



महाराष्ट्र विद्युत नियामक आयोग

Maharashtra Electricity Regulatory Commission

Ref. No. MERC/FAC/20162017/00293

Date: 13 June, 2016

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

Subject: Post Facto approval of FAC submissions of TPC-D for month of April, 2013 to March, 2014

Reference: TPC-D's FAC submissions for month of April, 2013 to March, 2014 vide letter No. 236 dated 15 September, 2014.

Sir,

Upon vetting FAC calculations for the months of April, 2013 to March, 2014 submitted vide letters under above reference, the Commission has accorded post facto approval for charging to its consumers the FAC amount as detailed below:

Month	FAC Amount (Rs. Crore)	Month	FAC Amount (Rs. Crore)
April, 2013	(21.18)	October, 2013	(266.05)
May, 2013	(63.14)	November, 2013	(322.01)
June, 2013	(74.43)	December, 2013	(373.80)
July, 2013	(104.79)	January, 2014	(423.70)
August, 2013	(161.23)	February, 2014	(461.71)
September, 2013	(205.09)	March, 2014	(503.88)

It is observed that TPC-D has not levied/ refunded any FAC charge to its Consumers during FY 2013-14. At the end of March, 2014 there was accumulated FAC of Rs. 503.88 Crore which was due for refund to its Consumers.

The Commission in Case No. 18 of 2015 vide Order dated 26 June 2015, has already carried out the Truing up of all the expenses of TPC-D for FY 2013-14 and the corresponding reduction in

Page 1 of 12

power purchase cost has already been passed through to the consumers through Tariff for FY 2015-16.

However it is observed that the holding cost on accumulated negative FAC amounts for FY 2013-14 has not been factored in above True up Order. TPC-D needs to refund such holding cost to its Consumer. Therefore, the Commission directs TPC-D to refund the holding cost on negative accumulated FAC amount as on March 2014, computed till March 2015, to its Consumers in the next billing cycle.

Your Faithfully,



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

Encl: Annexure: Detailed Vetting Report for the month of April 2013 to March, 2014

Cc as enclosed:

Names and Addresses of Consumer Representatives authorized as per Sec 94 (3) of EA 2003

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 7001	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, 12 K. Dubash Marg, Fort, Mumbai 400001 (Nashik Branch) Email : macci.nsk@gmail.com	



Post Facto approval of FAC Charges for the months of April, 2013 to March, 2014 submitted by TPC-D

Subject: Post Facto approval of FAC submissions of TPC-D for month of April, 2013 to March, 2014

Reference: TPC-D's FAC submissions for month of April, 2013 to March, 2014 vide letter No. 236 dated 15 September, 2014.

1. FAC submission by TPC:

- 1.1 TPC-D, in its submission has computed the FAC for the months of QI of FY 2013-14 i.e. April 2013 to June 2013 in accordance with Tariff Order dated 12 September 2010 in Case No. 98 of 2009, for approval of Truing up for FY 2008-09, Annual Performance Review for FY 2009-10 and Tariff determination for FY 2010-11 and for the months of QII to QIV of FY 2013-14, i.e. from July 2013 to March 2014 in accordance with MYT Order dated 28 June, 2013 in Case No. 179 of 2011, for approval of Aggregate Revenue Requirement for FY 2011-12 and Multi Year Tariff for the second Control Period (i.e., from FY 2012-13 to FY 2015-16).
- 1.2 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 the FAC charges. Accordingly, TPC-D has submitted details of FAC chargeable from all consumers for all quarters of FY 2013-14.

2. FAC Methodology

- 2.1 The methodology for arriving at FAC is as per MERC MYT Regulations, 2011 amended from time to time and as per MYT Order dated 28 June, 2013 in Case No. 179 of 2011. The salient features for arriving at FAC for the above period are as under:
- Variable cost of generation is calculated based on net generation for Tata Power-G, allocated to TPC-D, Bilateral purchases and procurement of Renewable energy.
 - Normative/specified parameters of Heat Rate, Auxiliary Consumption, Transmission and Distribution loss are considered.
 - Actual Distribution losses have been computed based on metering arrangement established between Tata Power-T and Tata Power-D.



- Power purchase for Tata Power – D requirement is considered from all sources of power usually purchased by the utility. The source include power from contracted capacity of Tata Power-G, renewable sources (wind), power purchase through bilateral contracts and power purchase through banking mechanism, Unscheduled Interchanges.
- As submitted by TPC-D, energy at the G\diamondT interface in the “Energy Balance” tabulation of the FAC submission , is arrived at as follows:

In MU

Tata Power-D Requirement (MU)	Formula	Apr 2013	May 2013	June 2013
Tata Power-D input	(i)	284.69	300.39	285.05
Changeover	(ii)	301.12	334.78	302.12
Tata Power –D Requirement at T\diamondD interface		585.81	635.16	587.18
Gross up for Transmission Loss	(iii)	24.6	26.5	26.2
Tata Power –D Requirement at G\diamondT interface	(iv)= (i) + (ii) + (iii)	610.41	661.69	613.37
Banking Return	(v)	0.00	0.00	0.00
Total of TPC-D	(vi)= (iv) + (v)	610.41	661.69	613.37

In MU

Tata Power-D Requirement (MU)	Formula	July 2013	Aug 2013	Sept 2013
Tata Power-D input	(i)	288.92	288.19	288.11
Changeover	(ii)	289.92	291.56	288.29
Tata Power –D Requirement at T\diamondD interface		578.84	579.75	576.40
Gross up for Transmission Loss	(iii)	25.25	24.85	25.21
Tata Power –D Requirement at G\diamondT interface	(iv)=(i)+(ii)+(iii)	604.09	604.60	601.61
Banking Return	(iv)	0.00	0.00	0.00
Total of TPC-D	(v)= (iv) + (v)	604.09	604.60	601.61



In MU

Tata Power-D Requirement (MU)	Formula	Oct 2013	Nov 2013	Dec 2013
Tata Power-D input	(i)	315.14	292.23	295.42
Changeover	(ii)	289.37	235.00	201.97
Tata Power –D Requirement at T\diamondD interface		604.51	527.23	497.39
Gross up for Transmission Loss	(iii)	27.24	21.55	17.45
Tata Power –D Requirement at G\diamondT interface	(iv)= (i) + (ii) + (iii)	631.75	548.78	514.84
Banking Return	(iv)	0.00	0.00	0.00
Total of TPC-D	(v)=(iv) +(v)	631.75	548.78	514.84

In MU

Tata Power-D Requirement	Formula	Jan 2014	Feb 2014	Mar 2014
Tata Power-D input	(i)	288.29	266.60	316.36
Changeover	(ii)	173.55	158.84	188.26
Tata Power –D Requirement at T\diamondD interface		461.84	425.44	504.62
Gross up for Transmission Loss	(iii)	18.84	19.53	23.39
Tata Power –D Requirement at G\diamondT interface	(iv)=(i)+(ii)+(iii)	480.68	444.97	528.01
Banking Return	(iv)	0.00	0.00	0.00
Total of TPC-D	(v)=(iv) +(v)	480.68	444.97	528.01

- The energy requirement met though the purchase of power from different sources as under:

In MU

Source of Purchase	Apr 2013	May 2013	Jun 2013
Tata Power –G Share	436.28	460.11	391.79
RPO	22.05	30.95	51.13
Contracted Purchase through Traders	89.16	65.30	49.85
Drawl/Supplied to Pool	62.91	105.33	120.59
Grand total	610.41	661.69	613.37



Source of Purchase	July 2013	Aug 2013	Sept 2013
Tata Power –G Share	389.90	316.20	338.96
RPO	64.56	48.97	24.43
Contracted Purchase through Traders	56.39	161.69	197.23
Drawl/Supplied to Pool	90.32	74.65	40.42
Stand by Purchase	2.93	3.09	0.57
Grand total	604.09	604.60	601.61

In MU

Source of Purchase	Oct 2013	Nov 2013	Dec 2013
Tata Power –G Share	375.63	357.51	334.15
RPO	13.79	14.10	12.34
Contracted Purchase through Traders	182.17	125.04	94.25
Drawl/Supplied to Pool	60.04	52.13	74.09
Stand by Purchase	0.11	0.00	0.00
Grand total	631.75	548.78	514.84

In MU

Source of Purchase	Jan 2014	Feb 2014	Mar 2014
Tata Power –G Share	291.30	240.26	262.22
RPO	13.48	12.97	14.70
Contracted Purchase through Traders	96.26	118.06	186.65
Drawl/Supplied to Pool	70.64	68.24	64.44
Standby purchase	9.00	5.44	0.00
Grand Total	480.68	444.97	528.01

3. Variable cost of generation for Tata Power-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 the following:

- a) Change in generation mix
- b) Change in fuel price
- c) Normative operating parameters (i.e. Heat rate and Auxiliary consumption) as set out in the Tariff Order.



4. Variable cost of power purchase of Tata Power-D:

In addition to purchase from Tata Power-G, Tata Power-D has considered power purchase from the Wind Plants of Tata Power, short term power purchase through bilateral contracts, power purchase through banking mechanism and Unscheduled Interchange (UI).

5. Change in Variable Cost and Fixed Cost of power purchase (“F”):

Change in variable cost of power purchase (Rs. Crores) has been arrived at by multiplying power purchase (MUs) with the change in weighted average cost (Rs/KWh) of power purchase. Change in fixed cost has been arrived by taking the difference between monthly actual fixed cost and approved fixed cost for each of the months.

For the months of Q1 of FY 2013-14 i.e. April 2013 to June 2013, the Commission has approved weighted average variable power purchase cost of Rs. 3.38/kWh and for the months of QII to QIV i.e. July 2013 to March 2014, the Commission has approved weighted average variable power purchase cost of Rs. 3.61/KWh. As against this, the normative actual variable cost incurred for FY 2013-14 for the months of April 2013 to March 2014 is shown in the table below.

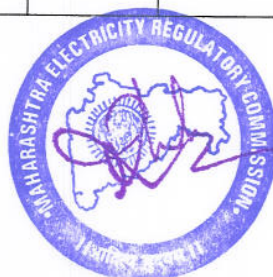
Particulars	April 2013	May 2013	June 2013	July 2013	Aug 2013	Sep 2013
Variable Power Purchase Cost (Rs. /kWh)	3.83	3.60	3.74	3.11	2.70	2.89

Particulars	Oct 2013	Nov 2013	Dec 2013	Jan 2014	Feb 2014	Mar 2014
Variable Power Purchase Cost (Rs. kWh)	2.65	2.61	2.63	2.63	2.79	2.83

The net variation in total power purchase cost for the months April 2013 to March 2014 are as under.

Particulars	April 2013	May 2013	June 2013	July 2013	Aug 2013	Sep 2013
Variation in Power Purchase Cost (Rs. Crore)	27.56	14.20	44.14	(30.31)	(55.72)	(43.32)

Particulars	Oct 2013	Nov 2013	Dec 2013	Jan 2014	Feb 2014	Mar 2014
Variation in Power Purchase Cost (Rs. Crores)	(60.51)	(55.02)	(50.74)	(48.72)	(36.81)	(41.28)



Note: Power Purchase cost for UI/Imbalance pool is proportionately divided among all months to match with the true-up cost allowed in MTR order dated 26 June 2015.

Additional cost of past adjustment due to revision in FBSM, which is approved in MTR order dated 26 June 2015, is not reflecting in the above table

6. Carrying/Holding Cost for Under Recover/Over Recovery (“C”):

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 Order 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 FY 2013-14 i.e. for the months of April 2013 to March 2014.

Particulars	Apr 2013	May 2013	Jun 2013	Jul 2013	Aug 2013	Sep 2013
Applicable Interest rate (%)	14.45%	14.45%	14.45%	14.45%	14.45%	14.49%
Carrying Cost/ (Holding Cost) for under/over recovery (Rs. Crore)	1.37	1.41	1.58	(0.39)	(0.69)	(0.56)

Particulars	Oct 2013	Nov 2013	Dec 2013	Jan 2014	Feb 2014	Mar 2014
Applicable Interest rate (%)	14.55%	14.71%	14.75%	14.75%	14.75%	14.75%
Carrying Cost/ (Holding Cost) for under/over recovery (Rs. Crore)	(0.63)	(0.94)	(1.04)	(1.17)	(1.18)	(0.87)

7. Adjustment factor for over recovery/ under recovery (“B”):

In FAC submission, the Adjustment factor is computed by considering the records of over/under recovery in the past as well as the costs approved by the Commission in previous months and allowed to be carried forward for recovery in future months. The Adjustments factor as arrived at is as follows:

S. No.	Particulars	Units	Apr-13	May-13	Jun-13
1.0	Calculation of ZFAC				
1.1	Change in cost of generation and power purchase attributable to Sales within the License Area (F)	Rs. Crore	27.56	14.20	44.14
1.2	Carrying cost for over-recovery/under-recovery (C)	Rs. Crore	1.37	1.41	1.58



1.3	Under recovery/(Over recovery) during the month	Rs. Crore	(50.11)	(57.58)	(57.01)
1.4	Adjustment for over-recovery/ under-recovery in subsequent month	Rs. Crore	-	(21.18)	(63.14)
1.5	Adjustment factor for over-recovery/ under-recovery (B) (1.3+1.4)	Rs. Crore	(50.11)	(78.76)	(120.15)
1.6	ZFAC = F+C+B	Rs. Crore	(21.18)	(63.14)	(74.43)

S. No.	Particulars	Units	Jul-13	Aug-13	Sep-13
1.0	Calculation of ZFAC				
1.1	Change in cost of generation and power purchase attributable to Sales within the License Area (F)	Rs. Crore	(30.31)	(55.72)	(43.32)
1.2	Carrying cost for over-recovery/under-recovery (C)	Rs. Crore	(0.39)	(0.69)	(0.56)
1.3	Under recovery/(Over recovery) during the month	Rs. Crore	0.33	(0.03)	0.02
1.4	Adjustment for over-recovery/ under-recovery in subsequent month	Rs. Crore	(74.43)	(104.79)	(161.23)
1.5	Adjustment factor for over-recovery/ under-recovery (B) (1.3+1.4)	Rs. Crore	(74.10)	(104.82)	(161.21)
1.6	ZFAC = F+C+B	Rs. Crore	(104.79)	(161.23)	(205.09)

S. No.	Particulars	Units	Oct-13	Nov-13	Dec-13
1.0	Calculation of ZFAC				
1.1	Change in cost of generation and power purchase attributable to Sales within the License Area (F)	Rs. Crore	(60.51)	(55.02)	(50.74)
1.2	Carrying cost for over-recovery/under-recovery (C)	Rs. Crore	(0.63)	(0.94)	(1.04)
1.3	Under recovery/(Over recovery) during the month	Rs. Crore	0.18	0.00	0.00
1.4	Adjustment for over-recovery/ under-recovery in subsequent month	Rs. Crore	(205.09)	(266.05)	(322.01)
1.5	Adjustment factor for over-recovery/ under-recovery (B) (1.3+1.4)	Rs. Crore	(204.91)	(266.05)	(322.01)
1.6	ZFAC = F+C+B	Rs. Crore	(266.05)	(322.01)	(373.80)



S. No.	Particulars	Units	Jan-14	Feb-14	Mar-14
1.0	Calculation of ZFAC				
1.1	Change in cost of generation and power purchase attributable to Sales within the License Area (F)	Rs. Crore	(48.72)	(36.81)	(41.28)
1.2	Carrying cost for over-recovery/under-recovery (C)	Rs. Crore	(1.17)	(1.18)	(0.87)
1.3	Under recovery/(Over recovery) during the month	Rs. Crore	(0.01)	(0.02)	(0.02)
1.4	Adjustment for over-recovery/ under-recovery in subsequent month	Rs. Crore	(373.80)	(423.70)	(461.71)
1.5	Adjustment factor for over-recovery/ under-recovery (B) (1.3+1.4)	Rs. Crore	(373.81)	(423.72)	(461.73)
1.6	ZFAC = F+C+B	Rs. Crore	(423.70)	(461.71)	(503.88)

8. Excess Distribution Loss:

The average distribution loss for FY 2013-14 is 0.99% which is lesser than the approved distribution loss of 1.12%. Since the cumulative distribution loss for FY 2013-14 is lower than the approved distribution loss of FY 2013-14, no adjustments have been made in FAC with respect to excess distribution loss.

9. Summary of FAC to be charged

TPC-D has not levied/ refunded any FAC charge to its Consumers during FY 2013-14. At the end of March, 2014 there was accumulated FAC of Rs. 503.88 Crore which was due for refund to its Consumers.

The Commission in Case No. 18 of 2015 vide Order dated 26 June 2015, has already carried out the Truing up of all the expenses of TPC-D for FY 2013-14 and the corresponding reduction in power purchase cost has already been passed through to the consumers through Tariff for FY 2015-16.

However it is observed that the holding cost on accumulated refundable FAC amounts for FY 2013-14 has not been factored in above True up Order. TPC-D needs to refund such holding cost to its Consumer. Therefore, the Commission directs TPC-D to refund the holding cost on accumulated FAC amount as on March 2014, computed till March 2015, to its Consumers in the next billing cycle.



Appendix -1

The normative parameters are as under:

Sr. No.	Parameter	Unit	Normative Rate
	As per Tariff Order dated 8 th September 2010 for TPC-G and 12 th September 2010 for TPC-D		
1	<u>Normative Auxiliary Consumption</u>		
	Hydro	%	0.50%
	Unit # 4	%	8.00%
	Unit # 5	%	5.50%
	Unit # 6	%	3.50%
	Unit # 7	%	2.75%
	Unit # 8	%	9.50%
2	<u>Heat Rate</u>		
	Unit # 4	kcal/ kWh	2683.00
	Unit # 5	kcal/ kWh	2577.00
	Unit # 6	kcal/ kWh	2514.00
	Unit # 7	kcal/ kWh	1971.00
	Unit # 8 (150 MW)	kcal/ kWh	2500.00
3	Distribution Loss	%	0.66%
4	Transmission Loss	%	4.85
5	Weighted Average Cost of Power Purchase	Rs. /kWh	3.3814



Sr. No.	Parameter	Unit	Normative Rate
	As per Order dated 5 th June 2013 for TPC-G and 28 th June 2013 for TPC-D		
1	<u>Normative Auxiliary Consumption</u>		
	Hydro		1.78%
	Unit # 4	%	8.00%
	Unit # 5	%	6.00%
	Unit # 6	%	3.50%
	Unit # 7	%	3.00% (CC) and 1% (OC)
	Unit # 8	%	8.50%
2	<u>Heat Rate</u>		
	Unit # 4	kcal/ kWh	2581.00
	Unit # 5	kcal/ kWh	2591.00
	Unit # 6	kcal/ kWh	2529.00
	Unit # 7	kcal/ kWh	2017(CC)/2900 (OC)
	Unit # 8 (150 MW)	kcal/ kWh	2450.00
3	<u>Distribution Loss</u>	%	1.12%
4	<u>Transmission Loss</u>	%	4.17%
5	<u>Weighted Average Cost of Power Purchase</u>	Rs. /kWh	3.6148

CC- Combined Cycle Mode, OC – Open Cycle Mode

