



सत्यमेव जयते

# महाराष्ट्र विद्युत नियामक आयोग Maharashtra Electricity Regulatory Commission



Ref. No. MERC/FAC/20182019/0633

Date: 16 May, 2018

To,  
The Managing Director,  
Tata Power Company Ltd.,  
Dharavi Receiving Station,  
New Shalimar Industrial Estate  
Matunga, Mumbai – 400 019

**Subject:** Post facto approval of TPC-D's Fuel Adjustment Charges (FAC) for the period of October, 2017 to December, 2017.

**Reference:** 1. TPC-D's FAC submission vide letter no. 103 dated 2 May, 2018 for post-facto approval of FAC for the period from October, 2017 to December, 2017.

Sir,

Upon vetting the FAC calculations for the months of October, 2017 to December, 2017 as mentioned in the above reference, the Commission has accorded post facto approval to TPC-D undertaking for charging FAC to its consumers as shown in the table below:

Month	Oct 2017	Nov 2017	Dec 2017
Z <sub>FAC</sub> allowed for recovery (Rs. Crore)	14.46	12.04	17.80

TPC-D is directed to refund Rs. 1.10 Crore along with interest to consumers in next FAC billing cycle. This is on account of correction in adjustment factor for the month of October, 2017 as explained in para 6.1 and 9.2 of the vetting report.

The above approval of FAC is subject to final True up of FY 2017-18 under the MERC (Multi Year Tariff) Regulations, 2015.

Yours faithfully,



(Dr. Rajendra Ambekar)  
Executive Director, MERC

**Encl:** Annexure A: Detailed Vetting Report for the period of October, 2017 to December, 2017.

Page 1 of 11



**Cc as enclosed:**

**Names and Addresses of Institutional Consumer Representatives**

Prayas Energy Group, Amrita Clinic, Athawale Corner, Lakdipool-Karve Road Junction, Deccan Gymkhana, Karve Road, Pune 411 004.	The President, Mumbai Grahak Panchayat, Grahak Bhavan, Sant Dynyaneshwar Marg, Behind Cooper Hospital, Vile Parle (West), Mumbai 400 056.
The General Secretary, Thane Belapur Industries Association, Plot No.P-14, MIDC, Rabale Village, PO Ghansoli, Navi Mumbai 400 7001	The President, Vidarbha Industries Association, 1st floor, Udyog Bhawan, Civil Lines, Nagpur 440 001.
Maharashtra Chamber of Commerce, Industry & Agriculture, Oricon House, 6th Floor, 12 K. Dubash Marg, Fort, Mumbai- 400 001, (Nashik Branch) E-mail: <a href="mailto:maccia.nsk@gmail.com">maccia.nsk@gmail.com</a>	Chamber of Marathwada Industries and Agriculture, Bajaj Bhavan, P-2, MIDC Area, Station Road, Aurangabad - 431 005



**POST FACTO APPROVAL FOR FAC CHARGES FOR THE MONTHS OF OCTOBER,  
2017 TO DECEMBER, 2017**

**Subject:** Post facto approval of TPC-D's Fuel Adjustment Charges (FAC) for the period of October, 2017 to December, 2017.

**Reference:** 1. TPC-D's FAC submission vide letter no. 103 dated 2 May, 2018 for post-facto approval of FAC for the period from October, 2017 to December, 2017.

**1. FAC submission by TPC-D:**

1.1 TPC-D has submitted FAC submissions for the months of October, 2017 to December, 2017 as referred above. Upon vetting the FAC calculations, taking cognizance of all the submissions furnished by TPC-D, the Commission has accorded post facto approval for the FAC amount to be charged in the billing months of December, 2017 to February, 2018.

**2. Background**

2.1 On 21 October, 2016, the Commission has issued Tariff Order for TPC-D, (Case No.47 of 2016) for True-up of FY 2014-15, provisional Truing-up for FY 2015-16, and Aggregate Revenue Requirement and Tariff for FY 2016-17 to FY 2019-20. Revised Tariff has been made applicable from 1 October, 2016.

2.2 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.

2.3 Vide FAC vetting Report dated 16 January, 2017, the Commission accorded prior approval to the FAC for the month of October, 2016.

2.4 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 2 May, 2018. TPC-D has filed FAC submissions for the months of October, 2017 to December, 2017 for post facto approval. The Commission has scrutinized the submissions provided by TPC-D 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 TPC-D 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 Sales		
	(I)		Oct'17 (MU)	Nov'17 (MU)	Dec'17 (MU)
		(II=I/12)	(III)	(IV)	(V)
<b>LT Category</b>					
LT I(A) - Residential (BPL)	0.02	0.00	0.00	0.00	0.00
LT I(B) - Residential	2122.18	176.85	173.78	155.53	129.64
LT II(A) - Commercial upto 20 kW	275.25	22.94	16.56	15.46	14.18
LT II(B) - Commercial 20 to 50 kW	90.36	7.53	7.34	7.04	6.37
LT II(C) - Commercial > 50 kW	363.45	30.29	27.50	25.99	23.72
LT III(A) - Industrial upto 20 kW	70.5	5.88	3.76	3.44	3.60
LT III(B) - Industrial > 20 kW	210.04	17.50	16.17	15.61	14.99
LT V - Advertisement & Hoardings	0.05	0.00	0.00	0.01	0.01
LT VI - Streetlights	0.57	0.05	0.05	0.05	0.05
LT VII(A) - Temporary Religious	0.08	0.01	0.02	0.00	0.00
LT VII(B) - Temporary Others	21.05	1.75	2.34	2.28	2.42
LT VIII - Crematoriums & Burial Grounds	0.33	0.03	0.03	0.03	0.03
LT IX(A) - Public Service Govt Hospital & Educational Institutions	0.09	0.01	0.32	0.31	0.30
LT IX(B) - Public Services Others	15.78	1.32	1.97	1.88	1.57
<b>HT Category</b>					
HT I - Industry	882.19	73.52	77.47	64.77	63.67
HT II - Commercial	610.51	50.88	49.00	43.62	39.31
HT III - Group Housing Society (Resi)	3.56	0.30	0.34	0.28	0.26
HT IV - PWW & Sewage Treatment Plants	63.97	5.33	6.57	6.23	6.43
HT V(A) - Railways 22/33 kV	158.1	13.18	5.62	5.36	4.95
HT V(B) - Railways Metro & Monorail	6.38	0.53	0.73	0.45	0.38
HT VI(A) - Public Service Govt Hospital & Educational Institutions	43.94	3.66	1.07	0.98	0.91
HT VI(B) - Public Services Others	153.62	12.80	7.78	6.50	5.62
HT VII - Temporary Supply	10.18	0.85	1.51	1.57	1.62
<b>Sub total</b>	<b>5102.20</b>	<b>425.18</b>	<b>399.93</b>	<b>357.39</b>	<b>320.03</b>

### 4. Cost of Power Purchase

4.1 TPC-D purchase majority of its power from TPC-G. Further, TPC-D also procures power from other sources in order to fulfil the demand of its consumers. The following are the list of sources from which TPC-D 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.
- d) Unscheduled Interchanges (Interstate UI)

4.2 The following tables show the variation in average power purchase cost (Rs/kWh) for the months of October, 2017 to December, 2017 as compared to average power purchase cost approved in Tariff Order dated 21 October, 2016:

Particulars	Tariff Order Dated 21.10.2016			Actual for Oct, 2017		
	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	3666.70	1539.52	4.20	309.23	143.85	4.65
RE Sources	369.61	261.48	7.07	12.39	13.14	10.60
Bilateral	1300.34	407.25	3.13	7.32	2.53	3.46
Others	-	-	-	94.52	26.25	2.78
<b>Total</b>	<b>5336.66</b>	<b>2208.25</b>	<b>4.14</b>	<b>424.16</b>	<b>191.18</b>	<b>4.51</b>

Particulars	Actual for Nov, 2017			Actual for Dec, 2017		
	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	299.06	133.40	4.48	283.66	127.58	4.50
RE Sources	16.23	10.76	6.63	23.11	13.42	5.81
Bilateral	21.96	6.69	3.05	15.49	4.09	2.64
Others	33.52	8.26	2.46	(2.40)	(2.05)	8.57
<b>Total</b>	<b>370.77</b>	<b>164.79</b>	<b>4.45</b>	<b>319.86</b>	<b>148.13</b>	<b>4.63</b>

4.3 The Commission allows the average power purchase cost of **Rs. 4.51/kWh** for the month of October, 2017, **Rs. 4.45/kWh** for the month of November, 2017 and **Rs. 4.63/kWh** for the month of December, 2017 as shown in the tables above.

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

5.1 The Commission has worked out the average power purchase costs for the months as shown in above tables. The same has been compared with the average power purchase cost approved by the Commission in Tariff Order dated 21 October, 2016 and arrived at differential per unit rate at which  $Z_{FAC}$  is to be passed on to the consumers.



5.2 The following table shows the  $Z_{FAC}$  worked out by the Commission on account of difference in fuel and power purchase cost for the months of October, 2017 to December, 2017.

S. No.	Particulars	Units	Oct 2017	Nov 2017	Dec 2017
1	Average power purchase cost approved by the Commission	Rs./kWh	4.14	4.14	4.14
2	Actual average power purchase cost	Rs./kWh	4.51	4.45	4.63
3	Change in average power purchase cost (=2 -1)	Rs./kWh	0.37	0.31	0.49
4	Net Power Purchase	MU	424.16	370.77	319.86
5	<b>Change in fuel and power purchase cost (=3 x 4/10)</b>	<b>Rs. Crore</b>	<b>15.67</b>	<b>11.37</b>	<b>15.77</b>

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

6.1 After adjustment for over-recovery/under recovery (B), the adjustment factor to be added / reduced is as below:

S. No.	Particulars	Units	Oct 2017	Nov 2017	Dec 2017
1.1	Incremental cost allowed to be recovered in Month n-4	Rs. Crore	7.31*	14.56	14.46
1.2	Incremental cost in Month n-4 actually recovered in month n-2	Rs. Crore	8.51	13.90	11.34
1.3	Adjustment factor for over-recovery/under-recovery (1.2 - 1.1)	Rs. Crore	(1.20)	0.66	3.13
2.0	Carried forward adjustment attributable to application of ceiling limit for previous month	Rs. Crore	0.00	0.00	0.00
3.0	Adjustment factor for over-recovery/under-recovery (1.3+2.0)	Rs. Crore	(1.20)	0.66	3.13
4.0	Adjustment for refund as per Post Facto Approval for Q1**	Rs. Crore	0.00	0.00	(1.12)
5.0	<b>Net Adjustment factor for over-recovery/under-recovery (1.3+ 1.4)</b>	<b>Rs. Crore</b>	<b>(1.20)</b>	<b>0.66</b>	<b>2.01</b>

\*TPC-D in its submission has considered the cost allowed to be recovered as Rs.7.85 Crore as against approved value of Rs.7.31 Crore. The same is corrected in this vetting report and consequential impact is stipulated in para 9.2 of this report.

\*\*The refund of Rs. 1.06 Crores along with the interest for the period 1st June 2017 to 31st December 2017 has been considered by TPC-D. TPC-D has refunded total amount of Rs. 1.12 Crores including interest in the February billing cycle.



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

- 7.1 Carrying/ Holding cost for under/ over recovery has been granted at approved interest rate for the eligible amount viz. the difference between the normative actual variable cost of power procurement and approved cost of power procurement for the respective months. The following Table shows the month wise interest rate and amount worked out as Carrying/ Holding cost for under/ over recovery for the months of October, 2017 to December, 2017.

Month	Oct 2017	Nov 2017	Dec 2017
Adjustment Factor (Rs. Crore)	(1.20)	0.66	3.13
Applicable Interest Rate	10.45%	10.45%	9.45%
Carrying/ Holding cost for under/ over recovery (Rs. Crore)	(0.010)	0.006	0.025

## 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.

*“10.8 The 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		
				Oct-17	Nov-17	Dec-17
1	Energy Requirement for TPC-D Consumers at T<math>\diamond</math>D interface	MU	2474.86	1612.51	1831.07	2041.23





2	TPC-D Retail Sales (excluding sales at 110/132 kV level)	MU	2449.61	1600.14	1812.71	2022.95
3	Distribution Loss (1 - 2)	MU	25.25	12.36	18.36	18.28
4	Distribution Loss as % of net energy input (3/1)	%	1.02%	0.77%*	1.00%	0.90%
5	Excess Distribution Loss = [Actual Distribution Loss (4) - Distribution loss approved] x Net Energy Input (1)	MU	-	-	-	-
6	<b>Disallowance of FAC due to excess Distribution Loss</b>	<b>Rs. Crore</b>	-	-	-	-

\* On evaluation it was found that the standalone distribution loss for the month of October, 2017 is negative. On a query of the Commission, TPC-D replied that this was due to cyclic billing of LT consumers which will get adjusted in the next billing period. However, it can be seen that the cumulative distribution loss for the same is positive.

8.3 As seen from the above table, cumulative distribution loss for the months of October, 2017 to December, 2017 is lower than the approved distribution loss of 1.02%. Accordingly, no deductions have been made on account of excess distribution loss for the month of October, 2017 to December, 2017.

## 9. Summary of Allowable Z<sub>FAC</sub>

9.1 The summary of the FAC amount as approved by the Commission for the month of October, 2017 to December, 2017 which is allowed to be recovered in the billing month of December, 2017 to February, 2018 is as shown in the Table below.

S. No.	Particulars	Units	Oct 2017	Nov 2017	Dec 2017
<b>1.0</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	15.67	11.37	15.77
1.2	Carrying cost for over-recovery/under-recovery (C)	Rs. Crore	(0.01)	0.01	0.02
1.3	Adjustment factor for over-recovery/under-recovery (B)	Rs. Crore	(1.20)	0.66	2.01
<b>1.4</b>	<b>ZFAC = F+C+B</b>	<b>Rs. Crore</b>	<b>14.46</b>	<b>12.04</b>	<b>17.80</b>
<b>2.0</b>	<b>Calculation of FAC Charge</b>				
2.1	Energy Sales within the License Area(including 15 days adjustment)	MU	412.37	347.15	312.28



S. No.	Particulars	Units	Oct 2017	Nov 2017	Dec 2017
2.2	Excess Distribution Loss	MU	0.00	0.00	0.00
2.3	ZFAC per kWh	Rs./kWh	0.35	0.35	0.57
<b>3.0</b>	<b>Recovery of FAC</b>				
3.1	Allowable FAC [(2.1 x 2.3)/10]	Rs. Crore	14.46	12.04	17.80
3.2	FAC disallowed corresponding to excess Distribution Loss [(2.2 x 2.3)/10]	Rs. Crore	0.00	0.00	0.00
<b>4.0</b>	<b>Total FAC based on category wise and slab wise allowed to be recovered</b>	<b>Rs. Crore</b>	<b>14.46</b>	<b>12.04</b>	<b>17.80</b>
4.1	Carried forward FAC for recovery during future period (3.1-3.2-4.0)	Rs. Crore	0.00	0.00	0.00

9.2 It can be seen from the above table that a recovery of Rs. 44.30 Crore becomes due for the months from October, 2017 to December, 2017 cumulatively against which the TPC-D has recovered Rs. 45.40 Crore due to the error specified in Para 6.1 above. The Commission directs the TPC-D to refund remaining Rs. 1.10 Crore along with interest to consumers in next FAC billing cycle.

#### 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: —*

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

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 a variation of Z<sub>FAC</sub> in absolute terms on considering category wise per unit FAC worked out and category wise actual sales for the months of October, 2017 to December, 2017.

10.3 The variation in FAC in absolute terms is due to formula error of Z<sub>FAC</sub> computed on per unit basis. The variation however is taken care in the adjustment factor of subsequent months.

10.4 The following table shows per unit Z<sub>FAC</sub> be charged to the consumers of TPC-D for the billing month of December, 2017 to February, 2018.

**FAC for Billing Month of December, 2017 to February, 2018**

S. No	Consumer Category	Slabs	ZFAC be levied in billing month of		
			Dec'17	Jan'18	Feb'18
			(Rs./kWh)	(Rs./kWh)	(Rs./kWh)
(A)	<b>LT Category</b>				
1	LT I – BPL	0 – 30	0.108	0.103	0.150
2	LT I - Residential S1	0 – 100	0.081	0.077	0.131
3	LT I - Residential S2	101 – 300	0.210	0.200	0.338
4	LT I - Residential S3	301 – 500	0.386	0.368	0.623
5	LT I - Residential S4	> 501	0.520	0.495	0.839
6	LT II Commercial (A)	0 - 20 kW	0.402	0.383	0.649
7	LT II Commercial (B)	20–50 kW	0.432	0.412	0.698
8	LT II Commercial (C)	> 50 kW	0.497	0.474	0.802
9	LT III (A) - LT Industries	0 - 20 kW	0.381	0.363	0.615
10	LT III (B) - LT Industries	> 20 kW	0.460	0.438	0.742
11	LT IV - Public Water Works	all units	0.339	0.323	0.548
12	LT V - Advt & Hoardings	all units	0.693	0.660	1.119
13	LT VI - Street Lights	all units	0.410	0.391	0.662
14	LT VII (A) - Temporary Supply –Religious	all units	0.302	0.288	0.488
15	LT VII (B) - Temporary Supply –Others	all units	0.513	0.489	0.828
16	LT VIII - Crematorium and Burial Grounds	all units	0.217	0.207	0.350



S. No	Consumer Category	Slabs	ZFAC be levied in billing month of		
			Dec'17	Jan'18	Feb'18
			(Rs./kWh)	(Rs./kWh)	(Rs./kWh)
17	LT IX (A) - Public Service – Govt. Hospitals & Educational Institutes	all units	0.413	0.394	0.667
18	LT IX (B) - Public Service – Others	all units	0.485	0.462	0.783
19	LT X - Agriculture (A) Pumpssets	all units	0.253	0.241	0.408
20	LT X - Agriculture (B) Others	all units	0.342	0.326	0.552
<b>(B)</b>	<b>HT Category</b>				
21	HT - I Industry	all units	0.448	0.427	0.723
22	HT - II Commercial	all units	0.498	0.475	0.804
23	HT - III Group Housing Society (Residential)	all units	0.323	0.308	0.522
24	HT - IV Public Water Works	all units	0.406	0.387	0.655
25	HT-V Railways, Metro & Monorail	all units	0.413	0.393	0.667
26	HT-VI (A) Public Service – Govt. Hospitals & Educational Institutes	all units	0.407	0.388	0.657
27	HT-VI (B) Public Service- Others	all units	0.473	0.451	0.764
28	HT-VII Temporary Supply	all units	0.500	0.477	0.808

