

Managing Director
Tata Power Company Ltd.
Bombay House,
24 Homi Mody Street,
Mumbai-400 001

Dear Sir,

Subject : **Vetting of FAC Charges of Tata Power Company Limited (TPC) for the period April, 2004 to March, 2006 (June, 2004 already vetted by the Commission)**

Reference: **SICOM letter No. IAG/MERC/TPC/FAC/April 04-March 06 dated 9/06/06.**

As per the tariff order dated 11th June, 2004, TPC is required to obtain post- facto approval of the Commission on a quarterly basis for the FAC charged. However TPC submitted FAC computations for post facto approval for the period July, 2004 to March 2005 only on 30th June 2006. It is also observed by the Commission that TPC had not forwarded quarterly FAC submissions for the period April, 2005 onwards to the Commission till March 2006, that too after a reminder was sent to TPC. Further, these FAC submissions are not in the Standard Formats prescribed by the Commission vide its letter dated 22nd August, 2005. The Commission notes with displeasure the failure of TPC in not complying with the directives of quarterly submission for post facto approval, of the Commission.

I am directed to forward herewith the detailed vetting and approval of the Commission on FAC Charges of TPC pertaining to the months of April, 2004 to March 2006 (June, 2004 already vetted). The cumulative over recovery for the period from June 2004 to March 2005 has been worked out at Rs.55.93 crores and interest on the same at Rs. 1.41 crores (@ 6% p.a.). The cumulative under recovery for the period from April 2005 to March 2006 has been worked out at Rs.326.60 crores and interest on the same at Rs. 5.02 crores. The over recovery of the year 2004-05 and under recovery for the year 2005-06 along with the interest thereon would be considered while truing up for 2004-05 and 2005-06 respectively. The summary of the under/over recovery along with the interest @6 % p.a. on the cumulative under/over recovery is given in **Annexure A**.

The Commission has not considered the under/over recovery for the months of April, 04 & May, 2004 in overall under/over recovery and the same would be considered while Truing Up as being done for other Distribution Licensees.

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It has been observed by the Commission that TPC has allocated the entire hydro generation to the License Area and the FAC of each month towards change in variable cost of thermal generation and power purchase has been apportioned between License Area and Other than License Area (OLA) as directed by the Commission. However, TPC has not charged the respective FAC to the consumers of OLA. The Commission directs TPC to recover the said amount from the consumers of OLA in the proportion of the sales to the respective consumers during the period April, 2004 to March, 2006.

With regards,

Yours faithfully,

Sd/-
(Ms. Malini Shankar)
Secretary, MERC

- Encl:** 1) Annexure A: Summary of Under/Over recovery (Page 1)
2) Vetting report for the period April 2004 to March 2006 including Annexure - B: Summary of FAC vetting (102 pages)

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ANNEXURE – AAttachment to MERC letter No. MERC/TPC/FAC/APR04-MAR 06/1293 dated 19.06.2006**Summary of the Under recovery / over recovery for the period June, 2004 to March, 2005**

(All fig. in Rs.crores unless specified)

FAC month	FAC of the respective month (a)	Sale in License area, MUs (b)	Excess T&D loss, MU's (c)	FAC disallowed towards excess T & D loss – (d)=a*c/(b+c)	Recoverable FAC (e)=a-d	Billed Amt. (f)	Under (+)/ Over (-) Recovery-(g)=e-f	Cumulative under (+)/over (-) recovery-(h)	Interest on (h) @ 6% p.a.
June, 04	19.45	837.72	4.46	0.10	19.35	0.09	19.26	19.26	0.10
July, 04	24.83	839.36	4.04	0.12	24.71	22.18	2.53	21.79	0.11
Aug., 04	-4.65	776.71	7.48	-0.04	-4.61	23.24	-27.85	-6.06	-0.03
Sept.04	-2.24	821.37	0	0.00	-2.24	23.58	-25.82	-31.88	-0.16
Oct. 04	-10.16	860.85	4.61	-0.05	-10.11	14.56	-24.67	-56.54	-0.28
Nov. 04	8.31	853.25	0	0.00	8.31	1.97	6.34	-50.20	-0.25
Decem 04	5.26	770.97	4.19	0.03	5.23	0.00	5.23	-44.97	-0.22
Jan,05	10.58	650.66	0	0.00	10.58	-0.02	10.60	-34.37	-0.17
Feb, 05	-8.65	632.26	3.7	-0.05	-8.60	0.00	-8.60	-42.97	-0.21
March, 05	-12.96	793.3	0.37	-0.01	-12.95	0.00	-12.95	-55.93	-0.28
Sub-Total	29.77	7836.45	28.85	0.10	29.67	85.60	-55.93		-1.41
Summary of the Under recovery / over recovery for the period April, 2005 to March, 2006									
Apr, 05	8.95	912.36	0	0.00	8.95	0.02	8.93	-47.00	-0.23
May, 05	11.03	921.49	0	0.00	11.03	0.00	11.03	-35.97	-0.18
June, 05	31.86	953.67	0	0.00	31.86	0.00	31.86	-4.11	-0.02
July, 05	27.19	857.56	7.68	0.24	26.95	18.35	8.60	4.49	0.02
August, 05	12.63	858.52	19.02	0.27	12.36	12.04	0.32	4.81	0.02
Sept.05	25.93	1007.75	0	0.00	25.93	20.00	5.93	10.74	0.05
Oct. 05	81.97	957.31	0.45	0.04	81.93	16.65	65.28	76.02	0.38
Nov. 05	49.25	792.45	0	0.00	49.25	15.98	33.27	109.29	0.55
Decem 05	42.68	758.07	0.73	0.04	42.64	15.49	27.15	136.44	0.68
Jan, 06	84.41	731.52	2.69	0.31	84.10	16.37	67.73	204.17	1.02
Feb, 06*	88.79	785.08	0	0.00	88.79	18.71	70.08	274.25	1.37
March, 06**	15.18	885.5	9.11	0.15	15.03	18.60	-3.57	270.68	1.35
Sub-Total	479.87	10421.28	39.68	1.06	478.81	152.21	326.60		5.02
Total	509.64	18257.73	68.53	1.15	508.49	237.81	270.68		3.61

* Billed amount is un-audited

** As the billed amount is not available the same is worked out based on the charged rate (cap) and the no. of units sold in the license area in the month of March, 06. The under / over recovery would be adjusted after receipt of actual billed amount in May, 06

Re: Vetting of the Fuel Adjustment Cost (FAC) charges of Tata Power Company Ltd. (TPC) for the months of April, 2004 to March, 2006
Attachment to MERC letter No. MERC/TPC/FAC/APR04-MAR 06/1293 dated 19.06.2006

As per the tariff order dated 11th June, 2004, TPC is required to obtain post- facto approval of the Commission on a quarterly basis for the FAC charged. The Commission has validated the FAC for June 2004 and issued detailed vetting report dated 4th January, 2005 detailing therein the methodology adopted to compute change in variable cost of generation and power purchase. Accordingly, TPC had forwarded its application for vetting of FAC for the months up to March, 2005.

It was observed by the Commission that TPC had not forwarded quarterly FAC submissions for the period April, 2005 onwards to the Commission till February 2006 and hence TPC was reminded to submit the same. TPC submitted the FAC submissions for the period April, 2005 to February, 2006 vide its letter dated 11th April, 2006. However, these submissions are not in the Standard Formats prescribed by the Commission vide its letter dated 22nd August, 2005. Considering the urgency of vetting, the Commission has carried out vetting report based on the submissions made by TPC. The Commission directs TPC to submit the future FAC submissions in time and in the Formats prescribed by the Commission.

The methodology adopted by TPC for FAC calculations is as under: -

- i) TPC has computed the change in variable cost of generation and power purchase on a composite basis by considering the change in weighted average cost of generation and power purchase.
- ii) TPC has considered the estimated generation and power purchase in MUs and estimated weighted average cost of generation and power purchase for each Unit, as per the Commission's directions in vetting report dated 4th January, 2005 for calculating the change in the fuel cost.
- iii) TPC has apportioned the variable cost of generation from Unit 4 to the sale outside the licensed area i.e. MSEDCL and to its licensed area to the extent of the generation used to meet its peak requirement.
- iv) TPC has apportioned variable cost of own generation (other than the variable cost of generation from Unit 4) to sale within its licensed area and balance to the sale outside license area.

- v) The entire generation from the Hydel station has been apportioned to sale in License area.

The Vetting by the Commission is based on the following orders :-

- a) Tariff Order dated 11th June 2004
- b) The vetting report dated 4th January, 2005 approving FAC of TPC for the month of June 2004
- c) The Commission's Order dated 7th December, 2004 in the matter of "Drawal of power by TPC from MSEB and compliance of TPC Tariff Order".

The Commission's consultant, SICOM Ltd. had detailed discussions with officials of TPC for clarifications on FAC Charge.

A. Variable cost of generation : 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 :-

- Change in generation mix
- Change in fuel price
- Fuel handling charges
- Normative operating parameters (i.e. Heat Rate and Auxiliary consumption) as set out in the Tariff Order.

a. Change in generation mix :

Commission has carried out broad assessment of adherence to the principles of merit order dispatch by comparing fuel wise, Unit wise, monthly / yearly gross generation to the levels considered in the tariff order and seeking justification for any material variation. The variable cost of each Unit and estimated generation as per Tariff Order and actual generation for the year 2004-05 and 2005-06 are detailed below :-

Station	Fuel	VC / unit as per order (Rs. / kWh)	Estimated gross generation as per order (MUs)	Actual gross generation for 2004-05 (MUs)	Actual gross generation for 2005-06 (MUs)
Hydel	-	-	1336.10	1438.54	2023.53
Unit 7	Natural Gas	0.62	1197.40	1335.02	1330.74
Unit 6	Natural Gas	0.71	102.70	153.73	147.04
Unit 5	Natural Gas	0.75	0.00	3.73	2.69
Unit 4	Natural Gas	0.79	0.00	49.29	4.06
Unit 5	Coal	1.18	3844.00	3829.28	3596.48
Unit 6	Oil	2.50	3660.20	3285.25	3307.39
Unit 5	Oil	2.62	340.20	237.04	158.35
Unit 4	Oil	2.76	111.60	617.42	638.27
Total			10592.2	10949.30	11208.55
Net Power purchase from MSEB/others		2.99	61.50	67.99	389.99
Less: Sale to MSEB from Unit 4/others				182.13	272.41

TPC has followed Merit Order Stack for the year 2004-05. The extra generation from Unit 4 is allowed as the cost of purchase of energy from MSEB was Rs.3.03 / kwh as compared to the cost of own generation of unit 4 of Rs. 2.79/ kwh.

As per the Tariff Order, TPC was to have outage of Unit 6 (Oil) and no planned outage for Unit 5 for the year 2004-05. The same Tariff Order also became applicable for the year 2005-06. However, as the Unit 5 being run on coal, it requires every alternate year planned outage. Unit 5 was out of operation in the months of January, 2005 and February, 2005. Accordingly, there is less generation from Unit 5, during these months as compared to the Tariff Order (which had no planned outage). This has also resulted into overall less generation from Unit 5 in the year 2005-06. During August, 2005, TPC has used Hydro unit as the base unit due to availability of water and this has resulted in lower generation from unit 5 (coal) which is allowed. During the months of June, 2005, Sept. 2005, October, 2005, November, 2005, December, 2005 and March, 2006, TPC has generated less energy from Unit 6(Oil) and higher energy from Unit 4 (Oil) which is comparatively costlier. Further, the cost of Unit 4 (oil) was Rs.4.27/kwh as against purchase of energy from MSEB / others @ 3.61 Rs./kwh during 2005-06. The reasons for running of Unit 4, as informed by TPC vide its letter dated 30th May, 2005 are :-

- (i) MSEDCL could not cater to the high demand of Mumbai Area in June, 2005
- (ii) The REL Unit 2 was shut down during August-September, 2005
- (iii) MSEDCL requested TPC to run the unit 4 during the period October, 2005 to December, 2005.

TPC has also informed that as the Unit 4 cannot be operated below certain level due to technical constraints it needs to be kept in operation once started. This results into backing down of more efficient Unit 6 (Oil). Thus, TPC could not comply with the Merit Order Stack stipulated by the Commission by running Unit 4 more or less as base Unit. The extra generation from unit 4 to meet peak requirement of the license area is allowed since MSEB itself was facing shortage of power and was not in a position to supply to TPC.

b. Change in fuel price :

Actual variable cost of power generation of each unit is certified by CA. The Commission had directed TPC vide its letter dated 4th January, 2005 to submit fuel analysis report of representative monthly samples of fuels certified by an Independent Certification Agency in support of actual fuel calorific value along with its quarterly FAC submissions in the future. However, the same has not been submitted by TPC. **The Commission hereby directs TPC to submit fuel analysis report of representative monthly samples of fuels certified by an Independent Certification Agency in support of actual fuel calorific value along with its FAC submissions in the future.** TPC has submitted only part of the data of the application audited and has not submitted the entire application along with the supporting details and back up calculations after cost audit. **The Commission directs TPC to submit future FAC submissions in the duly audited Format prescribed by the Commission.**

c) Fuel handling cost -

The fuel handling cost have been worked out by TPC as per the formula considered by Commission in its vetting report dated 4th January, 2005.

d) Normative Parameters:**Auxiliary consumption –**

- i) TPC has taken auxiliary consumption at each Unit at normative levels for calculation of variable cost of generation and the same is allowed.
- ii) Wherever there is extra consumption in case of Hydel Station the same has been disallowed by multiplying excess auxiliary consumption with the increase in weighted average variable cost of generation.

Heat Rate - TPC has worked out the variable cost of generation considering normative heat rates of each Unit and same is allowed.

B. Variable cost of power purchase:

In the Tariff Order, it was considered that TPC would purchase 61.50 MU's @Rs.2.99/unit with a cost of Rs.18.39 crore. TPC has purchased 67.99 MU's @ Rs.3.03/unit costing Rs.20.58 crore in the year 2004-05 and 389.99 MU's @ Rs.3.61/unit costing Rs.140.65 crore in the year 2005-06. Thus, TPC has purchased substantial energy as compared to the Tariff Order and the same has been allowed considering the shortfall in peak requirement of energy. However, in future, TPC has to justify the power purchase in excess of approved limit.

C. Change in variable cost of own generation and power purchase

Change in variable cost of own generation and power purchase has been arrived at by multiplying total of gross generation and power purchase with the change in weighted average cost of generation and power purchase.

D. Apportionment of change in variable cost of own generation and power purchase cost to License Area.

The Commission in its report dated 4th January, 2005 has specified the formula for arriving at apportionment of change in variable cost of own generation and power purchase cost to License Area so that the consumers in the License Area benefit from the low cost generation from the hydel plants.

TPC has apportioned the change in variable cost of own generation and power purchase cost to License Area as per the said formula.

E. Interest on working capital –

TPC has not considered any interest on working capital due to change in prices of fuel and accordingly, the Commission has also not considered the same.

F. Adjustment factor for over recovery / under recovery -

TPC has considered the adjustment factor towards under / over recovery in arriving at the FAC of individual month. However, it has not disallowed FAC towards excess T & D loss while taking recoverable FAC. Further, for the period April, 2005 to February 2006, it was observed that the incremental cost of the month J-4 taken in the month of J-2 was incorrect. TPC has attributed the mistake to incorrect linking of the cells and has corrected the same. It has been also observed that wherever there is positive FAC the same has been charged to the consumers. **However, the benefit of the negative FAC in the months of February, 2005 and March, 2005 was not passed on to the consumers. Thus, TPC has violated Commissions guidelines on passing the benefit of reduction in FAC to the consumers. The Commission directs TPC to pass through the reduction in fuel costs (negative FAC) to the consumers as and when the same occurs.**

G. Excess T & D loss:

TPC has not considered the disallowance of FAC on account of excess T&D loss for arriving at the recoverable FAC for each month. The Commission has disallowed the excess FAC on account of extra T&D loss for arriving at the recoverable FAC for each month and **directs TPC to arrive at the recoverable FAC for each month in future after disallowing for the excess T&D loss.** The overall T&D loss for the year 2004-05 and 2005-06 is lower than the normative T&D loss.

H. FAC charges as per Commission :

TPC has followed the Tariff Order dated 11th June 2004 and the Commission's Vetting Report dated 4th January, 2005 approving FAC of TPC for the month of June 2004, for arriving at the FAC for the individual months. The FAC calculations for individual month (six Tables for each month) are enclosed. The summary of FAC charges for each month as per TPC & Commission is given in Annexure B.

I. Over-recovery /Under-recovery for April and May 2004 –

The Commission in its detailed vetting report dated 4th January, 2005 validating FAC for June 2004 had directed TPC to determine Total Fuel Cost and Power Purchase Cost Adjustment for the month of April, 2004 to May, 2004 by applying the methodology detailed therein for June, 2004. The Commission vide its letter No.MERC/30 of 2003 /Compliance-FAC/18/3 dated 6th September, 2005 has extended the relief given by it to Reliance Energy Limited vide its Order dated 3rd August, 2005 in the matter of 'Review of directions on FAC' to TPC. As per the said Relief, the over recovery/under recovery on account of FAC for the period April, 2004 to May, 2004 may be adjusted at the time of 'truing up' for FY 2004-05 along with other expenses and revenue heads. Accordingly, the over-recovery /under recovery in respect of April, 2004 and May, 2004 have not been considered while working out cumulative under / over recovery and the same would be considered while carrying out 'Truing Up' for the year 2004-05 and 2005-06.

Annexure B

Summary of FAC as per TPC & Commission

Month	FAC of respective month	
	As per TPC	As per Commission after disallowance of excess T & D Loss
June, 04	19.45	19.35
July, 04	24.83	24.71
August, 04	-4.65	-4.61
Sept.04	-2.24	-2.24
Oct. 04	-10.16	-10.11
Nov. 04	8.31	8.31
December. 04	5.26	5.23
Jan,05	10.58	10.58
Feb, 05	-8.65	-8.60
March, 05	-12.96	-12.95
Sub- Total	29.77	29.67
April, 05	8.95	8.95
May, 05	11.03	11.03
June, 05	31.86	31.86
July, 05	27.19	26.95
August, 05	12.63	12.36
Sept.05	25.93	25.93
Oct. 05	81.97	81.93
Nov. 05	49.25	49.25
December 05	42.68	42.64
Jan,06	84.41	84.10
Feb, 06	88.79	88.79
March, 06	15.18	15.03
Sub-Total	479.87	478.81
Total of 2004-05 & 2005-06	509.64	508.49