT/PT operated Boundary meter	42,000	131	2	133	**0.56**
	Total			**10,67,318**	**13,349**	**10,80,667**	**659.17**
	Total GBS excluding incentive for Phase – I						**98.88**
	Incentive for Phase – I						**47.82**
	Total GBS including Incentive of Phase - I						**146.69**

***100% DT metering to be completed by December 2023**

Infrastructure works under Loss Reduction (BEST-Maharashtra) **Annexture C**

S.No.		Description	Unit	Unit Cost (in Rs Lakhs)	Qty.	Total Cost (in Rs. Crore)
A	**ERP, Billing Software and IT/OT enablement works**					
	1	New MBC solution (SaaS mode)	LS	2259.00	1	22.59
	2	ERP Solutions incl. License cost & Implementation cost etc. (MM, FICO, HCM, AM, DMS, BI/BW)	LS	3219.00	1	32.19
	3	Infrastructure Hardware (IaaS) Cost for ERP deployment	LS	870.00	1	8.70
	4	Network connectivity across all sites, head office and central cloud infrastructure	LS	667.00	1	6.67
	5	Complete setup of centralized Customer Call Centre	LS	221.00	1	2.21
	6	Contingency Charges@5% of Project Cost	LS	362.00	1	3.62
		Sub Total (A)				**75.98**
B	**Implementation of SCADA & DMS**					
	1	**Implementation of SCADA & DMS**	LS	14372.00	1	143.72
		Sub Total (B)				**143.72**
C	**Replacement of old Switchgear**					
	1	Replacement of 33 KV, 1500MVA Switchgears with relays	Nos.	17.32	19	3.29
	2	Replacement of 11 kV, 350MVA Switchgears with relays at RSS (10 switchgear per panel)	Panels	63.06	32	20.18
	3	Replacement of 11 kV OCB Switchgears by VCB Switchgears at DSS (No. given of DSS)	Nos.	21.40	396	84.74
	4	Replacement of Oil Ring Main Unit by SF6 Ring Main Unit	Nos.	8.23	95	7.82
		Sub Total (C)				**116.03**

D	**Renovation /Augmentation of Infrastructure at Power/Receiving Substations**					
	1	Additional / Replacement of Transformer (Power Transformer) - 16/ 20 MVA ONAN/ONAF	Nos.	251.16	20.00	50.23
		Sub Total (D)				**50.23**
E	**Renovation /Augmentation of Infrastructure at Distribution Substations**					
	1	Augmentation of substations (additional / replacement of Distribution transformer (995 KVA) along with Breakers/Cable)	Nos.	28.95	666	192.80
	2	No of New RMUs	Nos.	8.23	104	8.56
		Sub Total (E)				**201.36**
F	**Renovation /Augmentation of HV and LV lines**					
	1	Replacement / Additional of 33KV, with 3cx 300 sq.mm Cu. XLPE Cables	Kms	132.68	120	159.22
	2	Replacement / Additional of HV weak/Old cable with 3C X 240 SQ. MM XLPE AL. cables	Kms	63.24	203	128.38
	3	Replacement / Additional of LV weak/Old cable with LV 4C X 300 SQ. MM XLPE AL. cables	Kms	50.86	50	25.43
		Sub Total (F)				**313.03**
G	**Auxiliary component cost for Consumer metering**					
	1	Auxiliary component cost for Consumer metering (Single pole MCB, Copper service cable etc)	NOS	0.01	523357	**72.53**
		Sub Total (G)				
	Total Cost of Loss Reduction in Crs. (A+B+C+D+E+F+G)					**972.88**
	Total GBS @ 60%					**583.73**

Details of PMA Charges (BEST Maharashtra) **Annexure – D**

Sl. No.	Particulars	Total Project Cost	GBS*	PMA Charges**	GBS for PMA Charges***
1	**Smart Metering Works**	659.17	98.88	2.47	1.48
2	**Infrastructure Works – Loss Reduction**	972.88	583.73	14.59	8.76
	Total	**1632.05**	**682.60**	**17.07**	**10.24**

*** Excluding incentives in case of Smart Metering works of Phase-I.**
**** 2.5% of GBS for Smart Metering (excluding incentive) and 1.5% of total project cost for Infrastructure works.**
***** 60% of PMA Charges.**

Appendix-I

Approved DPR Cost and Government of India (GoI) Grant for BEST, Maharashtra

All amount in Rs. Cr.

Sl. No.	Grant No.	Name of the Project	Approved Project Cost	GoI Grant* Sanctioned	Additional Incentive** for Phase-I Smart Metering (GoI Grant)
1	21981001	RDSS Smart Metering Works	659.17	98.88	47.82
2	21984S01	RDSS PMA Grant for Smart Metering works	2.47	1.48	NA
Total			**661.64**	**100.36**	
3	21982001	RDSS Loss Reduction Works	972.88	583.73	NA
4	21984L01	RDSS PMA Grant for Loss Reduction Works	14.59	8.76	NA
Total			**987.47**	**592.49**	
Grand Total			**1649.11**	**692.85**	**47.82**

** 15% of the approved cost of the metering including the operational cost, provided that it is not more than Rs. 900 per meter for consumer metering only.*

*** Maximum incentive GBS for deployment of prepaid Smart meters by December, 2023- 7.50% of the cost per consumer meter including operational cost or Rs. 450 per consumer meter, whichever is lower*

General Terms and Conditions Applicable for Availing Financial Assistance under Revamped Distribution Sector Scheme

The terms and conditions of financial assistance as set out here under shall be binding on the DISCOM and State Government in accordance with the Scheme Implementation Agreement to be executed amongst PFC (on behalf of MoP), State Government & State Discom.

A. Project Financing & Fund Management:

1. The funding pattern under the scheme is as given below:

Part	Item Description	GBS % (Max)
Part A	Component I: Prepaid Smart consumer metering solution including Communicable/Smart System Metering at DT, feeder and boundary level including integration of existing infrastructure.	15% / 22.5% of meter lifecycle cost as the case may be (limited up to Rs.900 or Rs.1350 respectively per meter for Consumer metering only)
	Component II: Distribution Infrastructure works including SCADA, DMS, AB cables, feeder segregation etc.	60% or 90% of project cost as the case may be

2. The project cost approved by the Monitoring Committee or actual cost incurred whichever is less, shall be the eligible cost for determining the grant under the scheme for Component II and III of Part A. Any cost overrun after approval of the project (by Monitoring Committee) due to any reason whatsoever shall not be eligible for any grant and shall be borne by the DISCOM/respective State Government.

3. Part A: Component I- Metering:

   3.1. The operation and maintenance cost of the meter over the life of the meter as per the SBD shall be included in the project cost.

   3.2. Prepaid Smart metering for consumers, and System metering at Feeder and Distribution Transformer level with communicating feature along with associated Advanced Metering Infrastructure (AMI) will be done in TOTEX mode through PPP, to facilitate reduction of Distribution losses and enable automatic measurement of energy flows and energy accounting as well as auditing in line with the BEE regulations which will help in identifying high loss packets.

   3.3. Funding under Metering component of Part A will be available only if the DISCOM agrees to the operation of smart meters in prepayment mode for consumers, and in accordance with the uniform approach indicated by the Central Government, with implementation in TOTEX mode. Pre-paid smart metering works carried out after 1st January, 2020 will be eligible for funding, if they were carried out in TOTEX mode, after obtaining approval from Monitoring Committee in this regard

   3.4. In areas which do not have communication network, installation of prepayment meters, may be taken up.

   3.5. The financial support for Metering Component under Part A of the scheme shall be as under:

3.5.1. *Other than Special Category States:* 15% of the project cost of the metering works including the operational cost, limited upto Rs. 900 per meter for consumer metering only would be provided as grant by Government of India. Further, an incentive @ 7.5% of the cost per consumer meter worked out for the whole project or Rs. 450 per consumer meter, whichever is lower, would be for prepaid Smart meters installed within the targeted timeline of first phase mission i.e. by December, 2023.

3.5.2. *Special Category States (All North Eastern States including Sikkim, Himachal Pradesh & Uttarakhand and union Territories of Jammu & Kashmir, Ladakh, Andaman & Nicobar Islands & Lakshadweep)*: 22.5% of the project cost of the metering works including the operational cost, limited upto Rs. 1350 per meter for consumer metering only would be provided as grant by Government of India. Further, an incentive @ 11.25% of the cost per consumer meter worked out for the whole project or Rs. 675 per consumer meter, whichever is lower, would be for prepaid Smart meters installed within the targeted timeline of first phase mission i.e. by December, 2023.

4. Part A: Component II- Distribution Infrastructure works:

4.1. The eligible project cost shall include Central taxes and all fees like forest clearance, highway and railway crossing fee etc. The project cost shall however not include the cost of land, cost of buildings other than sub stations and anti-theft police stations, service lines to new consumers, compensation towards ROW (except forest clearance, highway and railway crossing fee), office equipment & fixtures, spares (other than mandatory spares prescribed by manufacturer), T&P, road cutting charges, vehicles and salaries and establishment expenditure. Further, the project cost shall be reduced to the extent of any Liquidated Damages actually levied, but the encashment of performance security or bid security (EMD) shall not reduce the project cost.

4.2. Feeders having significant agricultural load (30% or more) may be considered for separation under the loss reduction part of DPR and the same should also be proposed for solarization under the PM- KUSUM scheme of MNRE or any other scheme of Government.

4.3. Discom to submit feeder wise analysis of high loss feeders being taken up on priority under loss reduction works, within the 3 months of sanction to Nodal Agency.

4.4. The financial support for Part A: Component II under the scheme shall be as under:

4.4.1. Other than Special Category States:

a) 60% of project cost of works other than metering works under Part A and approved cost of PMA would be provided as grant by Government of India.

b) 40% of project cost of works and approved cost of PMA shall be arranged through own sources of State Government/ Utility or may avail loan from PFC & REC. Funding from bilateral/multilateral funding agencies can also be leveraged for which the Government of India would extend benefits of reduced Government Guarantee fee.

4.4.2. Special Category States (All North Eastern States including Sikkim, Himachal Pradesh & Uttarakhand and union Territories of Jammu & Kashmir, Ladakh, Andaman & Nicobar Islands & Lakshadweep)

a) 90% of project cost of works and approved cost of PMA would be provided as grant by Government of India.

b) 10% of project cost of works and PMA works shall be arranged through own sources of State Government/ Utility or may avail loan from PFC & REC. Funding from bilateral/multilateral funding agencies can also be leveraged for which the Government of India would extend benefits of reduced Government Guarantee fee.

5. Part A: Component III- Project Management:

5.1. 2.5% of the GBS of metering component and 1.5% of project cost of Distribution infrastructure works component, shall be allowed as PMA charges under the Scheme. PMA charges, over and above the permitted amount shall be borne by the respective DISCOM / State government.

5.2. 60% of the PMA charges allowed under the scheme for metering and Distribution infrastructure work components would be provided as grant by Government of India for other than Special Category States. For Special Category States, Government of India grant would be 90% of the allowed PMA charges.

5.3. Services of PMA shall be retained up to physical completion of the project, without any financial implications beyond that already provided

6. Release of grant to Discom by PFC:

6.1. Release of grant for Metering:

a) Grant for metering works, will be due when a meter is successfully installed and commissioned, and essential services and data related to it are provided for a period of one month to the DISCOM. It will be essential that a consumer meter is recharged at least once, for the release of grant pertaining to it to become due.

b) The DISCOM may submit claim for release of grant in a phased manner when grant becomes due against 5% of the total meters planned to be installed, or such number of meters or such period that the Nodal Agencies deem practical and convenient. After the first release, subsequent releases shall be subject to submission of utilization certificate of the previous releases.

6.2. Release of grant for Distribution Infrastructure works:

6.2.1. **Phase I- 10% of the grant for Loss reduction part of Project** (5% on sanction and further 5% on award of works)

a) Approval of the project by the Monitoring Committee
b) Execution of Scheme Implementation agreement

6.2.2. **Phase II**
30% of the grant for Loss reduction part of project in FY 2022-23 (including the advance 10%):

a) Qualification as per the Results Evaluation Framework of the Action Plan for FY 2021-22.
b) Submission of a certificate regarding utilization of grant already released in the Format prescribed by Ministry of Finance;

c) Submission of a certificate regarding receipts and expenditure on the project certified by a Chartered Accountant ;
d) Submission of physical and financial (grant and counterpart funding) progress report;
e) Sanction letter for counter-part funding / DISCOM's own resources / State Government funding for Distribution Infrastructure Works.
f) Award of prepaid Smart Metering works to be covered in the first phase to be completed by December 2023, as per the clause 3.2.2.2 of scheme guidelines.

30% of the grant for Modernization & System Augmentation part of project in FY 2022-23 (10 % on sanction and 20% on award of works.)

a) Approval of the project by the Monitoring Committee
b) Execution of Scheme Implementation agreement
c) Award of prepaid Smart Metering works to be covered in the first phase to be completed by December 2023, as per the clause 3.2.2.2 of scheme guidelines.

6.2.3. **Phase III: Cumulative release of 60% of grant component of the project cost of DPRs in FY 2023-24:**

a) Qualification as per the Results Evaluation Framework of the Action Plan for FY 2022-23.
b) Submission of a certificate regarding utilization of grant already released in the Format prescribed by Ministry of Finance;
c) Submission of a certificate regarding receipts and expenditure on the project certified by a Chartered Accountant;
d) Submission of physical and financial (grant and counterpart funding) progress report;
e) Sanction letter for counter-part funding / DISCOM's own resources / State Government funding for Distribution Infrastructure Works.

6.2.4. **Phase IV: Cumulative release of 95% of grant component of the project cost of DPRs in FY 2024-25:**

a) Qualification as per the Results Evaluation Framework of the Action Plan for FY 2023-24.
b) Submission of a certificate regarding utilization of grant already released;
c) Submission of a certificate regarding receipts and expenditure on the project certified by a Chartered Accountant;
d) Submission of physical and financial (grant and counterpart funding) progress report;
e) Sanction letter for counter-part funding / DISCOM's own resources / State Government funding for Distribution Infrastructure Works.

6.2.5. **Cumulative release of 100% of grant component of the project cost of DPRs in FY 2024-25:**

a) Submission of project completion report as per clause 4.9.1 of scheme guidelines.

6.2.6. Release of grant for PMA

Grant for PMA component shall be released, subject to the following conditions:
(i) Grant shall be released on the basis of the sanctioned cost or award cost, whichever is lower;

(ii) Grant will be released in the month of March, every year;
(iii) 10% shall be released as advance in the year of sanction;
(iv) 30% shall be released each year subsequent to the sanction year;
(v) Subsequent releases shall be subject to submission of utilization certificate of the previous releases and achievement against deliverables as specified in the SBD referred to in Clause

Discoms shall comply the amendments/supplemental to conditionalities prescribed for release of particular installment, if any, issued by MoP/PFC in future.

7. If DISCOM achieves the targets as per Action Plan of any previous FY in a subsequent year, then it shall be eligible for release of grant pertaining to that FY.

8. DISCOM (Implementing Agency) shall open an Assignment Account with NDRO, Reserve Bank of India (RBI) as Sub Agency for implementation of the RDSS through PFC (Central Nodal Agency) or as per the latest policy/ guidelines/ directives issued by Ministry of Power from time to time. All project related payments to the contractors/ agencies by DISCOM shall be done directly from the Assignment Account with RBI.

9. Regarding counterpart funding, DISCOM shall open a dedicated scheme account in a nationalized bank having E-banking facility or as per directions issued by MoP/ Nodal Agency. MoP/ Nodal Agency shall have the view right of the said Bank Account.

10. Any interest earned on grant shall be remitted to Ministry of Power's bank account on regular basis and at least once in a quarter.

11. Since grant under the scheme is Central Government money and DISCOMs are only the custodian of this money, income tax is not payable on interest earned on this money. DISCOMs shall take necessary steps to seek exemption from Income Tax Department regarding deduction of Tax at Source by the bank on interest accrued on un-utilized fund under the scheme. However, in case of deduction of TDS by bank, the Utilities shall claim refund of the deducted amount from Income Tax Department directly while filing annual tax return and remit it to Ministry of Power's account.

12. The Discom shall ensure that funds released under the scheme are utilized for the purpose for which it is released and will not be diverted for any other purposes whatsoever. In case of any breach or deviation further release of funds shall be stopped.

13. The grant release from Nodal Agencies to the DISCOMs shall be done through PFMS and the DISCOMs shall use PFMS for fund flows under the scheme. DISCOMs receiving funds under the scheme are to be registered / mapped in PFMS. The DISCOMs shall mandatorily enter details like receipts, expenditures, etc in Public Fund Management System (PFMS) portal. In case of non-entering desired details in PFMS portal, banks may not consider release of funds to Contractors.

14. DISCOM shall submit utilization certificates (UC) for the funds released during the financial year in prescribed format latest by 30th April of succeeding year in addition to the UC along with every claim.

15. DISCOMs shall maintain books of accounts both for receipt of funds from Nodal Agency and release to contractors for each of the project. The DISCOM shall ensure that fund shall not be invested in any other bank/branch, whether for short term or medium term, including fixed deposits.

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16. The DISCOM will ensure audit of the scheme accounts relating to receipts of funds from GoI / Nodal agency and expenditure incurred by the DISCOM against such receipts during the financial year by an independent Chartered Accountant and furnish a report to the Nodal agency latest by 30th June of the succeeding year.

17. The works and finances would be open to audit by the office of the Comptroller & Auditor General of India (C&AG) as well as Internal Audit Wing, Office of Controller of Accounts, MoP

18. **Recall of Grant:**

18.1. If by the end of year 2025-26, a DISCOM is not eligible for release of any grant, the initial advance of 10% of the grant component of the cost of DPR for Loss Reduction will have to be refunded by the DISCOM.

18.2. The Monitoring Committee is empowered to recall the grant released to the DISCOMs at any stage of the scheme, in case the sanctioned works are left incomplete, or the assets could not be put to use, or funds are utilized for purposes other than those prescribed in the scheme/ as approved by the Monitoring Committee in accordance with the prescribed guidelines.

18.3. Any unrecovered/ outstanding dues amount from earlier Schemes of Ministry of Power, GoI shall also be allowed to be adjusted against releases in the current Scheme.

19. In case loan component of the project cost is funded by the NBFCs under MoP, then in order to secure the loan, the existing TPA (Tri-partite Agreement) arrangement among Government of India, the State Government and the RBI shall be suitably amended to provide that the loan servicing payments in case of default can be recovered through RBI.

B. Project Implementation by Discom:

20. Mode of Implementation:

20.1. **Metering**: These projects shall be implemented in TOTEX mode (Total expenditure includes both capital and operational expenditure) with the following options:

a) Installation and commissioning of meters and cost recoveries in equated monthly instalments by PPP or implementation partner (or service provider) with no upfront payment by DISCOM

b) Some initial payment shall be made to the service provider upon installation and commissioning of the meters, with the rest of the payments made on equated monthly / quarterly instalments over the operational period.

20.2. **Distribution infrastructure works:** The projects shall be implemented normally on turnkey basis. However, certain works may be taken up on partial turnkey basis or departmentally with the approval of DRC and consent of Nodal Agency, subject to, overall guidance of the Monitoring Committee.

21. The scheme shall be implemented in accordance with the Ministry of Power's Office Memorandum No. 20/9/2019-IPDS dated 20th July, 2021, Scheme Implementation Agreement and operational guidelines issued including amendments/supplemental if any.

22. Discom to follow Standard bidding Document (SBD) as issued by Nodal Agencies for selection of AMI service provider, for Distribution infrastructure works, SCADA and PMA.

23. The DISCOMs may make minor changes in the SBD, while retaining its basic structure and essence, provided that the approval of the Nodal Agency is taken for the changes, subject to, overall guidance the Monitoring Committee

24. Prepaid smart Metering projects taken up by DISCOMs through MOU route with CPSUs or their JVs and Subsidiaries shall also be permitted subject to their being implemented in TOTEX mode as per proposed model circulated by Ministry of Power vide letter No. 14/07/2021- UR&S-II-(E-260509) dated 19.01.2022.

25. Keeping in view the aims and objectives of Atma Nirbhar Bharat Abhiyan, Ministry of Power has issued Public Procurement (Preference to Make in India) for Purchase Preference (linked with local content) Order in respect of Power Sector on 28.7.2020. This order is in line with the DPIIT Notification No. P-45021/2/2017-PP(BE-II) dated 4th June,2020. This order along-with amendments, if any, from time to time, shall be followed by the DISCOMs in the implementation of the scheme. However, in case a DISCOM is availing funds through multi-lateral financial institutions, applicable DEA directives may be followed.

26. Discom may appoint one or more PMA for project management. Existing PMA of DDUGJY or Saubhagya or IPDS or PMDP or any other Central/State Govt scheme of power sector may be used for preparation of DPR and Action Plan, and the expenses incurred will be eligible under the scheme. For all other works including bid process, monitoring of implementation, project completion, result evaluation and related works, a new PMA will have to be appointed as per the SBD as circulated by the Nodal agency. DISCOMs desirous of appointing CPSUs or their JVs and subsidiaries as PMA on nomination shall be required to obtain a specific approval from the Ministry of Power through concerned Nodal Agency. Any such proposal would be sent by the DISCOM along with the imperative need along with a detailed justification.

27. The sunset date for the scheme will be 31.03.2026, the works executed beyond which will not be eligible for release of Central Government grant.

28. Discom to ensure updation of MIS web portal to be developed by the Nodal Agencies for submission of Action Plan & DPRs, capturing baseline data, physical & financial progress, quality reports, outcomes and achievements for evaluation under Result Evaluation Framework, closure, etc.

C. Result Evaluation Framework:

29. Discom to meet the pre-qualifying criteria and achieve the specified marks in the Evaluation Matrix based on which DPR for Modernisation & System Augmentation shall be sanctioned and grant for both loss reduction works (other than the advance for DPR for Loss Reduction) and for the Modernisation & System Augmentation works will be released.

30. For qualifying in the Evaluation Matrix, a DISCOM needs to score a minimum of 60 marks.

D. Monitoring & Evaluation

31. This scheme would be reviewed by the District Electricity Committees, to be notified by the State Government in compliance to the notification of Government of India dated 16th Sept, 2021.

32. The DISCOM shall be responsible & accountable for assuring quality in the scheme works. Accordingly, DISCOM shall formulate a comprehensive Quality Assurance (QA) and Inspection Plan with an objective to build quality infrastructure under the project. The QA and Inspection Plan shall be an integral Part of the contract agreement with turnkey contractor or equipment supplier/vendor and erection agency as the case may be in case of partial turnkey and departmental execution of works. Documentation with regard to Quality Assurance & Inspection Plan shall be maintained by DISCOM and kept in proper order for scrutiny during the course of project execution and for future reference. The DISCOM has to ensure that the quality of

material/equipment supplied at site and field execution of works under the project is in accordance with Quality Assurance & Inspection Plan. DISCOM may use the MQP (Manufacturing Quality Plan) and FQP (Field Quality Plan) used in DDUGJY and IPDS schemes by suitably modifying as per requirement of this scheme.

33. In addition to the in-house quality checks and processes followed by the DISCOM, the nodal agency (PFC/ REC) shall carry out concurrent inspection of works through Third Party Quality Monitoring Agency (TPQMA).

E. Interpretation

Any dispute arising out of this Agreement/ interpretation of any clause may be referred to Secretary (Power), Govt. of India whose decision shall be final and binding on all parties. In case of any inconsistency between the Terms and Conditions of this sanction letter and the provisions of RDSS Guidelines, the latter shall prevail.

Appendix-II

[This MoA is to be executed on Non-Judicial Stamp Paper of Rs 200/-]

IMPLEMENTATION AGREEMENT AMONGST

_____ Limited, the Nodal Agency onbehalf of Ministry of Power, Government of India

AND

State Government,

AND

Power Utility

For Implementation of Revamped Distribution Sector Scheme

This TRIPARTITE MEMORANDUM OF AGREEMENT (hereinafter referred to as the **"Implementation Agreement")** is made this ..... day of .....20....

BY AND AMONGST

_____ Limited, A Government of India Undertaking, having its Registered Office at _____ (hereinafter referred to as "**Nodal Agency**" or "_____") part on behalf of Ministry of Power, Government of India, which expression shall unless it be repugnant to the subject or context thereof, include its successors and assigns, of the **FIRST PART;**

AND

State Government of..... (hereinafter referred to as "**State Government**") which expression shall unless it be repugnant to the subject or context thereof, include its successors and assigns, of the **SECOND PART**

AND

..... *[Distribution Company]* having its Head/Registered Office at ..... (hereinafter referred to as **"DISCOM"** which expression shall unless repugnant to the context or meaning thereof includes its successors and assigns) of the **THIRD PART**.

The Nodal Agency, the State Government, and the Utility are hereinafter also referred to collectively as the **"Parties"** and individually as the **"Party"**.

WHEREAS the Government of India has launched **Revamped Distribution Sector Scheme** (hereinafter referred to as "**RDSS**") as a Central Sector Scheme to improve the operational efficiencies and financial sustainability, by providing financial assistance to DISCOMs for strengthening of supply infrastructure. The DISCOM can take up projects relating to installation of prepaid smart meters for all consumers along with associated AMI, communicable meters for DTs & Feeders to enable automated Energy Audit and Accounting, SCADA, DMS & RT-DAS, Enterprise Resource planning (ERP) and other ICT initiatives, and Distribution infrastructure works as required

for strengthening and modernizing the system as well as measures for loss reduction with the end objective of reducing losses and ensuring 24 x 7 power supply , Public Charging Infrastructure for Electric Vehicles (EVs), Disaster Resilient Infrastructure works (hereinafter referred to as the "**Project**") on the terms & conditions contained in the **Order No. F. No. 20/9/2019-IPDS dated 20.07.2021 issued by Ministry of Power and RDSS guidelines and any amendments thereto issued by the nodal agency.**

NOW IT IS HEREBY AGREED BY AND BETWEEN THE PARTIES HERETO as follows:

1. This Agreement signed between (a) _____ Limited, the Nodal Agency on behalf of Ministry of Power, Government of India;(b) State Government and (c) Discom for implementation of Revamped Distribution Sector Scheme shall be implemented by the Discom in letter and spirit. Government of India will monitor implementation of the precedent conditions agreed to upon in this Agreement before releasing funds through Nodal Agency.

2. This Agreement shall be read in accordance with the provisions of **Order No. F. No. 20/9/2019-IPDS dated 20.07.2021 issued by Ministry of Power and RDSS guidelines and any amendments thereto issued by the nodal agency**. The said RDSS Guidelines shall form an integral part of this agreement as Annexure – 'A' as if fully set forth hereunder and all the terms and conditions set out in the said Revamped Distribution Sector Scheme Guidelines shall be binding on the Parties hereto.

3. The parties have agreed that the individual project(s), as proposed by DISCOM and sanctioned by the Monitoring Committee (MC) /nodal agency, under Revamped Distribution Sector Scheme (RDSS), commencing from the financial year 2021-22 shall be deemed to have been covered under this agreement. The terms and conditions of sanction by the MC/nodal agency for a particular project, as contained in the sanction letter (including the supplementals, modifications if any) issued by the nodal agency, shall also form part and parcel of this agreement.

4. DISCOM has to formulate, plan, design, develop and implement the projects in accordance with the Standard Bidding Documents for various components as circulated by Nodal agencies and in line with the Central Vigilance Commission (CVC) guidelines. Also, guidelines, SBDs, specifications and construction standards shall be adopted wherever applicable.

5. State Government and DISCOM agree that in the event the projects are not implemented satisfactorily in line with the sanction terms and conditions, left incomplete or the assets could not be put to use, or funds are utilized for purposes other than those prescribed in the scheme/ as approved by the Monitoring Committee in accordance with the prescribed guidelines then Monitoring Committee is empowered to recall the grant released to the DISCOMs at any stage of the scheme.

6. State Government and DISCOM agree that performance in the Reforms Based Results Linked Revamped Distribution scheme would also form integral part of the financing norms of PFC, REC, Banks/FIs and MDBs for any project in the Distribution Sector even beyond those related to funding under this scheme.

7. State Government and DISCOM agree that if due to adverse performance in the Reforms Based Results Linked Revamped Distribution scheme, funds does not get released then any advance amount released shall be refunded to the Government of India.

8. PROJECT FINANCING

i) For Smart Metering works:

The financial support under the scheme shall be as under:

a) 15% of sanction cost limited up to Rs.900 per meter for Consumer metering would be provided as grant by Government of India (22.5% for special category limited to Rs.1350)

b) The implementation of the metering scheme is proposed through PPP on TOTEX mode. State Government/DISCOM may also provide budgetary support in TOTEX mode.

c) An incentive of 7.5% (11.25% for special category) of the cost per consumer meter worked out for the whole project or Rs. 450 per consumer meter (Rs.675 for special category), whichever is lower, would be provided for prepaid Smart meters installed within the targeted timeline of first phase mission i.e. by December, 2023. The decision of Monitoring Committee shall be final while calculating Additional grant applicable to any project under the Scheme.

d) The consumer meters shall mandatorily be prepaid meters to be eligible for availing grant under the scheme.

e) Discoms shall ensure Feeder/DT metering in accordance with the requirements of the scheme/ directions of MOP

ii) **For Distribution Infrastructure works:**

a) The sanction of DPR for Modernisation & System Augmentation and release of grant for both loss reduction works (other than the advance) and for the Modernisation & System Augmentation works will be based on the DISCOM meeting the pre-qualifying criteria and achieving the specified marks in the Evaluation Matrix. Also, Monitoring Committee will issue sanctions of loss reduction works contingent to sanctions of metering works being already in place; or, Smart metering works being already implemented by the DISCOMs in line with the SBD for Smart prepaid metering in TOTEX mode; or together, as the case may be.

b) The financial support under the scheme shall be as under:

- The grant shall be restricted to 60% (90% for special category) of sanction cost or award cost or executed cost (excluding State & local taxes) whichever is lower *(this lowered cost herein after shall be referred to as 'Sanction cost')*. The state & local taxes are not admissible under RDSS and to be borne by the State Government/Discom
- 40% (10% for special category) of sanction cost shall be either loan from Financial Institutions (REC/PFC or MDBs) or own funds of State Government. REC/PFC shall consider offering loans at competitive interest rates for the RDSS scheme.

iii) Cost overruns beyond sanction cost, if any, and PMA charges beyond allowed GOI grant shall be borne by the State Government/Discom.

iv) To be eligible for grant, State Government/Discom has to follow the SBD circulated by the nodal agency or obtain specific approval of Nodal agency for deviations.

v) State Government to arrange for DISCOM contribution in case DISCOM fails to arrange the same;

vi) State Government to furnish guarantee for the loan component under the scheme in case the DISCOM is not able to provide any other mode of security.

vii) Directives of Ministry of Power in this regard if any, would be followed.

9. Funds

i) The release of the fund shall be as per the clause 5.2 of the operational guidelines of RDSS. The terms & conditions of release of funds for a particular project as contained in operational guidelines issued, shall also form part of the present agreement. The guidelines shall include supplementals and modifications issued, if any. The releases will be subject to the deductions as agreed amongst Nodal Agencies, State Government and Discom, as per RDSS guidelines or statutory requirements.

ii) State Government/ Discom commits to refund grant component released to Utility in case of non-compliance of RDSS guidelines/ this agreement or poor progress resulting to short-closure/ cancellation.

iii) MoP/ Monitoring Committee is empowered to recall the grant released to the DISCOMs at any stage of the scheme, in case the sanctioned works are left incomplete or the assets could not be put to use or funds are utilized for purposes other than those prescribed in the scheme/ as approved by the Monitoring Committee in accordance with the prescribed guidelines. Further, if by the end of year 2025-26, a DISCOM is unable to get any fund released due to non-fulfillment of performance criteria of the scheme,, the initial advance of 10% will have to be refunded by the DISCOM. Any unrecovered/due amounts from earlier schemes of Ministry of Power, GOI shall also be allowed to be adjusted against releases in the current scheme till 2025-26.

iv) In order to secure the loan of NBFCs under MoP, the existing TPA (Tri-partite Agreement) arrangement among Government of India, the State Government and the RBI shall be suitably amended to provide that the loan servicing payments in case of default can be recovered through RBI.

v) DISCOMs shall maintain books of accounts both for receipt of funds from Nodal Agency and release to contractors for each of the project.

vi) DISCOM shall ensure that fund shall not be invested in any other bank/branch, whether for short term or medium term, including fixed deposits.

10. Opening of Bank Account

i) DISCOM (Implementing Agency) shall open an Assignment Account with NDRO, Reserve Bank of India (RBI) as Sub Agency for implementation of the RDSS through PFC (Central Nodal Agency) or as per the latest policy/ guidelines/ directives issued by Ministry of Power from time to time. All project related payments to the contractors/ agencies by DISCOM shall be done directly from the Assignment Account with RBI. Regarding counterpart funding, DISCOM shall open a dedicated scheme account in a nationalized bank having E-banking facility or as per directions issued by MoP/ Nodal Agency. MoP/ Nodal Agency shall have the view right of the said Bank Account.

ii) State Government/Discom shall enter details like receipts, expenditures, etc in Public Fund Management System (PFMS) portal. In case of non-entering desired details in PFMS portal, banks may not consider release of funds to Contractors.

11. Distribution Reforms Committee

i) State Government shall setup a Distribution Reforms Committee (DRC), headed by the Chief Secretary, Secretary in charge of the Energy/Power Department of the State as the convener and consisting of Secretary (Finance), Secretary (Land Revenue) and Secretary (Forest and Environment) as its members. The roles and responsibilities of Distribution Reforms Committee (DRC) are mentioned in clause 7.4 of the operational guidelines of RDSS.

12. DISTRICT ELECTRICITY COMMITTEE (DEC):

i) State Government shall also setup a District Electricity Committee (DEC) as per the Ministry of Power letter no. 42/17/2011-RE [206787] dated 26.09.2021. The Committee shall meet periodically at District headquarters at least once in 3 months to review and coordinate overall development of power supply infrastructure in the district in accordance with the schemes of Government.

ii) State Government shall also facilitate participation of Public Representatives in the inauguration events etc.

13. PROJECT MANAGEMENT

i) Project Management Agency (PMA) shall be appointed by Discom/Power Department to assist them in project management to ensure timely implementation of the project. PMA charges, restricted to 2.5% of the GBS of component I - metering and 1.5% of project cost of component II - Distribution infrastructure works, shall be sanctioned as a separate component of the scheme. PMA charges, over and above the permitted amount shall be borne by the respective DISCOM/ Government.

ii) State Government shall ensure Reforms support in the form of consultancy for Discoms and payments thereof.

iii) State Government/Discom shall ensure establishment of a dedicated project implementation cell at district level and a centralized cell at Head office level.

14. CONSTRUCTION / IMPLEMENTATION

i) State Government/Discom shall make all possible efforts to complete the project(s) within the approved time frame starting from the date of award of project. State Government to provide required land for substations and facilitate in obtaining other statutory clearances (ROW, forest etc.);

ii) State Government/Discom to ensure following Public Procurement (Preference to Make in India) for Purchase Preference (linked with local content) Order in respect of Power Sector dated 28.7.2020 or its latest amendments thereof. DEA directives to be followed in case funds are availed through multi-lateral financial institutions.

iii) State Government/Discom shall suitably incorporate the provisions towards levy of Liquidated Damages in their agreements with contractors for delay in completion of the project(s) and also other relevant contractual provisions pertaining to the procurement of

goods and works. Out of the amount recovered towards Liquidated Damages, if any, by State Government/Discom under this provision, the amount proportionate to subsidy shall be remitted to MoP account.

iv) During implementation of projects, State Government/Discom shall be solely responsible & accountable for assuring quality in RDSS works. State Government/Discom shall formulate a comprehensive Quality Assurance (QA) and Inspection Plan with an objective to build Quality Infrastructure under RDSS works. The QA and Inspection Plan shall be an integral Part of the contract agreement with turnkey contractor or equipment supplier/vendor and erection agency as the case may be in case of partial turnkey and departmental execution of works.

v) State Government/Discom shall also ensure that the quality of material/equipment supplied at site and field execution of works under the project is in accordance with Quality Assurance & Inspection Plan.

vi) State Government/Discom to ensure submission of updated monthly physical and financial progress of the project to the Nodal Agency including its updation on the web portal.

vii) State Government/Discom shall ensure submission of geotagged photographs of the assets created under the scheme and same shall be uploaded in the portal while submitting the progress and claims. The detailed methodology shall be provided by the Nodal agency.

viii) State Government/Discom shall ensure that there is no duplication / overlapping of works with any other Government of India and State scheme.

ix) Appropriate third party/parties will be appointed by MOP / Nodal Agencies to assess / verify the achievements of DISCOMs with respect to the action plan finalized on periodical basis using the Result Evaluation Framework.

x) The projects shall be awarded and implemented within the time frame as per guidelines on turn-key basis through e-tendering in accordance with the prescribed Procurement Policy, Standard Bidding Document and Technical Specifications / amendments thereof.

xi) For metering, Standardization Testing and Quality Certification (STQC) & Cyber security aspects have to be mandatorily included in the contract, while following Government of India's stipulations related to source of procurement.

15. UTILISATION CERTIFICATE

i) State Government/Discom shall submit Utilization Certificate (UC) for the funds released during the Financial year and utilization thereof in prescribed format, latest by 30th April of succeeding year. The UC shall provide the physical progress/achievements also apart from financial utilization. Utilization Certificate is also mandatory to be submitted for every disbursement. The prescribed format of UC shall be furnished by the Nodal agency.

16. ARBITRATION

i) Any differences or dispute among the parties arising out of or in connection with this project shall be discussed and settled amicably amongst the parties. In the event of non-settlement of the difference or dispute within sixty (60) days, the same shall be referred to the Secretary to the Government of India in the Ministry of Power, as the sole arbitrator whose decision shall be final and binding on the parties to this Agreement.

17. FORCE MAJEURE

i) The parties shall ensure due compliance with the terms of this Agreement. However, no party shall be liable for any claim for any loss or damage whatsoever arising out of failure to carry out the terms of the Agreement to the extent that such a failure is due to force majeure events such as fire, rebellion, mutiny, civil commotion, riot, strike, lock-out, forces of nature, accident, act of God and any other reason beyond the control of concerned party. But any party claiming the benefit of this clause shall satisfy the other party of the existence of such an event and give written notice of 30 days to the other party to this effect. The services covered under this Agreement shall be started as soon as practicable by the parties concerned after such eventuality has come to an end or ceased to exist.

18. IMPLEMENTATION OF THE AGREEMENT

i) All discretions to be exercised and directions, approvals, consents and notices to be given and actions to be taken under these presents, unless otherwise expressly provided herein, shall be exercised and given by the signatories to this Agreement or by the Authorized representative(s) that each party may nominate in this behalf and notify in writing to the other party by Registered Post. Any other nomination of Authorized representative(s) and/or changes in designation shall be informed likewise in writing to/by State Government/Discom and PFC within one month of signing of the Agreement. Any changes in designations/ registered office address shall be intimated in writing to all concerned parties.

ii) In case of any inconsistency between the Terms and Conditions of this Agreement and the provisions of RDSS Guidelines, the latter shall prevail.

iii) Any dispute arising out of this Agreement/interpretation of any clause may be referred to Secretary (Power), Govt. of India whose decision shall be final and binding on all parties.

19. NOTICE

i) All notices required or referred to under this Agreement, shall be in writing and signed by the respective authorized signatories of the parties mentioned herein above, unless otherwise notified. Each such notice shall be deemed to have been duly given if delivered or served by registered/speed post of Department of Posts to the respective heads on the addresses mentioned in the recital.

20. VALIDITY & TERMINATION

i) This agreement shall remain valid until all liabilities and obligations of the Discom pertaining to the RDSS scheme implementation are discharged to the satisfaction of the Nodal Agency/Ministry of Power.

ii) This agreement shall remain valid unless terminated with consent of all the Parties.

21. JURISDICTION

The competent Courts of Delhi shall have exclusive jurisdiction in all matters relating to or arising out under these presents.

IN WITNESS WHEREOF the parties have executed these presents through their Authorized Representatives at _____.

SIGNED AND DELIVERED BY (on behalf of **STATE GOVT. OF .....**) **Signature** ..... **Name & Designation** ..... **Address**	in the presence of ..... Signature ..... Name & Designation ..... Address ....
SIGNED AND DELIVERED BY (on behalf of **UTILITY**.....) **Signature** ..... **Name & Designation** ..... **Address**	in the presence of ..... Signature ..... Name & Designation ..... Address ....
SIGNED AND DELIVERED BY **Power Finance Corporation Ltd** (on behalf of **Ministry of Power, Govt. of India**) **Signature** ..... **Name & Designation** ..... **Address**	in the presence of ..... Signature ..... Name & Designation ..... Address ....

Annexure-F

Acceptance Letter

(From Government of .....)

No. Dated:

.....

The Chairman & Managing Director,
Power Finance Corporation Limited,
Urjanidhi, 1 Barakhamba Lane
Connaught Place,
New Delhi-110001

Sub: Acceptance of financial assistance to <DISCOM> for implementation of Projects under RDSS Scheme (Grant Nos. _____and PMA Grant No- _____) and terms and conditions for implementation of projects under RDSS

This is with reference to your sanction letter No..... dated: ..... conveying approval of Action Plan and DPRs for sanction of project cost of Rs.....Cr. for implementation of prepaid Smart metering works & Rs..... for implementation of Infrastructure works under Loss reduction in..... <DISCOM> under RDSS scheme.

The Government accepts the Action Plan and above sanctions on the terms and conditions as set out in the sanction letter under reference above and RDSS guidelines..

District wise and Project area wise bifurcation of work and project cost approved for Infrastructure – Loss reduction works etc. shall be submitted by <Discom> within 15 days of this letter as per the requirement of MOP/ Nodal Agency.

Yours faithfully,

(Authorized Officer)
State Government

Smart meter Installation phasing wise details

			No. of meters								Total cost meter month wise							
	Meter Type		**1-ph**	**3-ph**	**LT-CTO**	**Consumer**	**DT Meter**	**Feeder**	**ABT**	**Total**	**1-ph**	**3-ph**	**LT-CTO**	**HT- Consumer**	**DT Meter**	**Feeder**	**ABT**	**Total**
	Rate per meter	No. of meter	**901212**	**168419**	**6053**	**206**	**3398**	**1255**	**133**	**1080676**								
	Rate per meter per month																	
	Dec-23		**15328**	**0**	**0**	**0**	**0**	**0**	**0**	**15328**	1875437.00	0.00	0.00	0.00	0.00	0.00	**0.00**	1875437.00
	Jan-24		**18304**	**0**	**0**	**0**	**0**	**198**	**0**	**18502**	4114998.52	0.00	0.00	0.00	0.00	89098.88	**0.00**	4204097.40
	Feb-24		**52184**	**389**	**0**	**0**	**50**	**24**	**0**	**52647**	10499902.26	71063.00	0.00	0.00	11249.79	99898.74	**0.00**	10682113.79
	Mar-24		**50419**	**2350**	**0**	**0**	**331**	**490**	**0**	**53590**	16668851.78	500363.87	0.00	0.00	85723.43	320395.97	**0.00**	17575335.05
	Apr-24		53218	7815	30	1	407	63	6	**61540**	23180269.21	1928017.62	6749.88	449.99	177296.76	348745.61	**6942.77**	25648471.84
	May-24		37869	9104	19	8	471	35	52	**47558**	27813680.21	3591147.47	11024.80	4049.95	283269.82	364495.41	**67113.40**	32134781.07
	Jun-24		4645	4975	73	36	352	18	29	**10128**	28382013.00	4499986.55	27449.50	20249.75	362468.38	372595.31	**100670.11**	33765432.58
	Jul-24		0	0	68	44	311	7	0	**430**	28382013.00	4499986.55	42749.22	40049.50	432442.10	375745.27	**100670.11**	33873655.73
	Aug-24		2714	528	104	39	350	0	0	**3735**	28714080.85	4596442.23	66148.79	57599.27	511190.66	375745.27	**100670.11**	34421877.18
	Sep-24		2716	1054	105	36	109	0	0	**4020**	29046393.41	4788988.24	89773.36	73799.07	535715.21	375745.27	**100670.11**	35011084.66
	Oct-24		0	750	400	20	324	0	0	**1494**	29046393.41	4925999.16	179771.72	82798.96	608613.88	375745.27	**100670.11**	35319992.49
	Nov-24		0	800	400	20	350	0	10	**1580**	29046393.41	5072144.14	269770.07	91798.84	687362.44	375745.27	**112241.38**	35655455.55
	Dec-24		0	2000	600	2	334	0	10	**2946**	29046393.41	5437506.58	404767.60	92698.83	762511.07	375745.27	**123812.66**	36243435.42
	Jan-25		44254	9100	1500	0	9	0	10	**54873**	34461032.57	7099905.70	742261.44	92698.83	764536.03	375745.27	**135383.94**	43671563.78
	Feb-25		44254	11750	1300	0	0	50	10	**57364**	39875671.74	9246410.06	1034756.09	92698.83	764536.03	398244.99	**146955.21**	51559272.95
FY 2024-25	Mar-25		44254	11837	1454	0	0	50	6	**57601**	45290310.90	11408807.69	1361900.12	92698.83	764536.03	420744.70	**153897.98**	59492896.25
	Apr-25		44254	25000	0	0	0	50	0	**69304**	50704950.06	15975838.25	1361900.12	92698.83	764536.03	443244.42	**153897.98**	69497065.69
	May-25		44254	27967	0	0	0	50	0	**72271**	56119589.23	21084883.99	1361900.12	92698.83	764536.03	465744.14	**153897.98**	80043250.31
	Jun-25		44254	26500	0	0	0	50	0	**70804**	61534228.39	25925936.38	1361900.12	92698.83	764536.03	488243.85	**153897.98**	90321441.58
	Jul-25		44254	26500	0	0	0	50	0	**70804**	66948867.56	30766988.77	1361900.12	92698.83	764536.03	510743.57	**153897.98**	100599632.85
	Aug-25		44254	0	0	0	0	50	0	**44304**	72363506.72	30766988.77	1361900.12	92698.83	764536.03	533243.29	**153897.98**	106036771.73
	Sep-25		44254	0	0	0	0	50	0	**44304**	77778145.89	30766988.77	1361900.12	92698.83	764536.03	555743.00	**153897.98**	111473910.61
	Oct-25		44254	0	0	0	0	20	0	**44274**	83192785.05	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	116897549.66
	Nov-25		44254	0	0	0	0	0	0	**44254**	88607424.22	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	122312188.83
	Dec-25		44254	0	0	0	0	0	0	**44254**	94022063.38	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	127726827.99
	Jan-26		44254	0	0	0	0	0	0	**44254**	99436702.55	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	133141467.16
	Feb-26		44254	0	0	0	0	0	0	**44254**	104851341.71	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	138556106.32
FY 2025-26	Mar-26		44259	0	0	0	0	0	0	**44259**	110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Apr-26										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	May-26										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Jun-26										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Jul-26										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Aug-26										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Sep-26										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Oct-26										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Nov-26										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Dec-26										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Jan-27										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Feb-27										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
FY 2026-27	Mar-27										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Apr-27										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	May-27										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Jun-27										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Jul-27										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Aug-27										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Sep-27										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Oct-27										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Nov-27										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Dec-27										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Jan-28										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Feb-28										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
FY 2027-28	Mar-28										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Apr-28										110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26

	Meter Type		1-ph	3-ph	LT-CTO	Consumer	DT Meter	Feeder	ABT	Total		1-ph	3-ph	LT-CTO	HT- Consumer	DT Meter	Feeder	ABT	Total
	May-28											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Jun-28											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Jul-28											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Aug-28											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Sep-28											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Oct-28											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Nov-28											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Dec-28											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Jan-29											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Feb-29											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
FY 2028-29	Mar-29											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Apr-29											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	May-29											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Jun-29											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Jul-29											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Aug-29											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Sep-29											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Oct-29											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Nov-29											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Dec-29											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Jan-30											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Feb-30											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
FY 2029-30	Mar-30											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Apr-30											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	May-30											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Jun-30											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Jul-30											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Aug-30											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Sep-30											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Oct-30											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Nov-30											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Dec-30											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Jan-31											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Feb-31											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
FY 2030-31	Mar-31											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Apr-31											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	May-31											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Jun-31											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Jul-31											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Aug-31											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Sep-31											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Oct-31											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Nov-31											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Dec-31											110266592.64	30766988.77	1361900.12	92698.83	764536.03	564742.89	**153897.98**	143971357.26
	Jan-32											110266592.64	30766988.77	1361900.12	92698.83	129372.64	429744.59	**135383.94**	143182681.52
	Feb-32											110266592.64	30766988.77	1361900.12	0.00	0.00	0.00	**0.00**	142395481.52
FY 3031-32	Mar-32											110266592.64	30766988.77	1361900.12	0.00	0.00	0.00	**0.00**	142395481.52
	Apr-32											110266592.64	30766988.77	1361900.12	0.00	0.00	0.00	**0.00**	142395481.52
	May-32											110266592.64	30766988.77	1361900.12	0.00	0.00	0.00	**0.00**	142395481.52
	Jun-32											110266592.64	30766988.77	1210477.88					142244059.29
	Jul-32											110266592.64	30766988.77						141033581.41
FY 3032-33	Aug-32											172462264.96	23181516.38						195643781.33
											Total	**9923993337.96**	**2769028988.89**	**122571010.39**	**8342894.94**	**68808242.74**	**50826859.95**	**13850818.17**	**12957422153.04**

Rate/meter

1-ph	**11011.83**	**122.3536667**	**9923993338**
3-ph	**16441.31**	**182.6812222**	**2769028989**
LT-CTO	**20249.63**	**224.9958889**	**122571010.4**
HT- Consumer	**40499.49**	**449.9943333**	**8342894.94**
DT Meter	**20249.63**	**224.9958889**	**68808242.74**
Feeder	**40499.49**	**449.9943333**	**50826859.95**
ABT	**104141.49**	**1157.127667**	**13850818.17**
Total cost of meter			**12957422153**

	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30
feeder meter cost	509393.5853	4535042.891	6385419.59	6776914.66	6776914.66	6776914.66	6776914.66
Rs. In Cr.	0.05	0.45	0.64	0.68	0.68	0.68	0.68
DT meter	0.009697323	0.665447841	0.917443237	0.917443237	0.917443237	0.917443237	0.917443237

FY wise payment	**FY 2023-24**	**FY 2024-25**	**FY 2025-26**	**FY 2026-27**	**FY 2027-28**	**FY 2028-29**	**FY 2029-30**	**FY 2030-31**	**FY 2031-32**	**FY 2032-33**
Amount	34336983.23	456797919.5	1340577570	1727656287	1727656287	1727656287	1727656287	1727656287	1723715860	763712385.1
Amount (Rs. Cr.)		**49.11**	**134.06**	**172.77**	**172.77**	**172.77**	**172.77**	**172.77**	**172.37**	**76.37**

AMISP Monthly Progress - September-2024

Progress of Smart Metering Works under RDSS, **AMISP : M/s ATL**

Award Value : 1303.16 Cr. **Date of Agreement : 10.03.2023**

	Target											Achieved														
Description	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Total target up to Sept-24	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Total achieved up to Sept-24	Achievment in %	Shortfall (Upto July-24)	Target Oct-24	Comulative target for the Month Aug-24
Single Phase Whole Current Consumer Meter	37500	27095	99515	83400	92017	102056	119400	118181	99048	59000	837212	15328	18304	52184	50419	53218	37869	4645	0	2714	2716	237397	28%	599815	32000	631815
Three Phase Whole Current Consumer Meter	2500	20000	20634	17063	28169	24511	20400	16480	1164	10000	160921	0		389	2350	7815	9104	4975	0	528	1054	26215	16%	134706	7498	142204
Three Phase LT CT Consumer Meter	0	870	784	695	738	764	520	530	457	360	5718	0		0	0	30	19	73	68	104	105	399	7%	5319	175	5494
Three Phase HT meter	0	50	50	50	56						206	0		0	0	1	8	36	44	39	36	164	80%	42		42
Three Phase LT CT - DT Meter	398	1500	1500								3398	0		50	331	407	471	352	311	350	109	2381	70%	1017		1017
Three Phase HT Feeder Meter	1255										1255	0	198	24	490	63	35	18	7	0	0	835	67%	420		420
Three Phase CT/PT Operated ABT Meter	133										133	0		0	0	6	52	29	0	0	0	87	65%	46		46
	41786	**49515**	**122483**	**101208**	**120980**	**127331**	**140320**	**135191**	**100669**	**69360**	**1008843**	**15328**	**18502**	**52647**	**53590**	**61540**	**47558**	**10128**	**430**	**3735**	**4020**	**267478**		**741365**	**39673**	**781038**

Status of Insatallation up to APR-24	
Conumer Meter	26%
DT Meter	70%
Feeder Meter	67%
Govt. Department Meter	29%
