

ANNEXURE

Detailed Vetting of Fuel Adjustment Cost (FAC) Charges of The Tata Power Company Ltd For Q2 FY10 (July 2009 to September 2009)

Tata Power's Application for approval of FAC Charge for July 2009 to Sept 2009
No: REG/MERC/09/276 dated December 18, 2009

1. TPC-D, vide its submission dated 18th December 2009, has computed the FAC for the month of July 2009 to Sept 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 July 2009 to September 2009.

2. The methodology for arriving at FAC 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. This is approved.

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 paise/kWh for the months July 09, August 09 and Sept 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.

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.

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 July 2009 to Sept 2009 is Rs 0.797, 0.516, 0.785 per kWh respectively, taking them to Rs 2.94, 2.66, 2.93 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 July 2009 to Sept 2009 is Rs 1,822.54, 1,128.22, 1,738.59 Lakhs respectively.

The reason for excessive power purchase cost is that during the said months TPC-D has been receiving less power from TPC-G as compared to the Order value and it has been purchasing from expensive sources

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

The eligible amount of interest which was not included while vetting the Q1 FY10 submission of TPC has been added to the Carried forward adjustment of the 1st month of the said quarter viz Q2FY10

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

Sr. No.	Parameter	Unit	July'09	August'09	Sept'09
(A)	(B)	(C)			
1.0	Adjustment for				
1.1	over-recovery/under-recovery ('B') Incremental Cost Allowed to be Recovered	Rs Lakh	(1,313.73)	1,003.07	853.83
1.2	in the month j-4 Incremental cost in Month j-4 actually	Rs Lakh	(0.54)	900.15	881.65
1.3	recovered in month j-2 Over-recovery/under-recovery (1.1-1.2)	Rs Lakh	(1,313.18)	102.92	(27.83)
2.0	Carried forward adjustment for	Rs Lakh	1,195.35	556.24	587.26
2.1	over-recovery/under-recovery attributable to application of ceiling limit Adjustment for T.O. (Total amount 3583.19)	Rs Lakhs	(275.37)	(291.14)	(282.69)
2.2	Adj. for IWC of Q1FY10	Rs Lakhs	(21.31)		
3.0	Adjustment factor for over-recovery/under-recovery (1.3+2.0)	Rs Lakh	(414.51)	368.03	276.74

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.

The Item 2.2 is towards Interest on Working Capital as per Regulation 82.5 of Tariff Regulations

8. Excess Distribution Loss:

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

The Actual Distribution Loss in July 2009 to Sept 2009 is 7.10% , 2.06% , 1.55% respectively. The average loss of the concerned quarter is 2.26%. Based on this, deduction on account of excess Distr loss is made.

Being average loss, the deduction is applicable for all months of the said quarter

9. Summary of FAC

The summarized details of FAC (A) & FAC per unit for the months July 2009 to Sept 2009 are as under

Parameter	Unit	July'09		August'09		September'09	
(B)	(C)	(V)	(V)	(W)	(W)	(U)	(U)
		TPC	Approved	TPC	Approved	TPC	Approved
Calculation of FAC (A)							
Change in weighted average variable cost <u>power purchase</u>	Rs Lakh	1,822.54	1,822.54	1,128.22	1,128.22	1,738.59	1,738.59
Working Capital Interest (I)	Rs Lakh	35.20	17.04	21.79	8.16	33.58	14.68
Adjustment for Over Recovery/Under Recovery (B)	Rs Lakh	(387.33)	-414.51	428.37	368.03	365.15	276.74
FAC (A) = C + I+ B	Rs Lakh	1,470.41	1,425.07	1,578.38	1,504.41	2,137.32	2,030.01
Calculation of FAC _{kWh}		-		-		-	
Sale within License Area	MU	202.81	202.81	214.42	214.42	208.20	208.20
Excess T&D Loss	MU	-		-		-	
FAC Charge (FAC _{kWh}) without considering cap on monthly FAC Charge	Paise/kWh	72.50	70.27	73.61	70.16	102.66	97.50
Cap on monthly FAC Charge	Paise/kWh	42.10	42.10	42.10	42.10	42.10	42.10
FAC Charge (FAC _{kWh}) 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	853.83	853.83	902.71	902.71	876.53	876.53
FAC (A) disallowed corresponding to excess T&D loss (Est)	Rs Lakh	-	15.01	-	14.44	-	14.54
Carried forward FAC (A) for recovery during future period (Est)	Rs Lakh	616.58	556.24	675.67	587.26	1,260.79	1,138.94

**Appendix-
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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%
4	Transmission Loss	%	4.85
5	Weighted Average variable cost of power purchase	Rs./KWh	2.1479