

**Detailed Vetting Report MSEDCL- Post Facto approval of
FAC Charges for February 2010 & March 2010 submitted by MSEDCL
And Revisiting the FAC charges approved for January 2010**

Reference :

- a) MSEDCL's letter No. MSEDCL/CAS/FAC/L7/16 of May 11, 2010 submission of month February-10
- b) MSEDCL's letter No. MSEDCL/CAS/FAC/L7/20 of June 10, 2010 submission of month March-10
- c) Meeting on June 17, 2010 with MSEDCL and MSPGCL at MERC office regarding revised performance parameters and vetting of Jan-Feb-Mar 2010 FAC submissions.

1. FAC submission by MSEDCL:

- 1.1 Upon vetting the FAC calculations for the months of February 2010 & March 2010, submitted vide letters under above Reference, the Commission has accorded post facto approval for the FAC amount for the said months as detailed below.
- 1.2 Further, based on the discussions with MSPGCL/MSEDCL at the Commission's office, the Commission has revisited the FAC vetting done for January 2010.

1.4 Reference Orders /Regulationms

The Commission issued MYT Order dated August 17, 2009 (Case 116 of 2008), approving principles of Annual Revenue Requirement (ARR) and Tariff for FY 2009-10 for MSEDCL and has also mentioned about the parameters and mechanism for computation of FAC. Some of the parameters have been revised as per CPRI guidelines and put on record in the Commission's order in the matter of case 16 of 2008. These have been summarized in the Appendix to this document.

Hereby the Commission approves FAC charges for the month of February 2010 & March 2010, and also re-visits its directive pertaining to FAC charges for January 2010, in accordance with the principles stipulated in the MYT Order dated August 17, 2009 and the MERC (Terms and Conditions of Tariff) Regulations, 2005 and based on detailed discussions with MSEDCL/MSPGCL on the matter.

1.5 Discussions with MSPGCL/MSEDCL: Salient Features

1.5.1 Vetting of FAC submission of January 2010

MSEDCL had submitted its FAC submission for January 2010, vide MSEDCL's letter No. MSEDCL/CAS/FAC/L7/12 of April 19, 2010 and had accordingly billed the FAC charge to its consumers. MSEDCL had prepared the said submission after applying the revised performance parameters recommended by CPRI, for the MSPGCL's thermal power stations, for the period April 2009 to January 2010. The arrears claimed for the period April 2009 to December 2009 were Rs 252.47 Crores

While scrutinizing and vetting the said submission and the FAC charge arrived at by MSEDCL, for January 2010, the Commission had communicated to MSPGCL/ MSEDCL that tabulations to arrive at the arrears for the said period, based on variations in Fuel charges and other parameters, would require detailed computations, on lines similar to those made for FY06, FY07, FY08 and FY09 in the Order issued by the Commission regarding case 16 of 2008.

It was further explained that the same would be part of the true-up exercise while issuing the APR order. The Commission, during discussions in the matter with MSPGCL, had emphasized that vetting of the final figure would be a complex exercise and just revision of performance norms in the historic documents would not be adequate.

1.5.2 **FAC submissions for Feb 2010 & March 2010 : Discussions:**

MSPGCL/MSEDCL had submitted FAC submissions for February 2010 and March 2010 in continuation with, and in complete alignment with, their earlier submission of January 2010 based on revised operational parameters. The Commission, in line with the thought process used for vetting January 2010 FAC submission, preferred to scrutinize these submissions with reference to the earlier performance parameters. Such exercise would need to align the February 2010 and March 2010 submission to that vetted by the Commission for January 2010. However, as MSEDCL had already switched over the performance parameters to those of the new set, there was too much variance almost in all the tabulations projected by MSEDCL with respect to those maintained by the Commission with the older norms, for the entire period of FY 10.

One of the options was to continue with the old parameters and entire arrears for FY10 would be through true-up exercise, and **the second option** was to accept the part rectification submitted by MSEDCL (after due scrutiny) and apply final corrections through the true-up exercise. The end result would be the same, except the timing, mid-course correction accuracy and phasing out of accrual **or** refund of the monies therefrom

MSEDCL preferred Option 1 from the above, informing the Commission, that MSEDCL had already billed these charges to the consumers and MSEDCL pleaded that it would be a difficult exercise to refund the amounts. Hence MSEDCL requested the Commission to re-visit the vetted submission of January 2010, and scrutinize the said submission with the new performance parameters so as to arrive at a practical solution to the problem faced. MSEDCL argued that finally the arrears/ refunds as the case may be, based on the trueing up would be passed on to the Consumers any way. The question was regarding timing of the billing and accuracy based on the interim calculations. The solution suggested by MSEDCL was discussed further at the meeting held at the Commission's office to sort out the issues.

- a) During discussions with MSEDCL / MSPGCL at the MERC office on June 17, 2010, regarding interim recovery of the dues, clarifications were furnished by MSEDCL / MSPGCL regarding the methodology used for calculating the arrears.

After examining the same, it was obvious that, this is a peculiar situation where the performance norms have been retrospectively changed in the FAC forms by MSPGCL/MSEDCL on the basis of recommendation of CPRI (approved by the Commission), and the changes in the costs, payable on account of these have already been considered for billing.

- b) It was explained by the Commission to MSPGCL/MSEDCL that, if, the revised performance norms had already been in place and had the tariff order been made on that basis, the tariff structure would itself be different and the base for comparison would also be different. In such event the arrears would not necessarily amount to those calculated by MSPGCL / MSEDCL.
- c) MSPGCL/MSEDCL concurred that “truing-up” through ARR order (expected to be out shortly), would be the ideal methodology, as all the details involved in such calculations would be squarely in place. However, it was brought to the notice of the Commission that MSEDCL has already recovered FAC payment from the consumers based on these calculations, and any change or reversal of the calculated arrears would mean substantial change in further billings. MSEDCL further stated that the amount to be adjusted through true-up would not be too large and they were prepared to accept any corrective action arising out of the same.
- d) **Approval :** Therefore, as a special case and on a one-time basis the Commission has vetted the FAC submissions of MSEDCL for February 2010 and March 2010 with the modified statements submitted by MSEDCL, after changing the performance norms by those approved by the Commission on advice of CPRI (case 16 of 2008). Further, for the same reasons as discussed above, the Commission has re-visited the FAC vetting for January 2010 as shown in the tables below.
- e) As the arrears based on these calculations have already been billed, any positive/negative variances with the same will be addressed adequately through the truing up process in the Tariff order which is to be issued shortly.

1.6 **Procurement from external source**

Regarding purchase of power from the external sources, the Commission has considered power purchase sources based on the MYT Order dated August 17, 2009

2. **Details of approval:**

- 2.1 FAC approval : In compliance with Regulation 82.6 of MERC (Terms and Conditions of Tariff) regulations 2005 the Commission has accorded post facto approval for the FAC amount of (net of T & D loss), Rs. 42.51 Crore for the month February 2010 & Rs. 1.03 Crore for March 2010. Further, the carried forward under-recovered FAC at the end of March 2010 works out to Rs. Nil

2.2 Agricultural consumers : The summary of the FAC claim for February 2010 & March 2010 as submitted by MSEDCL and as approved by the Commission for the Agricultural consumers is shown in the Table below:-

February 2010

Sr No	Particulars	Unit	Approved
1	FAC incl of excess T&D Loss	Rs. Crore	42.51
2	FAC rate	Paise/kWh	7.94
3	FAC rate (unmetered)		
	-LT-Ag (>1300 hours per year)	Rs/hp/month	8.6
	-LT-Ag (<1300 hours per year)	Rs/hp/month	4.8

March 2010

Sr No	Particulars	Unit	Approved
1	FAC incl of excess T&D Loss	Rs. Crore	1.03
2	FAC rate	Paise/kWh	0.18
3	FAC rate (unmetered)		
	-LT-Ag (>1300 hours per year)	Rs/hp/month	0.20
	-LT-Ag (<1300 hours per year)	Rs/hp/month	0.10

The above vetted charges are in alignment with the following FAC charges levied by MSEDCL to its consumers in January 2010, which are reproduced below.

January 2010

Sr No	Particulars	Unit	FAC charges levied by MSEDCL
1	FAC incl of excess T&D Loss	Rs. Crore	195.01
2	FAC rate	Paise/kWh	37
3	FAC rate (unmetered)		
	-LT-Ag (>1300 hours per year)	Rs/hp/month	39.90
	-LT-Ag (<1300 hours per year)	Rs/hp/month	22.50

The Commission, as discussed above, accords its approval to these charges.

3. Analysis of FAC proposal submitted by MSEDCL for February 2010 and March 2010 and computation of FAC charges is as below:

a) **Variable Cost of Generation:**

MSEDCL has submitted the break-up of purchase price of different fuels for all stations certified by Chartered Accountant.

i) **Variable Fuel Cost :**

MSEDCL has considered the base variable fuel cost for each station as approved by the Commission in the MYT Order of MSPGCL of August 17, 2009 (Case 115 of 2008) and in conformity with the directions given in the Commission's letter MERC/MON/FAC/MSEDCL/09/2637 dated November 20, 2009

MSEDCL has submitted sample bills for the fuel purchased along with the FAC submissions. MSEDCL has also submitted fuel analysis report of representative monthly sample of fuels certified by an Independent Certification Agency along with FAC submissions.

Station-wise based variable charge per unit considered for FAC based on the approved cost by the Commission is as given at the end of the report

ii) **Secondary fuel consumption :**

The Commission's clarifications on the issues of secondary fuel oil consumptions for FAC computations are as under:

- a) In case the secondary oil consumption is more than 2 ml/kWh, the same should be limited to the approved level of 2 ml/kWh
- b) In case usage of actual secondary fuel oil consumption is less than normative value of 2 ml/kWh (or no consumption),
- c) the same should be recomputed considering the normative levels.

Accordingly, the Commission has computed the cost of secondary fuel oil consumption, Such that, the normative fuel consumption allowed for FAC vetting for the month February 2010 & March 2010 is upto a limit value of 2 ml/kWh in combination of Fuel Oil, LDO and LSHS

The summary of fuel related costs for the month February 2010 & March 2010 for existing generating stations of MSPGCL as approved by the Commission after detail vetting, is shown in the Table below:

Cost of Generation : February 2010 & March 2010

S.No	Detail	Unit	February 2010	March 2010
1	Actual Fuel Cost	Rs Crore	605.01	678.56
2	Normative Actual Fuel cost	Rs Crore	576.95	652.97
3	Net Generation	MU	3468.57	3738
4	Approved variable cost of generation	Rs./kWh	1.6	1.6
5	Actual average variable cost of generation	Rs./kWh	1.74	1.6
6	Average Normative variable cost of generation	Rs./kWh	1.663	1.7
7	Change in variable cost of generation = $\{(3)X[(6)-(4)]\}/10$	Rs. Crore	21.654	39.3

The Commission has also vetted the tabulation of variable cost of generation for January as given below :

Cost of Generation : January 2010

S.No	Detail	Unit	Value
1	Actual Fuel Cost	Rs Crore	667.21
2	Normative Actual Fuel cost	Rs Crore	622.73
3	Net Generation	MU	3831.88
4	Approved variable cost of generation	Rs./kWh	1.6
5	Actual average variable cost of generation	Rs./kWh	1.74
6	Average Normative variable cost of generation	Rs./kWh	1.623
7	Change in variable cost of generation = $\{(3)X[(6)-(4)]\}/10$	Rs. Crore	8.568

iii) Auxiliary consumption:

Auxiliary consumption for all generating stations has been considered by MSEDCL at approved levels as per CPRI's recommendations, for calculation of variable cost of generation and the same is allowed.

iv) Heat Rate:

MSEDCL has worked out the variable cost of generation considering approved station heat rates of each station as per CPRI's recommendations, and the same is allowed.

v) Transit Loss:

MSEDCL has worked out the variable cost of generation considering normative transit loss as approved in the MYT Order of MSPGCL of August 17, 2009 (Case 115 of 2008) and the same is allowed.

b) Variable cost of power purchase

The Commission has considered the increase in power purchase cost in case of approved power purchase sources as per the MYT order of MSEDCL of August 17, 2009 (Case 116 of 2008) as per the tabulation given at the end of the Report.

MSEDCL has submitted the data for the power purchase certified by Chartered Accountant. The details of power purchase by MSEDCL for :February 2010 & March 2010 is given below

Power Purchase : February 2010 & March 2010

S.No	Details	Unit	February 2010	March 2010
1	Net Energy Purchase	MU	3145	3352
2	Variable Cost of Energy purchased	Rs Crore	589.89	632.72
3	Average Rate of energy purchased	Rs./kWh	1.88	1.89
4	Approved Rate for Energy purchase	Rs./kWh	2.1302	2.1302

The vetted tabulation for January 2010 is as follows :

Power Purchase : January 2010

S.No	Details	Unit	Value
1	Net Energy Purchase	MU	3077
2	Variable Cost of Energy purchased	Rs Crore	555.97
3	Average Rate of energy purchased	Rs./kWh	1.81
4	Approved Rate for Energy purchase	Rs./kWh	2.1302

c) **Unscheduled Interchange (UI) Charges:**

In February-2010 MSEDCL has purchased 194 MU through UI at avg rate of Rs. 2.05 per kWh. And in March 2010 purchased 89 MU through UI at avg rate of Rs. 0.75 per kWh. This is allowed.

Scheduled Energy Received in grid through Imports from various regions and losses:

MSEDCL has claimed losses in power purchase through grid at (140) MU in February-10 and (212) MU in March 2010 as the difference between the Scheduled Energy (including UI) and Actual Drawal

The Commission has considered the losses in the grid as submitted by MSEDCL.

For the month of February-10 the Commission has approved change in Variable (Fuel) Cost of Generation and Power Purchase Cost (C), of Rs (42.91) Crore and in March Rs.75.94 Crores. The Commission has also vetted and approve the cost Rs

d) **Interest on working capital** –

MSEDCL has mentioned that 10.25% is the rate of Interest for working capital. However, no claim has been tabulated in FAC submission.

As per APTEL judgment, interest on the difference of normative actual cost and approved cost of fuel in a month is eligible for payment through FAC mechanism, in case such claim is made. Else it will be addressed through the Annual Trueup.

e) **Adjustment factor for over recovery / under recovery (B)** –

The truing up as above is based on the performance parameters as approved by the Commission on recommendation of CPRI.

MSEDCL/MSPGCL had changed performance parameters for the Actual values as per CPRI studies for months Apr 09 to Jan 09. With this they had arrived at Rs 252.47 Crore as additional FAC chargeable for the period Apr 09 to Jan 09.

As the entire sets of forms of FAC calculation was changed according to the revised performance parameters , the Commission, while vetting the FAC submissions for February 2010 and March 2010, has aligned the FAC vetting to these forms, (Form 6.6 and Form 8.1) ., As discussed above, any variance thereto will be addressed through the True-up exercise.

It is to be noted that for January 2010, the item 2 of the tabulation of the Adjustment factor shown below (Rs 31,603 Lakhs) is constituted of Rs 6,356 Lakhs as the phased out recovery amount as approved by the Commission vide order for Case 16 of 2008 , plus, Rs 25,247 Lakhs as the arrears claimed by MSEDCL for the period April 09 to December 09.

The Commission has approved the same, subject to review and rectification in final true-up .

Adjustment Factor for January 2010

Sr. No.	Parameter	Unit	Value
(A)	(B)	(C)	(D)
1.0	Adjustment for over-recovery/under-recovery ('B')		
1.1	Incremental cost allowed to be recovered in Month (October 2009)	Rs Lakh	(6,612)
1.2	Incremental cost in Month j-4 actually recovered in month j-2 (November 2009, December 2009, January 2010)	Rs Lakh	(6,151.07)
1.3	Over-recovery/under-recovery (1.2-1.1)	Rs Lakh	(461)
2.0	Carried forward adjustment for over-recovery/under-recovery attributable to application of ceiling limit	Rs Lakh	31,603
3.0	Adjustment factor for over-recovery/under-recovery (1.3+2.0)	Rs Lakh	31,142

Adjustment factor for February 2010:

Sr. No.	Parameter	Unit	February 2010
(A)	(B)	(C)	(D)
1	Adjustment for over-recovery/under-recovery ('B')	Rs Lakh	
1.1	Incremental cost allowed to be recovered in Month J-5 (November 2009)	Rs Lakh	(2347)
1.2	Incremental cost in Month j-5 actually recovered in j-2 (February 2010)	Rs Lakh	(2288.71)
1.3	Over-recovery/under-recovery (1.2-1.1)	Rs Lakh	(58)
2	Carried forward adjustment for over-recovery/under-recovery, attributable to application of ceiling limit	Rs Lakh	8809
3.	Adjustment factor for over-recovery/under-recovery (1.3+2.0)	Rs Lakh	8751

Adjustment factor for March 2010:

Sr. No.	Parameter	Unit	March 2010
(A)	(B)	(C)	(D)
1	Adjustment for over-recovery/under-recovery ('B')	Rs Lakh	
1.1	Incremental cost allowed to be recovered in Month J-5 (December 2009)	Rs Lakh	1999
1.2	Incremental cost in Month j-5 actually recovered in j-2	Rs Lakh	2709.54
1.3	Over-recovery/under-recovery (1.2-1.1)	Rs Lakh	(711)
2	Carried forward adjustment for over-recovery/under-recovery, attributable to application of ceiling limit	Rs Lakh	6356
3.	Adjustment factor for over-recovery/under-recovery (1.3+2.0)	Rs Lakh	5645

f) **Distribution Loss:** .

Excess Distribution loss:

MSEDCL has incurred 20.18% cumulative Distribution loss upto the month February 2010 and 20.68% upto March 2010. As this is more than the approved value of 18.20% deduction of Rs. 1.06 Crore has been made from the computed FAC amounts of the month February 2010 and Rs. 0.03 Crores from FAC of March 2010.

g. **Energy Sales for within License area:**

The energy sales within licence area as submitted by MSEDCL for the month February-10 is 5350.69 MU and for March-10 is 5698.39 MU. The same is approved by the Commission.

4. **Summary :**

The summary of the FAC amount as approved by the Commission for February 2010 and March 2010 is shown in the Tables below. The Summary table for FAC of January 2010 re-visited and approved by the Commission as explained above is also printed below:-

The Rate at which the amount is to be charged to the consumers is arrived at by dividing the above amount by the total consumption in licensed area.

Sr. No.	Parameter	Unit	Approved		
			January 2010	February 2010	March 2010
1	Calculation of FAC (A)				
1.1	Disallowance of change in variable cost of generation corresponding to excess auxiliary consumption	Rs Lakh	0	0	0
1.2	Change in weighted average variable cost of generation and power purchase after accounting for disallowance of change in variable cost corresponding to excess auxiliary consumption	Rs Lakh	0	0	0
1.3	Apportionment of change in variable cost of generation and power purchase to License Area (C)	Rs Lakh	(8,688)	(4394)	(2978)
1.4	Working Capital Interest (I)	Rs Lakh	0	0	0
1.5	T & D Loss Adjustment for the year	Rs Lakh	0	0	(2561)
1.6	Adjustment for Over Recovery/Under Recovery (B)	Rs Lakh	31,142	8751	5645
1.7	FAC (A) = C + I + B	Rs Lakh	22,454	4357	107
2.	Calculation of FACKWh				
2.1	Sale within License Area	MU	5,271.93	5350.69	5698.39
2.2	Excess T&D Loss	MU	135	134	190
2.3	FAC Charge (FACKWh) without considering cap on monthly FAC Charge	Paise/KWh	41.53	7.94	0.18
2.4	Cap on monthly FAC Charge	Paise/KWh	37	37	37
2.5	FAC Charge (FAC/kWh) considering cap on monthly FAC Charge	Rs/KWh	0.3699	.0794	0.0018
3	FAC (A)				
3.1	FAC (A) considering cap on Monthly FAC Charge	Rs Lakh	19,501	4251	103
3.2	FAC (A) disallowed corresponding to excess T&D loss	Rs Lakh	500	106	3
3.3	Carried forward FAC (A) for recovery during future period	Rs Lakh	2,453	0	0

APPENDIX

**Assumptions/Norms as per MYT order for MSPGCL dated May 31, 2008
and for MYT Order dated August 17, 2009 (Case 116 of 2008),**

1. CAP on monthly FAC charge.

CAP on monthly FAC charge for FY 2009-10 works out to 37 paise per unit (10% of energy charge).

2 Summary of New Norms:

2.1 Purchase from MSPGCL:

Station	Net Gen (MUs)	Energy Charge as per Order (Rs/kWh)	Heat rate (kcal/kwh)		Auxiliary Consumption	
			As per MYT Order	As per CPRI Recommendation	As per MYT Order	As per CPRI Recommendation
Khaparkheda	5,627	1.75	2566	2612.2	8.50%	9.17%
Paras	373	1.86	3105	3223.8	9.70%	12.18%
Bhusawal	2,938	2.28	2652	2784.3	9.75%	10.74%
Nasik	5,630	2.4	2642	2774.3	9.00%	9.74%
Parli	4,226	2.13	2660	2796.1	9.00%	10.93%
Koradi	5,888	1.51	2797	3014.9	9.80%	10.74%
Chandrapur	13,227	1.23	2556	2664.4	7.80%	8.18%
Paras -3	1,594	1.28	2500	2500	9%	9.00%
Parli -6	1,594	1.47	2500	2500	9%	9.00%
Uran	3,761	1.23	1980	1980	2.40%	2.40%

Note : The Net approved MUs are based on last 3 years' average Net generation of MSPGCL Stations

2.2 Purchase from Other sources

Particulars	ESO	Total Variable Charges (Rs Cr)	Avg. Cost (Rs./kWh)
MSPGCL	49093	7734	1.58
Korba STP	5014	319	0.64
Vindhayanchal STP I	3361	403	1.20
Vindhayanchal STP II	2625	304	1.16
Vindhayanchal STP III	2187	251	1.15
KAWAS APM	1393	828	5.94
GANDHAR APM	1366	539	3.95
Farakka STPP-EP	499	83	1.67
Kahalgaon TPS-EP	242	36	1.49
KahalgaonTPS-II	300	48	1.60
TSTPS-EP	300	29	0.96
Sipat Stage - II	2235	189	0.84
Barh	110	22	1.96
NTPC	19634	3052	1.55
Kakrapar APP	310	65	2.10
Tarapur APP 1&2	1080	104	0.97
Tarapur APP 3&4	1559	457	2.93
NPCIL	2949	626	2.12
Saradar Sarovar Project	924	189	2.05
PENCH	103	21	2.05
U.I. CHARGES	0	0	
DODSON-I	40	9	2.31
DODSON-II	38	10	2.63
RGPPL	7500	1824	2.43
TOTAL PP	80281	13466	1.68
NCE Sources	4110	1509	3.67
CPPs	250	95	3.80
TOTAL	84641	15070	1.78

- 3 **T and D loss**- Approved Intra State Transmission Loss is 4.85% and Distribution Loss as per APR Order is 18.20%
- 4 Transit Loss: 0.80% for all stations

