

Ref. No. MERC/FAC/20102011/1714

Date: November 23, 2010

The Managing Director,
Maharashtra State Electricity Distribution Company Ltd.,
5th Floor, Prakashgad, Plot No. G-9,
Bandra (East),
Mumbai – 400 051.

Subject: Post Facto approval of FAC submission of MSEDCL for July 2010

Reference: FAC submissions for July 2010 MSEDCL/CAS/FAC/L7/31608 dated 13 October , 2010

Sir,

Upon vetting the FAC calculations for the month of July 2010, submitted vide letter under above reference, the Commission has accorded post facto approval for the FAC amount for the above mentioned month as detailed below.

1. On scrutiny of the FAC submission under reference, the Commission has observed that,
 - a) The performance parameters approved for the MSPGCL's thermal stations for FY 10 have been used in the FAC formats. Please note that the Commission has specified in the Tariff Order dated 12th September 2010 (Case 102 of 2009) the Performance parameters applicable for MSPGCL Thermal stations for FY 11 based on CPRI recommendations. These should be used for the submissions.
 - b) The Commission has observed that MSPGCL has continued to operate the retired "vintage" units of Koradi and Bhusawal thermal stations and MSEDCL has procured energy from the same at rates different from the determined rates for the said stations. It is recollected that during the meeting of the State Advisory Committee held at the Commission's office on June 25, 2010 , continued usage of the retired "vintage " plants as above was recommended in view of the prevalent power shortage situation in the State. Accordingly the procurement of energy generated by these units, for the consumers of MSEDCL, is approved by the Commission.

2. Details of approval:

The Commission has accorded post facto approval for the FAC amount (net of T&D loss) of Rs. 211.6050 Crore for the month July 2010. Further, the carried forward FAC at the end of the month July 2010 for adjustment in future is Rs. 90.4207 Crores.

The summary of the FAC claim for July 2010 as submitted by MSEDCL and approved by the Commission is shown in the Table below:-

Sr No	Particulars	Unit	MSEDCL	Approved
1	FAC incl of excess T&D Loss	Rs. Crore	211.6050	211.6050
2	FAC rate	Paise/kWh	36.99	36.99
3	FAC rate (unmetered)			
	-LT-Ag (>1318 hours per year)	Rs/hp/month	39.90	39.90
	-LT-Ag (<1318 hours per year)	Rs/hp/month	22.50	22.50

I am directed to forward herewith the detailed vetting and approval of the Commission on FAC amount for the months July 2010

Yours faithfully,

(K.N.Khawarey)
Secretary, MERC

Encl : Detailed Vetting Report for July 2010

Cc To:

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 Dynyaneshwar 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.
Shri S R Tamhane B5, Sahakar Nivas, Prof V S Agashe Road, Off Portuguese church, Dadar, Mumbai 400028	

**Detailed Vetting Report MSEDCL- *Post Facto* approval of
FAC Charges for July 2010 submitted by MSEDCL**

ANNEXURE
Date 23.11.2010

Reference : MSEDCL's letter No. MSEDCL/PP/FAC/L7/31608 of October 13, 2010 submission of month July-2010 and subsequent clarifications furnished regarding the same

1. FAC submission by MSEDCL:

- 1.1 Upon vetting the FAC calculations for the month of July 2010, submitted vide letter under above Reference, and after taking cognizance of the clarifications furnished by MSEDCL to the queries raised by the Commission, the Commission has accorded post facto approval for the FAC amount for the said months as detailed below.

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. Further, the Commission appointed CPRI (A Govt. of India enterprise) to conduct tests and recommend "Achievable performance parameters". Of MSPGCL's thermal stations

Based on CPRI recommendations, the Commission approved revised performance parameters for all MSPGCL stations, taking into consideration the plant degradations and also implementation of the immediate, medium term and long term improvements to the plants as recommended.

MSPGCL and MSEDCL are required to note that for year 2010-11, the achievable performance parameters for MSPGCL stations, which have been tabulated under the title as above, in the Appendix to this letter, are to be used for FAC submissions in the current financial year. The tabulations are also shown in the Tariff order for MSPGCL, issued by the Commission on 12th September 2010 in the matter of Case 102 of 2009.,

The Commission has approved FAC charges for the month of July 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 as explained above, any variance on account of the above will be addressed during the true-up.

- 1.2 Regarding purchase of power from the external sources, the Commission has considered power purchase sources and rates based on the MYT Order dated August 17, 2009, which were effective for the said month of July 2010.

2. Details of approval:

The Commission has accorded post facto approval for the FAC amount of (net of T & D loss), **Rs. 211.6050 Crore** for the month July 2010. The summary of the FAC claim for July 2010 as submitted by MSEDCL and as approved by the Commission is shown in the Table below:-

Sr No	Particulars	Unit	MSEDCL	Approved
1	FAC incl of excess T&D Loss	Rs. Crore	211.6050	211.6050
2	FAC rate	Paise/kWh	36.99	36.99
3	FAC rate (unmetered)			
	-LT-Ag (>1318 hours per year)	Rs/hp/month	39.90	39.90
	-LT-Ag (<1318 hours per year)	Rs/hp/month	22.50	22.50

Further, the carried forward FAC at the end of the month July 2010 works out to **Rs. 90.4207 Crores**

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

a) Generation by MSPGCL stations :

While comparing the stationwise generation figures of MSPGCL thermal station, submitted by MSEDCL with those in the Balancing statement of SLDC for the month, following **discrepancy** was observed regarding the energy purchase figures from Koradi and Bhusawal thermal power stations. :

In case of **Koradi**, 194.73 MUs energy was procured by MSEDCL at the “actual” rate of Rs. 2.19 per kWh and 56.68 MUs were procured from **“Koradi vintage plant”** at Rs 4.0 per kWh.

In case of **Bhusawal**, 151.82 MU were procured from Bhusawal at the “actual” rate of Rs. 2.8913 per kWh and 2.33 MU were procured from **“Bhusawal vintage plant”** at Rs 4.0 per kWh

MSEDCL was asked to furnish explanation for splitting up the procurement as above and for paying higher rates to part of the generation without the Commission’s approval..

On 22nd October 2010. MSEDCL explained as follows :

“MSPGCL was planning to close Koradi I to IV units and Bhusawal U I as they have out lived their useful life. Considering Demand Supply Gap & resultant distress load shedding ,MSEDCL requested to MSPGCL, to continue the generation from Koradi U I to IV and Bhusawal U I. MSPGCL agreed to this and & MSEDCL confirmed to avail this power at the

indicative rate of Rs 4 / KWH with escalation of 20% in future. These units will be deleted from existing PPA .MSEDCL has procured power for these units @ Rs 4 / KWH w.e.f 16.7.2010. and for earlier period amt is paid as per MERC tariff order .

So this Purchase will be treated as short term power purchase as per Regulation 25 of MERC Regulation 2005”

b) **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), 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 July 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 July 2010 for existing generating stations of MSPGCL as approved by the Commission after detail vetting, is shown in the Table below:

Sr No	Detail	Unit	For July- 0
1	Actual Fuel Cost	Rs Crore	566.4498
2	Normative Actual Fuel cost	Rs Crore	459.9714
3	Net Generation	MU	2553.20
4	Approved variable cost of generation	Rs./kWh	1.60
5	Actual average variable cost of generation	Rs./kWh	2.22
6	Average Normative variable cost of generation	Rs./kWh	1.80
7	Change in variable cost of generation = $\{(3)X[(6)-(4)]\}/10$	Rs. Crore	51.064

iii) Auxiliary consumption:

Auxiliary consumption for all generating stations has been considered by MSEDCL at normative levels for calculation of variable cost of generation and the same is allowed.

iv) Heat Rate:

As explained under item 1.1 above, MSEDCL has worked out the variable cost of generation considering normative heat rates of each station as applicable in year 2009-10 and the same is allowed by the Commission with the clear understanding that the same will be trued up as per criteria as explained above..

v) Transit Loss:

MSEDCL has worked out the variable cost of generation considering normative transit loss as approved in the MYT Order dated August 17, 2009, which were effective for the said month of July 2010. 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, which was applicable for July 2010.

MSEDCL has submitted the data for the power purchase certified by Chartered Accountant.

The details of power purchase by MSEDCL for July 2010 is given below

S.No	Details	Unit	July 2010
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-1	Net Energy Purchase	MU	3448.58
-2	Variable Cost of Energy purchased	Rs Crore	844.1631
-3	Average Rate of energy purchased	Rs./kWh	2.45
-4	Approved Rate for Energy purchase	Rs./kWh	2.13

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

In July-10 MSEDCL has purchased 279 MU through UI at avg rate of Rs. 2.32 per kWh. This is allowed

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

MSEDCL has claimed losses in power purchase through grid at (207) MU in July-10 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.

e) **High cost of power procurement incurred in July 2010**

For the month of July-10 the Commission has approved change in Variable (Fuel) Cost of Generation and Power Purchase Cost (C), of Rs 205.3505 Crore

It is to be noted that as against scheduled procurement of **3738 MU** from MSPGCL, MSEDCL has procured only **2553 MU** in July 2010. The gap between the scheduled and actual supply of MSPGCL has been partially filled up by procuring **3448.58 MU at Rs 2.45/kWH** from other sources instead of approved “procurement from other sources” of **2869.67 MU at Rs 2.13 per kWH**.

As a result, the actual power procurement rate for July 2010 has shot up to Rs 2.35 per kWh in place of approved Rs 1.83 per kWh. After taking cognizance of deviations in the performance parameters of MSPGCL generating stations as compared to the approved parameters, the normative actual power procurement rate, (MSPGCL and other sources) allowed by the Commission is Rs. 2.17 per kWh.

The total metered and assessed energy consumption for July 2010 is 5738 MUs which is lower than that in the previous months (Monsoon effect). Hence FAC chargeable per kWh is high. The adjustment factor also includes the approved 8th instalment of arrears Rs 63.56 Crores, due to which the FAC cost has reached the rate 52.8 paise /KWH. The overflow amount after applying the 10% cap, Rs 90.42 Crore is allowed to be carried over for adjustment in future.

d) **Interest on working capital –**

MSEDCL has mentioned that 10.25% is the rate of Interest for working capital. In the Note MSEDCL has mentioned that Rs.24.1575 Crores is the interest accrued on Working Capital for incurred by the company in July 2010. 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 along with supportive documentation. Else it will be addressed through the Annual True-up.

f) Adjustment factor

MSPGCL has claimed the adjustments for 8th instalment of arrears Rs 63.56 Crores,(permitted by the Commission's Order of Case 16 of 2008)

There was no amount carried forward from June 2010 to July 2010 for recovery in future.

Total adjustment factor (sum of above) is Rs 96.6752 Crores. This has been approved.

Adjustment Factor

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 (April 2010)	Rs Lakh	12184.33
1.2	Incremental cost in Month j-4 actually recovered in month j-2 (July- 2010)	Rs Lakh	8873
1.3	Over-recovery/under-recovery (1.2-1.1)	Rs Lakh	3311.10
2.0	Carried forward adjustment for over-recovery/under-recovery attributable to application of ceiling limit	Rs Lakh	0
2.1	8 th instalment of arrears permitted by the Commission's Order of Case 16 of 2008		6356.43
3.0	Adjustment factor for over-recovery/under-recovery (1.3+2.0)	Rs Lakh	9667.53

f) Transmission and Distribution Loss:

Transmission Loss :

As per IBSM statements, the transmission loss for the entire Intra state transmission system of Maharashtra for the month July 2010 is 4.20%. In the FAC submission, MSEDCL has reported Transmission loss in its system as 6.20% . This is permitted.

Distribution loss:

In the previous month, June 2010, MSEDCL had reported 7.78 % Distribution Loss (16.92 % cumulative Distribution loss upto the month)

For the current month July 2010, MSEDCL has reported 6.64 % Distribution Loss (17.75% cumulative Distribution loss upto the month).

Such drastic reduction in Distribution Loss has occurred without taking any specific steps towards reduction in Technical loss or Commercial loss. However, MSEDCL has explained that the reduction could be due to the lower Assesed consumption of unmetered consumer category as compared to the previous quarter.

The Commission has observed that existence of large amount of Unmetered consumers and irregular/infrequent meter reading cycles appear to be the main reasons behind such unrealistic values of Distribution loss. On account of such arbitrary and ad-hoc measurements, proper audit of loads and realistic trending thereof are not possible. The Commission instructs MSEDCL to substantially reduce the number of unmetered consumers, improve Metering and take actual meter readings every month rather than taking the readings in certain areas once in 3 months and apply “Assessed reading” for next 2 months.

As the reported distribution loss (cumulative upto the month) is lesser than the stipulated limit value, no deductions from FAC charges are made.

g. Energy Sales for within License area:

The energy sales within licence area as submitted by MSEDCL for the month July-10 is 5720.60 MUs. and the same is approved by the Commission. Based on the explanation furnished by MSEDCL, correction for assessed consumption for the previous months is getting reflected in sale of July 2010, because of unsound Meter reading methodology adopted as above by MSEDCL.

4. Summary :

The summary of the FAC amount as approved by the Commission for July-10 is shown in the Tables below:-

At the above rate, total FAC amount of Rs 211.6050 Crores is to be charged to the consumers and the amount to be carried forward for recovery at future date is Rs 90.4207 Crores

SUMMARY

Sr. No.	Parameter	Unit	MSEDCL	Approved
1	Calculation of FAC (A)			
1.1	Disallowance of change in variable cost of generation corresponding to excess auxiliary consumption	Rs Lakh	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
1.3	Apportionment of change in variable cost of generation and power purchase to License Area (C)	Rs Lakh	20535.05	20535.05
1.4	Working Capital Interest (I)	Rs Lakh	0	0
1.5	T & D Loss Adjustment for the year		0	0
1.6	Adjustment for Over Recovery/Under Recovery (B)	Rs Lakh	9667.52	9667.52
1.7	FAC (A) = C + I + B	Rs Lakh	30202.57	30202.57
2	Calculation of FACKWh			
2.1	Sale within License Area	MU	5720.60	5720.60
2.2	Excess T&D Loss	MU	0	0
2.3	FAC Charge (FACKWh) without considering cap on monthly FAC Charge	Paise/K Wh	52.80	52.80
2.4	Cap on monthly FAC Charge	Paise/K Wh	37	37
2.5	FAC Charge (FAC/kWh) considering cap on monthly FAC Charge	Rs/KWh	0.37	0.37
3	FAC (A)			
3.1	FAC (A) considering cap on Monthly FAC Charge	Rs Lakh	21160.50	21160.50
3.2	FAC (A) disallowed corresponding to excess T&D loss	Rs Lakh	0	0
3.3	Carried forward FAC (A) for recovery during future period	Rs Lakh	9042.07	9042.07

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) FY 2009-10	Auxiliary Consumption		Approved Heat Rate applicable for FY 2010-11 kCal/kWH	Approved Auxiliary Consumption for FY 2010-11 %
Khaparkheda	5,627	1.75	2612	8.50%		2559.9	9.74
Paras	373	1.86	3224	9.70%		3186.5	12.45
Bhusawal	2,938	2.28	2784	9.75%		2733.9	10.55
Nasik	5,630	2.4	2774	9.00%		2721.9	10.95
Parli	4,226	2.13	2796	9.00%		2744.6	11.15
Koradi	5,888	1.51	3015	9.80%		2964.8	10.70
Chandrapur	13,227	1.23	2664	7.80%		2617	9.15
Paras -3	1,594	1.28	2500	9%		2500	9.0
Parli -6	1,594	1.47	2500	9%		2500	9.0
Uran	3,761	1.23	1980	2.40%		1980	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

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

