



# महाराष्ट्र विद्युत नियामक आयोग

## Maharashtra Electricity Regulatory Commission

Ref. No. MERC/FAC/2021-22/028

Date: 2 February, 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 November, 2021.

**Reference:**

1. FAC submission dated 28 December 2021 by BEST Undertaking for prior approval of FAC for the month of November, 2021.
2. Data gaps communicated to BEST vide email dated 04 January, 2022.
3. BEST's response to data gaps on 07 January, 2022 and 12 January, 2022.

Sir,

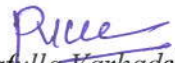
Upon vetting the FAC calculations for the month of November, 2021 as mentioned in the above reference, the Commission has accorded approval for FAC of **Rs. 79.62 Crore** to its consumers as shown in the table below:

Month	FAC Amount (Rs. Crore)
November 2021	0 (Zero)

The Commission allows the accumulation of FAC amount of **Rs. (208.30) Crore** which shall form part of FAC Fund and shall be carried forward to next FAC billing cycle with holding cost as per the Order dated 30 March, 2020 in Case No 324 of 2019. Further, as directed in the said Order, 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 November, 2021.

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**PRIOR APPROVAL FOR FAC CHARGES FOR THE MONTH OF NOVEMBER  
2021**

**Subject:** Prior Approval of Fuel Adjustment Charges (FAC) submission of BEST Undertaking for the month of November, 2021.

**Reference:**

1. FAC submission dated 28 December 2021 by BEST Undertaking for prior approval of FAC for the month of November, 2021.
2. Data gaps communicated to BEST vide email dated 04 January, 2022.
3. BEST's response to data gaps on 07 January, 2022 and 12 January, 2022.

**1. FAC submission by BEST Undertaking:**

- 1.1 BEST Undertaking ('BEST') has submitted FAC submissions for the months of November, 2021 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. 79.62 Crore**. The approved FAC amount shall be adjusted from the FAC Fund and balance amount shall be carried forward to next FAC billing cycle with holding cost as per the Order dated 30 March, 2020 in Case No 324 of 2019 (herein after referred to as "Tariff Order").

**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 15<sup>th</sup> 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 November, 2021 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 November 2021 (MUs)**

Consumer Category	Approved by the Commission (MU)	Monthly Approved* (MU)	Actual Sales
	(I)	(II=I/12)	November, 2021 (MU)
	(I)	(II=I/12)	(III)
<b>HT I- Industry</b>	156.66	13.06	12.57
<b>HT II - Commercial</b>	286.41	23.87	17.39
<b>HT III - Group Housing Society (Residential)</b>	30.63	2.55	2.08
<b>HT IV – Railways/Metro/Monorail</b>	2.14	0.18	0.21
<b>HT V - Public Services</b>			
a) Govt. Edu. Inst. & Hospitals	26.57	2.21	2.08
b) Others	196.57	16.38	14.24
<b>HT-VI EV Charging Stations</b>	-	-	-
<b>Total HT Sales</b>	<b>698.99</b>	<b>58.25</b>	48.56
<b>LT I (A)- Residential (BPL)</b>	0.07	0.01	0.00
<b>LT I (B)- Residential</b>	2,102.61	175.22	179.57
<b>LT II - LT Commercial</b>			
(A)- upto 20 kW	927.29	77.27	68.54
(B) >20 kW and <50 kW	211.04	17.59	13.43
(C) - 50 kW	369.84	30.82	26.97
<b>LT III (A) - Industry &lt; 20 kW</b>	43.21	3.60	8.47
<b>LT III (B) - Industry &gt; 20 kW</b>	90.27	7.52	6.47
<b>LT IV - Public Services</b>			
a) Govt. Edu. Inst. & Hospitals	56.14	4.68	4.39
b) Others	183.95	15.33	14.03
<b>LT V(A) – Agriculture Pumpsets</b>	-	-	-
<b>LT V(B) – Agriculture Others</b>	-	-	0.00
<b>LT VI - EV Charging Stations</b>	0.37	0.03	1.27
<b>Total LT Sales</b>	<b>3,984.80</b>	<b>332.07</b>	<b>323.14</b>
<b>Total</b>	<b>4,683.78</b>	<b>390.32</b>	<b>371.71</b>

\*- 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 November 2021 is 371.71 MU which is lower by 4.77% as compared to the approved energy sales of 390.32 MU. With respect to the consumption, HT category consumption is 48.56 MU which is on a lower side by 16.63% compared to approved monthly HT energy sales of 58.25 MU and the reduction has been noticed by 2.69% on LT side whereby the actual sales is 323.14 MU as compared to approved monthly LT energy sales of 332.07 MU. The major variation was observed across various categories in view of lower sales due to restrictions imposed due to pandemic, lower activity in commercial / industrial premises and seasonal variation. However, HT – Railways, LT – Residential, LT Industrial (below 20 KW load) and LT EV Charging Station category have witnessed sales higher than the approved monthly sales.
- 3.3 BEST has also submitted the data providing actual billing and estimated billing undertaken for the calculation of total energy consumption for the month of November 2021. BEST further submitted the number of actual and estimated meter readings undertaken for the month of November 2021 as shown below:

**Table 2: No. of Meters reading on actual and estimated basis for November 2021**

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	186	0	186
2	LT	1008127	16568	1024695
	<b>Total</b>	<b>1008313</b>	<b>16568</b>	<b>1024881</b>
	<b>%</b>	<b>98%</b>	<b>2%</b>	<b>100%</b>

- 3.4 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 reducing gradually and is around 1% in November 2021.

**Table 3: Actual and Estimated Sales of past 6 months**

Particulars	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21
Actual – MUs	337.52	336.32	352.58	349.68	375.96	367.59
Estimated - MUs	5.64	2.70	2.29	2.63	3.18	4.11
<b>Total</b>	<b>343.16</b>	<b>339.02</b>	<b>354.87</b>	<b>352.31</b>	<b>379.14</b>	<b>371.71</b>
% Sales based on Estimated Reading	1.64%	0.80%	0.64%	0.75%	0.84%	1.11%

- 3.5 As per the data, the 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 98.38% is undertaken as per actual meter readings and balance 1.62% is still assessed on an estimated basis. Also, with respect to consumption, under LT Category, about 98.73% consumption is undertaken as per actual meter readings and balance 1.27% is still assessed on an estimated basis.



- 3.6 The Commission has observed that there was a marginal increase in estimated reading and consumption for the month of November 2021 and accordingly, the clarification for the same was sought from BEST. In response to the data gaps raised by the Commission, BEST submitted that the estimation is done when meter reading is not available in cases of defective meters and obstruction when key to consumer premises or service cabin is not available. This being a routine activity and in the subsequent month, the billing system re-estimates as per pre-defined logic in the billing system. The Commission noted the submission made by BEST.
- 3.7 Further, comparison of sales of April to November 2021 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-20	149.90	114.49	39.19	303.58
Apr-21	180.21	126.59	48.81	355.61
May-20	158.43	98.95	42.73	300.11
May-21	199.05	108.25	49.44	356.73
Jun-20	191.74	156.65	41.52	389.91
Jun-21	187.16	105.33	50.67	343.16
Jul-20	164.72	100.36	46.45	311.53
Jul-21	170.11	116.94	51.97	339.02
Aug-20	159.28	90.03	47.03	296.34
Aug-21	176.58	128.43	49.86	354.87
Sep-20	175.55	106.10	46.76	328.41
Sep-21	169.56	133.18	49.57	352.31
Oct-20	180.80	123.36	48.69	352.85
Oct-21	180.08	147.72	51.34	379.14
Nov-20	160.76	118.91	45.94	325.61
Nov-21	179.57	143.57	48.56	371.71
<b>April 20 – Nov 20</b>	<b>1,341.18</b>	<b>908.84</b>	<b>358.32</b>	<b>2,608.33</b>
<b>April 21 – Nov 21</b>	<b>1,442.31</b>	<b>1,010.01</b>	<b>400.23</b>	<b>2,852.55</b>

- 3.8 The Commission observes that overall sales for the month of November, 2021 is higher than November 2020 due to increase in sales of HT and LT Category. This was mainly due to relaxation provided to many of the industrial / commercial activities in November 2021 which was curbed in November 2020 due to widespread COVID-19 Pandemic.

#### 4. Power Purchase Details

- 4.1 The Commission has approved following sources in the Tariff Order for power purchase by BESTs.
- Tata Power Company Ltd. (TPC-G)
  - Manikaran Power Limited
  - Renewable Energy (Solar and Non-Solar)



d) Short Term Sources (Bilateral and Power Exchange).

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.			
3	Fuel Utilization Plan	Existing 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.			
4	Deviation Quantum	BEST has overdrawn 1.61 MU as compared to Schedule under Deviation Settlement Mechanism.			
5	Sale of Surplus Power	BEST has sold 0.52 MU on IEX at Rs. 10.99/kWh (para 5.45 to 5.47 below).			
6	Power Purchase	Actual Net Power Purchase is 386.12 MU as against approved 420.71 MU due to lower sales			
7	Source wise Power Purchase	Source Name	Approved (MU)	Actual (MU)	Proportion of each Source in Actual Purchase
		TPC-G	304.72	256.82	66.51%
		Manikaran Power	62.05	65.49	16.96%
		RE Sources	2.63	13.79	3.57%
		Net Short Term	51.32	48.41	12.54%
		Deviation & Sale		1.61	0.42%
		<b>Total</b>	<b>420.71</b>	<b>386.12</b>	<b>100.00%</b>
8	Power Purchase: a. Section 62 of Electricity Act, 2003	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.			





Sr. No.	Particular	Compliance
	b. Section 63 of Electricity Act, 2003	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  The Power procurement from Manikaran Power is through competitive bidding and as approved by Commission.  Cost and MUs verified as per Invoice
9	RE Purchase	Cost and MUs verified as per Invoice
10	Short Term Power Purchase	Short-term power purchase invoices of November 2021 are submitted by BEST. All the power purchase quantum and rate are verified from the invoices and has been considered for FAC calculation.

4.4 **The BEST has purchased 386.12 MU as against approved 420.71 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 November 2021.

4.5 The following table show the variation in average power purchase cost (Rs/kWh) for the month of November, 2021 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 November 2021**

Particulars	Tariff Order Dated 30.03.2020 FY 2021-22 - Approved			Actual for Nov. 2021 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	304.72	140.09	4.60	256.82	157.92	6.15
Manikaran	62.05	27.40	4.42	65.49	26.09	3.98
RE Power	2.63	2.25	8.56	13.79	6.57	4.76
REC	-	5.97	1.00		51.38	1.88
Short Term	51.32	20.53	4.00	48.93	17.72	3.62
Deviation Quantum				1.61	0.61	3.81
<b>Gross Total</b>	<b>420.71</b>	<b>196.23</b>	<b>4.66</b>	<b>386.64</b>	<b>260.29</b>	<b>6.73</b>
Less: Sale of Power to IEX				-0.52	-0.57	10.99
<b>Net Power Procurement</b>	<b>420.71</b>	<b>196.23</b>	<b>4.66</b>	<b>386.12</b>	<b>259.72</b>	<b>6.73</b>

\* 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

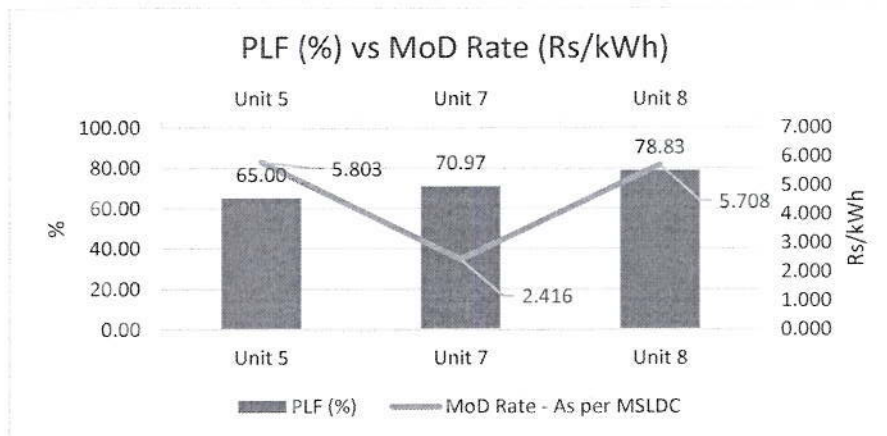


in order to verify the claim of BEST with regards to average power purchase cost for the month of November, 2021. The Commission has verified the Net Purchase, Variable Cost, Fixed Charge and the Power Purchase Cost from the relevant bills/invoices received for all purchasing sources. BEST has purchased 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. Analysis of TPC-D’s FAC submission for November 2021 in respect of TPC-G’s supply has already been undertaken while approving FAC submission of TPC-D for November 2021. Accordingly, the Commission has considered the said submissions of TPC-D in respect of TPC-G.
- 5.4 TPC-G Units 5,7 and 8 have declared Availability of more than 98% which is higher than the normative Availability of 85%. It is observed that Unit-7 having lowest rate in MOD and has lower PLF than Unit-8 having higher MOD rate. In response to data gaps raised by the Commission for lower PLF of Unit-7, TPC submitted that Unit-7 PLF is lower due to lower availability of APM gas. The graph showing the comparison of Variable Cost in MoD Stack and monthly PLF for TPC-G thermal/gas units is given below:

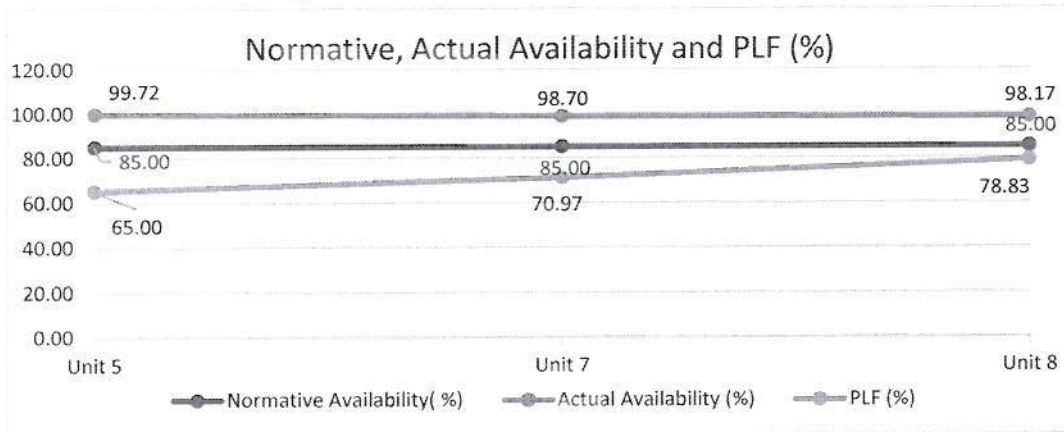
**Figure 1: PLF of TPC Generating Units**



- 5.5 The graphical comparison of normative availability and actual availability for the month of November 2021 is as given below:

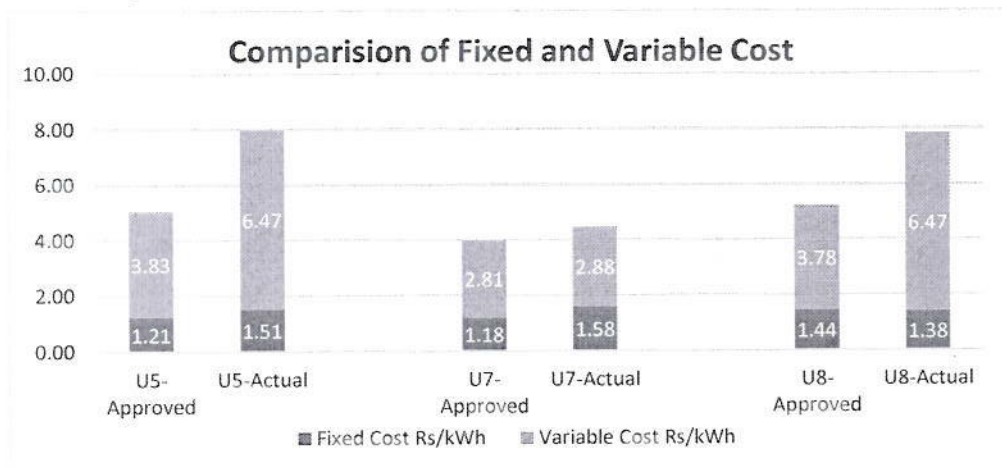


**Figure 2: PAF and PLF of TPC Generating Units**



5.6 The entire monthly fixed cost was payable in line with MYT Regulations, 2019 as the cumulative plant availability was higher than the normative availability of 85%. It is observed that Unit-5 and Unit 7 have lower PLF resulting in higher fixed cost per unit than as approved by the Commission. Also, the Variable Cost of the Units 5, 7 and 8 was substantially higher than the approved cost mainly due to higher prices of imported coal and due to purchase of RLNG to continue operations of unit 7 during the lower availability of APM gas. 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 November 2021**

TPC-G Units	Availability – November 2021	Availability – November 2020
Unit 5	99.72%	96.58%
Unit 7	98.70%	99.68%
Unit 8	98.17%	99.50%



5.8 The Commission has observed that **BEST has purchased 256.82 MU from TPC-G as against monthly approved quantum of 304.72 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-D has also signed contract with GAIL for supply of APM Gas for the period 7 July, 2021 to 6 July, 2026.

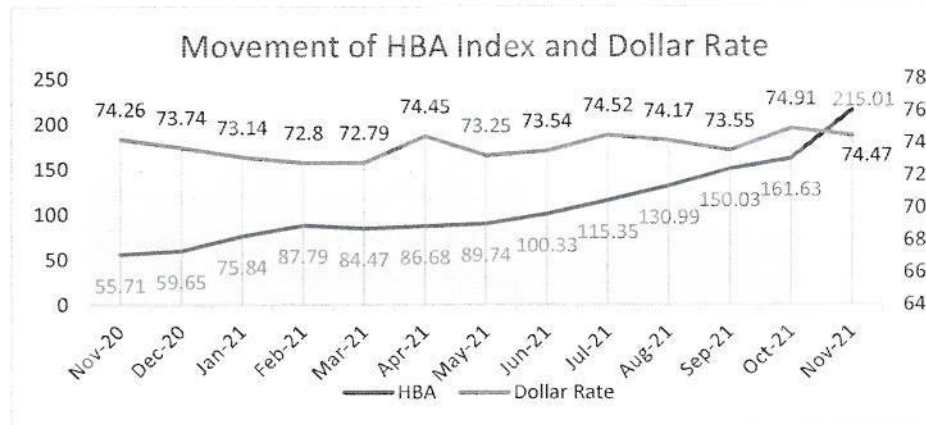


- 5.11 **The APPC for power procured from TPC-G, which generates power on Imported Coal, Domestic Natural Gas (under APM mechanism), Oil (LSHS), imported RLNG and hydro has been worked out at Rs. 6.15/ kWh as against the approved rate of Rs. 4.60/kWh.**
- 5.12 **The variation in APPC is mainly on account of increase in imported coal price and RLNG prices for November, 2021, fixed charge payment, lower generation from Units 7 and 8.**
- 5.13 **The landed cost of coal for energy charge computation as claimed by TPC-G is Rs. 11321.10/MT as compared to approved rate of Rs. 6907.09/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-D submitted that Tata Power-G thermal power plant at Trombay is operated under 100% Indonesian coal. The price of this coal is based on HBA Index, which is internationally accepted. Since few months, HBA Index has gone up substantially (e.g., HBA Index for July'21 – 115.35 \$/MT, August'21 – 130.99 \$/MT, September'21 – 150.03\$/MT, October'21 – 161.63/MT and November'21- 215.01\$/MT) and as an effect imported coal prices have gone up, owing to which Trombay Cost of Generation has increased. BEST has submitted the details in respect of instructions received from MSLDC for operation of Unit 5 and Unit 8. BEST has made effort to purchase cheaper power from the power exchange , at comparatively lower rate (48.93 MU were purchased at Rs 3.62/kWh) so as to compensate the costly power from TPC-G Unit-5 & Unit-8. Further, BEST has reduced the quantum of power purchase from the TPC-G Unit-5 and Unit-8 up to its technical minimum level and carried out the optimization of the power purchase cost through TPC-G sources. 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. HBA index was the highest in November, 21 as compared to last 12 months. HBA index is almost 4 times as compared to November 2020. Further, there is a marginal increase in the dollar rate in the month of November, 21 as compared to October, 21. It is also observed that the price of APM Gas was Rs 15,428.69/SCM in November 2021 which is less than the approved rate of Rs.17,653.75/SCM as approved in MYT Order. However, the Commission notes that prices of APM Gas have increased from Rs. 10,851.59/SCM prevailing in the month of September, 2021 to Rs.15,428.60/SCM. This is due to increase in notified APM gas price from \$1.79/MMBTU to \$2.90/MMBTU from October 2021 by Ministry of Petroleum and Natural Gas, Government of India.
- 5.14 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 February, 2021 onwards. Also, the Dollar Exchange rate has witnessed sharp surge.

**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](http://www.x-rates.com) (Average rate for the month for representation purpose and may not be a reference rate at which Coal is procured)

5.15 The Commission has also sought coal purchase bills considered for November, 2021. The Commission has scrutinised the bills submitted and computed the purchase price of coal for the month of November, 2021 as shown in Table below:

**Table 7: Computation of Purchase price of Coal by TPC-G for the month of November 2021**

Date	Invoice QTY	GCV	HBA	Correction as per FSA	Invoice Rate	Coal Cost	Freight Rate	BF Correction	Freight Payable	Total Coal Cost	
										MT	kcal/kg
a	b	c	D	e	f	g	h	i	j	k	l
13-Oct-21	61245	4839	161.63	58.13	103.50	6338858	10.57	0.55	665948	7004805	114.37
18-Oct-21	56300	4808	161.63	59.00	102.63	5778069	10.57	0.70	634501	6412570	113.90
21-Oct-21	60251	4906	161.63	52.05	109.58	6602305	10.57	0.71	679631	7281936	120.86
26-Oct-21	55250	4819	161.63	58.17	103.46	5716165	10.57	0.68	621563	6337728	114.71
08-Nov-21	60705	4806	215.01	80.9	134.11	8141148	10.57	0.69	683538	8824686	145.37
13-Nov-21	63850	4818	215.01	80.83	134.18	8567393	10.57	0.59	712566	9279959	145.34
<b>Total</b>	<b>357601</b>	<b>4833</b>	<b>180.22</b>	<b>65.17</b>	<b>115.06</b>	<b>41143937</b>	<b>10.57</b>	<b>0.65</b>	<b>3997747</b>	<b>45141684</b>	<b>126.23</b>

5.16 TPC has submitted the detailed coal computation for the coal purchased in November, 2021 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.

- 5.17 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.
- 5.18 Apart from above, the Commission has also sought for third party sampling report for GCV verifications. TPC-G 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-G has also considered the stacking loss as per norms approved by the Commission while computing the Energy Charges.
- 5.19 From the Table above, the basic purchase cost of imported coal including freight during the month of November, 2021 as per bills submitted worked out at USD 126.23/MT. TPC-D has booked Rs. 9574.38/MT (i.e. Rs. 8690.72/MT for Coal and Rs. 883.66/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. 11447.53 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 November, 2021 is as given below:

**Table 8: Break-up of Coal Cost for the month of November 2021 for TPC-G**

Sr. No	Particular	Source / Formula	Units	As Submitted – Coal Cost	As Approved – Coal Cost
1	Basic Coal cost + Freight in Rs.	As submitted	Rs./MT	9,574.38	9,574.38
2	Excise + Custom Duty + CE Cess+ Insurance	As submitted	Rs./MT	928.55	928.55
3	Handling and Wharfage	As submitted	Rs./MT	674.17	674.17
4	Other Fuel Handling Charges	As submitted	Rs./MT	285.90	285.90
5	Other Adjustment	As submitted	Rs./MT	(15.47)	(15.47)
6	<b>Total as per Form 12</b>	<b>Sum (3:7)</b>	<b>Rs./MT</b>	<b>11,447.53</b>	<b>11,447.53</b>

- 5.20 It is observed that there is difference in coal cost considered in Form 11 and Form 12. TPC 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 November 2021 of TPC-G**

Particulars	Units	TPC Submission	As Approved
Form F12 - Coal Consumption Cost	Rs/MT	11052.83	11052.83
Foreign Exchange Rate Variation	Rs/MT	243.73	243.73
Employee Cost	Rs/MT	24.54	24.54
Form F11 - Coal Consumption Cost	Rs/MT	11,321.10	11,321.10

- 5.21 In response to the query raised on procurement of costlier power of 101.19 MUs from Unit-5 at Rs. 8.09/unit, BEST submitted that it could have replaced this costly power with other cheaper options like power exchanges etc only if zero scheduling would have permitted by MSLDC to the embedded generating units like TPC-G U-5 and U-8. MSLDC is reluctant to give approval for zero scheduling requests for Mumbai embedded units due to transmission constraint issues. However, BEST has made attempt to purchase cheaper power from the power exchange so as to replace the costly power from TPC-G Unit-5 & Unit-8 up to its technical minimum level. Thus, BEST has reduced the quantum of power purchase from the TPC-G Unit-5 and Unit-8 and carried out the optimization of the power purchase cost through TPC-G sources.
- 5.22 Also, in response to query raised by the Commission in respect of purchase of costly power from RLNG (Rs 22.74/kWh), BEST submitted that TPC-G informed the Daily Net quota (DNQ) of APM gas from GAIL will be insufficient to run Unit-7 at technical minimum level and GAIL is able to provide RLNG to TPC-G only on Take or Pay basis from 14th October'2021. Therefore, envisaging critical availability situation, TPC-G in consultation with BEST & TPC-D had executed contract with GAIL for additional 0.2 MMSCMD quantum of RLNG on 90% take or pay condition for the period from 14 October-2021 to 31 October-2021 to sustain TPC-G Unit-7 at technical minimum load considering prevailing power scenario. Further, TPC-G requested GAIL to extend the Take or Pay period in view of non-consumption of RLNG fully up to 31 October-2021. GAIL agreed for the same and extended period till 15 November-2021. The balance quantity of RLNG was consumed in the month of November-2021 (till 15 November-2021). The Commission notes that the quantum of power purchased through RLNG was miniscule (i.e., 1.06 MU) and such power purchase was done to ensure Unit-7 can generate on technical minimum when APM gas was not available.
- 5.23 The Weighted Average Rate of TPCG Unit-7 using APM/ RLNG is Rs.2.88/Kwh for November-2021 which consists of 44.60 MU purchase under APM gas and 1.06 MU purchase under RLNG.
- 5.24 The Commission has directed TPC-G in its MYT order that the use of RLNG shall be done only in consultation with MSLDC. In this regard, it was clarified that scheduling of Unit 7 on RLNG has now moved into MOD operations. Hence, consent for scheduling RLNG has become system driven. Accordingly, MSLDC was aware of the use of RLNG for running Unit 7. The Commission notes the same.
- 5.25 **In view of the above, the Commission has considered APPC of Rs 6.15/kWh as against approved rate of Rs. 4.60/kWh for power purchased from TPC-G. The APPC varies due to higher Fixed Cost/unit of power purchased from Unit-5, Unit-7**





**and Unit-8, and increase in imported fuel price and RLNG price resulting in higher variable cost of Unit-5, 7 & 8.**

5.26 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
November 2021	(29.45)	47.28	17.83

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

**Manikaran Power Limited (Medium Term PPA)**

5.27 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.

5.28 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.

5.29 As submitted by BEST, it has purchased 65.49 MU at average rate of Rs. 3.98/kWh as against approved rate of Rs. 4.42/kWh. **The reduction in rate is due to higher availability and PLF of the said plant which has resulted in higher quantum above 85% PLF being available at only Variable Charge and Incentive as per terms of the PPA.** The incentive is payable at the rate of 50% of the Fixed Charge for Availability in excess of Normative Availability and shall be payable only to the extent of despatch of the power station above Normative Availability.

5.30 Accordingly, the Commission has considered the said purchase from Manikaran Power Limited for the month of November 2021 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 November 2021**

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	14.62	2.36	12.78	2.06	27.40	4.42
Actual	65.49	12.24	1.87	13.85	2.12	26.09	3.98



5.31 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
November 2021	1.37	(2.68)	(1.31)

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

### Renewable Sources

- 5.32 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.
- 5.33 Further, the Commission has also approved annual purchase of non-solar and solar REC's at Floor Price of Rs.1.00/kWh for approximately 716 MUs towards shortfall in meeting RPO.
- 5.34 **BEST has purchased 2.19 MU of Solar Power at Rs 8.56/kWh for November 2021 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.
- 5.35 In addition to the above, BEST has also procured Solar and Non-Solar Power under Green Day-Ahead Market (GDAM) launched by IEX at its power trading platform, so as to meet part of its Solar and Non-Solar RPO. Accordingly, for the month of November 2021, BEST has procured 11.36 MU and 0.23 MU at Rs. 4.04/kWh and Rs. 4.03/kWh of Solar and Non-Solar Respectively. The overall power procured through GDAM is 11.60 MU at Rs. 4.04/kWh.
- 5.36 REC trading was put on hold by the Hon'ble APTEL on power exchange platform vide its interim Order dated 24 July 2020 in the matter of Appeal No. 113 of 2020. Wherein RECs are not available in the market from the month of July 2020. The REC trading session has been resumed in line with the Hon'ble APTEL vide Appeal No. 113 of 2020, 117 of 2020, 118 of 2020, 123 of 2020, 137 of 2020 and 138 of 2020 dated 09.11.2021 and CERC vide order no. 05/SM/2020 dated 18.11.2021.
- 5.37 Accordingly, BEST has also purchased REC in accordance with Regulation 7.6 of MERC (RPO-REC) Regulations, 2019. The relevant provision Regulations is reproduced below;
- “An Obligated Entity may meet its RPO target by way of its own generation or procurement of power from another RE Project or by purchase from a Licensee or by purchase of RECs or by a combination of these options.”*



- 5.38 BEST has purchased 1,57,000 and 1,16,000 nos. of Solar and Non-Solar REC at Rs. 2.38/kWh and Rs. 1.20/kWh respectively for November 2021 from IEX and PXIL. The said rates are inclusive of exchange fees and taxes. The Commission has verified the said purchase from the invoice submitted by BEST and has accordingly considered the said purchase of REC.
- 5.39 In response to the query raised by the Commission on procurement of Green Power from Power Exchange and procurement of REC, BEST replied that since REC was stayed from July 2020, there was a substantial backlog towards RPO compliance by BEST for FY 2020-21 and FY 2021-22 (upto 31.10.2021) to the extent of 340.37 MU and 865.16 MU of procurement of Solar and Non-Solar respectively. To meet this shortfall, REC and power under GDAM from power exchange was procured for achieving the cumulative RPO compliance.
- 5.40 BEST has procured solar power from M/s. Walwahn Solar MH Ltd (approved source), REC from Power Exchange as well as IEX and GDAM from IEX platform (Competitive bidding), resulting in total power procurement of 13.79 MU at weighted average tariff of Rs. 4.76/kWh. **Accordingly, the Commission has considered RE purchase as submitted by BEST.**
- 5.41 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
November 2021	5.32	(1.00)	4.32

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

#### Short Term Purchase

- 5.42 **With regards to short term purchase, BEST has purchased 48.93 MU at an average rate of Rs. 3.62/kWh as compared to approved rate of Rs. 4.00/kWh.** The overall power purchased from Power Exchange was about 12.54% of Net power procured during the month of November 2021 mainly to meet the shortfall during day-time.
- 5.43 Considering the prevailing market prices, the Commission has considered the short-term purchase by BEST for November, 2021.
- 5.44 Accordingly, variation in power purchase expenses from Short Term Purchase can be divided on account of change in quantum and per unit rate as follows:



Month	Increase in Expenses for power purchase from Short Term (Rs. Crore)		
	On Account of change Quantum of Power Purchase	On Account of change in Per Unit rate of Power Purchase	Total
November 2021	(0.87)	(1.94)	(2.81)

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

### Sale of Power

- 5.45 **BEST has done sale of surplus power to the extent of 0.52 MU during the month at Rs. 10.99/kWh.** Therefore, to optimize power purchase cost, the surplus power of 0.52 MU was sold through power exchange (IEX) from which BEST has earned Revenue of Rs. 0.57 Crore (i.e. Rs. 10.99/Unit). In view of the aforesaid, the Commission has considered the actual quantum and revenue against surplus sale.

### Deviation Quantum and Cost

- 5.46 It was observed that BEST has overdrawn 1.61 MU during the month of November, 2021. Accordingly, the deviation quantum 1.61 MU at Rs 0.61 Crore has been considered as per provisional weekly invoice raised by MSLDC for the period 1 November, 2021 to 30 November, 2021. 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.
- 5.47 **In view of the same, the Commission has considered total deviation quantum of 1.61 MU (Overdrawn), which contributes to around 0.42% of the total power procurement, for Rs 0.61 Crore at Rs 3.81/kWh.**

### Approved Cost of Power Purchase

- 5.48 In view of the above, the overall cost approved in the Tariff Order and actual for the month of November, 2021 considered by the Commission is as shown below:

**Table 11: Approved Power Purchase Cost for the month November 2021**

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	304.72	36.80	1.21	103.29	3.39	140.09	4.60
	Actual	256.82	37.79	1.47	120.13	4.68	157.92	6.15
Manikaran Power	Approved	62.05	14.62	2.36	12.78	2.06	27.40	4.42
	Actual	65.49	12.24	1.87	13.85	2.12	26.09	3.98
Renewable Power	Approved	2.63	-	-	2.25	8.56	2.25	8.56
	Actual	13.79	-	-	6.57	4.76	6.57	4.76
REC	Approved	-	-	-	5.97	1.00	5.97	1.00



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)
	Actual	-	-	-	51.38	1.88	51.38	1.88
Short Term Purchase	Approved	51.32	-	-	20.53	4.00	20.53	4.00
	Actual	48.93			17.72	3.62	17.72	3.62
Sale of Power	Approved	-	-	-	-	-	-	-
	Actual	-0.52			-0.57	10.99	-0.57	10.99
Deviation Quantum	Approved	-	-	-	-	-	-	-
	Actual	1.61	-	-	0.61	3.81	0.61	3.81
Total	Approved	420.71	51.42	1.22	144.81	3.44	196.23	4.66
	Actual	386.12	50.03	1.30	209.70	5.43	259.72	6.73

5.49 Considering the above submission, the Commission allows the power purchase quantum of 386.12 MU for total cost of Rs. 259.72 Crore at average power purchase cost of Rs. 6.73/kWh for the month of November, 2021 as shown in Table above. The actual purchase for same month in FY 2020-21 i.e. November 2020 was 364.27 MU and power purchase cost was Rs. 149.80 Crore with APPC of Rs. 4.11/kWh.

#### Summary

- 5.50 To summarise, BEST has optimised its overall power purchase cost by procuring entire power purchased from Manikaran Power Ltd to the extent of its Availability, Short term power (48.93 MU at Rs 3.62/kWh from DAM and RTM on IEX) and selling the surplus power of quantum 0.52 MU in IEX at Rs. 10.99/kWh.
- 5.51 However, the overall average power procurement cost has increased due to increase in variable cost for power procurement from TPC Unit 5 & 8 due to increase in imported coal price, lower PLF of Unit 7 due to less APM Gas availability and higher per unit fixed charges due to lower PLF of Unit 5 and Unit 8.

#### 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 November, 2021 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 Approved per unit Power Purchase Cost hence the  $Z_{FAC}$  worked November, 2021 is positive as shown in the Table below.



**Table 12: Computed Z<sub>FAC</sub> for the month of November 2021**

S. No.	Particulars	Units	November 2021
1	Average power purchase cost approved by the Commission	Rs./kWh	4.66
2	Actual average power purchase cost	Rs./kWh	6.73
3	Change in average power purchase cost (=2 -1)	Rs./kWh	2.06
4	Net Power Purchase	MU	386.12
5	Change in fuel and power purchase cost (=3 x 4/10)	Rs. Crore	79.62

**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) month as per provisions of MYT Regulations, 2019. As FAC levied for the month of July 2021 was nil, there would not be any adjustment factor for the month of November 2021 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 November, 2021.

**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<sub>FAC</sub> 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<sub>FAC</sub> 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<sub>FAC</sub> corresponding to the excess distribution losses (in kWh terms) shall be deducted from the total Z<sub>FAC</sub> 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 November 2021**

S. N	Particulars	Units	Approved in Tariff Order	November 2021 – Actual	Cumulative Actual April 21 to Nov-21	Annual Sliding Loss – Dec 20 to Nov 21
1	Net Energy Input at Distribution Voltage	MU	4,888.10	372.81	2,966.97	4,260.89
2	BEST Retail Sales	MU	4,683.78	371.71	2,852.55	4114.59
3	Distribution Loss (1 - 2)	MU	204.32	1.10	114.42	146.30
4	Distribution Loss as % of net energy input (3/1)	%	4.18%	0.30%	3.86%	3.43%
5	Excess Distribution Loss = [Actual Distribution Loss (4) - Distribution loss approved (4)] x Net Energy Input (1)	MU	-	-	-	-
6	<b>Disallowance of FAC due to excess Distribution Loss</b>	<b>Rs. Crore</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

9.3 As seen from the above table, for the month of November, 2021, the standalone distribution loss is lower than the approved distribution loss. As per BEST, the power purchase quantum is for a calendar month whereas sales figures are spread over different months on account of billing cycle. 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 distribution loss up to the month in financial year 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. It is observed that cumulative loss of 3.86% upto November, 2021 and annual sliding distribution loss (i.e. Annual distribution Loss for the period between December 20 to November 21) of 3.43% is marginally lower than approved loss

9.4 Further, the comparison of Distribution Loss for the November 2021 as compared to last year is as given below:

**Table 14: Monthly Distribution Loss of FY 2020-21 and FY 2021-22**

Particulars	Approved Loss	April	May	June	July	Aug	Sep	Oct	Nov	Cumulative upto Nov
FY 2021-22	4.18%	2.65%	4.30%	3.15%	8.47%	2.87%	2.19%	6.59%	0.30%	<b>3.86%</b>
FY 2020-21	4.18%	2.79%	13.92%*	-24.42% <sup>§</sup>	1.64%	3.37%	1.19%	4.20%	2.62%	<b>6.08%</b>

\* - Estimated billing undertaken due to widespread pandemic of COVID-19

§ - Negative distribution loss due to accounting of incremented sale units of prior period in June-2020 due to COVID-19 pandemic

9.5 It is observed that annual sliding Distribution Loss of 3.43% 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 November, 2021.

## 10. Summary of Allowable ZFAC



10.1 The summary of the FAC amount as approved by the Commission for the month of November, 2021 is as shown in the Table below.

**Table 15: Summary of Allowable Z<sub>FAC</sub> for November, 2021**

S. No.	Particulars	Units	November 2021 - As per BEST	November 2021 – As Approved
<b>1</b>	<b>Calculation of ZFAC</b>			
1.1	Change in cost of generation and power purchase attributable to Sales within the License Area (F)	Rs. Crore	79.62	79.62
1.2	Carrying cost for over-recovery/under-recovery (C)	Rs. Crore	-	-
1.3	Adjustment factor for over-recovery/under-recovery (B)	Rs. Crore	-	-
1.4	<b>ZFAC = F+C+B</b>	Rs. Crore	79.62	79.62
<b>2</b>	<b>Calculation of Per Unit FAC</b>			
2.1	Energy Sales within the License Area	MU	371.71	371.71
2.2	Excess Distribution Loss	MU	-	-
2.3	ZFAC per kWh	Rs./kWh	2.14	2.14
<b>3</b>	<b>Allowable FAC</b>			
3.1	FAC disallowed corresponding to excess Distribution Loss [(2.2 x 2.3)/10]	Rs. Crore	-	-
3.2	FAC allowable [1.4-3.1]	Rs. Crore	79.62	79.62
<b>4</b>	<b>Utilization of FAC Fund</b>			
4.1	Opening Balance of FAC Fund	Rs. Crore	(286.11)	(286.08)
4.2	Holding Cost on FAC Fund	Rs. Crore	(1.85)	(1.85)
4.3	Z <sub>FAC</sub> for the month (Sr. N. 3.2)	Rs. Crore	79.62	79.62
4.4	Closing Balance of FAC Fund	Rs. Crore	(208.33)	(208.30)
4.5	Z <sub>FAC</sub> leviable/refundable to consumer	Rs. Crore	-	-
5.0	Energy Sales within the License Area	MU	371.71	371.71
6.0	ZFAC per kWh [(4.5/5.0)*10]	Rs./kWh	-	-
7.0	<b>Total FAC based on category wise and slab wise allowed to be recovered in the billing month of January 2022</b>	Rs. Crore	-	-
8.0	<b>Carried forward FAC for recovery during future period (4.5-7.0)</b>	Rs. Crore	-	-

10.2 BEST has considered the holding cost considering the MCLR + 150 basis points. This turns out to be 8.50% for November 2021 and holding cost worked out is Rs. 1.85 Crore which is also approved by the Commission. The holding cost as calculated will be contributed to the FAC fund and is outlined as below:





**Table 16: Calculation of Holding Cost for the month of November 2021**

Calculation of Carrying Cost	
Month	November -21
Op. Balance	(261.08)
FAC fund of the Month	79.62
<b>Cl. Balance</b>	<b>(181.46)</b>
Interest Rate	8.50%
Interest for the month	(1.85)
Cumulative Interest till previous month	(25.00)
Cumulative Interest till Current Month	(26.85)
<b>Total</b>	<b>(208.30)</b>

10.3 It can be seen from the above table that standalone FAC for the month of November, 2021 is Rs. 79.62 Crore. As the FAC is positive, the said amount will be adjusted from the FAC Fund for stabilisation of FAC rate over the period.

#### 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: —*

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

Where:

$Z_{FAC\ Cat}$  = 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 Z<sub>FAC</sub> 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<sub>FAC</sub> 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. 79.62 Crore for the month of November, 2021 to be adjusted against the accumulated FAC Fund and shall be carried forward to the next billing cycle with holding cost.

11.4 The Commission in its approval for the month of October, 2021, has directed BEST to carry forward the approved FAC amount of Rs. (286.08) Crore to be accumulated as FAC Fund to be carried forward to the next billing cycle with holding cost. The opening balance of FAC fund along with holding cost is Rs. (287.93) Crore.

11.5 **The Commission in its approval for the month of March 2021 dated 24 May 2021 has decided to accumulate the FAC Fund arising out of negative FAC up to March 2023 along with the holding cost. Accordingly, considering the approved standalone FAC amount of Rs. 79.62 Crore for the month of November, 2021 and opening**



balance FAC Fund of Rs. (287.93) Crore, the total adjustable amount of Rs. (208.30) Crore is accumulated in the FAC Fund. The Commission allows the BEST to carry forward the accumulated FAC fund of Rs. (208.30) Crore to the next billing cycle with holding cost.

- 11.6 In view of the above, the per unit  $Z_{FAC}$  for the month of November, 2021 to be levied on the consumers of BEST in the billing month of January, 2022 is Nil.



