



# महाराष्ट्र विद्युत नियामक आयोग

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स वि नि डा  
No. MERC/FAC/20102011/ ०१९०

Date: 23 April 2010

To  
The Managing Director  
The Tata power Company Ltd  
24, Homi Mody street  
Mumbai 400001

Mr. S. P. Khurwary

Subject : Approval of FAC submission of TPC-D for Q3FY10  
Reference : TPC-D's submission No RBG/MERC/10/57 dated 10 March 2010


Sir

The Commission has scrutinized the FAC computation submitted by you as above and approved the FAC chargeable to the consumers for the months October, November and December 2009 as 42.10 paise per kWh. At the end of Q3FY10, an amount of Rs.24.1614 Crore is carried forward for adjustment at future date.

The vetted summary sheet and detailed report are attached herewith.

From the said FAC submissions, the Commission has observed that negative distribution loss has been reported for the months October, and December 2009. This is not acceptable as the distribution loss cannot be less than zero. You are required to address the issue and give compliance feedback to the Commission.

Yours faithfully

  
(K N Khurwary)  
Secretary, MERC

Enclosed : Detailed report

Cc: -

All consumer representatives as per attached list

## ANNEXURE

Detailed Vetting of Fuel Adjustment Cost (FAC) Charges of The Tata Power Company Ltd. for Q3 FY 10 (October 2009 to December 2009)

Tata Power's Application for approval of FAC Charge for October 2009 to December 2009  
No: REG/MERC/10/57 dated March 10, 2010

1. TPC-D, vide its submission dated 18th December 2009, has computed the FAC for the month of October 2009 to December 2009 in accordance with the Order dated June 15, 2009 in the matter of Annual Performance Review for (APR) for FY 2008-09 and Tariff Determination for FY 2009-10 (herein after 'APR Order') passed by the Commission and detailed methodology as per MERC (Terms and Conditions of Tariff) Regulations, 2005.

The relevant parameters approved in the APR Order for computation of FAC are enclosed at Appendix-1

In terms of the aforesaid Regulation, 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 the months October 2009 to December 2009 covering 3rd quarter of FY 2009-10.

### 2. Methodology

The methodology for arriving at FAC from October, 2008 is as per Tariff Order dated 15th June, 2009. The salient features for arriving at FAC for the above period are as under:

- a. Variable cost of generation is calculated based on net generation for Tata Power-G. The hydro generation continues to be charged based on the variable tariff @ Rs. 2.00 per kWh and Rs. 1.65 per kWh for peak and off peak period generation respectively. These charges are considered as given in the Tariff Order dated 28th May, 2009.
- b. Normative parameters of Heat Rate, Auxiliary Consumption, Transmission and Distribution loss are considered.
- c. Actual Distribution losses have been computed based on the metering arrangement established between Tata Power-T and Tata Power-D in October'07. The distribution loss computed is widely fluctuating from month to month. It is appreciated that such wide fluctuations are due to the very small base of sales and inherent low distribution loss levels.

Hence, TPC has presented average Distribution loss for the said quarter. However for the said quarter Q3-FY10

TPC has shown average distribution loss a negative value. This is not acceptable. TPC is directed to improve the metering arrangement. For the said quarter, the distribution loss is considered zero.

- d. Power purchase for Tata Power-D requirement is considered from all sources of power it purchases power from.  
The sources include power from contracted capacity of Tata Power-G, renewable sources (wind), power purchase through bilateral contracts and power purchase through banking mechanism.
- e. The cap on the FAC rate, as per the Commission's Tariff Order dated 15th June, 2009 for Tata Power-Distribution Business, which is set at 10% of the average variable charge works out to 42.10 , 42.10, 42.10 paise/kWH for the months Oct 09, Nov 09 and Dec 09 respectively.

### **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 considering 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.

#### **a. Change in generation mix:**

The Commission has carried out a broad assessment of adherence to the principles of merit order dispatch by comparing fuel wise, unit wise monthly gross generation with the levels considered in the Tariff Order and seeking justification for any material variation.

#### **b. Change in Fuel Price:**

Actual variable cost of power generation of each unit is certified by Cost Accountant. Tata Power also has submitted Fuel Analysis Report of representative monthly samples of fuels certified by an Independent Certification Agencies viz M/s SGS India Pvt Ltd, Mumbai in support of actual fuel calorific value of Coal and M/s Intertek Lab for Oil

#### **c. Normative Operating Parameters:**

Tata Power has considered Unit-wise approved heat rate as per the Tariff Order for Tata Power-G dated 28th May 2009 for computing actual Unit-wise, variable cost of generation on monthly basis and the same is allowed.

For Trombay Unit 6 , the same approved heat rate is considered for all fuels. (Oil and RLNG).

As Trombay Unit 8 has completed the stabilisation period, the normative heat rate and auxiliary consumption values are considered 2500 kCal/kWH and 8.5% respectively.

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

In addition to Tata Power-G, Tata Power-D has considered power purchase sources from the Wind Plants of Tata Power, short term power purchase through bilateral contracts and power purchase through Banking mechanism.

**5. Change in variable cost of power purchase ("C"):**

Change in variable cost of power purchase (Rs Lakhs) has been arrived at by multiplying power purchase (MUs) with the change in weighted average cost (Rs/kWh) of power purchase. The change in variable cost of power purchase for months October 2009 to December 2009 is Rs 0.854, 0.512, 0.799 per kWh respectively, taking them to Rs 3.00, 2.66, 2.947 per kWh resp. for these months as against the approved rate of Rs 2.148 per kWh

The net change in variable cost of power purchase for the months October 2009 to December 2009 is Rs 1,954.28, 1,160.83, 1,930.51 Lakhs respectively

**6. Interest on working capital ("I"):**

Interest on working capital has been granted at the approved Interest rate for the eligible amount viz the difference between the Normative Actual variable cost of Power procurement and the Order cost of power procurement, for the respective Month.

**7. Adjustment factor for over recovery / under recovery ("B"):**

TPC-D has explained that Subsequent to the filing of previous FAC submissions by TPC-D, SLDC has issued revisions to the inter-utility billing through the Intermediate Balancing and Settlement Mechanism ( IBSM ). The variations because of the same, caused changes to the decremented and incremented energies from/to the common pool, by TPC-D and the other Distribution utilities in the state, and the price payable/receivable for the same. TPC-D has incorporated the change in the Summary sheet of FAC submission (Sheet 8.1) for all the three quarters of the year and this sheet replaces the one attached to the previous submissions for the resp quarters.

The carried forward adjustment for October 09 is thereby revised to Rs 1218.88 lakhs, instead of Rs 1138.94 Lakhs. The Commission has approved the said revisions.

TABLE

Sr. No.	Parameter	Unit	Oct'09	Nov'09	Dec'09
(A)	(B)	(C)	(D)	(E)	(F)
1	Adjustment for over-recovery/under-recovery ('B')				
1.1	Incremental Cost Allowed to be Recovered in the month j-4	Rs Lakh	902.71	876.53	1,008.32
1.2	Incremental cost in Month j-4 actually recovered in month j-2	Rs Lakh	966.69687	915.52	985.37
1.3	Over-recovery/under-recovery (1.1-1.2)	Rs Lakh	(63.99)	(38.99)	22.95
2	Carried forward adjustment for over-recovery/under-recovery attributable to application of ceiling limit	Rs Lakh	1,218.88	1,793.98	1,769.49
2.1	Adjustment for T.O. (Total amount 3583.19)	Rs Lakhs	(325.20)	(282.01)	(323.76)
3	Adjustment factor for over-recovery/under-recovery (1.3+2.0)	Rs Lakh	829.70	1,472.99	1,468.68

Note: The item 2.1 in the Table above, is towards the appropriation of Rs 3583.19 lakhs projected in the ARR application by TPC as "unrecovered FAC", but the same has not been considered by the Commission in the Gap calculations. Hence it is

assumed to be carried over for recovery at future date and hence it is being deducted per month in proportion with sales of the month.

#### **8. Excess Distribution Loss:**

The approved distribution loss for TPC-D for FY 10 it is 0.63 %

The Actual Distribution Loss in October 2009 to December 2009 is -10.03%, 3.72%, -4.43% respectively. The average loss of the concerned quarter is -3.68%. Based on this, no deduction or addition in MU loss is made

**9. Summary of FAC** The summarized details of FAC (A) & FAC per unit for the months October 2009 to December 2009 are as under

Parameter (B)	Unit (C)	October'09		November'09		December'09	
		(V) TPC	(V) Approved	(W) TPC	(W) Approved	(U) TPC	(U) Approved
Calculation of FAC (A)							
Change in weighted average variable cost power purchase	Rs Lakh	1,954.28	1,954.28	1,160.83	1,160.83	1,930.51	1,930.51
Working Capital Interest (I)	Rs Lakh	18.33	18.33	10.08	10.08	20.80	20.80
Adjustment for Over Recovery/Under Recovery (B)	Rs Lakh	829.70	829.70	1,472.99	1,472.99	1,468.68	1,468.68
FAC (A) = C + I + B	Rs Lakh	2,802.30	2,802.30	2,643.89	2,643.89	3,419.99	3,419.99
Calculation of FACkWh							
Share within License Area	MU	239.51	239.51	207.70	207.70	238.45	238.45
Excess T&D Loss	MU	0.00	0.00	0.00	0.00	0.00	0.00
FAC Charge (FACkWh) without considering cap on monthly FAC Charge	Paise/kWh	117.00	117.00	127.30	127.30	143.43	143.43
Cap on monthly FAC Charge	Paise/kWh	42.10	42.10	42.10	42.10	42.10	42.10
FAC Charge (FACkWh) considering cap on monthly FAC Charge	Paise/kWh	42.10	42.10	42.10	42.10	42.10	42.10
FAC (A)							
FAC (A) considering cap on Monthly FAC Charge (Est)	Rs Lakh	1,008.32	1,008.32	874.41	874.41	1,003.85	1,003.85
FAC (A) disallowed corresponding to excess T&D loss (Est)	Rs Lakh	0.00	0.00	0.00	0.00	0.00	0.00
Carried forward FAC (A) for recovery during future period (Est)	Rs Lakh	1,793.98	1,793.98	1,769.49	1,769.49	2,416.14	2,416.14

Appendix-1

The normative parameters as per the tariff order dated 28th May 2009, are as under:

Sr.No.	Parameter	Unit	Normative Rate
1	Heat Rate		
	Unit #		
	4	kCal/KWh	2575
	Unit #		
	5	kCal/KWh	2499
	Unit #		
	6	kCal/KWh	2400
	Unit #		
	7	kCal/KWh	1971
2	Auxiliary Consumption		
	Hydro	%	0.5
	Unit #		
	4	%	8
	Unit #		
	5	%	5.5
	Unit #		
	6	%	3.5
	Unit #		
	7	%	2.75
3	Distribution Loss (TPC-D)	%	0.63
	Transmission		
4	Loss	%	4.85
5	Weighted Average variable cost of power purchase	Rs./KWh	2.1479