महाराष्ट्र विद्युत नियामक आयोग
Maharashtra Electricity Regulatory Commission

Ref. No. MERC/FAC/2022-23/ 0676 **Date:** 26 **December, 2022**

To,
The General Manager
The Brihanmumbai Electric Supply and Transport Undertaking
BEST Bhavan, BEST Marg
Post Box No. 192
Mumbai 400 001.

Subject: Prior Approval of Fuel Adjustment Charges (FAC) submission of BEST Undertaking for the month of September, 2022.

Reference:

1. FAC submission dated 20 October, 2022 by BEST Undertaking for prior approval of FAC for the month of September, 2022.

Sir,

Upon vetting the FAC calculations for the month of September, 2022 as mentioned in the above reference, the Commission has accorded approval for charging FAC of **Rs. 113.58 Crore.** However, the said amount is added to the existing amount as on August, 2022 along with carrying cost and the total amount of **Rs 538.50 Crore** is being levied on the consumers as per letter dated 5 April, 2022 issued by the Commission. Accordingly, the FAC chargeable to consumers is as shown in the table below:

Month	FAC Amount (Rs. Crore)
September, 2022	**538.50**

The Commission has decided to allow recovery of aforesaid FAC amount equally over three months from January 2023 to March 2023. The total estimated recovery for three months considering the ceiling is Rs. 114.31 Crore. The balance amount of Rs. 424.19 Crore is carried forward and will be considered in Mid-Term Review Petition at the time of provisional true-up of FY 2022-23. BEST Undertaking shall maintain the monthly account of FAC Fund and upload it on its website to maintain transparency of FAC Fund and also for information of all the stakeholders.

Yours faithfully,

(Prafulla Varhade)
Director (EE), MERC

Encl: Annexure A: Detailed Vetting Report for the month of September, 2022.

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

ANNEXURE A

Detailed Vetting Report

Date: 20 December, 2022

PRIOR APPROVAL FOR FAC CHARGES FOR THE MONTH OF SEPTEMBER 2022

Subject: Prior Approval of Fuel Adjustment Charges (FAC) submission of BEST Undertaking for the month of September, 2022.

Reference: FAC submission dated 20 October, 2022 by BEST Undertaking for prior approval of FAC for the month of September, 2022.

1. FAC submission by BEST Undertaking:

1.1 BEST Undertaking ('BEST') has submitted FAC submissions for the months of September, 2022 as referred above. Upon vetting the FAC calculations, taking cognizance of all the submissions furnished by BEST, the Commission has accorded prior approval to BEST for FAC amount of Rs. 113.58 Crore. The approved FAC amount shall be added to the FAC Fund to be recovered from the consumers and the cumulative amount of Rs. 538.50 Crore is being levied on the consumers equally for three months from January 2023 to March 2023. The Commission has decided to allow the recovery of aforesaid FAC amount equally over next three months from January 2023 to March 2023. The total estimated recovery for three months considering the ceiling is Rs. 114.31 Crore. The balance amount of Rs. 424.19 Crore is carried forward and will be considered in Mid-Term Review Petition at the time of provisional true-up of FY 2022-23.

2. Background

2.1 On 30 March, 2020, the Commission has issued Tariff Order for BEST (Case No.324 of 2019) for True-up of FY 2017-18 and FY 2018-19, provisional Truing-up for FY 2019-20, and Aggregate Revenue Requirement and Tariff for FY 2020-21 to FY 2024-25. Revised Tariff has been made applicable from 1 April, 2021.

2.2 In the Tariff Order, the Commission has stipulated methodology of levying FAC as follows:

"8.2.15 Stabilising variation in consumer bill on account of FAC

………………

8.2.15.4 Therefore, using its powers for Removing Difficulty under Regulation 106 of the MYT Regulations, 2019, the Commission is making following changes in the FAC mechanism specified under Regulation 10 of the MYT Regulations, 2019:

a. Distribution Licensee shall undertake computation of monthly FAC as per Regulation 10 of the MYT Regulations, 2019 except for treatment to be given to negative FAC as follows:

(i) Negative FAC amount shall be carried forward to the next FAC billing cycle with holding cost;

(ii) Such carried forward negative FAC shall be adjusted against FAC amount for the next month and balance negative amount shall be carried forward to subsequent month with holding cost;

(iii) Such carry forward of negative FAC shall be continued till the accumulated negative FAC becomes 20% of monthly tariff revenue approved by the Commission in Tariff Order. In case of BEST, such limit shall be Rs. 59 Crore. Any accumulated amount above such limit shall be refunded to consumers through FAC mechanism;

(iv) In case such FAC Fund is yet to be generated or such generated fund is not sufficient to adjust against FAC computed for given month, then Distribution Licensee can levy such amount to the consumers through FAC mechanism.

8.2.15.5 In order to maintain transparency in management and use of such FAC Fund, the Distribution Licensee shall maintain monthly account of such FAC fund and upload it on its website for information of stakeholders. Further, till date, the Distribution Licensees have been levying FAC up to the prescribed limit of 20% of variable component of tariff without prior approval in accordance with the MYT Regulations, 2015, and submitting the FAC computations on a quarterly basis within 60 days of the close of each quarter, for post facto approval. However, as the Commission has created a FAC fund as stated above to address the increase in fuel prices and power purchase costs, the Commission has modified the FAC mechanism such that the Distribution Licensees shall submit the FAC computations on a monthly basis for prior approval, irrespective of whether FAC is chargeable in a month or whether some amount is accruing to the Fund on account of negative FAC.

8.2.15.6 The details of the FAC as per the Regulations, shall be submitted by the 15th of the every month prior to the month in which the FAC is proposed to be levied and the Commission will endeavour to decide on the same within 10 days so that the same can be levied from the 1st of the subsequent month. This prior approval will facilitate the addressing of any difficulties that may arise in giving effect to this fund. All the details will be submitted by the Distribution Licensee as is being done for approval of FAC on post facto basis. Thus, the FAC to the consumers shall now be levied with prior approval of the Commission"

2.3 Vide its letter dated 20 April, 2020, the Commission communicated the excel formats along with the checklist to file FAC submissions for prior approval to all Distribution Licensees. The Commission also directed all Distribution Licensees to file FAC submissions by 15th of every month prior to the month for which the FAC is proposed to be levied for prior approval.

2.4 Accordingly, BEST has filed FAC submissions for the month of September, 2022 for prior approval of the Commission. The Commission has scrutinized the submissions provided by BEST and has also verified the fuel and power purchase bills provided along with its submissions.

3. Energy Sales of the Licensee

3.1 The net energy sales within licence area as submitted by BEST in the FAC submission and as approved by the Commission are as shown in the table below:

Table 1: Energy Sales Approved and Actual for the Month of September 2022 (MUs)

Consumer Category	Approved by the Commission (MU)	Monthly Approved* (MU)	Actual Sales September, 2022 (MU)
	(I)	(II=I/12)	(III)
HT I- Industry	156.56	13.05	14.06
HT II - Commercial	295.54	24.63	18.67
HT III - Group Housing Society (Residential)	30.61	2.55	2.87
HT IV – Railways/Metro/Monorail	2.14	0.18	0.21
HT V - Public Services			
a) Govt. Edu. Inst. & Hospitals	26.56	2.21	2.35
b) Others	196.45	16.37	16.58
HT-VI EV Charging Stations	-	-	-
Total HT Sales	**707.85**	**58.99**	**54.74**
LT I (A)- Residential (BPL)	0.07	0.01	0.00
LT I (B)- Residential	2,129.66	177.47	181.42
LT II - LT Commercial			
(A)- upto 20 kW	934.60	77.88	71.11
(B) >20 kW and <50 kW	210.90	17.57	13.99
(C) - 50 kW	369.60	30.80	29.47
LT III (A) - Industry < 20 kW	43.19	3.60	9.22
LT III (B) - Industry > 20 kW	90.21	7.52	6.49
LT IV - Public Services			
a) Govt. Edu. Inst. & Hospitals	56.59	4.72	5.19
b) Others	183.84	15.32	15.20
LT V(A) – Agriculture Pumpsets	-	-	-
LT V(B) – Agriculture Others	-	-	0.00
LT VI - EV Charging Stations	0.46	0.04	1.52
Total LT Sales	**4,019.14**	**334.93**	333.60
Total	**4,726.99**	**393.92**	**388.34**

**- Monthly approved sales is derived based on average of annual sales for comparison purpose.*

3.2 With respect to sales submitted by BEST as per Guidelines dated 19 May 2021, it is observed that the actual sales for the month of September 2022 is 388.34 MU which is lower by 1.42% as compared to the approved energy sales of 393.92 MU. With respect to the consumption, HT category consumption is 54.74 MU which is on a lower side by 7.20% compared to approved monthly HT energy sales of 58.99 MU and decrease in the sales has been noticed of 0.40% on LT side whereby the actual sales is 333.60 MU as compared to approved monthly LT energy sales of 334.93 MU. The major variation was observed across various categories due to seasonal variation and midst of monsoon.

3.3 However, HT Commercial, LT BPL Consumers, LT Residential, LT Commercial (upto 20 kW and between 20 kW and 50 kW), LT Industrial (above 20 kW) and LT Public Service (others) have witnessed sales lower than the approved monthly sales whereas other categories have witnessed higher sales than the approved monthly sales.

3.4 BEST has also submitted the data providing actual billing and estimated billing undertaken for the calculation of total energy consumption for the month of September 2022. BEST further submitted the number of actual and estimated meter readings undertaken for the month of September 2022 as shown below:

Table 2: No. of Meters reading on actual and estimated basis for September 2022

Sr. No.	Particulars	No. of Meters for which actual meter reading is done either manually or through AMR	No. of Meters for which meter reading are estimated.	Total Meters
1	HT	194	0	194
2	LT	1019290	28555	1047845
	Total	**1019484**	**28555**	**1048039**
	%	**97.28%**	**2.72%**	**100.00%**

3.5 Accordingly, the Commission has also analysed the comparison of estimated sales and sales based on actual meter reading for last 6 months and it was observed that the assessed sales percentage has been constant for past several months and is around 1% to 2%. Similarly, it was observed that in September 2022, the estimated sales were 2.37% of the total sales.

Table 3: Actual and Estimated Sales of past 6 months

Particulars	Apr-22	May-22	June-22	July-22	August-22	Sept-22
Actual – MUs	388.97	441.19	409.28	373.91	376.19	379.13
Estimated – MUs	3.29	6.50	7.46	5.72	4.08	9.20
Total	**392.25**	**447.69**	**416.73**	**379.63**	**380.28**	**388.34**
% Sales based on Estimated Reading	0.84%	1.45%	1.79%	1.51%	1.07%	2.37%

3.6 **As per the data, 100% of HT billing is undertaken on actual basis due to Automatic Meter Reading (AMR) in place whereas under LT category, the billing of about 97.28% is undertaken as per actual meter readings and balance 2.72% is on estimated basis. Also, with respect to consumption, under LT Category, about 97.24% consumption is undertaken as per actual meter readings and balance 2.76% is on estimated basis.**

3.7 Further, comparison of sales of September 2022 as compared to last year are as shown below:

Table 4: Monthly Comparison of Sales for Residential, LT (Others) and HT Category

Particulars	LT - Residential (MU)	LT Others (MU)	HT (MU)	Total (MU)
Apr-21	180.21	126.59	48.81	355.61
Apr-22	180.93	155.77	55.55	392.25
May-21	199.05	108.25	49.44	356.73
May-22	216.56	171.07	60.05	447.69
Jun-21	187.16	105.33	50.67	343.16
Jun-22	195.61	162.95	58.17	416.73
Jul-21	170.11	116.94	51.97	339.02
Jul-22	172.68	152.05	57.50	382.24
Aug-21	176.58	128.43	49.86	354.87
Aug-22	175.34	148.81	56.13	380.28
Sep-21	169.56	133.18	49.57	352.31
Sep-22	181.42	152.17	54.74	388.34
April 21 – September 21	**1,082.66**	**718.72**	**300.32**	**2,101.70**
April 22 – September 22	**1,122.55**	**942.82**	**342.15**	**2,407.52**

3.8 The Commission observes that overall sales for the month of September 2022 is higher than September 2021 mainly due to higher sales in all categories as compared to last year. This was mainly due to relaxation in COVID-19 curbs, increase in industrial and commercial activities as compared to last year.

4. Power Purchase Details

4.1 The Commission has approved following sources in the Tariff Order for power purchase by BESTs.

a) Tata Power Company Ltd. (TPC-G)
b) Manikaran Power Limited
c) Renewable Energy (Solar and Non-Solar)

4.2 In addition to the aforesaid, there may be some variation in real time (unscheduled interchange) which will be settled through Deviation Settlement Mechanism as approved by the Commission from 10 October 2021.

4.3 Summary of Power Purchase for BEST is as follows:

Sr. No.	Particular	Compliance
1	Sources of approved Power Purchase	BEST has purchased power from approved sources.
2	Merit Order Dispatch	BEST has followed merit order for scheduling of power and preference was given to cheapest power.

<table>
<tr><th>Sr. No.</th><th>Particular</th><th>Compliance</th></tr>
<tr><td>3</td><td>Fuel Utilization Plan</td><td>Existing coal contracts of TPC-G at the time of issue of tariff order has expired in July 2020. TPC-G has entered into new coal contracts for 2.2 MT for 2 years further extendable by 2 years as per directions of the Commission in TPC-G MYT Order through Competitive Bidding.</td></tr>
<tr><td>4</td><td>Deviation Quantum</td><td>BEST has underdrawn 8.51 MU as compared to Schedule under Deviation Settlement Mechanism.</td></tr>
<tr><td>5</td><td>Sale of Surplus Power</td><td>BEST has sold 1.80 MU of surplus power in September 2022 (para 5.37 below).</td></tr>
<tr><td>6</td><td>Power Purchase</td><td>Actual Net Power Purchase is 389.81 MU as against approved 424.60 MU due to lower sales.</td></tr>
<tr><td>7</td><td>Source wise Power Purchase</td><td><table>
<tr><th>Source Name</th><th>Approved (MU)</th><th>Actual (MU)</th><th>Proportion of each Source in Actual Purchase</th></tr>
<tr><td>TPC-G</td><td>292.58</td><td>239.82</td><td>61.52%</td></tr>
<tr><td>Manikaran Power</td><td>62.05</td><td>38.02</td><td>9.75%</td></tr>
<tr><td>RE Sources</td><td>69.97</td><td>2.10</td><td>0.54%</td></tr>
<tr><td>Net Short Term</td><td>-</td><td>118.38</td><td>30.37%</td></tr>
<tr><td>DSM Pool</td><td>-</td><td>(8.51)</td><td>-2.18%</td></tr>
<tr><td>Total</td><td>424.60</td><td>389.81</td><td>100.00%</td></tr>
</table></td></tr>
<tr><td>8</td><td>Power Purchase:
a. Section 62 of Electricity Act, 2003</td><td>BEST is procuring power from only one source i.e., TPC-G under Section 62 of EA, 2003.

As part of verification of fixed cost claimed by BEST, the same has been verified from the BEST MYT Order in Case No.324 of 2019.

As part of verification of energy charges claimed by BEST, verification of operational parameters, fuel cost, GCV etc. vis-à-vis the MYT Order/Tariff Regulations is carried out</td></tr>
<tr><td></td><td>b. Section 63 of Electricity Act, 2003</td><td>The Power procurement from Manikaran Power is through competitive bidding and as approved by Commission.

Cost and MUs verified as per Invoice</td></tr>
<tr><td>9</td><td>RE Purchase</td><td>Cost and MUs verified as per Invoice</td></tr>
<tr><td>10</td><td>Short Term Power Purchase</td><td>Short-term power purchase invoices of September, 2022 are submitted by BEST. All the power purchase quantum and rate are verified from the invoices and has been considered for FAC calculation.</td></tr>
</table>

4.4 **The BEST has purchased 389.81 MU as against approved 424.60 MU from the sources approved by the Commission.** The reduction in Power Purchase is due to reduction in sales of BEST as compared to approved Sales in the month of September, 2022.

4.5 The following table show the variation in average power purchase cost (Rs/kWh) for the month of September, 2022 submitted by BEST as compared to average power purchase cost approved in Tariff Order:

Table 5: Approved and Actual Power Procurement source wise for the Month of September 2022

Particulars	Tariff Order Dated 30.03.2020 FY 2022-23 – Approved			Actual for September 2022 as submitted by BEST		
	Net Purchase	Cost	Average Power Purchase Cost	Net Purchase	Cost	Average Power Purchase Cost
	MU	Rs. Crore	Rs/kWh	MU	Rs. Crore	Rs/kWh
TPC-G	292.58	138.41	4.73	239.82	210.19	8.76
Manikaran	62.05	27.67	4.46	38.02	15.10	3.97
RE Power	69.97	21.65	3.09	2.10	1.80	8.56
REC	-	-	-	-	-	-
Short Term	-	-	-	120.19	63.81	5.31
Deviation Quantum			-	(8.51)	(2.95)	3.46
Gross Total	**424.60**	**187.73**	**4.42**	**391.61**	**287.95**	**7.35**
Less: Sale of Power to IEX				(1.80)	(2.01)	11.16
Net Power Procurement	**424.60**	**187.73**	**4.42**	**389.81**	**285.94**	**7.34**

* - Although, power purchase quantum is not approved on monthly basis, the monthly quantum is arrived at based on yearly approved quantum and shown for comparison purpose only

5. **Power Purchase Cost**

5.1 The Commission has sought detailed bills/invoices for all of the power purchase sources in order to verify the claim of BEST with regards to average power purchase cost for the month of September, 2022. The Commission has verified the Net Purchase, Variable Cost, Fixed Charge and the Power Purchase Cost from the relevant bills/invoices received for all purchasing sources. BEST has purchased power from approved sources as per the Tariff Order.

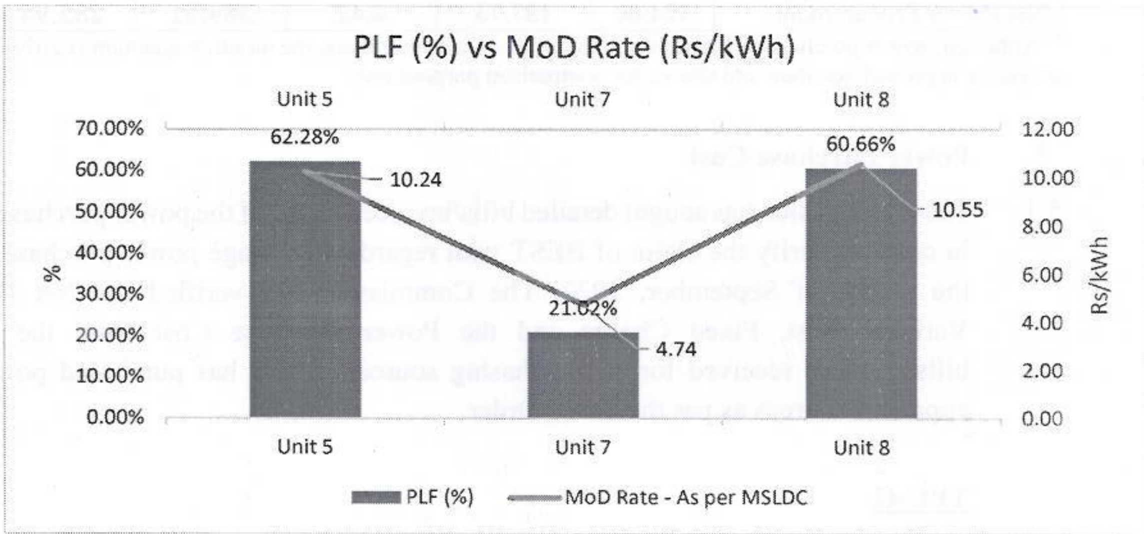
TPC-G

5.2 The Commission in its order dated 2 January, 2019 in Case No 249 of 2018 has allowed BEST to extend its existing PPA for 676.69 MW for a period of five years from 1 April, 2019 to 31 March, 2024. In line with the said Order, BEST share is 51.17% of the total capacity of TPC-G Unit 5, 7 and Hydro, whereas its share is 40% in TPC-G Unit 8.

5.3 Since BEST and TPC-D have same generating source i.e., TPC-G, BEST has submitted and relied upon TPC-D's FAC submissions in respect of TPC generating units (TPC-G) to the extent they are relevant to BEST. The Commission has considered the said submissions of TPC-D in respect of TPC-G, while reviewing the power purchase cost for BEST.

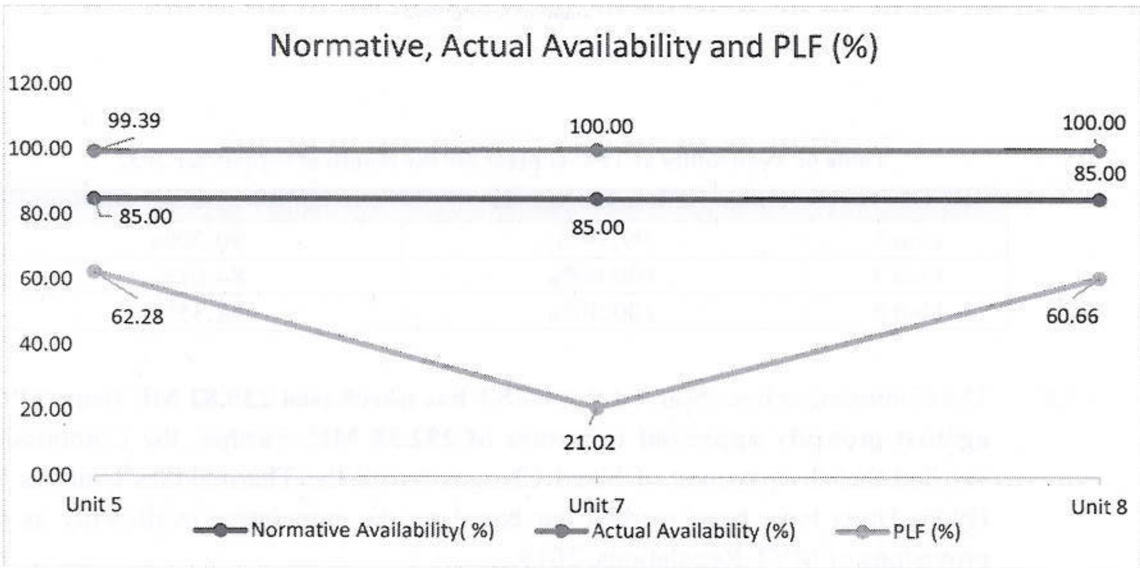
5.4 TPC-G Units 5, 7 and 8 have declared Availability of more than 99% which is higher than the normative availability of 85%. Further, the PLF of Unit 5,7 and 8 are lower i.e., 62.28%, 21.02% and 60.66% respectively. In response to data gaps raised by the Commission for lower PLF of Unit 5, 7 and 8, TPC submitted that Unit 5 and Unit 8 PLF are lower due to lower schedule by beneficiaries and Unit 7 PLF is lower due to lower APM gas availability and reserve shutdown from 01.09.2022 (01:28 Hrs) to 01.09.2022 (17:33 Hrs), 04.09.2022 (02:38 Hrs) to 05.09.2022 (18:00 Hrs), 05.09.2022 (21:59 Hrs) to 06.09.2022 (18:00 Hrs), 06.09.2022 (23:30 Hrs) to 07.09.2022 (15:30 Hrs), 09.09.2022 (03:52 Hrs) to 10.09.2022 (17:44 Hrs), 10.09.2022 (23:29 Hrs) to 12.09.2022 (15:01 Hrs), 14.09.2022 (05:50 Hrs) to 25.09.2022 (19:00 Hrs) respectively. TPC further submitted that BEST & TPC-D have taken the decision to avoid RLNG consumption in Unit-7 and to schedule power from Unit-7 on APM only, to protect consumer's interest with a reasonable and competitive tariff. Further, BEST and TPC-D had provided consent to schedule power from Unit-7 only on APM. The Commission notes the submission of TPC. The graph showing the comparison of Variable Cost in MoD Stack and monthly PLF for TPC-G thermal/gas units is given below:

Figure 1: PLF of TPC Generating Units



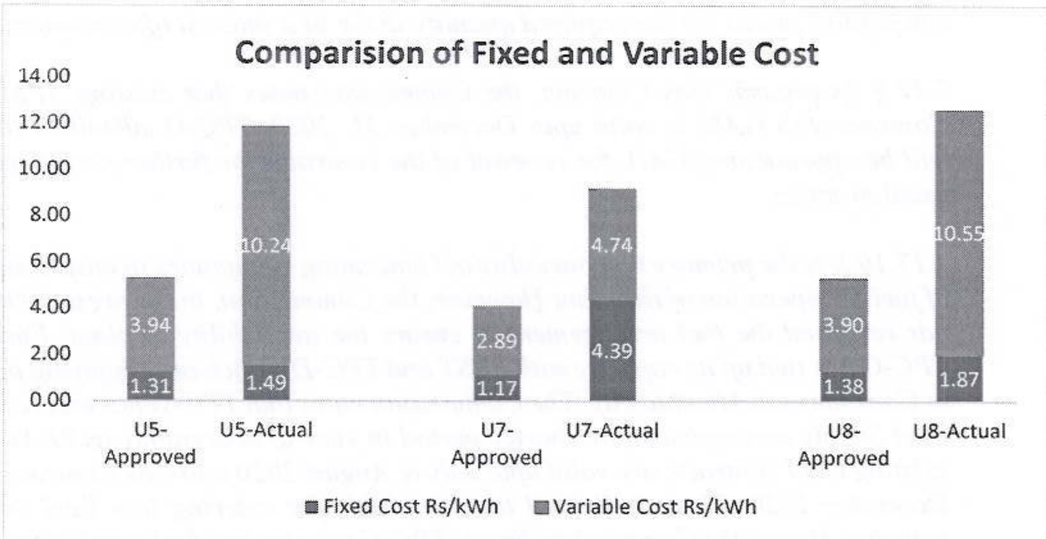
5.5 The graphical comparison of normative availability and actual availability for the month of September, 2022 is as given below:

Figure 2: PAF and PLF of TPC Generating Units



5.6 The entire monthly fixed cost was payable in line with MYT Regulations, 2019 as the cumulative plant availability of Units 5, 7 and 8 were higher than the normative availability of 85%. It is observed that Units 5,7 and 8 have lower PLF resulting in higher fixed cost per unit than approved by the Commission. Also, the Variable Cost of the Units 5 and 8 was substantially higher than the approved cost mainly due to higher prices of imported coal. Further, Variable Cost of Unit 7 has also increased due to revision in APM gas price from April 22. The comparison of Actual and Approved Fixed and Variable Cost of Units as shown in the graph below shows the impact of fixed cost due to actual generation.

Figure 3: Comparison of Fixed and Variable Cost of TPC Generating Units



5.7 The Availability of TPC-G units as compared to last year is as given below:

Table 6: Availability of TPC-G plant for the month of September 2022

TPC-G Units	Availability – September 2022	Availability – September 2021
Unit 5	99.39%	90.20%
Unit 7	100.00%	84.61%
Unit 8	100.00%	98.35%

5.8 The Commission has observed that **BEST has purchased 239.82 MU from TPC-G as against monthly approved quantum of 292.58 MU.** Further, the Commission has verified that the payment of Fixed Charges for all the Thermal/Gas Units as well as Hydro Units have been worked out based on the cumulative availability as per the provisions of MYT Regulations, 2019.

5.9 The Commission in its Order dated 30 March, 2020 in Case No 300 of 2019 in respect of Fuel Utilisation Plan of TPC-G as held as follows:

"7.17.7 Regarding the imported coal, it is submitted that Thermal Generating Station at Trombay needs ultra-low sulphur, low ash and Mid GCV coal to adhere with the stringent environment norms. Since, PPAs were not finalised during the year 2019 and there was uncertainty with respect to future tie-ups, the coal tie-ups were done only for a period of one year. The long term contract with Adaro is valid till 2020. Also, annual contract with Kideco and with Avra are valid upto July 31, 2020.

7.17.8 Regarding further fuel arrangement, the Commission notes the TPC-G's submission that, existing PPAs are valid till March 31, 2024 and hence, it is exploring the options to tie up Coal on annual basis or on term basis, to get competitive prices for the required quantity in the best interest of consumers.

7.17.9 As regards Gas Contract, the Commission notes that existing APM gas Contract with GAIL is valid upto December 31, 2020. TPC-G submitted that it will be approaching GAIL for renewal of the contracts for further period as per usual practice.

7.17.10 It is the primary responsibility of Generating Companies to ensure supply of fuel for operation of the plant However, the Commission, in the present Order, has reviewed the fuel arrangement to ensure the availability of plant. Further, TPC-G has tied up its capacity with BEST and TPC-D, which are supplying power to Consumers in Mumbai city. The Commission notes that TPC-G has entered into Fuel Supply arrangement for shorter period in view of uncertainty of PPAs. The existing Coal contracts are valid upto July & August 2020 and Gas Contract upto December 2020. There is limited time available for entering into Fuel Supply contract. Hence, the Commission directs TPC-G to enter into fuel supply contracts or arrangement so as to ensure the supply of fuel till the validity of PPA, i.e., upto March 31, 2024 through transparent process of Competitive Bidding. Further, TPC-G is directed to submit its Status report, on arrangement of Fuel Supply for future period, to the Commission within three (3) months from the date of this Order."

5.10 TPC-G's existing contracts for coal purchase expired in July 2020. Vide its letter dated 8 July, 2020, TPC-G informed that it has entered into coal contracts for 2.2 Million MT for two years from 1 August, 2020 onwards and further extendable by two years through competitive bidding. The Commission notes that the purchase of coal has been from the contracts entered into by TPC-G. The existing contracts which were approved by the Commission in the MYT Order as part of Fuel Utilisation Plan have expired and new contract have been entered through Competitive Bidding. Accordingly, the new contracts for purchase of imported coal will now be considered as part of Fuel Utilisation Plan. TPC-G has also signed contract with GAIL for supply of APM Gas for the period 7 July, 2021 to 6 July, 2026. It is observed that TPC-G has entered into contract to procure Indonesian origin coal with coal specifications similar to TPC-G's long term contracted coal, with price linked to ICI3 index and the same offers significant cost advantage over HBA pricing.

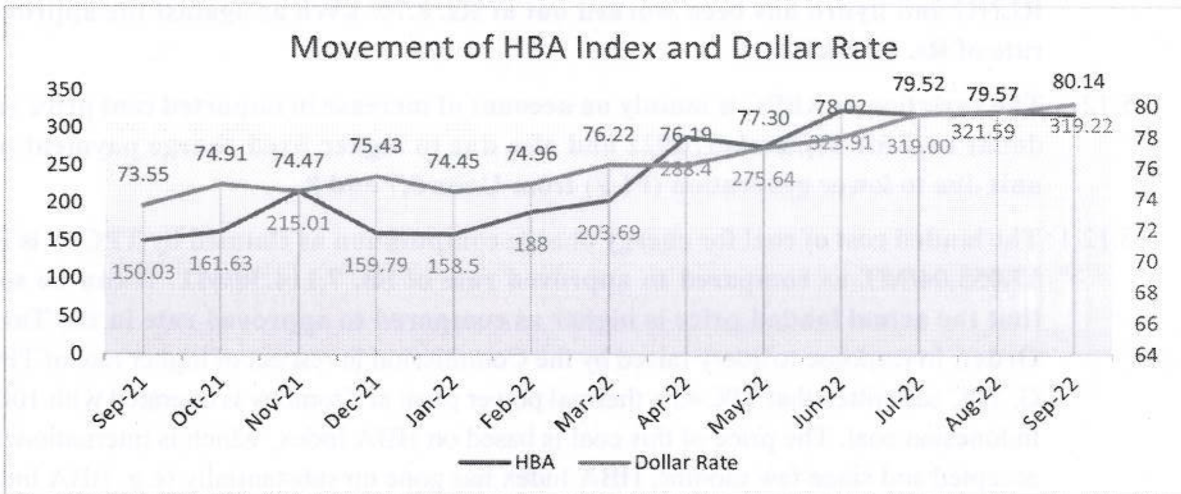
5.11 **The APPC for power procured from TPC-G, which generates power on Imported Coal, Domestic Natural Gas (under APM mechanism), Oil (LSHS), imported RLNG and hydro has been worked out at Rs. 8.76/ kWh as against the approved rate of Rs. 4.73/kWh.**

5.12 **The variation in APPC is mainly on account of increase in imported coal price and dollar rate for September, 2022 and also due to higher fixed charge payment per unit due to lower generation (PLF) from Units 5,7 and 8.**

5.12.1 **The landed cost of coal for energy charge computation as claimed by TPC-G is Rs. 17,053.04/MT as compared to approved rate of Rs. 7,114.30/MT. It can be seen that the actual landed price is higher as compared to approved rate in the Tariff Order.** In response to query raised by the Commission in respect of higher rate of TPC-G, TPC submitted that TPC-G's thermal power plant at Trombay is operated with 100% Indonesian coal. The price of this coal is based on HBA Index, which is internationally accepted and since few months, HBA Index has gone up substantially (e.g. HBA Index for June'22 – 323.91$/MT, July'22 – 319.00$/MT, August'22– 321.59$/MT and September'22 – 319.22$/MT) and as an effect imported coal prices have gone up, owing to which Trombay Cost of Generation has increased in month of September, 22. The Commission observes that there has been increasing trend in the imported coal price primarily attributed to demand supply position of the global coal market which is reflected in the HBA index for the last few months. It is seen that HBA index is more than 2 times as compared to September, 21. As mentioned above, TPC-G has also purchased Indonesian origin coal linked to ICI3 index in September 22 which is cheaper to optimise the cost. The Commission notes that MYT Regulations, 2019 permit use of alternate source of fuel for optimization of economical operation through blending. It is also observed that the price of APM Gas was Rs 29,628.04/SCM in September, 22 which is also higher than the approved rate of Rs. 18,183.36/SCM in MYT Order. The Commission notes that prices of APM Gas have increased due to increase in notified APM gas price from $2.90/MMBTU to $6.10/MMBTU from April, 22 by Ministry of Petroleum and Natural Gas, Government of India.

5.13 TPC-G mainly procures imported coal from Indonesian market. As per the Contract, the coal reference price is HBA index i.e., Harga Batubara Acuan for Indonesian coal which is set by Ministry of Energy and Mineral Resources (Indonesia). The Commission has sought for prevailing HBA index during the aforesaid period along with the detailed computation of FOB price at which the coal has been procured by TPC-G. The graph below shows the trend of HBA index which is considered by TPC-G for energy charge calculations. It can be observed that the HBA index has witnessed substantial increase from September, 2021. HBA index has after peak of 319.22 $/MT in September 2022. Also, the Dollar Exchange rate has witnessed a sharp surge in September 2022.

Figure 4: Movement of HBA indices and Dollar Rate



* - HBA indices at 6,322 kcal/kg GAR coal with 8% total moisture, 15% ash as received and 0.8% sulphur
$ - Dollar Rate source - www.x-rates.com (Average rate for the month for representation purpose and may not be a reference rate at which Coal is procured)

5.14 The Commission has also sought coal purchase bills considered for September, 2022. The Commission has scrutinised the bills submitted and computed the purchase price of coal for the month of September, 2022 as shown in Table below:

Table 7: Computation of Purchase price of Coal by TPC-G for the month of September 2022

Date	Invoice QTY	GCV	Invoice Rate	Coal Cost	Freight Rate	BF Correction	Freight Payable	Total Coal Cost	
	MT	kcal/kg	$/MT	$	$/MT	$/MT	$	$	$/MT
22-Aug-22	49670	5000	127.93	6354283	16.15	1.97	900020	7254304	146.05
27-Aug-22	55000	4895	203.87	11212850	16.15	2.10	1003750	12216600	222.12
05-Sep-22	48600	4100	76.15	3700890	16.15	1.53	859248	4560138	93.83
07-Sep-22	60191	4800	102.84	6190042	14.65	1.24	956435	7146477	118.73
Total	**213461**	**4712**	**128.63**	**27458066**	**15.73**	**1.70**	**3719453**	**31177519**	**146.06**

5.15 TPC-G has submitted the detailed coal computation for the coal purchase considered in September, 2022 and also the reconciliation of coal cost considered in Form F12 along with each coal invoice. The coal cost is arrived on the basis of Goods Receipt Note (GRN) in the SAP system which is dependent on the rate of coal purchase (in Rs./MT or USD/MT) considered at the time of coal order (PO) booking. However, the coal cost mentioned in the coal invoice is as per the base price of coal purchase (in Rs./MT or USD/MT) arrived on the basis of actual gross calorific value, Moisture content, Ash content, Sulphur content, HBA indices etc. Once the invoice is booked in the SAP system after GRN of full coal quantity of a shipment, the cost as per coal invoice gets booked against each shipment in the SAP system in order to make payment to the supplier. To facilitate this, the difference between coal cost in Goods Receipt Note (GRN) and coal cost in the invoice is booked as adjustment entry in the SAP. Hence, the coal inventory gets valued ultimately at the invoice values and at the coal purchase rate (in Rs./MT or USD/MT) prevailing on the date of billing.

5.16 Further, as the coal purchase during a month is generally not utilised in the same month, hence, there is a variation in above computed coal price vis-à-vis coal price as considered by TPC-G for energy charge calculations. The cost of coal for energy charge computation pertains to coal consumed during the respective months which is arrived based on the actual cost of coal inventory as well as the purchased coal cost received in the coal yard.

5.17 From the Table above, the basic purchase cost of imported coal including freight during the month of September, 2022 as per bills submitted worked out at USD 146.06/MT. TPC has booked Rs. 12,478.65/MT (i.e. Rs. 11,023.01/MT for Coal and Rs. 1,455.65/MT for freight). Also, other coal handling charges such as insurance, handling and wharfage charges, taxes and duties, clean energy cess and other miscellaneous charges considered by TPC-D are in line with the average prices approved in the previous quarters and accordingly, the total landed cost of coal arrived is Rs. 13,856.37/MT. Accordingly, the break-up of the cost as submitted by TPC-D and as considered by the Commission against the procurement of coal for the month of September, 2022 is as given below:

Table 8: Computation of Coal cost for the month of September 2022

Sr. No	Particular	Source / Formula	Units	As Submitted – Coal Cost	As Approved – Coal Cost
1	Basic Coal cost + Freight in Rs.	1 X 2	Rs./MT	12,478.65	12,478.65
2	Excise + Custom Duty + CE Cess+ Insurance	As submitted	Rs./MT	1,041.65	1,041.65
3	Handling and Wharfage	As submitted	Rs./MT	674.49	674.49
4	Other Fuel Handling Charges	As submitted	Rs./MT	400.13	400.13
5	Other Adjustment	As submitted	Rs./MT	(738.55)	(738.55)
6	Total as per Form 12	Sum (3:7)	Rs./MT	13,856.37	13,856.37

5.18 Apart from above, the Commission has also sought for third party sampling report for GCV verifications. TPC has submitted the third-party sampling certificate for the respective period. The Commission has verified the document submitted and found to be in order. TPC has also considered the stacking loss as per norms approved by the Commission while computing the Energy Charges.

5.19 It is observed that there is difference in coal cost considered in Form 11 and Form 12. TPC-D submitted that the difference in the cost is due to Foreign exchange variation due to difference in dollar rate at the time of booking of Purchase Order and the actual payment made to vendor and the employee cost. Accordingly, the coal consumption cost considered by the Commission as per Form 11 is as given below:

Table 9: Coal Consumption Cost for the month of September 2022 of TPC-G

Particulars	Units	TPC Submission	As Approved
Form F12 - Coal Consumption Cost	Rs/MT	15,270.66	15,270.66
Foreign Exchange Rate Variation	Rs/MT	1,753.16	1,753.16
Employee Cost	Rs/MT	29.91	29.91
Form F11 - Coal Consumption Cost	Rs/MT	17,053.04	17,053.04

5.20 **In view of the above, the Commission has considered APPC of Rs 8.76/kWh as against approved rate of Rs. 4.73/kWh for power purchased from TPC-G. The APPC varies due to increase in imported fuel price resulting in higher variable cost of Unit-5 & 8, and higher Fixed Cost/unit of power purchased from Unit-7 due to lower generation.**

5.21 Variation in power purchase expenses from TPC-G can be divided on account of change in quantum and per unit rate as follows:

Month	Increase in Expenses for power purchase from TPC-G (Rs. Crore)		
	On Account of change Quantum of Power Purchase	On Account of change in Per Unit rate of Power Purchase	Total
September 2022	(46.25)	118.02	71.78

Out of above, variation on account of increased per unit rate is only considered for FAC computation.

<u>Manikaran Power Limited (Medium Term PPA)</u>

5.22 The Commission in its Order in Case No. 249 of 2018 dated 2 January, 2019, allowed BEST to tie up 100 MW Power with M/s. Manikaran Power Ltd. through M/s. Sai Wardha Power Generation Ltd for 5 years from 1 April, 2019 to 31 March, 2024 and accordingly Medium Term PPA was signed on 24 May 2019.

5.23 The Commission has noted that there was delay in signing of agreement along with subsequent events as stated by BEST in its MYT Order which has led to the power supply not commencing on 1 April, 2019. However, the power supply has started from April 2020 which was envisaged at the time of issue of Tariff Order.

5.24 As submitted by BEST, it has purchased 38.02 MU at average rate of Rs. 3.97/kWh as against approved rate of Rs. 4.46/kWh. The reduction in rate is due to damages applied as per clause 11.6.2 of PPA as the availability of power for the month of September 2022 was 53.37%, which is lower than normative availability of 85% PAF. This has resulted in shortfall of 6.42 MU for the month of September 2022. The damages for lower availability were payable at the rate of 25% of the Fixed Charge i.e. 50 paise per unit against the shortfall unit. The relevant clause of the PPA is reproduced herein below -.

"11.6.2 In the event that Availability in any month is less than the Normative availability, the fixed charge for such month shall be reduced to the extent of shortfall in Normative Availability and in addition, any reduction below the Normative Availability shall be multiplied by a factor of 0.25 (zero point two five) to determine the Damages payable for such reduction in Availability. For the avoidance of doubt, the parties agree that the damages to be deducted for any reduction in Normative availability shall be 25% (Twenty Five Percent) of the Fixed Charge which is reduced on account of shortfall in Availability below Normative availability".

5.25 Accordingly, the Commission has considered the said purchase from Manikaran Power Limited for the month of September 2022 as per invoice submitted by BEST. The details of approved v/s actual are as shown in the table below:

Table 10: Power Procurement from Manikaran Power Limited for the month of September 2022

Source	Power Purchase Quantum (MU)	Fixed Cost (Rs. Crore)	Fixed Cost (Rs./kWh)	Variable Cost (Rs. Crore)	Variable Cost (Rs. /kWh)	Total Cost (Rs. Crore)	APPC (Rs. /kWh)
Approved	62.05	14.70	2.37	12.97	2.09	27.67	4.46
Actual	38.02	7.92	2.08	7.18	1.89	15.10	3.97

5.26 Variation in power purchase expenses from Manikaran Power Limited (MPL) can be divided on account of change in quantum and per unit rate as follows:

Month	Increase in Expenses for power purchase from MPL (Rs. Crore)		
	On Account of change Quantum of Power Purchase	On Account of change in Per Unit rate of Power Purchase	Total
September 2022	(9.54)	(3.03)	(12.57)

Out of above, variation on account of increased per unit rate is only considered for FAC computation.

<u>Renewable Sources</u>

5.27 BEST has entered into Long term PPA for 20 MW with M/s Walwahn Solar MH Ltd (earlier Welspun) to meet its Solar RPO. The Commission in the Tariff Order has approved the purchase of solar power from the said PPA at Rs. 8.56/kWh.

5.28 **BEST has purchased 2.10 MU of Solar Power at Rs 8.56/kWh for September 2022 from M/s. Walwahn Solar MH Ltd.** The Commission has verified the said purchase from the invoice submitted by BEST and has accordingly considered the said solar purchase for FAC.

5.29 Apart from the above approved power procurement source from Walwahn Solar MH Ltd., no additional Long term Solar and Non-Solar power has been procured under bidding route for the month of September 2022. Also, the Commission notes that BEST has not purchased any solar/non-solar REC and solar/non-solar power under GTAM and GDAM in the month of September 2022.

5.30 As per the Tariff order dated 30 March 2019, the Commission has approved the purchase of solar energy at generic tariff of Rs. 2.90 per kWh and non-solar energy at generic tariff of Rs. 2.87 per kWh from FY 2022-23 onwards. However, it was observed that no additional quantum of Solar and Non-Solar Power has been procured by BEST. However, BEST has initiated the process of renewable power procurement through SECI Bid of 400 MW Hybrid RE project, whereby in Case No. 16 of 2021, the Commission has adopted tariff at Rs. 2.41/kWh plus trading margin of Rs. 0.07/kWh. With respect to 400 MW Hybrid RE project, BEST in Case No. 46 of 2022 has submitted that anticipated flow of power shall be from February 2023 onwards, and hence no additional RE power has been sourced. Further, the Commission in its Order dated 30 November 2022 in Case No 120 of 2022 has approved PPA for 234 MW of solar power with SECI. This will also help in meeting the RPO target of BEST.

5.31 Accordingly, as submitted by BEST, it has purchased overall renewable power of 2.10 MU at average rate of Rs. 8.56/kWh as against approved rate of Rs. 3.09/kWh.

5.32 Variation in power purchase expenses from RE Sources can be divided on account of change in quantum and per unit rate as follows:

Month	Increase in Expenses for power purchase from RE Sources (Rs. Crore)		
	On Account of change Quantum of Power Purchase	On Account of change in Per Unit rate of Power Purchase	Total
September 2022	(58.10)	38.24	(19.86)

Out of above, variation on account of increased per unit rate is only considered for FAC computation.

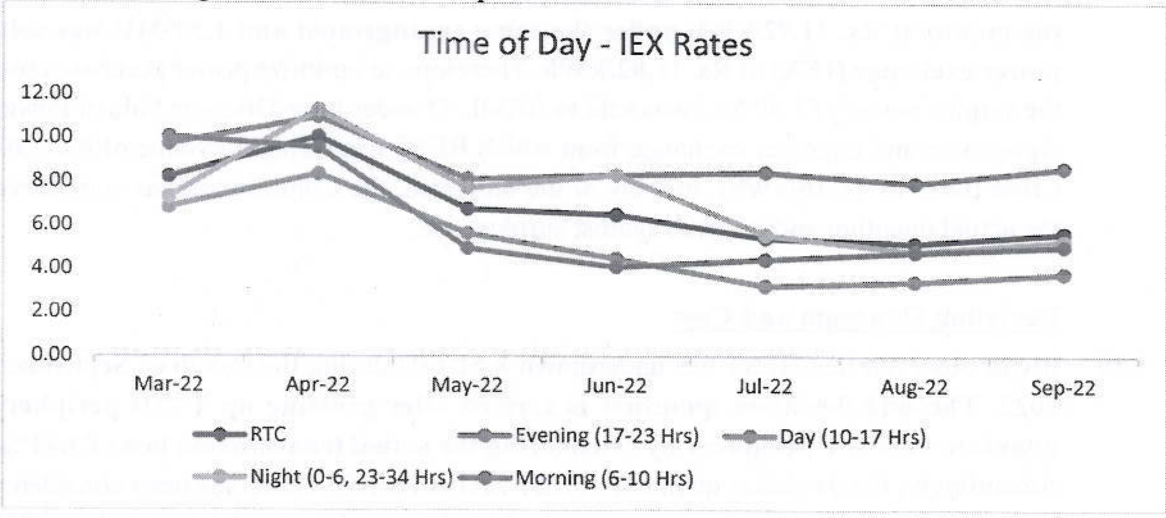
Short Term Purchase

5.33 **With regards to short term purchase, BEST has purchased 120.19 MU at an average rate of Rs. 5.31/kWh.** The overall power purchased from Power Exchange was about 30.83% of Net power procured during the month of September, 2022 mainly to meet the shortfall during day-time.

5.34 BEST has purchased 48.16 MU at Rs. 5.27/kWh and 60.88 MU at Rs. 4.92/kWh from DAM and RTM respectively through IEX in the month of September 2022. Further, it has also purchased 4.27 MU at Rs. 7.50/kWh from Tata Power Trading Company Limited through Prayagraj Power Generation Company Limited (PPGCL) and 6.87 MU at Rs. 7.68/kWh from Tata Power Trading Company Limited through Jindal Power Limited (JPL) in bilateral market through competitive bidding. The Commission, vide order dated 24 August, 2022 in Case No. 151 of 2022 has approved power procurement on short term basis for the period from August 2022 to December 2022 at weighted average rate of Rs. 7.72/kWh.

5.35 The market trend of past six months has been provided in the following graph with different time slot whereby it can be witnessed that from March 2022 onwards, the price has witnessed an upward trend in peak hours and is above Rs. 3.00 per unit.

Figure 5: Price Trend of past months at IEX for different time slots



5.36 Considering the upward trend of prices in the short-term market, the Commission has approved the short-term purchase by BEST for September, 2022.

<u>**Sale of Power**</u>

5.37 The Commission has observed that BEST and AEML-D has executed the agreement of Inter-Discom Sale of Power under MERC (Deviation Settlement Mechanism and Related Matters) Regulations, 2019 read with Scheduling and Dispatch code, which interalia provides guiding principles for exchange of power between utilities on Day-ahead and Intra-day basis.

<u>" Para 6.3 of Statement of Reasons of DSM Regulations, 2019</u>

6. 3. ..... Accordingly, the Commission has modified the provisions such that, such inter-se or bilateral sale / purchase of power on day to day basis may be undertaken by respective licensee entirely at the discretion and time block wise rate for settlement of such inter-se exchange of unrequisitioned surplus power for load generation balance during day ahead scheduling may be mutually agreed.

It is expected that these decisions shall be taken by the distribution licensees on the commercial principles."

<u>Para 8.4.10 and 8.4.11 of Scheduling and Despatch Code:</u>

8.4.10 As the sellers have contracted their generation capacity through long term / medium term contract with buyers, such exchange of available surplus capacity shall be effected inter-se amongst buyers without need to amend existing PPAs with their respective sellers.

8.4.11 MSLDC shall maintain and publish separate account of exchange of surplus power capacity if any amongst the buyers / distribution licensees."

5.38 **Accordingly, BEST has done sale of surplus power to the extent of 0.28 MU during the month at Rs. 11.92/kWh under the same arrangement and 1.52 MU was sold power exchange (IEX) at Rs. 11.02/kWh.** Therefore, to optimize power purchase cost, the surplus power of 1.80 MU was sold to AEML-D under Inter-Discoms Sale of Power Agreement and to power exchange from which BEST has earned Revenue of Rs. 2.01 Crore (i.e., Rs. 11.16/kWh). In view of the aforesaid, the Commission has considered the actual quantum and revenue against surplus sale.

Deviation Quantum and Cost

5.39 It was observed that BEST has underdrawn 8.51 MU during the month of September, 2022. **The said deviation quantum is arrived after grossing up T<>D periphery quantum to G<>T periphery by considering the actual transmission loss of 3.41%.** Accordingly, the deviation quantum of 8.51 MU at Rs 2.95 Crore has been considered as per provisional weekly invoice raised by MSLDC for the period 1 September, 2022 to 30 September, 2022. Further, it is observed that TPC-G has not considered DSM and ADSM charges for calculation of energy charges as well as fixed charges. Also, BEST has considered only DSM charges and not considered ADSM charges for calculation of power purchase cost for deviation quantum.

5.40 **In view of the same, the Commission has considered total deviation quantum of 8.51 MU (Underdrawl), which contributes to around 2.18% of the total power procurement, for Rs 2.95 Crore.**

Approved Cost of Power Purchase

5.41 In view of the above, the overall cost approved in the Tariff Order and actual for the month of September, 2022 considered by the Commission is as shown below:

Table 11: Approved Power Purchase Cost for the month September 2022

Particulars	Source	Power Purchase Quantum (MU)	Fixed Cost (Rs. Crore)	Fixed Cost (Rs. /kWh)	Variable Cost (Rs. Crore)	Variable Cost (Rs. /kWh)	Total Cost (Rs. Crore)	APPC (Rs. /kWh)
TPC-G	Approved	292.58	36.93	1.26	101.48	3.47	138.41	4.73
	Actual	239.82	36.93	1.54	173.26	7.22	210.19	8.76
Manikaran Power	Approved	62.05	14.70	2.37	12.97	2.09	27.67	4.46
	Actual	38.02	7.92	2.08	7.18	1.89	15.10	3.97
Renewable Power	Approved	69.97	-	-	21.65	3.09	21.65	3.09
	Actual	2.10			1.80	8.56	1.80	8.56
REC	Approved	-	-	-	-	-	-	-
	Actual	-	-	-	-	-	-	-
Short Term Purchase	Approved	-	-	-	-	-	-	4.00
	Actual	120.19			63.81	5.31	63.81	5.31
Sale of Power	Approved	-	-	-	-	-	-	-
	Actual	(1.80)			(2.01)	11.16	(2.01)	11.16
Deviation Quantum	Approved	-	-	-	-	-	-	-
	Actual	(8.51)	-	-	(2.95)	3.46	(2.95)	3.46

Particulars	Source	Power Purchase Quantum (MU)	Fixed Cost (Rs. Crore)	Fixed Cost (Rs. /kWh)	Variable Cost (Rs. Crore)	Variable Cost (Rs. /kWh)	Total Cost (Rs. Crore)	APPC (Rs. /kWh)
Total	Approved	424.60	51.63	1.22	136.10	3.21	187.73	4.42
	Actual	389.81	44.85	1.15	241.09	6.18	285.94	7.34

5.42 **Considering the above submission, the Commission allows the power purchase quantum of 389.81 MU for total cost of Rs. 285.94 Crore at average power purchase cost of Rs. 7.34/kWh for the month of September, 2022 as shown in Table above. The actual purchase for same month in FY 2021-22 i.e., September, 2021 was 425.10 MU and power purchase cost was Rs. 214.19 Crore with APPC of Rs. 5.04/kWh.**

Summary

5.43 **To summarise, BEST has optimised its overall power purchase cost by selling the surplus power of quantum 2.73 MU in IEX at Rs. 11.16/kWh and by procuring power from Manikaran Power Limited of quantum 38.02 MU at Rs. 3.97/kWh.**

5.44 **However, the overall average power procurement cost has increased due to increase in variable cost for power procurement from TPC Unit 5 & 8 cause of increase in imported coal price coupled with higher dollar rate fluctuations and higher per unit fixed charges for power procured from TPC-G purchase due to lower PLF of Unit 5, 7 and 8, lower availability of cheaper power from Manikaran Power Limited, short term power procurement at the rate of Rs. 5.31/kWh and no additional renewable power procurement through competitive bidding as envisage in the tariff order.**

6. FAC on account of fuel and power purchase cost (F)

6.1 The Commission has worked out the average power purchase cost for the month of September, 2022 as shown in above table. The same has been compared with the average power purchase cost approved by the Commission in Tariff Order dated 30 March, 2020 and accordingly arrived at differential per unit rate at which Z_{FAC} is to be passed on to the consumers.

6.2 It is noted that BEST has incurred the per unit Power Purchase cost which is higher than the limits Approved per unit Power Purchase Cost hence the Z_{FAC} September, 2022 is positive as shown in the Table below.

Table 12: Computed Z_{FAC} for the month of September 2022

S. No.	Particulars	Units	September 2022
1	Average power purchase cost approved by the Commission	Rs./kWh	4.42

S. No.	Particulars	Units	September 2022
2	Actual average power purchase cost	Rs./kWh	7.34
3	Change in average power purchase cost (=2 -1)	Rs./kWh	2.91
4	Net Power Purchase	MU	389.81
5	**Change in fuel and power purchase cost (=3 x 4/10)**	**Rs. Crore**	**113.58**

7. Adjustment for over recovery/under recovery (B)

7.1 The adjustment for over recovery/under recovery has to be done for the (n-4)th month as per provisions of MYT Regulations, 2019. As FAC levied for the month of July 2022 was nil, there would not be any adjustment factor for the month of September, 2022 while computing the allowable FAC.

8. Carrying Cost for over recovery/under recovery (B)

8.1 As explained in the above paragraph in absence of any adjustment factor for previous month, there is no carrying cost which is to be allowed in FAC for the month of September, 2022.

9. Disallowance due to excess Distribution Loss

9.1 Regulation 10.8 of MYT Regulations, 2015 provides for FAC amount to be reduced in case the actual distribution loss for the month exceeds the approved distribution loss. The relevant extract is reproduced as follows.

"10.8 The total Z_{FAC} recoverable as per the formula specified above shall be recovered from the actual sales in terms of "Rupees per kilowatt-hour":

Provided that, in case of unmetered consumers, the Z_{FAC} shall be recoverable based on estimated sales to such consumers, computed in accordance with such methodology as may be stipulated by the Commission:

Provided further that, where the actual annual sliding distribution losses of the Distribution Licensee exceed the level approved by the Commission, the amount of Z_{FAC} corresponding to the excess distribution losses (in kWh terms) shall be deducted from the total Z_{FAC} recoverable"

9.2 The following table provides the comparison of approved and actual distribution loss and disallowance due to excess distribution loss if any.

Table 13: Distribution Loss for the month of September 2022

S. N	Particulars	Units	Approved in Tariff Order	September – 2022 Actual	Cumulative Actual April - 2022 to September - 2022	Annual Sliding Loss – October - 2021 to September - 2022
1	Net Energy Input at Distribution Voltage	MU	4,933.20	389.30	2,496.93	4,572.99
2	BEST Retail Sales	MU	4,726.99	388.34	2,407.52	4392.82
3	Distribution Loss (1 - 2)	MU	206.21	0.97	89.41	180.17
4	Distribution Loss as % of net energy input (3/1)	%	4.18%	0.25%	3.58%	3.94%
5	Excess Distribution Loss = [Actual Distribution Loss (4) - Distribution loss approved (4)] x Net Energy Input (1)	MU	-	-	-	-
6	**Disallowance of FAC due to excess Distribution Loss**	**Rs. Crore**	**0.00**	**0.00**	**0.00**	**0.00**

9.3 As seen from the above table, for the month of September, 2022 the standalone distribution loss is positive and lower than the approved distribution loss. BEST has stated that by considering net energy input at distribution voltage of 389.30 MU for the month of September, 2022 and actual energy sales of 388.34 MU for the month of September, 2022, the Standalone Actual Distribution Loss works out to 0.25%, however annual sliding distribution loss (from October, 2021 to September, 2022) works out to 3.94%, which is lower than the approved distribution loss. BEST has also stated that the standalone distribution loss for the month may give erratic figure due to consideration of energy sales with different bill generation period. However, the cumulative sliding distribution loss of last 12 months may give figure near to target distribution loss. Hence, to determine the actual distribution loss for a month, sum of purchase and sales for a period of 12 months is required to be considered. Also, it is observed that cumulative loss of 3.58% up to September, 2022 as per the related financial year and annual sliding distribution loss of 3.94% for the period October, 21 to September, 22 is lower than approved loss.

9.4 Further, the comparison of standalone Distribution Loss for the September, 2022 as compared to last year is as given below:

Table 14: Monthly Distribution Loss of FY 2021-22 and FY 2022-23

Particulars	FY 2022-23	FY 2021-22
Approved Loss	**4.18%**	**4.18%**
April	11.09%	2.65%
May	3.26%	4.30%
June	1.83%	3.15%
July	2.10%	8.47%
August	2.84%	2.87%
September	0.25%	2.19%
Cumulative upto September	**3.58%**	**3.96%**

9.5 **It is observed that annual sliding Distribution Loss of 3.94% is lower than the approved loss of 4.18%. Accordingly, the Commission has not worked out any disallowance on account of Distribution Loss for the month of September, 2022.**

10. Summary of Allowable ZFAC

10.1 The summary of the FAC amount as approved by the Commission for the month of September, 2022 is as shown in the Table below.

Table 15: Summary of Allowable Z_{FAC} for September, 2022

S. No.	Particulars	Units	September 2022 - As per BEST	September 2022 - As Approved
1	**Calculation of ZFAC**			
1.1	Change in cost of generation and power purchase attributable to Sales within the License Area (F)	Rs. Crore	113.57	113.58
1.2	Carrying cost for over-recovery/under-recovery (C)	Rs. Crore	0.04	-
1.3	Adjustment factor for over-recovery/under-recovery (B)	Rs. Crore	5.53	-
1.4	**ZFAC = F+C+B**	Rs. Crore	119.15	113.58
2	**Calculation of Per Unit FAC**			
2.1	Energy Sales within the License Area	MU	388.34	388.34
2.2	Excess Distribution Loss	MU	-	-
2.3	ZFAC per kWh	Rs./kWh	3.07	2.92
3	**Allowable FAC**			
3.1	FAC disallowed corresponding to excess Distribution Loss [(2.2 x 2.3)/10]	Rs. Crore	0.00	0.00
3.2	FAC allowable [1.4-3.1]	Rs. Crore	119.15	113.58
4	**Utilization of FAC Fund**			
4.1	Opening Balance of FAC Fund	Rs. Crore	420.30	204.16
4.2	Carrying Cost on FAC Fund	Rs. Crore	3.19	1.56
4.3	Z_{FAC} for the month (Sr. N. 3.2)	Rs. Crore	119.15	113.58
4.4	Closing Balance of FAC Fund	Rs. Crore	542.64	319.30
4.5	Z_{FAC} leviable/refundable to consumer	Rs. Crore	542.64	319.30
5.0	Energy Sales within the License Area	MU	388.34	388.34
6.0	ZFAC per kWh [(4.5/5.0)*10/5]	Rs./kWh	13.97	8.22
7.0	**Total FAC based on category wise and slab wise allowed to be recovered in the billing month of January 23. February 23 and March 23**	**Rs. Crore**	114.31	114.31
8.0	**Carried forward FAC for recovery during future period (4.5-7.0)**	**Rs. Crore**	428.33	204.99

10.2 BEST has considered the carrying cost considering the MCLR + 150 basis points. This turns out to be 9.20% for September 2022 and carrying cost of Rs. 3.19 Crore has been computed by BEST. The Commission has computed and approved the carrying cost of

Rs. 1.56 Crore considering the opening balance of Rs. 204.16 Crore. The carrying cost as calculated will be contributed to the FAC fund and is outlined as below:

Table 16: Calculation of Carrying Cost for the month of September 2022

Calculation of Carrying Cost	
Month	**September-22**
Op. Balance	203.40
FAC amount for the Month after disallowance of distribution loss	113.58
Cl. Balance	316.98
Interest Rate	9.20%
Interest for the month -September 22	1.56
Cumulative Interest till previous month -August 22	0.76
Cumulative Interest till Current Month	2.32
Total	**319.30**

10.3 **It can be seen from the above table that standalone FAC for the month of September, 2022 is Rs. 113.58 Crore. As the FAC is positive, the said amount is added to the existing FAC Fund. Accordingly, the total FAC Amount to be recovered is Rs 319.30 Crore.**

11. Recovery from Consumers:

11.1 Regulation 10.9 of MYT Regulations, 2019 provides for methodology of recovery of FAC charge from each category of consumers. The relevant extract is reproduced as below.

"10.9 The ZFAC per kWh for a particular Tariff category/sub-category/consumption slab shall be computed as per the following formula: —

*$Z_{FAC\ Cat}$ (Rs/kWh) = [Z_{FAC} / (Metered sales + Unmetered consumption estimates + Excess distribution losses)] * k * 10,*

Where:

$Z_{FAC\ Cat}$ = Z_{FAC} component for a particular Tariff category/sub-category/consumption slab in 'Rupees per kWh' terms;

k = Average Billing Rate / ACOS;

Average Billing Rate = Average Billing Rate for a particular Tariff category/sub-category/consumption slab under consideration in 'Rupees per kWh' as approved by the Commission in the Tariff Order:

Provided that the Average Billing Rate for the unmetered consumers shall be based on the estimated sales to such consumers, computed in accordance with such methodology as may be stipulated by the Commission:

ACOS = Average Cost of Supply in 'Rupees per kWh' as approved for recovery by the Commission in the Tariff Order:

Provided that the monthly Z_{FAC} shall not exceed 20% of the variable component of Tariff or such other ceiling as may be stipulated by the Commission from time to time:

Provided further that any under-recovery in the Z_{FAC} on account of such ceiling shall be carried forward and shall be recovered by the Distribution Licensee over such future period as may be directed by the Commission…."

11.2 The Commission had invoked power of removing difficulties under MYT Regulation, 2019 and made following changes for computation of FAC.

8.2.15.4 Therefore, using its powers for Removal of Difficulties under Regulations 106 of MYT Regulations, 2019, the Commission is making following changes in FAC mechanism stipulated under Regulation 10 of MYT Regulations, 2019:

a. Distribution Licensee shall undertake computation of monthly FAC as per Regulation 10 of the MYT Regulations, 2019 except for treatment to be given to negative FAC as follows:

i. Negative FAC amount shall be carried forward to the next FAC billing cycle with holding cost.

ii. Such carried forward negative FAC shall be adjusted against FAC amount for the next month and balance negative amount shall be carried forward to subsequent month with holding cost.

iii. Such carry forward of negative FAC shall be continued till the accumulated negative FAC becomes 20% of monthly tariff revenue approved by the Commission in Tariff Order. In case of BEST such limit shall be Rs. 59 Crore. Any accumulated amount above such limit shall be refunded to consumers through FAC mechanism.

iv. In case such FAC Fund is yet to be generated or such generated fund is not sufficient to adjust against FAC computed for given month, then Distribution Licensee can levy such amount to the consumers through FAC mechanism.

11.3 Accordingly, the Commission allows the FAC amount of Rs. 113.58 Crore for the month of September, 2022 to be added to the FAC fund.

11.4 The Commission in its approval for the month of August, 2022, has directed BEST to carry forward the approved FAC amount of Rs. 204.16 Crore to be accumulated as FAC Fund to be carried forward to the next billing cycle.

11.5 **Accordingly, the approved FAC amount of Rs. 113.58 Crore for the month of September 2022 and the same after being added to the existing FAC fund of Rs. 204.16 Crore**, the total balance amount along with the carrying cost to be recovered is Rs. 319.30 Crore.

11.6 **The Commission in its letter dated 5 April 2022 has indicated that positive FAC amount for the period of three months will be accumulated and allowed to be recovered equally in next three months. The Commission, in its FAC approval for June 22 has allowed FAC recovery in five months (August 22 to December 22) considering the ceiling limit of FAC recovery of 20% and balance amount of Rs. 206.89 Crore was carried forward for recovery from January 23 onwards. Since there is positive FAC for the three months from July 22 to September 22, the same has to be recovered from November 22 to January 23. However, earlier FAC recovery has already hit the ceiling limit up to December 22. Further, BEST has filed its MTR Petition wherein the revised Tariff has been sought from April 2023 onwards. Hence, the accumulated FAC amount of Rs. 319.30 Crore has to be allowed to be recovered in three months equally i.e., from January 23 to March 23. The said recovery of Rs. 106.43 Crore per month will exceed the 20% ceiling of variable component of tariff of Rs. 38.10 Crore as specified in MYT Regulations. In addition, there would be unrecovered amount of Rs. 204.99 Crore for FY 2022-23 at the end of March 23. The Commission notes that on the MTR Petition filed by BEST, there would be provisional true-up of FY 2022-23 wherein the Commission will approve the revised power purchase cost as per actuals of H1 (Apr to Sep) and revised estimates of H2 (Oct to Mar). Thus, the revised total power purchase cost will be approved in the MTR Order. Accordingly, the Commission is of the view that any unrecovered FAC at the end of March 23 will get subsumed in the provisional true-up of FY 2022-23 and any gap arising thereof will be allowed to be recovered in tariff of FY 2023-24.**

11.7 **In view of the above, the Commission in allowing the recovery of FAC Fund at the end of September 22 over three months from January 23 to March 23 and any unrecovered amount at the end of March 23 will get adjusted in provisional true-up of FY 2022-23. Thus, the total amount to be allowed to be recovered is as given below:**

Particulars	Amount in Rs. Crore
Closing Balance as on September 2022	319.30
Unrecovered FAC carried forward in June 22 along with carrying cost (Rs. 206.89 Cr. + Rs. 7.46 Cr.)	214.35

Particulars	Amount in Rs. Crore
Carrying cost from November -22 and December -22 (Since recovery allowed from January-23 instead of November-22)	4.86
Total Closing Balance as on September 2022 recoverable from January 2023 onwards	**538.50**

11.8 If the aforesaid amount of Rs. 538.50 Crore is allowed to be recovered in three months from January 23 to March 23, it would exceed ceiling limit of 20%. Accordingly, the Commission has allowed recovery of Rs. 38.10 Crore per month considering the ceiling at 20% of the variable component of tariff. The Commission has allowed the equal recovery to avoid tariff variation every month to the Consumers. The total estimated recovery for three months considering the ceiling is Rs. 114.31 Crore. The balance amount of Rs. 424.19 Crore along with carrying cost will get subsumed in the provisional true-up of FY 2022-23 and any gap arising thereof will be allowed to be recovered in tariff of FY 2023-24.

11.9 In view of the above, the per unit Z_{FAC} for the month of September, 2022 to be levied on the consumers of BEST in the billing month of January 2023, February 2023 and March 2023 is given below. The rate of FAC is rounded for Rs. 0.05 as per letter dated 5 April, 2022. Therefore, same may be reconciled in the next approvals on under/over recovery:

Category	Z_{FAC} for the month of September 2022 to be levied in January 2023, February 2023 and March 2023
	(Rs/kWh, Rs/kVAh – as Applicable)
HT CUSTOMERS	
HT - I Industry	0.95
HT - II Commercial	1.10
HT - III Group Housing	0.95
HT - IV Railways, Metro, Monorail	1.05
HT-V (A) Public Services (Govt. Hospitals and Educational Institutions)	1.00
HT-V (B) Public Services (Others)	1.05
HT-VI Electrical Vehicle Charging	0.00
LT CUSTOMERS	
LT - I (A) Residential (BPL)	0.25
LT - I (B) Residential	
- S1 0-100 units	0.35
- S2 101-300 units	0.85
- S3 301-500 units	1.20

Category	Z_{FAC} for the month of September 2022 to be levied in January 2023, February 2023 and March 2023 (Rs/kWh, Rs/kVAh – as Applicable)
- S4 > 500 units	1.40
LT - II (a) Commercial	1.00
LT - II (b) Commercial >20kW & <=50kW	1.00
LT - II (c) Commercial >50kW	1.05
LT - III (A) Industry (upto 20kW)	0.90
LT - III (b) Industrial (above 20kW)	1.00
LT-IV (A) Public Services (Govt. Hospitals and Educational Institutions)	0.85
LT-IV (B) Public Services (Others)	0.90
LT-V (A) Agriculture-Pumpsets	0.00
LT-V (B) Agriculture-Others	0.75
LT-VI Electrical Vehicle Charging	0.75