Annexure-1

Detailed Vetting Report MSEDCL- *Post Facto* approval of FAC Charges for April 2009 and May 2009 submitted by MSEDCL

Reference :

a) MSEDCL's letter No. MSEDCL/CAS/FAC/L7/45 of July 13,2009
b) MSEDCL's letter No. MSEDCL/CAS/FAC/L7/52 of August 7, 2009

1. FAC submission by MSEDCL:

1.1 Upon vetting the FAC calculations for the months of April 2009 and May 2009, submitted vide letters under above Reference "(a)" and "(b)", respectively, the Commission has accorded post facto approval for the FAC amount for the months of April 2009 and May 2009 as detailed below:

The Commission issued APR Order dated June 20, 2008 approving principles of Annual Revenue Requirement (ARR) and Tariff for FY 2008-09 for MSEDCL and has also mentioned about the parameters and mechanism for computation of FAC, which have been summarized in the Appendix to this letter. The Commission has approved FAC charges for the month of April 2009 and May 2009 in accordance with the principles stipulated in the APR Order dated June 20, 2008 and the MERC (Terms and Conditions of Tariff) Regulations, 2005.

1.2 The Commission has considered power purchase sources based on the APR Order dated June 20, 2008.

1.3. MSEDCL has forwarded FAC submissions as per formats with a charge for April 2009 and May 2009 @ 31 paise / unit for metered sales.

1.4 The Commission has considered the increase in power purchase cost in case of approved power purchase sources as per the APR Order dated June 20, 2008 (Case No. 72 of 2007)

2. Details of approval:

The Commission has accorded post facto approval for the FAC amount of (net of T & D loss), Rs.161.57 Crore and Rs 163.57 Crore for months April 2009 and May 2009 resp. The summary of the FAC claim for April 2009 and May 2009 as submitted by MSEDCL and as approved by the Commission is shown in the Table below:-

April 2009

Sr No	Particulars	Unit	MSEDCL	Approved by Commission
1.	FAC net of excess T&D Loss	Rs. Crore	161.57	161.57
2.	FAC rate	Paise/kWh	31	31
3.	FAC rate (unmetered)			
	-LT-Ag (>1300 hours per year)	Rs/hp/month	33.30	33.30
	-LT-Ag (<1300 hours per year)	Rs/hp/month	18.80	18.80

May 2009

Sr No	Particulars	Unit	MSEDCL	Approved by Commission
1.	FAC net of excess T&D Loss	Rs. Rs. Crore	163.57	163.57
2.	FAC rate	Paise/kWh	31	31
3.	FAC rate (unmetered)			
	-LT-Ag (>1300 hours per year)	Rs/hp/month	33.30	33.30
	-LT-Ag (<1300 hours per year)	Rs/hp/month	18.80	18.80

Further, the carried forward under-recovered FAC for the month of May 2009 as approved by the Commission works out to Rs.313.00 Crore.

The Commission's Order in the matter of the Review petition of MSEDCL regarding (Case No 102 of 2008), stipulates that the Commission would approve the FAC to be recovered by MSEDCL in excess of existing ceiling (30.90 Paise/kWh) through FAC charge after detailed vetting of the actual FAC data on case to case basis for the period from November 2008 to February 2009. Accordingly, the approved value of unrecovered FAC at the end of May **2009** , allowed to be carried forward for recovery at future date, amounted to Rs.313.00 Crores.

3. Analysis of FAC proposal submitted by MSEDCL 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) <u>Variable Fuel Cost :</u>

MSEDCL has considered the base variable fuel cost for each station as approved by the Commission in the APR Order of MSPGCL dated May 31, 2008 (Case 71 of 2007). MSEDCL has not considered power stations, which are yet to be commissioned while computing weighted average cost of generation.

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 under:

Station	Net Gen (MU)	Energy Charge as per Order (Rs/kWh)	Other cost considered Rs. Crore	Component of Other charges (Rs./KWh)	Energy Charge as considered for FAC (Rs/kWh)
Khaparkheda	5483	1.28	13.77	0.03	1.25
Paras	348	1.55	2.53	0.07	1.48
Bhusawal	3004	1.91	18.50	0.06	1.85
Nasik	5612	2.06	48.22	0.09	1.97
Parli	4273	1.96	40.99	0.10	1.86
Koradi	6574	1.23	29.52	0.04	1.19
Chandrapur	15120	1.19	13.57	0.02	1.17
Uran	3844	0.76	0.72	0.00	0.76
Paras II	1592	1.28	--	--	1.28
Parli II	1592	1.47	--	--	1.47

ii) <u>Secondary fuel consumption :</u>

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

- In case secondary fuel oil consumption is more than 2 ml/kWh, the same should be limited to the approved level of 2 ml/kWh;
- 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 months April 2009 and May 2009, 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 of April 2009 and May 2009 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 April 2009	For May 2009
(1)	Actual Fuel Cost	Rs Crore	664.11	772.18
(2)	Normative Actual Fuel cost	Rs Crore	576.18	648.09
(3)	Net Generation	MU	3686.9	3633.26
(4)	Approved variable cost of generation	Rs./kWh	1.37	1.37
(5)	Actual average variable cost of generation	Rs./kWh	1.80	2.13
(6)	Average Normative variable cost of	Rs./kWh	1.56	1.78

	generation			
(7)	Change in variable cost of generation ={(3)X[(6)-(4)]}/10	Rs. Crore	70.0511	150.62

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:

MSEDCL has worked out the variable cost of generation considering normative heat rates of each station 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 APR Order dated June 20, 2008 for FY 2008-09, 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 APR Order of MSEDCL dated June 20, 2008 for FY 2008-09. However, the Commission observed that MSEDCL has not considered certain sources, which the Commission has approved in the APR Order, whenever no power was purchased from these. This has been rectified

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

The details of power purchase by MSEDCL for the month April 2009 and May 2009 is given below:

S.No	Details	Unit	April 2009	May 2009
(1)	Net Energy Purchase	MU	2653.96	3002.4
(2)	Variable Cost of Energy purchased	Rs Crore	671.46	676.87
(3)	Average Rate of energy purchased	Rs./kWh	2.53	2.58
(4)	Approved Rate for Energy purchase	Rs./kWh	1.8801	1.8801

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

In April 2009 MSEDCL has purchased 43 MU through UI at average rate of Rs. 1.31/kWh. and in May 2009 MSEDCL has purchased 105 MU through UI at average rate of Rs. 1.95/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 210 MU in April 2009 and 244 MU in May 2009 respectively, 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 April 2009 and May 2009 the Commission has approved change in Variable (Fuel) Cost of Generation and Power Purchase Cost (C), of Rs.235.93 Crores and Rs 363.35 Crores respectively, as submitted by MSEDCL.

d) **Interest on working capital** –

In the FAC submissions for the months April 2009 and May 2009 MSEDCL, has not made any claim for interest on working capital under Section 82.5 of MERC (Terms and Conditions of Tariff) Regulations, 2005. It is to be noted that any claim towards Interest on working capital, made as per Regulation 82.5 and substantiated with due documentation will be eligible for consideration under FAC submission.

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

All expenditure, inclusive of that incurred as fuel related expenditure has been trued up at the end of the financial year ending 31st March 2009. Since, the "**Carried Forward FAC(A) for recovery during future period**" indicated at the end of **March 2009** (statement 8.1, SrNo. 3.3) has already been included in the said truing up exercise, the said amount is now reset to zero.

The truing up as above is based on the performance parameters as specified in the relevant APR orders of the Commission. In case any change in the specified parameter is approved by the Commission at a later date, based on the CPRI studies pertaining to "Determination of Achievable performance parameters of the MSPGCL Thermal power stations", these values will be trued up accordingly at that time.

The summary of the adjustment factor for over recovery/under recovery for the month April 2009 and May 2009 as submitted by MSEDCL and as approved by the Commission is shown in the Tables below:

For the month of April 2009

Sr. No.	Parameter	Unit	MSEDCl	Commission
(A)	(B)	(C)	(D)	
1.0	**Adjustment for over-recovery/under-recovery ('B')**			
1.1	Incremental cost allowed to be recovered in Month **(January 2009)**	Rs Lakh	14434	14434
1.2	Incremental cost in Month j-4 actually recovered in month j-2 **(April 2009)**	Rs Lakh	12966	12966
1.3	Over-recovery/under-recovery (1.2-1.1)	Rs Lakh	1469	1469

Sr. No.	Parameter	Unit	MSEDCl	Commission
2.0	**Carried forward adjustment for over-recovery/under-recovery attributable to application of ceiling limit #**	Rs Lakh	9573	1243
3.0	**Adjustment factor for over-recovery/under-recovery (1.3+2.0)**	Rs Lakh	11041	2711

For the month of May 2009

Sr. No.	Parameter	Unit	MSEDCl	Commission
(A)	(B)	(C)	(D)	
1.0	**Adjustment for over-recovery/under-recovery ('B')**			
1.1	Incremental cost allowed to be recovered in Month **(February 2009)**	Rs Lakh	14893	14893
1.2	Incremental cost in Month j-4 actually recovered in month j-2 **(May 2009)**	Rs Lakh	13086	13086
1.3	Over-recovery/under-recovery (1.2-1.1)	Rs Lakh	1807	1807
2.0	**Carried forward adjustment for over-recovery/under-recovery attributable to application of ceiling limit #**	Rs Lakh	21167	9825
3.0	**Adjustment factor for over-recovery/under-recovery (1.3+2.0)**	Rs Lakh	22974	11631

NOTE : The difference in the Row 2.0 of the above Tables is on account of the value considered by the Commission based on the carried forward under-recovered FAC as approved by the Commission

f) **Distribution Loss:** .

Excess Distribution loss:

MSEDCL has incurred 23.72% and 23.66% cumulative Distribution loss upto the months April 2009 and May 2009 respectively. As this is more than the approved value of 22.2%, deduction of Rs. 3.23 Crores and Rs. 3.09 Crores has been made from the computed FAC amounts of the months April 2009 and May 2009 respectively.

g. **Energy Sales for within License area:** The energy sales within licence area as submitted by MSEDCL for April 2009 and for May 2009 is 5229MU and 5294 MU respectively, and the same is approved by the Commission.

4. **Summary :**

The summary of the FAC amount as approved by the Commission for April 2009 and May 2009 is shown in the Tables below:-

Month :April 2009

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	-	-
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	-	-
1.3	Apportionment of change in variable cost of generation and power purchase to License Area (C)	Rs Lakh	24042	23593
1.4	Working Capital Interest (I)	Rs Lakh	2267	-
1.5	T & D Loss Adjustment for the year		-	-
1.6	Adjustment for Over Recovery/Under Recovery (B)	Rs Lakh	11041	2711
1.7	**FAC (A) = C + I + B**	Rs Lakh	37350	26305
2	**Calculation of FACkWh**			
2.1	Sale within License Area	MU	5229	5229
2.2	Excess T&D Loss	MU	8	105
2.3	FAC Charge (FACkWh) without considering cap on monthly FAC Charge	Paise/KWh	71.32	49.32
2.4	Cap on monthly FAC Charge	Paise/KWh	30.9	30.90
2.5	FAC Charge (FAC/kWh) considering cap on monthly FAC Charge	Rs/KWh	0.31	0.31
3	**FAC (A)**			
3.1	FAC (A) considering cap on Monthly FAC Charge	Rs Lakh	16157	16157
3.2	FAC (A) disallowed corresponding to excess T&D loss	Rs Lakh	25	323
3.3	Carried forward FAC (A) for recovery during future period	Rs Lakh	21167	9825

Month :May 2009

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	-	-
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	-	-
1.3	Apportionment of change in variable cost of generation and power purchase to License Area (C)	Rs Lakh	36804	36335
1.4	Working Capital Interest (I)	Rs Lakh	0	-
1.5	T & D Loss Adjustment for the year		-	-
1.6	Adjustment for Over Recovery/Under Recovery (B)	Rs Lakh	22974	11631
1.7	**FAC (A) = C + I + B**	Rs Lakh	59778	47966
2	**Calculation of FACkWh**			
2.1	Sale within License Area	MU	5294	5294
2.2	Excess T&D Loss	MU	7	100
2.3	FAC Charge (FACkWh) without considering cap on monthly FAC Charge	Paise/KWh	112.77	88.93
2.4	Cap on monthly FAC Charge	Paise/KWh	30.9	30.90
2.5	FAC Charge (FAC/kWh) considering cap on monthly FAC Charge	Rs/KWh	0.31	0.31
3	**FAC (A)**			
3.1	FAC (A) considering cap on Monthly FAC Charge	Rs Lakh	16357	16357
3.2	FAC (A) disallowed corresponding to excess T&D loss	Rs Lakh	22	309
3.3	Carried forward FAC (A) for recovery during future period	Rs Lakh	43399	31300

APPENDIX

MSEDCL – Assumptions/Norms as per ARR order for FY 2008-09 for MSPGCL dated May 31, 2008 and for MSEDCL June 20, 2008 respectively.

MSEDCL - Vetting of FAC charges claimed by MSEDCL for April 2009 and May 2009

1. **CAP on monthly FAC charge.**
   CAP on monthly FAC charge for FY 2008-09 works out to 30.90 paise per unit (10% of energy charge).

2 **Summary of New Norms:**

Station	Net Gen (MUs)	Energy Charge as per Order (Rs/kWh	Energy Charge as considered for FAC $ (Rs/kWh)	Heat rate (kcal/kwh)	Auxiliary Consumption
Khaparkheda	5483	1.28	1.25	2561	8.50%
Paras	348	1.55	1.48	3105	9.70%
Bhusawal	3004	1.91	1.85	2654	9.75%
Nasik	5612	2.06	1.97	2653	9.00%
Parli	4273	1.96	1.86	2657	9.00%
Koradi	6574	1.23	1.19	2792	9.80%
Chandrapur	15120	1.19	1.17	2551	7.80%
Uran	3844	0.76	0.76	1980	2.40%
Paras II	1592	1.28	1.28	2500	9%
Parli II	1592	1.47	1.47	2500	9%

$ Energy charge for FAC is revised as energy charge as per MSPGCL with Tariff Order dated 31st May, 2008 include other charges like lubricants, chemicals, water, etc. which are excluded.

3. **T and D loss-** Approved Intra State Transmission Loss is 4.85% and Distribution Loss as per APR Order is 22.20%.

4. Transit Loss: 0.80% for all stations