

MAHARASHTRA ELECTRICITY REGULATORY COMMISSION
World Trade Centre, Centre No.1, 13th Floor, Cuffe Parade, Mumbai 400 005
Tel. No. 022 22163964/65/69 – Fax 022 22163976

E-mail: mercindia@merc.gov.in

Website: www.merc.gov.in

Ref. No. MERC/Tech/FAC/2020-21/E-Letter

Date: 18 June,2020

To,

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

Subject: Post facto approval of BEST Undertaking’s Fuel Adjustment Charges (FAC) for the period from April, 2019 to June, 2019.

Reference: BEST Undertaking’s submission for post-facto approval of FAC for the period from April, 2019 to June, 2019.

Sir,

Upon vetting the FAC calculations for the month of April, 2019 to June, 2019 as mentioned in the above reference, the Commission has accorded post facto approval BEST Undertaking for charging FAC to its consumers as shown in the Table below:

Month	April, 2019	May, 2019	June, 2019
FAC allowed (Rs. Crore)	9.44	15.11	37.16

BEST has computed total FAC of Rs. 41.82 Cr. for June, 2019 (Rs. 39.71 Cr. for the month and Rs. 2.11 Cr. for carry forward FAC) against which the Commission has approved Rs. 39.96 Cr. (Rs. 37.16 Cr. for the month and Rs. 2.79 Cr. for carry forward FAC) thus Rs. 1.86 Cr. is disallowed which is explained in detail at Paras. 9.3, 9.4, 9.5 and 11 of the enclosed Report. Since the recovery of this amount is already done, the above adjustment will be rolled over in next FAC approvals (i.e., FAC of Q2 of FY 2019-20) and finally would be adjusted in the final True up of FY 2019-20.

As FY 2019-20 is already over and provisional True-up of FY 2019-20 has also been done in recent MYT Order dated 30 March, 2020, the rationale for post facto approval of Q1 of FY 2019-

20 is only to carry forward the allowance or disallowance to next quarter and subsequently to Q4 of FY 2019-20. Any variation in final allowance or disallowance of FAC will be reconciled at the time of final True-up of FY 2019-20 under the MERC (Multi Year Tariff) Regulations, 2015.

Yours faithfully,
Sd/-
(Prafulla Varhade)
Director (EE), MERC



Encl: Annexure A: Detailed Vetting Report for the period of April, 2019 to June, 2019.

**POST FACTO APPROVAL FOR FAC FOR THE MONTH OF APRIL, 2019 TO JUNE,
2019**

Subject: Post facto approval of BEST Undertaking's Fuel Adjustment Charges (FAC) for the period from April, 2019 to June, 2019.

Reference: BEST Undertaking's submission dated 30 October 4 November, 2019 and 25 May 2020 for post-facto approval of FAC for the period from April, 2019 to June, 2019.

1. FAC submission by BEST Undertaking:

1.1 BEST Undertaking has submitted FAC submissions for the month of April, 2019 to June, 2019 as referred above. Upon vetting the FAC calculations, taking cognizance of all the submissions furnished by BEST Undertaking, the Commission has accorded post facto approval for the FAC amount to be charged in the billing month of April, 2019 to June, 2019.

2. Background

2.1 On 28 October, 2016, the Commission has issued Tariff Order for BEST Undertaking, (Case No.33 of 2016) for Truing-up of Aggregate Revenue Requirement (ARR) for FY 2012-13 to FY 2014-15, provisional Truing-up of FY 2015-16 and ARR and Tariff for FY 2016-17 and FY 2019-20. Revised Tariff has been made applicable from 1 October, 2016.

2.2 On 12 September, 2018, the Commission has issued Tariff Order for BEST Undertaking, (Case No.203 of 2017) for Mid-Term Review, including Truing-up of FY 2015-16 and FY 2016-17, provisional Truing-up for FY 2017-18, and revised Aggregate Revenue Requirement and Tariff for FY 2018-19 to FY 2019-20. Revised Tariff has been made applicable from 1 September, 2018.

2.3 Vide its letter dated 15 November, 2016, the Commission communicated the excel formats for filing of FAC submissions to all Distribution Licensees. The Commission also directed all Distribution Licensees to submit FAC computations, including details pertaining to variation in fuel cost of generators for the approval of the Commission.

2.4 Vide FAC vetting Report dated 4 January, 2017, the Commission accorded prior approval of the FAC for the month of October, 2016.

2.5 In terms of MERC (MYT) Regulations, 2015 a Distribution Licensee is required to obtain post facto approval of the Commission on a quarterly basis for FAC charges. Accordingly, vide its letter dated 30 October and 4 November, 2019 and 25 May 2020, BEST Undertaking

has filed FAC submissions for the month of April, 2019 to June, 2019 for post facto approval. The Commission has scrutinized the submissions provided by BEST Undertaking 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 Undertaking in the FAC submission and as approved by the Commission are as shown in the Table below.

Consumer Category	Approved by the Commission (MU)	Monthly Approved (MU)	Actual (April-19) (MU)	Actual (May-19) (MU)	Actual (June-19) (MU)
	(I)	(II=I/12)	(III)	(IV)	(V)
LT Category					
LT - I (A) Residential-BPL	0.58	0.05	0.00	0.00	0.00
LT - I (B) Residential	2,188.19	182.35	196.59	208.00	186.91
LT - II (A) Commercial	977.00	81.42	83.50	85.76	75.98
LT - II (B) Commercial	215.93	17.99	18.63	19.91	19.13
LT - II (C) Commercial	371.38	30.95	32.27	35.24	34.25
LT - III (A) Industrial	45.00	3.75	4.19	4.10	3.81
LT - III (B) Industrial	88.94	7.41	7.46	7.51	7.17
LT - IV PWW	6.78	0.57	0.40	0.44	0.44
LT - V Adv & Hoardings	1.63	0.14	0.12	0.12	0.11
LT - VI St. Lighting	18.65	1.55	1.54	1.49	1.46
LT - VII (A) Temp-Religious	0.21	0.02	0.00	0.08	0.01
LT - VII (B) Temp-Others	32.00	2.67	0.84	1.06	0.81
LT - VIII Crematorium	2.15	0.18	0.13	0.13	0.12
LT - IX (A) Public Service	61.28	5.11	4.89	5.25	5.04
LT - IX (B) Public Service Others	168.09	14.01	14.20	14.80	14.86
LT - X (A) Pumpsets	-	-	-	-	-
LT - X (B) Others	-	-	-	-	-
LT - XI Electric Vehicle Charging Stations	-	-	0.02	0.02	0.02
HT Category					
HT - I Industry	137.28	11.44	15.16	16.16	15.71
HT - II Commercial	270.00	22.50	19.68	21.12	20.38
HT - III Grp.Housing (Residential)	32.63	2.72	2.63	2.75	2.78
HT - IV PWW	37.99	3.17	2.49	2.58	3.09

Consumer Category	Approved by the Commission (MU)	Monthly Approved (MU)	Actual (April-19) (MU)	Actual (May-19) (MU)	Actual (June-19) (MU)
	(I)	(II=I/12)	(III)	(IV)	(V)
HT-V (A) Railways, Metro & Monorail	-	-	-	-	-
HT-V (B) Railways, Metro & Monorail	2.29	0.19	0.19	0.21	0.20
HT-VI (A) Public Service	26.49	2.21	2.26	2.48	2.42
HT-VI (B) Public Service-Others	167.24	13.94	13.80	14.74	14.69
HT-VII Temporary Supply	18.31	1.53	1.17	1.44	1.77
HT-VIII Electric Vehicle (EV) Charging Stations	-	-	-	-	-
Total Energy Sale	4,869.75	405.81	422.16	445.37	411.15

3.2 The total monthly sales for the months of April, May and June, 2019 is 422.16 MUs, 445.37 MUs and 411.15 MUs as compared to monthly approved MTR sale of 405.81 MUs. The major variation was observed in LT – I (B) Residential, LT – II (A) Commercial, Commercial, LT - II (C) and HT – I Industry due to seasonal variation during the respective period.

4. Cost of Power Purchase

4.1 BEST Undertaking does not own or operate any generating stations. Accordingly, BEST Undertaking is required to procure power from outside sources in order to fulfil the demand of its consumers. The following are the list of sources from which BEST Undertaking procures power to meet its demand.

- a) Purchases from Tata Power Company Ltd. (TPC-G)
- b) Renewable energy procurement(RPS)
- c) Bilateral contracts and decrements to the imbalance pool.

4.2 The following Table shows the variation in average power purchase cost (APPC) (Rs/kWh) for the month of April, 2019 to June, 2019 as compared to average power purchase cost approved in Tariff Orders dated 12 September, 2018.

Particulars	Tariff Order Dated 12.09.2018			Actual for April, 2019		
	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	3,521.45	1,529.59	4.34	310.97	135.90	4.37
RE Sources#	799.04	245.60	3.07	8.17	6.23	7.62
Traders	1,013.35	363.79	3.59	43.03	21.68	5.04
Total Variation of Prior period (O/C provision for payment of FBSM Bills & Standby Energy Bills to be received for prior period)	-	-	-	42.73	11.65	2.73
Total	5,333.84	2,138.98	4.01	404.91	175.45	4.33

Particulars	Tariff Order Dated 12.09.2018			Actual for May, 2019		
	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	3,521.45	1,529.59	4.34	324.70	138.82	4.28
RE Sources#	799.04	245.60	3.07	9.00	20.88	23.21
Traders	1,013.35	363.79	3.59	76.56	38.09	4.97
Total Variation of Prior period (O/C provision for payment of FBSM Bills & Standby Energy Bills to be received for prior period)	-	-	-	78.87	21.87	2.77
Total	5,333.84	2,138.98	4.01	489.13	219.66	4.49

Particulars	Tariff Order Dated 12.09.2018			Actual for June, 2019		
	Net Purchase	Cost	Average Power	Net Purchase	Cost	Average Power

			Purchase Cost			Purchase Cost
	MU	Rs. Crore	Rs/kWh	MU	Rs. Crore	Rs/kWh
TPC-G	3,521.45	1,529.59	4.34	293.59	131.34	4.47
RE Sources#	799.04	245.60	3.07	7.67	21.02	27.41
Traders	1,013.35	363.79	3.59	69.55	32.27	4.64
*Total Variation of Prior period (O/C provision for payment of FBSM Bills & Standby Energy Bills to be received for prior period)	-	-	-	26.64	11.19	4.20
Total	5,333.84	2,138.98	4.01	397.45	195.82	4.93

**Total monthly variations of prior period accounted for April, 2019 to June, 2019 are the expenses claimed against the provisional FBSM bills, reimbursement charges, revision of energy bills and supplementary bills for prior period.*

#the rates of the RE sources include the cost of REC which were not considered in the tariff order.

- 4.3 The Commission has scrutinised 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 months of April, 2019 to June, 2019. 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.

TPC-G

- 4.4 TPC-G operates thermal as well as hydro generating stations. The thermal generating station of TPC-G are placed in MoD stack by MSLDC whereas the hydro is considered as must run. BEST Undertaking has purchased 310.97 MUs, 324.70 MUs and 293.59 MUs of energy from TPC-G during the months of April, May and June, 2019, respectively. The reason for above variation in power purchase quantum during Q1 period is mainly on account of variation in PLF of various generating station of TPC-G which is due to variation in system demand during aforesaid period, as stated by BEST. The Table below shows the PLF of its thermal generating stations during Q1 of FY 2019-20:

Units/Months	Unit 5 (Multi-fired)	Unit 7 (Gas)	Unit 8 (Coal)	Total Monthly
Apr-19 (PLF%)	76.78%	97.97%	85.19%	83.14%
May-19 (PLF%)	75.20%	99.91%	77.52%	80.61%
Jun-19 (PLF%)	69.91%	95.48%	82.15%	78.15%
Quarterly (PLF%)	73.98%	97.81%	81.57%	

- 4.5 From the above Table, it can be seen that the quarterly PLF of unit 5 & 8 were lower than the normative level (85%) whereas the PLF of unit 7 (Gas) was above normative. TPC-G further stated that although the PLF of unit 5 & 8 were lower (below normative level of 85%) due to low system demand, the generation availability of all of its units was more than 95% during Q1 period. In this regard the Commission sought BEST Undertaking to confirm if it has fully utilised TPC-G's contracted power before scheduling any costlier power or short term power. BEST Undertaking was also sought to confirm if MoD principles has been followed while scheduling power from various sources. On response to above query, BEST Undertaking stated that all the power procurement during quarter 1 of FY 2019-20 has been done through sources approved in MTR Order in Case No. 203 of 2017. Further, it has fully utilised availability declared by all contracted sources during aforesaid period. Any shortfall in power over & above availability declared by contracted conventional/RE sources was met from short term bilateral sources through competitive bidding route and power purchase from Power Exchange.
- 4.6 With regards to following of MoD principle, BEST Undertaking stated that it has intimated MSLDC regarding various power purchase contracts it has entered into under LTOA/STOA. The generating unit of TPC Unit 5, 7 & 8 contracted by BEST Undertaking is placed under MOD stack by MSLDC whereas other contracted sources are considered as must run. As per provisions of ABT Order and FBSM Code, based on availability schedule forecasted by generating stations and load requirement forecasted by State Pool participants (SPPs), MSLDC draw up the least cost despatch for the state as a whole as per MOD principle approved by the Commission. Accordingly, target despatch schedule to generators and target drawl schedule to SPPs is issued by MSLDC for scheduling of power as well as real-time operation instruction on MOD principle in the state is given by MSLDC.
- 4.7 The Commission has also sought for month wise and cumulative availability declared by TPC-G for it various generating stations during the Q1 period. TPC-G has provided the same as shown in Table below:

Unit 5 (Thermal)	Apr-19	May-19	Jun-19
Monthly Availability	100.00%	100.00%	100.00%
Cumulative Availability	100.00%	100.00%	100.00%
Unit 7 (Thermal)	Apr-19	May-19	Jun-19
Monthly Availability	100.00%	100.00%	100.00%
Cumulative Availability	100.00%	100.00%	100.00%
Unit 8 (Thermal)	Apr-19	May-19	Jun-19
Monthly Availability	99.25%	90.50%	97.78%
Cumulative Availability	99.25%	94.81%	95.79%
Bhira (Hydro)	Apr-19	May-19	Jun-19
Monthly Availability	100.00%	100.00%	100.00%
Cumulative Availability	100.00%	100.00%	100.00%
Bhivpuri (Hydro)	Apr-19	May-19	Jun-19
Monthly Availability	100.00%	100.00%	100.00%
Cumulative Availability	100.00%	100.00%	100.00%

Khopoli (Hydro)	Apr-19	May-19	Jun-19
Monthly Availability	100.00%	100.00%	100.00%
Cumulative Availability	100.00%	100.00%	100.00%

4.8 As it can be seen from the Table above, that cumulative availability of all generating Units were above normative Target availability of 85%, therefore, TPC-G was entitled for recovery of full monthly fixed cost during the aforesaid period, in line with Regulation 48.3 of MYT Regulations 2015. Further, as mentioned above that the PLF of only Unit 7 was more than Target PLF of 85% during all the months of quarter 1. Therefore, in accordance with Regulation 48.7 of MYT Regulations, 2015 TPC-G is entitled for incentives on account of higher PLF for actual energy generation in excess of ex-bus energy corresponding to Target PLF. Accordingly, TPC-G has claimed full monthly fixed cost as well as PLF incentive (of Rs. 0.62 Crore w.r.to Unit 7) during Q1 of FY 2019-20. The Commission has verified the computation of monthly fixed charge and PLF incentives and found to be in order.

4.9 The weighted average power purchase cost for TPC-G considering all its thermal and hydro generation has been worked out at Rs. 4.37/ kWh, Rs. 4.28/ kWh and Rs. 4.47/kWh for the months of April, May and June, 2019, respectively as compared to MTR approved rate of Rs. 4.34/kWh. The APPC is marginally higher by approx. Rs. 0.03/kWh mainly in the month of April, 2019 whereas it is marginally lower by approx. Rs. 0.06/kWh in the month of May 2019. Further, in the month of June, 2019, the APPC again increased by Rs. 0.13/kWh. The variation in power purchase price is mainly because of following reasons:

- Due to variation in fuel parameters during Q1 period as compared to MTR approved parameters.
- Due to the change in actual quantum from various sources as compared to MTR approved quantum.

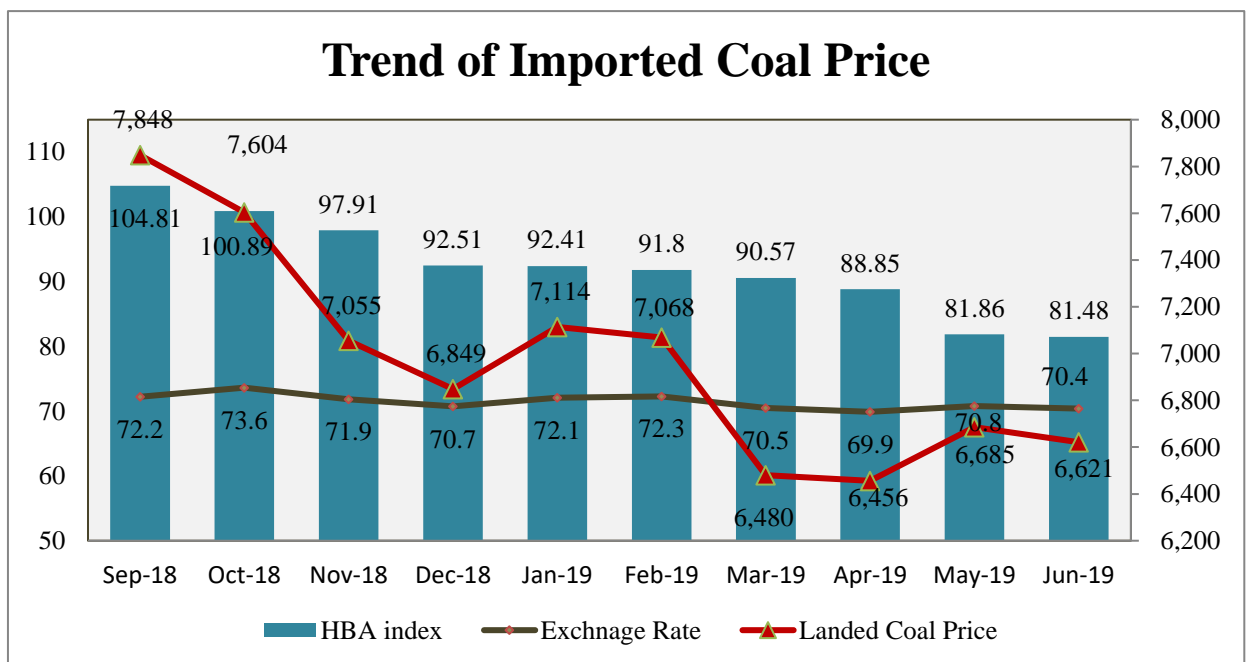
Fuel parameter Analysis:

4.10 TPC-G generates power on Imported Coal, Domestic Natural Gas (under APM mechanism), Oil (LSHS), imported RLNG and Hydro. The Commission observed that energy charge with respect to coal based generating stations was lower whereas for gas based generating station it was higher during Q1 period as compared to respective MTR approved charges. The energy charges for hydro remains same as approved in MTR Order. The Table below shows the comparison of actual energy charges vis-à-vis approved energy charges for thermal generating station.

Units/ Months	Unit 5 (Multi-fired)		Variation	Unit 7 (Gas)		Variation	Unit 8 (Coal)		Variation
	Approved	Actual		Approved	Actual		Approved	Actual	
Apr-19	3.99	3.63	(0.36)	1.80	2.55	0.75	3.94	3.70	(0.24)
May-19	3.99	3.69	(0.30)	1.80	2.54	0.74	3.94	3.76	(0.18)
Jun-19	3.99	3.71	(0.28)	1.80	2.55	0.75	3.94	3.79	(0.15)

4.11 The above variation in energy charges is mainly due to variation in fuel prices during the respective period. The Commission has sought for fuel purchase bills during respective quarter.

4.12 With regards to coal, TPC-G mainly procures imported coal from Indonesian market which is linked to Harga Batubara Acuan (HBA) index. The coal reference price, i.e., Harga Batubara Acuan or HBA index for Indonesian coal is set by Ministry of Energy and Mineral Resources (Indonesia). The Commission has asked BEST to confirm if the imported coal has been procured by TPC-G through competitive bidding along with documentary evidence. The Commission has also 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. In response to above, TPC-G stated that it has procured imported coal through competitive bidding route and submitted the bidding documents vide its data gap reply. TPC-G has also provided the HBA indices prevailing during Q1 period. The Commission has observed that the HBA indices and hence, the price of imported coal in international market has shown downward trend in recent times. However, at the time of MTR Order, the HBA indices was very high (104.81 as shown in graph). This is mainly attributed to demand supply position of the global coal market. The graph below shows the trend of HBA indices vis-à-vis landed coal cost claimed by TPC-G from September 2018 to June, 2019.



4.13 From graph above, it can be observed that the HBA index was at around 104.8 in September 2018 and has decreased to 81.48 in June 2019. Due to this the landed cost of coal and hence, energy charges during present quarter has arrived lower as compared to cost approved in MTR Order dt 12th September, 2018. The landed cost of coal claimed by TPC-G is Rs. 6456/MT, Rs. 6685/MT and Rs. 6621/MT for the month of April, May and June, 2019 as against the MTR approved rate of Rs. 7154/MT.

4.14 Further, the Commission has also scrutinised the sample bills provided in order to verify the landed cost of imported coal. The Table below provides the detailed computation of basic cost of imported cost for the month of May, 2019:

Month	2 May-19	21 May-19	30 May-19	Remark
Exchange Rate	69.54	69.73	69.79	Verified from SAP Entry
Supplier	PT ADARO	PT ADARO	PT ADARO	Verified from Invoice
Vessel Name	THARKEY	DUBAI CROWN	NATHAN BRANDON	Verified from Invoice
HBA	81.86	81.86	81.86	Submitted by TPC-G
Coal Qty (MT)	77772.00	50000.00	48922.00	Verified from Invoice
GCV (kcal/kg)	4907.00	4872.00	4909.00	Verified from Invoice
Moisture (%)	28.41	28.65	28.19	Verified from Invoice
Ash (%)	1.92	1.76	1.76	Verified from Invoice
Sulphur (%)	0.11	0.10	0.10	Verified from Invoice
HPB	57.43	57.02	57.71	Calculated
Premium	0.50	0.50	0.50	Verified from Invoice
FOB (USD/MT)	57.93	57.52	58.21	Verified from Invoice
FOB Rs /MT	4028.56	4010.82	4062.20	Calculated
Base Price in USD	4505331.96	2876000.00	2847749.62	Verified from Invoice
Base Price in INR	313309344.63	200540891.60	198730776.78	Verified from SAP Entry
Avg. Base Price Rs./MT	4032.85			Calculated

4.15 As seen from Table above the average basic cost of imported coal for the month of May 2019 is Rs. 4,032.85/MT. The landed cost of imported coal is arrived by adding the freight charges, excise duty, custom duty, GST compensation cess, insurance and other handling charges. The Commission has sought TPC-G to provide the details of above expenses. TPC-G in its data gap reply submitted the details, accordingly, the Commission worked out the landed cost of imported coal for the month of May 2019 as shown in Table below:

Sr. No	Particular	Source/Formula	Units	Price
1	Base price	As computed above	Rs./MT	4032.85
2	Freight charges	As per bills	Rs./Rs.	698.87
3	Excise + Custome Duty + C E Cess + insurance	As submitted	Rs./MT	664.44
4	Handling and wharfage	As submitted	Rs./MT	543.46
5	Other Fuel Handling Charges	As submitted	Rs./MT	626.33
6	Total landed cost	Sum (3:4)	Rs./MT	6,565.95

4.16 From the Table above, the landed cost of imported coal for the month of May2019 has been worked at Rs. 6,565.95 /MT. Although, the landed cost claimed by TPC-G in FAC computation for the month of May2019 is Rs. 6,685/MT. This is mainly due to reason that the cost claimed by TPC-G in FAC computation pertains to cost of coal consumed in respective period from the inventory/stocks whereas, the cost as calculated above pertains to recent purchase cost. Further, the cost claimed in FAC computation is based on the weighted average cost of the total coal purchase and the cost of actual inventory prevailing at that time. Therefore, there is a variation in the between the cost claimed by TPC-G and as computed by the Commission. However, the sample calculations are found to be in similar range as submitted by TPC-G. Further, the Commission has also sought for third party sampling report for GCV verifications. TPC-G has submitted the third party sampling certificate issued by Bureau Veritas for the respective period. The Commission has verified the document submitted and found to be in order.

4.17 With regards to higher gas price and hence, energy charges for gas generating station, TPC-G stated the actual energy charge is higher than approved energy charge due to following reasons:

- APM gas price increased due to its scheduled revision by MOPNG (Ministry of Petroleum & Natural Gas) from 1st April 2019 from \$3.36 / MMBTU to \$3.69/MMBTU (increased by 10%).
- Revised ONGC differential tariff which has increased from Rs. 5.7/MMBTU to Rs. 34.73/MMBTU.

4.18 TPC-G has submitted the sample gas bills issued by GAIL showing the above revised rate and the same has been verified. The Table below shows the net impact of change in variation in fuel price for respective months:

Particulars for April, 2019	Units	Unit 5	Unit 7	Unit 8	Impact
Energy Available to BEST	Mus	133.56	63.24	57.48	254.29
Approved Energy Charge	Rs./kWh	3.99	1.80	3.94	
Actual Energy Charge	Rs./kWh	3.63	2.55	3.70	
Fuel Surcharge Adjustment	Rs./kWh	(0.36)	0.74	(0.24)	
Recoverable through FAC	Rs. Crore	(4.85)	4.69	(1.40)	(1.56)

Particulars for May, 2019	Units	Unit 5	Unit 7	Unit 8	Impact
Energy Available to BEST	Mus	134.91	66.65	53.93	255.49
Approved Energy Charge	Rs./kWh	3.99	1.80	3.94	
Actual Energy Charge	Rs./kWh	3.69	2.54	3.76	
Fuel Surcharge Adjustment	Rs./kWh	(0.30)	0.74	(0.19)	

Particulars for May, 2019	Units	Unit 5	Unit 7	Unit 8	Impact
Recoverable through FAC	Rs. Crore	(4.07)	4.93	(1.00)	(0.15)

Particulars for June, 2019	Units	Unit 5	Unit 7	Unit 8	Impact
Energy Available to BEST	Mus	121.16	61.67	55.43	238.25
Approved Energy Charge	Rs./kWh	3.99	1.80	3.94	
Actual Energy Charge	Rs./kWh	3.71	2.55	3.79	
Fuel Surcharge Adjustment	Rs./kWh	(0.28)	0.75	(0.16)	
Recoverable through FAC	Rs. Crore	(3.33)	4.63	(0.87)	0.43

4.19 As can be seen from above, the impact of decrease in coal price is almost offset by increase in gas price during the respective period. Hence, the actual APPC is hovering around APPC as approved in MTR Order. Considering the above variation in fuel parameters the weighted average power purchase cost for TPC-G arrived at Rs. 4.37/ kWh, Rs. 4.28/ kWh and Rs. 4.47/kWh for the months of April, May and June, 2019, respectively as compared to MTR approved rate of Rs. 4.34/kWh. The APPC in the month of June is higher than the approved mainly due corresponding lower purchase during the said month. As sated above BEST has purchased 293.59 MUs of power during the months of June whereas it has purchased 310.97 MUs, 324.70 MUs of power during April and May, 2019 respectively. Even though the power purchase was lower in the month of June, 2019, the fixed cost was fully payable as the cumulative availability was above normative level as already explained in paras above. Hence, the spread of full monthly fixed cost over lower generation has resulted in higher APPC during said month.

Renewable Purchase:

4.20 In order to meet its RPO requirement, BEST Undertaking procure renewable power from both solar RE sources and non-solar RE sources. For solar RE power BEST has long term power purchase agreement with Walwhan (Welspun) Solar Energy Maharashtra. The non-solar RE power has been procured through various generators (GRETA Energy Ltd. and Lokmangal Agro Ltd.) on short-term basis at preferential tariff.

4.21 BEST has purchased total 8.17 MUs, 9.00 MUs and 7.67 MUs of RE power (solar and non-solar) at a weighted average price of Rs. 7.62/kWh, Rs. 7.59/kWh and Rs. 7.52/kWh during the months of April, May and June, 2019. The Table below shows the summary of RE power purchased by BEST during Q1 of FY 2019-20:

Particular	As approved in MTR Order			Actual for April		
	Quantum (MUs)	% share	Rate (Rs./kWh)	Quantum (MUs)	% share	Rate (Rs./kWh)
Solar Sources:						
Welspun	31.50	3.94%	8.56	3.18	38.85%	8.56
New Solar	155.23	19.43%	2.72*	-	-	-
Non-Solar Sources:						
New Non- Solar (MU)	612.31	76.63%	2.87*	5.00	61.15%	7.02 [#]
Total RE Power	799.04	100.00%	3.07	8.17	100.00%	7.62
REC Solar	-	-	-	-	-	-
REC Non-solar	-	-	-	-	-	-

*Generic Tariff solar and non-solar Tariff as considered in MTR Order

[#]Actual preferential Tariff for the month

Particular	Actual for May			Actual for June		
	Quantum (MUs)	% share	Rate (Rs./kWh)	Quantum (MUs)	% share	Rate (Rs./kWh)
Solar Sources:						
Welspun	3.33	37.01%	8.56	2.54	33.18%	8.56
New Solar	-	-	-	-	-	-
Non-Solar Sources:						
New Non- Solar (MU)	5.67	62.99%	7.02 [#]	5.13	66.82%	7.01 [#]
Total RE Power	9.00	100.00%	7.59	7.67	100.00%	7.53
REC Solar	-	-	3.24[^]	-	-	3.24[^]
REC Non-solar	-	-	10.82[^]	-	-	12.01[^]

[#]Actual preferential Tariff for the month

[^]REC purchase in Rs. Crore

4.22 Further, apart from the RE power, BEST has also purchased REC of worth Rs. 14.05 Crore during May 2019 and Rs. 15.25 Crore during June, 2019 as shown in Table above. Although, in MTR Order no REC purchase was approved for BEST Undertaking. This additional REC cost has resulted in increase in power purchase cost from RE sources thus impacting average power purchase cost. The APPC from RE sources considering the RE power purchase cost and REC cost, during the months of April, May and June, 2019 is Rs. 7.62/kWh, Rs. 23.21/kWh and Rs. 27.41/kWh, respectively, as compared to MTR approved rate of Rs.3.07/kWh. The reason for such an increase in APPC is explained in paras below.

4.23 The Commission in its MTR Order has approved the APPC from RE sources at Rs. 3.07/kWh. This approved APPC from RE sources has been arrived by the Commission considering solar and non-solar RPO obligation of BEST Undertaking. For solar RPO obligation, the Commission has considered solar purchase from M/s. Welspun Energy Maharashtra Ltd. at the rate of Rs. 8.56/kWh as approved in its Order dated 29 October, 2013 in Case No. 92 of 2013. The remaining requirement towards the solar RPO target was

envisaged to be met through new solar sources instead of REC purchase. However, in absence of any identified RE sources at that time, the Commission has considered the additional requirement of Solar power for FY 2019-20 to be purchased at generic tariff of Rs. 2.72/kWh as determined in the Order in Case No. 204 of 2018. Similarly, for non-solar RPO obligation, the Commission has considered the same to be met through new non-solar sources at the generic tariff of Rs. 2.87/kWh as determined in the Order in Case No. 204 of 2018 instead of any REC purchase as proposed by BEST. Accordingly, the Commission in its MTR Order has approved the APPC from RPS as Rs. 3.07/kWh.

- 4.24 As against the above, in the present quarter the part of solar RPO target has been fulfilled through Welspun at approved Tariff of Rs. 8.56/kWh and remaining through purchase of solar REC. Also, part of non-solar RPO target has been fulfilled through non-solar power from GRETA Energy Ltd. and Lokmangal Agro Ltd. at a weighted average preferential Tariff of Rs. 7.02/kWh as against the MTR approved generic Tariff of Rs. 2.87/kWh and remaining through purchase of non-solar REC. Due to this the APPC has increased.
- 4.25 Further, with regards to rationale for such REC purchase, BEST Undertaking had earlier replied that its long term tied up PPA is not sufficient to meet its solar RPO. Further, the non-solar RE generators with whom BEST Undertaking has long term tied up, has not commissioned the project as per the agreement and hence, will not be able to supply non-solar energy to BEST Undertaking. Therefore, BEST had purchased REC which is in accordance with Regulation 7.2 of MERC (RPO-REC) Regulations, 2016. The relevant provision of MERC (RPO-REC) Regulations, 2016 is reproduced below;

“Every 'Obligated Entity' may meet its RPO target by way of own generation or procurement of power from RE developer or by way of purchase from other licensee or by way of purchase of renewable energy certificate or by way of combination of any of the above options.”

- 4.26 BEST Undertaking in its previous submission in order to support its REC Purchase had also stated that, in its Judgment dated 20 April, 2015 in O.P. No. 1, 2 and 4 of 2013 and IA No. 291 and 420 of 2013, the APTEL has given the following among other directions regarding RPO compliance;

“28... ii) ...If the distribution licensee is not able to tie up procurement of renewable energy to meet the RPO target, it may plan to purchase RECs to meet its RPO target as per the provisions of the Regulations. Advance planning of REC purchase will give opportunity to the distribution licensees/other obligated entities to purchase REC when the market conditions are more favorable to them... “

- 4.27 BEST Undertaking in its present submission has stated that Commission in its recent MYT Order dated 30 March 2020 in Case No. 324 of 2019, has provisionally approved the procurement of Solar RE and Solar RECs. BEST further stated that it is in the process of initiating the bidding process to procure solar as well as non-solar power on long term basis. Therefore, based on above the Commission has considered the respective amount towards REC purchase in this FAC approval. The Commission has also verified the respective

amount and cost of RE purchases during the aforesaid period from the bills and documents as submitted by BEST Undertaking.

Traders:

- 4.28 Bilateral Power Purchase (Traders) sources for the months of April to June, 2019, mainly include PTC India Ltd., Kreate Energy Pvt. Ltd., JSW and IEX. BEST Undertaking has purchased bilateral power during aforesaid period after inviting e-tender through Ministry of Power's DEEP e-portal, in line with MoP guidelines on short term competitive bidding. BEST Undertaking has submitted NIT, Bid document as well as reverse auction result as a documentary evidence for bilateral purchase.
- 4.29 The average power purchase price from Traders during the months of April to June, 2019 were Rs. 5.04/ kWh, Rs. 4.97 /kWh and Rs. 4.64 /kWh respectively which is higher than the MTR approved rate of Rs. 3.59 /kWh. As BEST has purchased the short term power through competitive bidding, on DEEP e-portal, the Commission allows the short term power as submitted by BEST.
- 4.30 BEST Undertaking has made adjustment in the Total Power Purchase on account of "Total Monthly Variation of prior period" for the months of April to June, 2019. The monthly variation as mentioned above is mainly on account weekly provisional FBSM bills received from MSLDC for prior period, Debit/Credit note for refund towards reimbursement of Open Access Charges, payment of balance GST amount on REC purchased through trading on PXIL etc. The Commission has verified the Net Pool Imbalance Charges and the corresponding units (MUs) claimed by BEST from the letter issued by Maharashtra State Power Committee and found to be in order. The Commission has also verified the other charges as claimed by BEST from the bills and invoices submitted and found to be in order.
- 4.31 Based on above, on an overall basis the key reasons for increase in APPC are due to variation in actual quantum of power purchase from TPC-G coupled with variation in fuel prices, additional REC purchase for solar and non-solar RPO target, increased short term power purchase rate and adjustment towards monthly variation related to FBSM and other settlements. Accordingly, the Commission allows the average power purchase cost of **Rs. 4.33/kWh** for the month of April, 2019, **Rs. 4.49/kWh** for the month of May, 2019 and **Rs. 4.93/kWh** for the month of June, 2019.

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

- 5.1 The Commission has worked out the average power purchase cost for the month as shown in above Table. The same has been compared with the average power purchase cost approved by the Commission in Tariff Orders dated 12 September, 2018 and arrived at differential per unit rate at which ZFAC is to be passed on to the consumers.
- 5.2 The following Table shows the ZFAC worked out by the Commission on account of difference in fuel and power purchase cost for the month of April, 2019 to June, 2019.

S. No.	Particulars	Units	April, 2019	May, 2019	June, 2019
1	Average power purchase cost approved by the Commission	Rs./kWh	4.01	4.01	4.01
2	Actual average power purchase cost	Rs./kWh	4.33	4.49	4.93
3	Change in average power purchase cost (=2 -1)	Rs./kWh	0.32	0.48	0.92
4	Net Power Purchase	MU	404.91	489.13	397.45
5	Change in fuel and power purchase cost (=3 x 4/10)	Rs. Crore	13.08	23.51	36.43

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

6.1 Adjustment factor for over recovery/under recovery (B) for the period of April, 2019 to June, 2019, the adjustment factor to be added/reduced is as below;

S. No.	Particulars	Units	April, 2019	May, 2019	June, 2019
1.1	Incremental cost allowed to be recovered in Month n-4	Rs. Crore	22.52	21.65	(11.81)
1.2	Incremental cost in Month n-4 actually recovered in month n-2	Rs. Crore	26.12	29.98	(15.30)
1.3	(over-recovery)/under-recovery (=1.1 - 1.2)	Rs. Crore	(3.61)	(8.33)	3.49
2.0	Carried forward adjustment for over-recovery/under-recovery attributable to application of ceiling limit for previous month	Rs. Crore	-	-	-
3.0	Adjustment factor for over-recovery/under-recovery (1.3+2.0)	Rs. Crore	(3.61)	(8.33)	3.49

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

7.1 The following Table shows the month wise interest rate and amount worked out as Carrying cost for under/over recovery for the month of April, 2019 to June, 2019.

S. No.	Particulars	Units	Apr, 2019	May, 2019	Jun, 2019
1	Adjustment factor for over-recovery/under-recovery	Rs. Crore	(3.61)	(8.33)	3.49
2	Applicable Interest rate	%	10.00	9.95	9.95
3	Carrying cost for over-recovery/under-recovery	Rs. Crore	(0.03)	(0.07)	0.03

8. Disallowance due to excess Distribution Loss

8.1 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.

“10.8The total ZFAC 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 ZFAC 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 distribution losses of the Distribution Licensee exceed the level approved by the Commission, the amount of ZFAC corresponding to the excess distribution losses (in kWh terms) shall be deducted from the total ZFAC recoverable”

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

S.No.	Particulars	Units	Approved in Tariff Order	Actual up to Apr-19	Actual up to May-19	Actual up to Jun-19
1	Net Energy input at Distribution Voltages	MU	5,158.63	431.88	894.72	1,347.83
2	Energy sales (metered) at Distribution voltages	MU	4,869.75	422.16	867.53	1,278.68
3	Distribution Loss (=1-2)	MU	288.88	9.72	27.18	69.15
4	Distribution Loss as % of net energy input (=3/1)	%	5.60 %	2.25 %	3.04 %	5.13 %
5	Excess Distribution Loss = [Distribution Loss (4) - Distribution loss approved] x Net Energy Input (1)	MU	-	-	-	-
6	Disallowance of FAC due to excess Distribution Loss	Rs. Crore	-	-	-	-

8.3 As seen from the above Table, cumulative distribution loss is 2.25% for the month of April, 2019, 3.04% for May, 2019 and 5.13% for the month of June, 2019. The cumulative distribution losses are observed lower than the approved Distribution Loss of 5.60%. Hence, there is no disallowance on account of excess distribution loss.

9. Summary of Allowable ZFAC

9.1 The summary of the FAC amount as approved by the Commission for the month of April, 2019 to June, 2019 which is allowed to be recovered in the billing month of July, 2019 to September, 2019 is as shown in the Table below:

S. No.	Particulars	Units	Apr, 2019	May, 2019	Jun, 2019
1.0	Calculation of ZFAC				
1.1	Change in cost of generation and power purchase attributable to Sales within the License Area (F)	Rs. Crore	13.08	23.51	36.43
1.2	Carrying cost for over-recovery/under-recovery (C)	Rs. Crore	(0.03)	(0.07)	0.03
1.3	Adjustment factor for over-recovery/under-recovery (B)	Rs. Crore	(3.61)	(8.33)	3.49
1.4	ZFAC = F+C+B	Rs. Crore	9.44	15.11	39.96
2.0	Calculation of FAC Charge				
2.1	Energy Sales within the License Area	MU	422.16	445.37	411.15
2.2	Excess Distribution Loss	MU	-	-	-
2.3	ZFAC per kWh	Rs./kWh	0.22	0.34	0.9718
2.4	Cap at 20% of variable component of tariff	Rs./kWh	0.97	0.97	0.9659
2.5	FAC Charge allowable (Minimum of 2.3 and 2.4)	Rs./kWh	0.22	0.34	0.9659
3.0	Recovery of FAC				
3.1	Allowable FAC [(2.1 x 2.5)/10]	Rs. Crore	9.44	15.11	39.71
3.2	FAC disallowed corresponding to excess Distribution Loss [(2.2 x 2.5)/10]	Rs. Crore	-	-	-
4.0	Total FAC based on category wise and slab wise allowed to be recovered	Rs. Crore	9.44	15.11	37.16*
5.0	Carried forward FAC for recovery during future period	Rs. Crore	-	-	2.79

*restricted to Rs.37.16 Crore due to 20% cap for the month

9.2 It can be seen from the above Table that standalone FAC for the months of April to June, 2019 is Rs. 9.44 Crore, Rs. 15.11 Crore and Rs 39.96 Crore respectively. Based on total energy sales, FAC per unit has been worked out as Rs. 0.22/kWh, Rs. 0.34/kWh and Rs. 0.9718/kWh for the months of April to May, 2019, respectively. Further, the Regulation 10.9 of MYT Regulations,2015 specifies as:

Provided that the monthly ZFAC 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:

- 9.3 The FAC per unit mainly for the month of June, 2019 is higher than the capping of 20% cap specified in Regulation as shown in Table above, hence, there is restriction triggered with regards to such ceiling for the months June, 2019. Accordingly, FAC per unit leviable is considered as Rs. 0.9659/kWh, i.e., equal to the 20% of the variable charge for the month of June instead of Rs. 0.9718/kWh. Based on this monthly ceiling the allowable FAC has been reworked as Rs. 39.71 Crore for the month of June. Accordingly, due to application of ceiling an amount of Rs. 0.24 Crore (Rs. 39.96 Crore minus Rs. 39.71 Crore) got unrecovered which is then considered as carry forward adjustment.
- 9.4 Further, the Category wise and Slab wise FAC Rate (Rs./kWh) is then worked out based on above ceiling rate. However, it was observed that for some of the categories, the Slab wise FAC Rate (Rs./kWh) worked out was above 20% FAC cap applicable for respective category. Therefore, the allowable FAC is again reworked based on individual Slab wise FAC Rate (Rs./kWh) as Rs. 37.16 Crore. Accordingly, an amount equivalent of Rs. 2.55 Crore (Rs. 39.71 Crore minus Rs. 37.16 Crore) got unrecovered due to applicability of 20% FAC cap on these individual consumer categories. The same is then considered as carry forward adjustment for future period. Thus, out of the standalone FAC of Rs. 39.96 Crore, Rs. 37.16 Crore is allowed to be recovered through category wise and slab wise FAC rate and remaining Rs. 2.79 Crore is considered as carry forward adjustment. (Rs. 39.96 Crore = Rs. 37.16 Crore + Rs. 2.79 Crore).
- 9.5 However, as against the above BEST Undertaking has erroneously computed FAC allowable as Rs. 39.71 Crore and carry forward adjustment as Rs. 2.11 Crore. Thus, making FAC allowed to be recoverable as Rs. 41.82 Crore (Rs. 41.82 Crore = Rs. 39.71 Crore + Rs. 2.11 Crore). Hence, BEST Undertaking has recovered additional Rs.1.86 Crore (Rs. 41.82 Crore – Rs. 39.96). Therefore, BEST Undertaking is required to refund additionally recovered FAC of Rs. 1.86 Crore to consumers. However, as FY 2019-20 is already over, therefore, above adjustment will be rolled over in next FAC approvals (i.e., FAC of Q2 of FY 2019-20) and finally would be adjusted in the final True up of FY 2019-20.

10. Recovery from Consumers:

- 10.1 Regulation 10.9 of MERC MYT Regulations, 2015 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:—

*ZFAC Cat (Rs/kWh) = [ZFAC / (Metered sales + Unmetered consumption estimates + Excess distribution losses)] * k * 10,*

Where:

ZFAC Cat = ZFAC 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 ZFAC 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 ZFAC 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....”

- 10.2 The Commission has worked out FAC per unit for each category of consumer based on the formula provided in the above Regulations. The Commission observed that there is an under recovery of ZFAC in absolute terms on considering category wise per unit FAC worked out and category wise actual sales for the month of April, 2019 to June, 2019.
- 10.3 The following Table shows per unit ZFAC to be charged to the consumers of BEST Undertaking for the billing month of July, 2019 to September, 2019.

S. No.	Consumer categories	Slab	ZFAC to be levied in billing month of July' 2019	ZFAC to be levied in billing month of August' 2019	ZFAC to be levied in billing month of September' 2019
			Rs./kWh	Rs./kWh	Rs./kWh
(A)	LT Category				
1	LT - I (A) Residential-BPL	0 - 30	0.0795	0.1206	0.2000
2	LT - I (B) Residential	0 - 100	0.1026	0.1557	0.2900
3		101 - 300	0.1837	0.2787	0.7400
4		301 - 500	0.2556	0.3878	1.1041
5		> 501	0.2949	0.4474	1.2738
6	LT - II (A) Commercial	0 - 500	0.2452	0.3720	1.0180
7	LT - II (B) Commercial	> 500	0.2591	0.3931	1.0160
8	LT - II (C) Commercial	all units	0.2664	0.4042	1.1020
9	LT - III (A) Industry	all units	0.2205	0.3345	0.9400
10	LT - III (B) Industry	0 - 500	0.2369	0.3595	0.9340
11	LT - IV PWW	> 500	0.2392	0.3628	0.9160
12	LT - V Advertisement & Hoardings	> 20 KW	0.3944	0.5983	1.3940
13	LT - VI Street Lights	all units	0.2420	0.3672	0.8400
14	LT - VII (A) Temp-Religious	all units	0.1758	0.2667	0.7200
15	LT - VII (B) Temp-Others	all units	0.3120	0.4734	1.3477
16	LT - VIII Crematorium & Burial Grounds	all units	0.1777	0.2696	0.7675
17	LT - IX (A) Public Service	all units	0.2322	0.3523	1.0029
18	LT - IX (B) Public Service Others	all units	0.2420	0.3672	1.0453
19	LT - X (A) Agriculture- Pumpsets	all units	0.1261	0.1913	0.5000
20	LT - X (B) Agriculture-Others	all units	0.1736	0.2634	0.7498
21	LT - XI Electric Vehicle (EV) Charging Stations	all units	0.2115	0.3192	0.9040
(B)	HT Category				
22	HT - I Industry	all units	0.2490	0.3777	1.0754
23	HT - II Commercial	all units	0.2597	0.3941	1.1219
24	HT - III Group Housing	all units	0.2167	0.3287	0.9358
25	HT - IV PWW	all units	0.2366	0.3590	1.0220
26	HT-V (A) Railways, Metro & Monorail (110/132 kV)	all units	-	-	-
27	HT-V (B) Railways, Metro & Monorail (33kV)	all units	0.2281	0.3460	0.9851
28	HT-VI (A) Public Service	all units	0.2385	0.3619	1.0302
29	HT-VI (B) Public Service-Others	all units	0.2531	0.3840	1.0932
30	HT-VII Temporary Supply	all units	0.2810	0.4263	1.2136

11. Summary

The Table below shows the summary of FAC claimed by BEST vis-à-vis approved by the Commission for Q1 of FY 2019-20:

Particular	Month	Claimed	Approved	Remarks
FAC (Rs. Cr.)	April	9.44	9.44	For June, 2019 (Rs. 39.96 Cr.- Rs. 41.82 Cr.) =Rs. 1.86 Cr. refundable
	May	15.11	15.11	
	June	39.71	37.16	
Carried forward FAC (Rs. Cr.)	April	-	-	
	May	-	-	
	June	2.11	2.79	
Total FAC (Rs Cr.)	April	9.44	9.44	
	May	15.11	15.11	
	June	41.82	39.96	
FAC per Unit	April	0.223	0.223	
	May	0.339	0.339	
	June	0.965	0.965	

BEST has computed total FAC of Rs. 41.82 Cr. against which the Commission has approved Rs. 39.96 Cr. thus Rs. 1.86 Cr. is disallowed. Since the recovery of this amount is already done, the above adjustment will be rolled over in next FAC approvals (i.e., FAC of Q2 of FY 2019-20) and finally would be adjusted in the final True up of FY 2019-20.