



महाराष्ट्र विद्युत नियामक आयोग

Maharashtra Electricity Regulatory Commission

Ref. No. MERC/FAC/20162017/01327

Date: 9 January, 2017

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

Subject: Post Facto approval of Fuel Adjustment Charges (FAC) for TPC-D for the period of April, 2016 to September, 2016

Reference: a) TPC-D submission vide letter dated 5 January, 2017 for post facto approval of FAC for the period from April, 2016 to September, 2016.

Sir,

Upon vetting the FAC calculations for the months of April, 2016 to September, 2016 submitted vide letter under reference, the Commission has accorded post facto approval to TPC-D for charging to its consumers, the FAC amount (net of excess T&D loss), as detailed below:

Month	FAC allowed to be recovered / (Refunded) (Rs. Crore)	Month	FAC allowed to be recovered / (Refunded) (Rs. Crore)
April 2016	(2.81)	July 2016	(6.60)
May 2016	(5.55)	August 2016	(9.82)
June 2016	1.08	September 2016	(12.10)

Since, FAC for the period of April, 2016 to September, 2016 has been calculated based on the power purchase cost approved for FY 2015-16 in the prevailing Tariff Order dated 26 June, 2015, TPC-D is directed to recalculate FAC for this period after considering the power purchase cost approved for FY 2016-17 in the Tariff Order dated 21 October, 2016 in Case No. 47 of 2016. TPC-D shall adjust the resultant FAC amount which remains to be recovered/ refunded in the next FAC billing process.

Yours faithfully,

(Dr. Rajendra Ambekar)
Director (Tariff), MERC

Encl: Annexure: Detailed Vetting Report for the months of April, 2016 to September, 2016.

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 Dnyaneshwar 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 400 701	The President, Vidarbha Industries Association, 1 st floor, Udyog Bhawan, Civil Lines, Nagpur 440 001
Maharashtra Chamber of Commerce, Industry & Agriculture, Oricon House, 6 th Floor, 12k. Dubash Marg, Fort, Mumbai- 400001 (Nashik Branch) Email: maccia.nsk@gmail.com	Chamber of Marathwada Industries and Agriculture, Bajaj Bhavan, P-2, MIDC Area, Station Road, Aurangabad – 431 005



Post Facto approval of FAC Charges for the months of April, 2016 to September, 2016 submitted by TPC-D

Subject: Post Facto approval of Fuel Adjustment Charges (FAC) for TPC-D for the period of April, 2016 to September, 2016

Reference: a) TPC-D submission vide letter dated 5 January, 2017 for post facto approval of FAC for the period from April, 2016 to September, 2016.

1. FAC submission by TPC-D:

- 1.1 MERC (Multi Year Tariff) Regulations, 2015 becomes applicable for Tariff determination of 3rd Control Period of FY 2016-17 to FY 2019-20. However, Tariff Order under this MYT Regulations, 2015 applicable for FY 2016-17 has been issued on 21 October, 2016 and made effective from 1 October, 2016. Therefore, for the period of April, 2016 to September, 2016, Tariff Order dated 26 June, 2015 was applicable.
- 1.2 Accordingly, TPC-D in its submission has computed the FAC for the months of April, 2016 to September, 2016 in accordance with the MTR Order dated 26 June, 2015 in Case No. 18 of 2015 in the matter of Truing up for FY 2011-12, Truing up of FY 2012-13 and FY 2013-14, provisional True-Up of ARR for FY 2014-15, and revised ARR and Tariff for FY 2015-16.
- 1.3 In terms of the MERC (MYT) Regulations, 2011 a Distribution Licensee is required to obtain post facto approval of the Commission on a quarterly basis for FAC charges. Accordingly, TPC-D has submitted details of FAC chargeable from all consumers for Quarter I and II of FY 2016-17, i.e., April, 2016 to September, 2016.

2. FAC Methodology

- 2.1 The methodology for arriving at FAC is as per MERC MYT Regulations, 2011 amended from time to time. The salient features for arriving at FAC for the above period are as under:
 - Actual Distribution losses have been computed based on metering arrangement.
 - Power purchase requirement for TPC-D is considered from all sources of power usually purchased by the utility. The source include power from Tata Power Company Ltd. (TPC-G), Renewable energy procurement (RPS), Bilateral contracts and decrements to the imbalance pool and Unscheduled Interchanges (Interstate UI)



- As submitted by TPC-D, energy at the T◇D interface in the 'Energy Balance' tabulation of the FAC submission, is arrived at as follows:

MU

TPC-D's Requirement (MU)	Formula	Apr 2016	May 2016	June 2016
Tata Power-D input	(i)	218.08	244.39	229.38
Changeover	(ii)	192.46	215.08	209.72
Tata Power-D Requirement at T◇D interface	(iii) = (i) + (ii)	410.54	459.47	439.11
Gross up for Transmission Loss	(iv)	17.82	15.60	15.62
Tata Power-D Requirement at G◇T interface	(v) = (iii) + (iv)	428.36	475.07	454.73

MU

TPC-D's Requirement (MU)	Formula	July 2016	Aug 2016	Sept 2016
Tata Power-D input	(i)	211.82	201.81	201.07
Changeover	(ii)	155.04	154.09	163.59
Tata Power-D Requirement at T◇D interface	(iii) = (i) + (ii)	366.86	355.90	364.66
Gross up for Transmission Loss	(iv)	14.58	13.59	12.42
Tata Power-D Requirement at G◇T interface	(v) = (iii) + (iv)	381.44	369.49	377.08

2.2 The energy requirement met through the purchase of power from different sources is as under:

MU

Source of Purchase	Apr 2016	May 2016	Jun 2016
TPC-G including Unit 6	339.04	342.57	323.26
Renewable Energy based Generating Stations	23.78	37.38	44.96
Traders	69.44	100.80	75.40
Other Sources	(3.90)	(5.68)	11.11
Grand Total	428.36	475.07	454.73

MU

Source of Purchase	Jul 2016	Aug 2016	Sept 2016
TPC-G including Unit 6	331.59	355.76	323.37
Renewable Energy based Generating Stations	51.30	59.39	28.86
Traders	9.97	10.46	15.21
Other Sources	(11.41)	(56.12)	9.65
Grand Total	381.44	369.49	377.08



3. Variable Cost of Generation of TPC-G

3.1 TPC-D purchases majority of its power from TPC-G. While assessing the actual variable cost of generation, the Commission has assessed unit wise variable cost of generation and weighted average variable cost of generation based on the following.

- Change in generation mix
- Change in fuel price
- Normative parameters (i.e. heat rate and auxiliary consumption) as set out in Tariff Order

3.2 TPC-D fulfils remaining of the power requirement from following sources

- Renewable energy procurement
- Traders and Bilateral contracts
- Unscheduled Interchanges

4. Change in Variable Cost of Power Purchase:

4.1 Change in variable cost of power purchase has been arrived at by multiplying power purchase (MU) with the change in weighted average cost (Rs/kWh) of power purchase.

4.2 The variable cost of power procurement approved by the Commission as per MTR Order dated 26 June, 2015 in Case No. 18 of 2015 for FY 2015-16, is Rs. 3.06/kWh as explained in the table below:

Source	Approved Annual Quantum (MU)	Variable Cost (Rs. Crore)	Rate Rs/kWh
TPC-G	3958.67	1049.85	2.65
RPS Power	449.61	278.50	6.19
Traders/ Bilateral Purchase	2457.70	770.04	3.13
Total Power Purchase	6865.98	2098.39	3.06

4.3 TPC-D has submitted that it has incurred additional variable costs towards power procurement. The actual variable cost incurred by TPC-D for the months of April, 2016 to September, 2016 is as follows:

Sr. No	Parameter	Unit	Apr 2016	May 2016	Jun 2016
1	Weighted Average variable cost of power purchase considered by the Commission	Rs/kWh	3.06	3.06	3.06
2	Weighted Average Normative Actual variable cost power purchase for Month	Rs/kWh	2.54	2.58	2.63
3	Change in variable cost of power	Rs/kWh	(0.52)	(0.47)	(0.42)



Sr. No	Parameter	Unit	Apr 2016	May 2016	Jun 2016
	purchase				
4	Net Power Purchase	MU	428.36	475.07	454.73
5	Change in variable cost of power purchase	Rs Crore	(22.22)	(22.56)	(19.24)
6	Change in Fixed Cost of Power Purchase	Rs Crore	0.39	0.31	0.14
7	Total Change in Power Purchase Cost	Rs Crore	(21.83)	(22.24)	(19.11)

Sr. No	Parameter	Unit	Jul 2016	Aug 2016	Sep 2016
1	Weighted Average variable cost of power purchase considered by the Commission	Rs/kWh	3.06	3.06	3.06
2	Weighted Average Normative Actual variable cost power purchase for Month	Rs/kWh	2.59	2.40	2.31
3	Change in variable cost of power purchase	Rs/kWh	(0.47)	(0.66)	(0.74)
4	Net Power Purchase	MU	381.44	369.49	377.08
5	Change in variable cost of power purchase	Rs Crore	(17.95)	(24.23)	(27.98)
6	Change in Fixed Cost of Power Purchase	Rs Crore	(0.03)	0.04	0.12
7	Total Change in Power Purchase Cost	Rs Crore	(17.98)	(24.19)	(27.85)

5. Adjustment for over recovery/ under recovery:

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

Month	Adjustment Factor (Rs. Crore)
April 2016	18.80
May 2016	16.50
June 2016	19.95
July 2016	11.24
August 2016	14.20
September 2016	15.57

6. Carrying Cost/ Holding Cost for Under Recovery/ Over Recovery ("C")

6.1 The following table shows the month wise interest rate and amount worked out as Carrying/ Holding cost for under/ over recovery for Quarter-I and Quarter-II of FY 2016-17, i.e., for the months of April, 2016 to September, 2016.



Particulars	Apr 2016	May 2016	Jun 2016	Jul 2016	Aug 2016	Sept 2016
Applicable Interest Rate	14.05%	14.05%	14.05%	14.05%	14.05%	14.05%
Carrying Cost/ (Holding Cost) for under/ over recovery (Rs. Crore)	0.22	0.19	0.23	0.13	0.17	0.18

7. Distribution Loss:

7.1 The Commission has considered allowable Distribution Loss at 1.02% for the months of April, 2016 to September, 2016. The actual cumulative Distribution Losses and the corresponding disallowances on account of excess distribution losses are shown in the Table below:

Month	Cumulative Distribution Losses (%)	Disallowances due to excess Distribution Loss (Rs. Crore)
April 2016	0.75%	0.00
May 2016	1.30%	0.00
June 2016	0.41%	0.00
July 2016	0.99%	0.00
August 2016	0.98%	0.00
September 2016	1.21%	0.00

7.2 As seen from the above table, the cumulative distribution loss for the month of May, 2016 and September, 2016 is higher than the approved distribution loss of 1.02%. However, no reduction is considered on account of such excess distribution loss for the months of May, 2016 and September, 2016 as the FAC for these months is negative.

8. Cap on Monthly FAC Charge

8.1 Applicability of Ceiling Limit of 20%

The relevant extract from the MERC (Multi Year Tariff) (Third Amendment) Regulations, 2014 is as below:

13.9 The formula for the calculation of the FAC component of Z-factor charges as given under:-

*.....
Provided that the monthly FAC charge 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.*



8.2 As per above Regulations, the ceiling based on 20% of the variable component of Tariff works out to Rs. 142.02 Paise/kWh

9. **The summary of FAC recoverable and carried forward for recovery in future is as follows:**

Sr. No.	Parameter	Unit	Apr 16	May 16	Jun 16
1	Calculation of FAC (A)				
1.1	Change in cost of generation and power purchase attributable to Sales within the License Area (F)	Rs Crore	(21.83)	(22.24)	(19.11)
1.2	Carrying cost for over-recovery/under-recovery (C)	Rs Crore	0.22	0.19	0.23
1.3	Adjustment factor for over-recovery/under-recovery (B)	Rs Crore	18.80	16.50	19.95
1.4	FAC (A) = F + C + B	Rs Crore	(2.81)	(5.55)	1.08
2	Calculation of FAC_{kWh}				
2.1	Sales within License Area	MU	410.69	458.30	448.88
2.2	Excess Distribution Loss	MU	0.00	0.84	0.00
2.3	FAC Charge (FAC _{kWh}) without considering cap on monthly FAC Charge	Rs./kWh	(0.07)	(0.12)	0.02
2.4	Cap on monthly FAC Charge	Rs./kWh	1.42	1.42	1.42
2.5	FAC Charge (FAC_{kWh}) considering cap on monthly FAC Charge	Rs./kWh	(0.07)	(0.12)	0.02
3	FAC (A)				
3.1	Allowable FAC	Rs. Crore	(2.81)	(5.55)	1.08
3.2	FAC disallowed corresponding to excess Distribution Loss	Rs. Crore	0.00	0.00	0.00
3.3	Total FAC based on category wise and slab wise allowed to be recovered	Rs Crore	(2.81)	(5.55)	1.08
3.4	Carried forward FAC for recovery during future period	Rs Crore	0.00	0.00	0.00

Sr. No.	Parameter	Unit	Jul 16	Aug 16	Sep 16
1	Calculation of FAC (A)				
1.1	Change in cost of generation and power purchase attributable to Sales within the License Area (F)	Rs Crore	(17.98)	(24.19)	(27.85)
1.2	Carrying cost for over-recovery/under-recovery (C)	Rs Crore	0.13	0.17	0.18
1.3	Adjustment factor for over-recovery/under-recovery (B)	Rs Crore	11.24	14.20	15.57
1.4	FAC (A) = F + C + B	Rs Crore	(6.60)	(9.82)	(12.10)
2	Calculation of FAC_{kWh}				



Sr. No.	Parameter	Unit	Jul 16	Aug 16	Sep 16
2.1	Sales within License Area	MU	365.15	354.34	359.28
2.2	Excess Distribution Loss	MU	0.00	0.00	0.48
2.3	FAC Charge (FAC _{kWh}) without considering cap on monthly FAC Charge	Paise/kWh	(0.18)	(0.28)	(0.34)
2.4	Cap on monthly FAC Charge	Paise/kWh	1.42	1.42	1.42
2.5	FAC Charge (FAC_{kWh}) considering cap on monthly FAC Charge	Paise/kWh	(0.18)	(0.28)	(0.34)
3	FAC (A)				
3.1	Allowable FAC	Rs Crore	(6.60)	(9.82)	(12.10)
3.2	FAC disallowed corresponding to excess Distribution Loss	Rs. Crore	0.00	0.00	0.00
3.3	Total FAC based on category wise and slab wise allowed to be recovered	Rs Crore	(6.60)	(9.82)	(12.10)
3.4	Carried forward FAC for recovery during future period	Rs Crore	0.00	0.00	0.00

10. Recovery of FAC:

- 10.1 At the end of September, 2016, FAC to be carried forward for next month is Nil
- 10.2 The Commission approves the FAC computed for the months of April, 2016 to September, 2016 as given in the Tables above subject to Truing up TPC-D for FY 2016-17.
- 10.3 As the Tariff Order applicable for FY 2016-17 has been issued on 21 October, 2016, and revised Tariff has been made affective from 1 October, 2016, recovery of FAC in the month of October, 2016 has been equated to zero. TPC-D needs to get prior approval of FAC for the month of October 2016 based on revised Tariff.
- 10.4 Accordingly, the Commission accorded its approval for levy of FAC for the month of July 2016 to the consumers in the billing month of September, 2016. TPC-D is not able to levy FAC for the month of August, 2016 and September, 2016 to its consumers due to above directives in Tariff Order dated 21 October, 2016.
- 10.5 Since FAC for the period of April, 2016 to September, 2016 has been calculated based on the power purchase cost approved for FY 2015-16 in the prevailing Tariff Order dated 26 June, 2015 TPC-D is directed to recalculate FAC for this period after considering the power purchase cost approved for FY 2016-17 in the Tariff Order dated 21 October, 2016 in Case No. 47 of 2016. TPC-D shall adjust the resultant FAC amount which remains to be recovered/ refunded in the next FAC billing process.



11. Slab wise and Category wise FAC for the month of April 2016 to July 2016 to be recovered in billing month of June 2016 to September 2016:

Category	Slabs	FAC to be recovered in billing month (Rs/kWh)			
		Jun 2016	Jul 2016	Aug 2016	Sep 2016
LT-I Residential					
BPL	0-30	(0.09)	(0.08)	(0.07)	(0.12)
>S1	1-100	(0.13)	(0.12)	(0.10)	(0.17)
>S2	101-300	(0.27)	(0.25)	(0.21)	(0.35)
>S3	301-500	(0.54)	(0.50)	(0.41)	(0.69)
>S4	>501	(0.68)	(0.63)	(0.52)	(0.87)
LT-II Commercial					
(LT-II -a)	> 0 - 20 kW	(0.60)	(0.55)	(0.46)	(0.76)
(LT-II-b)	> 20kW <= 50 kW	(0.62)	(0.57)	(0.48)	(0.79)
(LT-II-c)	>50kW	(0.64)	(0.59)	(0.49)	(0.82)
LT III - LT Industries	<20 kW	(0.53)	(0.49)	(0.40)	(0.67)
LT IV - LT Industries	>20 kW	(0.60)	(0.55)	(0.46)	(0.76)
LT V-Advt. & Hoardings	all units	(1.10)	(1.01)	(0.84)	(1.40)
LT VI - Street Light	all units	(0.43)	(0.39)	(0.33)	(0.54)
LT VII - Temporary-Religious	all units	(0.33)	(0.30)	(0.25)	(0.42)
LT VII - Temporary-Others	all units	(0.95)	(0.87)	(0.72)	(1.20)
LT VIII - Crematorium and Burial Grounds	all units	(0.28)	(0.26)	(0.21)	(0.36)
LT IX - Public Services					
(A) Government Hospitals & Educational	all units	(0.53)	(0.49)	(0.40)	(0.67)
(B) Others	all units	(0.56)	(0.52)	(0.43)	(0.71)
HT I – Industry	all units	(0.60)	(0.55)	(0.46)	(0.76)
HT II – Commercial	all units	(0.62)	(0.57)	(0.47)	(0.79)
HT III -Bulk Supply (Residential)	all units	(0.64)	(0.59)	(0.49)	(0.81)
HT IV - Temporary Supply	all units	(0.83)	(0.76)	(0.63)	(1.05)
HT V (A) – Railways	> 22/33 kV	(0.59)	(0.54)	(0.45)	(0.75)
	>100 kV	(0.58)	(0.53)	(0.44)	(0.74)
HT V (B) Metro & Monorail	all units	(0.56)	(0.52)	(0.43)	(0.71)
HT VI - Public Services					
(A) Government Hosp. & Edu. Institutions	all units	(0.55)	(0.50)	(0.42)	(0.70)
(B) Others	all units	(0.55)	(0.51)	(0.42)	(0.70)

