Before the

MAHARASHTRA ELECTRICITY REGULATORY COMMISSION

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Case No. 26 of 2008

In the matter of

Maharashtra State Power Generation Company Limited's (MSPGCL) Petition for Determination of Tariff for Parli Unit No. 6

Shri V.P. Raja, Chairman

Shri S.B. Kulkarni, Member

ORDER

Dated: October 21, 2009

The Maharashtra State Power Generation Company Limited (MSPGCL) submitted a Petition under affidavit before the Maharashtra Electricity Regulatory Commission (hereinafter referred as 'MERC' or 'the Commission') on May 23, 2008, for determination of tariff for its recently commissioned Parli Unit No. 6.

2. MSPGCL under its Petition prayed as under:

"

a. *Condone the delay in submission and admit this Petition.*

b. *Approve the tariff of Parli Unit-6 for the remaining part of the year 2007-08 and also for the years 2008-09 and 2009-10.*

c. *Approve the Variable cost of Parli Unit-6 on actual operating parameters till the stabilization of unit i.e. till end of December 2008.*

d. *Allow MSPGCL to recover the differential tariff to be recovered from MSEDCL for units supplied to them from Nov 1, 2007 based on the final tariff determined by the Hon'ble Commission* *e. Provide the Petitioner with the workable excel model used to determine the final tariff for the unit*

f. Condone any shortcomings in the Petition and allow the Petitioner to submit additional information as may be required by the Commission at a later stage."

3. MSPGCL submitted that it owns eight thermal power Generating Stations including a Gas based Power Plant. Further, MSPGCL also operates and maintains Hydro Power Stations in the State of Maharashtra. MSPGCL submitted that it has recently commissioned Parli Unit No. 6 (250 MW) on November 1, 2007.

4. MSPGCL submitted that it is in the process of signing the Power Purchase Agreement (PPA) with Maharashtra State Electricity Distribution Company Limited (MSEDCL) for the power generated from Parli Unit No. 6.

5. MSPGCL submitted that it has filed this Petition under Section 62 of the Electricity Act, 2003 (EA 2003), which provides for determination of tariff by the Appropriate Commission for supply of electricity by a Generating Company. MSPGCL added that the Commission has the jurisdiction to regulate the tariff of Generating Companies owned or controlled by a State Government and other Generating Companies as envisaged under Section 86 (1) (a) and (b) of the EA, 2003. MSPGCL further submitted that it has filed the Petition for the determination of tariff for Parli Unit No. 6 for the first Control Period under the Multi Year Tariff (MYT) framework and in accordance with the provisions stipulated in the MERC (Terms and Conditions of Tariff) Regulations, 2005, based on the actual project cost till October 31, 2007 and projections from November 1, 2007 onwards for FY 2007-08, FY 2008-09 and FY 2009-10.

6. The Commission scheduled a Technical Validation Session (TVS) in the matter on June 17, 2008. Subsequently, MSPGCL sought postponement of the TVS. On the request of MSPGCL, the Commission rescheduled the TVS in the matter to June 19, 2008, in the presence of Consumer Representatives authorised on a standing basis under Section 94(3) of the EA 2003. Notices were issued accordingly.

7. During the TVS, MSPGCL made a presentation on the salient features of the Petition for approval of tariff for Parli Unit No. 6 and requested the Commission to approve the tariff for Parli Unit No. 6. MSPGCL also submitted during the presentation that as against stabilisation period of 275 days, i.e., till June 2008 as submitted in the Petition, it is still facing problems of stabilisation on account of constant tripping of the Unit

and accordingly requested the Commission to consider the revised expected period of stabilisation of 427 days till December 2008.

8. The Commission detailed the data gaps/discrepancies/additional information requirement based on the Petition submitted by MSPGCL. MSPGCL submitted the revised Petition along with the additional information on August 8, 2008. The summary of the submissions of MSPGCL in the Petition are as under:

9. **Components of tariff**

   MSPGCL submitted that in accordance with the MERC (Terms and Conditions of Tariff) Regulations, 2005, the tariff for Parli Unit No. 6 should consist of two parts, namely, Annual Fixed Charge and Energy Charge.

10. **Annual Fixed Charge**

    MSPGCL submitted that Annual Fixed Charge consists of recovery of the following elements:

    a) Return on Equity capital;
    b) Interest on loan capital;
    c) Depreciation including Advance Against Depreciation (AAD);
    d) O&M expenses;
    e) Interest on Working Capital; and
    f) Income Tax.

11. MSPGCL submitted that it has computed the fixed tariff under various heads of expenditure as follows:

    i. **Capital Cost of Project**

    MSPGCL submitted that the Board of erstwhile MSEB approved the proposal for development of the 250 MW, Parli Extension Project (Unit No. 6) under Stage-I on October 13, 1997 vide Board Resolution (BR) No. 881. MSPGCL submitted that the estimated cost was Rs. 1155 Crore in the year 1997 comprising of capital cost of Rs. 875 Crore and Interest during Construction (IDC) of Rs. 280 Crore.

    MSPGCL submitted that subsequently, Central Electricity Authority (CEA) also accorded the Techno Economic Clearance (TEC) to this project vide letter dated July 9, 1999. The Project cost approved in the TEC is Rs. 1053.90 Crore, comprising of hard cost of Rs. 946 Crore and IDC of Rs. 107.90 Crore, at the costs prevailing in 1st quarter of FY 1999-00. Subsequently, the Planning Commission vide letter dated February 9, 2001 also accorded the investment approval for implementation of the project, at the cost estimated by TEC.

The Board of MSPGCL (erstwhile MSEB), vide Resolution No. 953 dated August 7, 2003 accorded the final approval for implementation of the project at the cost approved by the Planning Commission and the project implementation commenced with placement of order for main plant equipment on January 14, 2004.

ii. **Estimation of Gross Fixed Assets (GFA)**

MSPGCL submitted that the capital cost of the station incurred upto the date of commissioning has been considered in accordance with Regulation 30.1 of the MERC (Terms and Conditions of Tariff) Regulations, 2005, as follows:

i. Based on the Audited Accounts of Parli Unit No.6, the capital cost as on October 31, 2007 (upto Commercial Date of Operation (COD)) was Rs. 1354.62 Crore, including IDC of Rs. 104.69 Crore.

ii. In the Audited Accounts of Parli Unit No. 6, IDC for the period from FY 2003-04 to FY 2006-07 was considered based on the principles of Electricity (Supply) (Annual Accounts) Rules (ESAAR) and for the period April 1, 2007 to October 31, 2007, actual interest on loans had been capitalised.

iii. MSPGCL submitted that the actual IDC for the period from FY 2003-04 to October 31, 2007 incurred on loans including the finance charges amounted to Rs. 212.42 Crore.

iv. MSPGCL submitted that there was a difference between the IDC considered in accordance with ESAAR vis-à-vis the actual interest paid on the loans actually taken for Parli Unit No. 6. Further, MSPGCL submitted the details of the IDC based on the above two approaches as indicated in the Table below:

Rs. Crore

Year	Interest Expenses capitalised as per the accounts for Parli Unit No. 6	Actual Interest Paid	Differential IDC to be capitalised
FY 2003-04	4.25	0.04	-4.21
FY 2004-05	13.29	7.74	-5.55
FY 2005-06	13.79	31.94	18.15
FY 2006-07	24.98	93.67	68.69

FY 2007-08	48.37	79.03	30.65
Total	**104.69**	**212.42**	**107.72**

v. MSPGCL submitted that it has identified project-wise loans for its various power stations and has been submitting data of such loan segregation since FY 2005-06 in the MYT Petition for FY 2007-08 to FY 2009-10 and APR Petitions for FY 2007-08 and FY 2008-09. MSPGCL submitted that in the above mentioned Petitions, the actual IDC based on the identified loans for Parli Unit No.6 had been capitalised and hence, it was not considered in the revenue expenses.

vi. MSPGCL submitted that the differential IDC of Rs. 107.72 Crore should be added to the capital cost of the project based on the rationale provided above. MSPGCL has accordingly considered the actual capital cost as the sum of capital cost in accordance with accounts and the differential IDC of Rs. 107.72 Crore on October 31, 2007.

vii. MSPGCL submitted that IDC is inclusive of the Guarantee Fee paid to Government of Maharashtra (GoM) in two half yearly instalments, computed @ 2% p.a. on the outstanding amount of loan and the total interest accrued on the loan on March 31 and September 30 of the financial year. The total Guarantee Fee paid to GoM for Parli Unit No.6 upto COD was Rs. 36.44 Crore.

viii. Based on the above facts, MSPGCL considered the total capital cost of the project as on October 31, 2007 as Rs. 1462.35 Crore.

iii. **Debt: Equity Ratio for funding the Project**

MSPGCL submitted that in accordance with Regulation 31.2.1 of the MERC (Terms and Conditions of Tariff) Regulations, 2005 any new generating station commissioned on or after the date of notification of the said Regulations, shall be assumed to be financed at a normative debt:equity ratio of 70:30. MSPGCL submitted the details of actual funding sources of Parli Unit No. 6 as on the date of COD as shown in the Table below:

Parameter	Amount (Rs. Crore)	% of Total Capital Cost (as on COD)
Debt	1139.86	77.95%
Equity	322.49	22.05%

Total (as on COD)	1462.35	100%

iv. **Reasons for Delay in Commissioning**

MSPGCL submitted that it had considered an optimistic target of commissioning the Unit in 32 months from date of award of contract to M/s Bharat Heavy Electricals Limited (BHEL); however, besides the other factors, delay in sequential supplies of material by M/s BHEL served as a major cause in the delay. This led to delay in commissioning of the Unit from its earlier envisaged target of September 2006. MSPGCL therefore, imposed Liquidated Damages of Rs. 49 Crore on M/s BHEL as on February 2008, for causing the delay in commissioning of the Unit. MSPGCL submitted that the final amount of Liquidated Damages would be finalized in due course of time.

v. **Additional capitalisation**

MSPGCL submitted the details of additional capitalisation prior to cut off date of March 31, 2009, in accordance with Regulation 30.2 of the MERC (Terms and Conditions of Tariff) Regulations, 2005. In addition to the above additional capitalisation, MSPGCL also considered capitalisation of initial spares i.e., 2.5% of the original cost in accordance with Regulation 30.1 of the MERC (Terms and Conditions of Tariff) Regulations, 2005.

vi. **Depreciation**

For the purpose of depreciation, MSPGCL considered the opening GFA as the original cost of the assets. MSPGCL classified its assets in accordance with the depreciation schedule of the MERC (Terms and Conditions of Tariff) Regulations, 2005 and considered the rates prescribed therein to compute the depreciation. For FY 2007-08, MSPGCL considered depreciation on pro-rata basis for the period from November 2007 to March 2008.

vii. **Advance Against Depreciation (AAD)**

MSPGCL submitted that it has clearly segregated the loans specifically taken for the commissioning of the new Units, in accordance with the MERC (Terms and Conditions of Tariff) Regulations, 2005. Considering that the amount of loan repayment for such loans is higher than the allowable depreciation, MSPGCL considered AAD in accordance with Regulation 32.3 of the MERC (Terms and Conditions of Tariff) Regulations, 2005.

viii. **Operations and Maintenance (O&M) Expenses**

MSPGCL submitted that the normative O&M expenses for FY 2005-06 for a new generating station as specified in Regulation 34.6.2 of the MERC (Terms and Conditions of Tariff) Regulations, 2005 is 10.82 Lakh/MW. These expenses were to be escalated at the rate of 4% per annum to arrive at O&M expenses for any relevant year of the tariff period. MSPGCL accordingly escalated the O&M expense of FY 2005-06 at the rate of 4% to derive the O&M expenses for FY 2006-07. However, to compute normative O&M expenses for FY 2007-08, FY 2008-09 and FY 2009-10, MSPGCL escalated the allowable O&M expenses for FY 2006-07 at the rate of 5.38%, as determined by the Commission in the MYT Order dated April 25, 2007 based on weighted average of Consumer Price Index (CPI) and Wholesale Price Index (WPI).

The summary of O&M expenses considered by MSPGCL is provided in the Table below:

Particulars	FY 2005-06	FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10
Rs. Lakh/MW	10.82	11.25	11.86	12.5	13.17
Escalation rate over previous year		4%	5.38%	5.38%	5.38%
O&M Expenses (Rs. Crore)	-	-	12.35*	31.24	32.92

* Considered on pro-rata basis for five months (November - March) in FY 2007-08

ix. **Interest on Long-Term Loans**

MSPGCL submitted that it has availed long-term loans from Power Finance Corporation (PFC) and GoM for funding the capital expenditure for Parli Unit No. 6. MSPGCL also submitted that it has capitalised all interest and finance charges incurred upto October 31, 2007.

x. **Interest on working capital**

MSPGCL submitted that it has computed working capital requirement in accordance with Regulation 34.5 of the MERC (Terms and Conditions of Tariff) Regulations, 2005 considering the following:

a. Cost of coal for two months for non-pit-head generating stations, corresponding to target availability;

b. Cost of oil for two months corresponding to target availability;

c. Cost of secondary fuel oil for two months corresponding to target availability;

d. Operation and Maintenance expenses for one month;

e. Maintenance spares @ 1 per cent of the historical cost; and

f. Receivables for sale of electricity equivalent to two months of the sum of annual fixed charges and energy charges calculated on target availability; minus

g. Payables for fuel (including oil and secondary fuel oil) to the extent of one month of the cost of fuel calculated on target availability.

MSPGCL considered the short-term Prime Lending Rate (PLR) of State Bank of India (SBI) as on the date of filing this Petition, i.e., 12.25%, for computing the interest on working capital.

xi. **Return on Equity**

MSPGCL submitted that it has computed Return on Equity (RoE) at the rate of 14% on the equity capital, in accordance with Regulation 34.1 of the MERC (Terms and Conditions of Tariff) Regulations, 2005. MSPGCL further submitted that Regulation 31.2 stipulates that any generating station commissioned on or after the date of notification of the said Regulations shall be assumed to be financed at a normative debt: equity ratio of 70:30. However, the Commission in its Order dated September 7, 2006, in the matter of Petition filed by MSPGCL for approval of Annual Revenue Requirement (ARR) for FY 2005-06 and FY 2006-07 clarified that RoE shall be on the actual equity limited to 30% of the capitalized investments and cannot be on a normative basis. MSPGCL submitted that the amount of equity investment has been lower than the normative equity of 30% and accordingly RoE has been computed on the actual equity investment of Rs. 322.49 Crore on the date of COD.

xii. **Income Tax**

MSPGCL submitted that it has computed the income tax considering the approved return on equity for each financial year at the rate of Minimum Alternative Tax (MAT), i.e., 11.33%, based on the fact that it has to pay income tax on its consolidated income from all its stations.

12. MSPGCL submitted that it has computed the energy charge based on following parameters and assumptions:

i. **Fuel Supply Arrangement**

MSPGCL submitted that it envisaged the use of domestic and washed coal as the primary fuel for power generation, which is to be sourced from Western Coalfields from the Kolgaon open cast mines and Adasa underground coal mines. MSPGCL proposed to use domestic and washed coal in the ratio of 40:60. The summary of the price and calorific value of primary and secondary fuels as submitted by MSPGCL is shown in the Table below:

Table: Calorific Value of fuels

Fuel	Unit	FY 2007-08	FY 2008-09	FY 2009-10
Domestic Coal	kcal/kg	3609	3400	3400
Washed Coal	kcal/kg	4115	4000	4000
FO	kcal/kl	10300	10300	10300
LDO	kcal/kl	10700	10700	10700

Table: Landed Price of fuels

Fuel	Unit	FY 2007-08	FY 2008-09	FY 2009-10
Domestic Coal	Rs./MT	1,876.46	1,978.14	2,077.04
Washed Coal	Rs./MT	2,112.73	2,215.87	2,324.16
FO	Rs./kL	24,000.00	27,000.00	28,350.00
LDO	Rs./kL	28,500.00	32,347.50	33,964.88

MSPGCL submitted that the landed price of fuels has increased recently because of steep increase in the landed price of Fuel Oil (FO) and Light Diesel Oil (LDO). Landed price of FO and LDO was Rs. 26909.40 per KL and Rs. 32350 per KL, respectively, for the month of May 2008. Further, MSPGCL considered an increase of 12.5% and 13.5% in prices of FO and LDO, respectively, for FY 2008-09 over the prices in FY 2007-08.

ii. Performance of Parli Unit No. 6

MSPGCL submitted that the stabilization period for a new Unit is 180 days from the date of commissioning for coal based stations in accordance with the Regulation 33.1.5 of the MERC (Terms and Conditions of Tariff) Regulations, 2005. MSPGCL further submitted that the said Regulations also stipulate relaxed norms for operations during such stabilization period as compared to the norms applicable after the stabilization of the Unit.

MSPGCL submitted that although Parli Unit No. 6 was commissioned on November 1, 2007, however, the Unit has not stabilized in the 180 days period, as stipulated in Regulation 33.1.5 of the MERC (Terms and Conditions of Tariff) Regulations, 2005. MSPGCL added that the turbine set of the Unit was tripping frequently and has not been stabilized yet. Accordingly, the boiler of the Unit has to be kept on oil support to avoid flame failure as the flame scanner intensity has been low and also, coal mill performance is not satisfactory.

MSPGCL submitted that because of the aforementioned problems of Parli Unit No. 6, it has taken necessary corrective measures like changing of coal mill balls, preventive maintenance of refusal duct and classifier vanes. Further, all necessary measures to improve the combustion in order to reduce coal and oil consumption is in progress with the help of M/s BHEL.

MSPGCL submitted that the following systems are yet to be commissioned, which also affects the performance of the Unit, in addition to above mentioned factors:

i) Smart soot blowing system

ii) On line condenser tube cleaning system

iii) Condenser polishing unit

iv) Coal mill spares not available

MSPGCL submitted that it is yet to receive the Performance Guarantee (PG) Test Report from M/s BHEL and has plans to undertake detailed investigations to rectify the causes of such frequent tripping.

MSPGCL submitted that based on the above mentioned factors, it has considered higher value for performance parameters during the stabilisation period and submitted that normative parameters are expected to be achieved by the end of December 2008.

iii. Availability Factor

MSPGCL submitted that in accordance with Regulation 33.1.1 of the MERC (Terms and Conditions of Tariff) Regulations, 2005, target availability for full recovery of Annual Fixed Charge is 80%. MSPGCL envisaged that the Parli Unit No. 6 would be able to achieve the normative levels in FY 2008-09 and FY 2009-10.

iv. Plant Load Factor (PLF)

MSPGCL submitted that it envisaged a PLF of 80% for FY 2008-09 and FY 2009-10. MSPGCL further submitted that it would claim incentive at the flat rate of 25 paise/kWh payable in accordance with Regulation 37.1 of the MERC (Terms and Conditions of Tariff) Regulations, 2005, for ex-bus scheduled energy corresponding to scheduled generation in excess of ex-bus energy corresponding to target PLF.

v. Auxiliary Consumption

MSPGCL submitted that in accordance with Regulation 33.1.2, auxiliary consumption for coal-based generating stations with cooling tower is 9%. However, during the stabilization period, Regulations provide for auxiliary consumption of 0.5% more than the norm of 9%. MSPGCL further submitted that during the initial months, i.e., November 2007 to March 2008, the auxiliary consumption of the Unit had been higher than the norm specified for stabilisation period; however, MSPGCL has considered the norm of stabilisation period during the extended stabilization period, i.e., from April 2008 to December 2008.

vi. Quantum of Generation

MSPGCL submitted the expected generation from the Unit, based on the envisaged availability and PLF, as shown in the Table below.

Parameter	FY 2007-08 (Nov to March)	FY 2008-09	FY 2009-10
Gross Generation (MU)	591.43	1752.00	1752.00
Auxiliary Consumption (%)	10.60%	9.54%	9.00%
Net Generation (MU)	528.74	1573.20	1594.32

vii. Station Heat Rate

MSPGCL submitted that Regulation 33.1.3 of the MERC (Terms and Conditions of Tariff) Regulations, 2005 stipulates the gross station heat rate for coal-based generating stations of 200/210/250 MW during stabilization period as 2600 kcal/kWh and for the subsequent period as 2500 kcal/kWh; however, MSPGCL has considered the relaxed norm of station heat rate of 2600 kcal/kWh during the extended stabilization period, i.e., till the end of December 2008. Further, for the period beyond stabilization period, MSPGCL considered the normative station heat rate of 2500 kcal/kWh.

viii. Transit Losses

MSPGCL submitted that in accordance with Regulation 33.1.6 of the MERC (Terms and Conditions of Tariff) Regulations, 2005, allowable transit losses for coal based generating stations, as a percentage of quantity of coal dispatched by the coal supply company during the month, shall be 0.8% for non-pit head generating stations. MSPGCL submitted that it has accordingly considered the same in its tariff computations.

ix. Secondary fuel oil consumption

MSPGCL submitted that in accordance with Regulation 33.1.4 of the MERC (Terms and Conditions of Tariff) Regulations, 2005, allowable secondary fuel oil consumption for coal-based generating stations is 4.5 ml/kWh during stabilization period and 2.0 ml/kWh for subsequent period. MSPGCL submitted that during the initial months during the stabilization period, the secondary fuel oil consumption was 12.83 ml/kWh and accordingly, MSPGCL considered secondary fuel oil consumption of 12.83 ml/kWh during FY 2007-08 and 4.5 ml/kWh till December 2008 in FY 2008-09. Further, for the period after stabilization of Unit, MSPGCL considered the normative specific fuel oil consumption of 2 ml/kWh in tariff computations.

MSPGCL submitted the overall summary of technical performance parameters considered for determination of tariff of Parli Unit No. 6 after stabilisation period, as shown in the Table below:

Parameter	Unit	Post Stabilisation Period
Availability Factor	%	80
PLF	%	80
Station Heat Rate	kcal/kWh	2500
Auxiliary Consumption	%	9
Transit Losses	%	0.8
Secondary oil consumption	ml/kWh	2

x. Impact of increase in stabilisation period

MSPGCL submitted that in accordance with the MERC (Terms and Conditions of Tariff) Regulations, 2005, the stabilisation period for a thermal Unit is 180 days.

However, it has envisaged a higher number of days for stabilisation of the Unit. The Table given below provides the impact of such increase in stabilisation period of the Unit with respect to the normative parameters.

Parameter	Unit	MERC Tariff Regulations	Projected for approval by the Commission
Stabilisation Period	Days	180	427 (up to Dec 08)
SHR	kcal/kWh	2600	2797
Sec. oil consumption	ml/kWh	4.5	12.83 in FY 2007-08 4.50 in FY 2008-09
Auxiliary consumption	%	9.50	10.60
Fuel cost (2007-08)	Rs. Crore	89.32	104.90
Fuel cost (2008-09)	Rs. Crore	266.15	294.00

MSPGCL requested the Commission to consider the technical problems of the Unit and approve the increase in the fuel cost during the stabilisation period.

13. The summary of AFC and the cost of generation for Parli Unit No. 6 as proposed by MSPGCL for FY 2007-08, FY 2008-09 and FY 2009-10 are shown in the Table below:

Particulars	Unit	FY 2007-08	FY 2008-09	FY 2009-10
Depreciation	Rs. Crore	21.55	51.98	53.19
Advance Against Depreciation	Rs. Crore	66.47	62.01	60.80
Operations & Maintenance Expenses	Rs. Crore	12.35	31.24	32.92
Interest on Long Term Loan	Rs. Crore	49.30	108.97	104.25
Interest on Working Capital	Rs. Crore	7.67	17.76	17.35
Return on Equity Capital	Rs. Crore	19.31	50.84	58.23
Income Tax	Rs. Crore	2.19	5.76	6.60
Total Fixed Charges	**Rs. Crore**	**178.84**	**328.56**	**333.34**
Total Variable Charges	**Rs. Crore**	**104.90**	**295.29**	**278.56**
Total charges	**Rs. Crore**	**283.74**	**623.85**	**611.90**
Net Generation	**MU**	**528.74**	**1573.20**	**1594.32**
Variable Cost	**Rs./kWh**	**1.98**	**1.88**	**1.75**
Total Cost of Generation (Ex-bus)		**5.37**	**3.97**	**3.84**

14. The Commission admitted the revised Petition (dated August 8, 2008) on September 1, 2008 and directed MSPGCL to publish the Public Notice for inviting suggestions and

objections on the Petition from the stakeholders. The Public Notice inviting suggestions and objections was published in Maharashtra Times (Marathi), Loksatta (Marathi), The Times of India (Mumbai Edition), and Indian Express (Mumbai Edition) on September 5, 2008.

Public Hearing

15. The Public Hearing in the matter was held on Thursday, October 14, 2008 at 11:00 hours in the Commission's Office at 13th Floor, Centre No. 1, World Trade Centre, Cuffe Parade, Mumbai-400 005.

16. During the Public Hearing, MSPGCL with the Commission's permission submitted that because of the change in the Debt:Equity ratio on account of the fact that some part of the loan from PFC and GoM has been repaid before COD of the Parli Unit No. 6. The Commission directed MSPGCL to provide the detailed computations and rationale for the same.

17. During the hearing, Shri Suresh Darde, Shri Chandulal Mohanlal Biyani, Shri. Shrikant Chandrakant Patharkar, Shri. Lakshman Ishwarrao Wakde, Shri Jivan Babasaheb Deshmukh, and Shri Dhanmanand Munde submitted their objections regarding the increased capital cost of the project on account of delay and requested the Commission to disallow the same.

18. MSPGCL submitted that one of the main reasons on account of which, Parli Unit No. 6 could not be commissioned on time, was on account of delay in supply of the required equipments and further delay in sequential order, attributable to M/s BHEL, for which MSPGCL has levied liquidated damages of Rs. 49 Crore on M/s BHEL as on February 2008 and the balance amount of liquidated damages is to be levied after finalisation in due course of time.

19. MSPGCL added that the inspection of Parli Unit No.6 for energy generation was first carried out on February 16, 2007. It was observed that the Unit requires some more inspections and achieved commissioning on November 1, 2007. However, Parli Unit No. 6 was unable to stabilise on account of the following reasons:

    a. From November 2007 to April 2008, the turbine set of the Unit was tripping frequently and has not been stabilized yet. Accordingly, the boiler of the unit has to be kept on oil support to avoid flame failure as the flame scanner intensity has been low and also coal mill performance is not up to the mark.

b. All necessary measures to improve the combustion for reducing coal and oil consumption is in progress with the help of BHEL.

20. As regards the treatment of the liquidated damages and impact of delay on the capital cost and performance parameters after COD, the Commission has deliberated on the issue in detail in the Commission's ruling.

21. Shri Suresh Darde, in his rejoinder submitted that the replies provided by MSPGCL indicate shifting of blame of delay on BHEL. He submitted that as on November 4, 2008, the Unit has still not stabilised and is not likely to get stabilised in the near future. He submitted that whenever the Unit gets commissioned, from that date till six months period, necessary tests should be carried out to check whether the Unit is generating as per its capacity. Once, such test establishes the capacity of Unit to generate electricity, only then should MSPGCL's petition for determination of tariff be considered.

22. As regards the contention raised regarding the increased stabilisation period, the Commission agrees with the concerns raised by the objector in this regard and has accordingly ruled on the issue in accordance with provisions of the MERC Tariff Regulations, 2005 in subsequent paragraphs.

23. Shri Chandulal Mohanlal Biyani, Shri. Shrikant Chandrakant Patharkar, Shri. Lakshman Ishwarrao Wakde, Shri Jivan Babasaheb Deshmukh and Shri Dhanmanand Munde, in their Rejoinder, submitted that they do not agree with the replies submitted by MSPGCL and raised the following objections:

    a. BHEL alone is not responsible for the delay in commissioning Unit No. 6 and the officials of MSPGCL working on Unit No.6 are also responsible and hence, an enquiry should be made on the concerned officials who were working on Unit No.6 by a high level Committee, and the excess cost of the project should be recovered from the salaries of such officers.

    b. GoM had provided a loan for this project at 11.50% p.a., however, it appears that GoM has not benefited from this project as load shedding has further increased on account of poor performance of the Unit. Moreover, since July 27, 2008 the Unit has been closed down for unspecified time.

24. As regards the contention raised by the objectors that officers working on the Project should also be made responsible for the delay and a high level Committee should be formed to probe the matter, the Commission is of the view that the issue of conducting an enquiry against employees for delay in the project is not within the jurisdiction of the Commission.

Additional Submission

25. MSPGCL submitted its additional submission on October 27, 2008. The summary of the revised Debt:Equity ratio as submitted in the Petition and thereafter is shown in the Table below:

Table: Means of Finance as submitted in Petition and Additional Submissions

	Petition	Rs Cr.	Additional Submissions	Rs Cr.
A. Debt	PFC	974.86	PFC	974.86
			Less Loan Repaid through internal accruals	47.11
			Net PFC Loan as on COD	927.75
	GoM	165.00	GoM	165.00
			Less Loan Repaid through internal accruals	28.88
			Net GoM Loan as on COD	136.13
	Total Debt as on COD (A)	**1139.86**	**Total Debt as on COD (A)**	**1063.87**
B. Equity	GoM	3.00	GoM	3.00
	Internal Accruals	319.47	Internal Accruals	395.46
	Total Equity as on COD (B)	**322.47**	**Total Equity as on COD(B)**	**398.46**
	Total Project Cost (A +B)	**1462.33**	**Total Project Cost (A +B)**	**1462.33**
	Debt (%)	77.95%	Debt (%)	72.75%
	Equity (%)	22.05%	Equity (%)	27.25%

26. The summary of the impact of the revised Debt:Equity ratio on the AFC as submitted by MSPGCL is shown in the Table below:

Table: Impact of Revised Debt:Equity Ratio on AFC (Rs. Crore)

Parameters	FY 2007-08		FY 2008-09		FY 2009-10	
	Petition	Additional Submissions	Petition	Additional Submissions	Petition	Additional Submissions
Depreciation	21.55	21.55	51.98	51.98	53.19	53.19
Advance Against Depreciation	66.47	66.47	62.01	62.01	60.80	60.80
O & M Expenses	12.41	12.41	31.37	31.37	33.06	33.06
Interest on Long Term Loan	49.30	49.30	108.97	108.97	104.25	104.25

Parameters	FY 2007-08		FY 2008-09		FY 2009-10	
	Petition	Additional Submissions	Petition	Additional Submissions	Petition	Additional Submissions
Interest on Working Capital	7.67	7.78	17.76	18.00	17.35	17.60
Return on Equity Capital	19.31	23.74	50.84	61.47	58.23	68.87
Income tax paid/payable	2.19	2.69	5.76	6.97	6.60	7.80
Total Annual Fixed Charges	**178.90**	**183.88**	**328.69**	**340.64**	**333.47**	**345.42**

27. MSPGCL thus, modified the Debt:Equity ratio and submitted that the revision in debt amount from Rs. 1139.86 Crore to Rs. 1063.87 Crore has been arrived at by considering the repayment of Rs. 47.11 Crore of PFC loans and Rs. 28.88 Crore of GoM loans before COD of the project. Further, the RoE on internal accrual used for funding debt repayment prior to COD may result in double accounting as the interest on some loans has been considered as part of the IDC. In this context, the Commission asked MSPGCL to revisit this aspect to optimise the overall tariff.

28. MSPGCL submitted that the total IDC on account of such loan (Rs 47.11 Crore + Rs 16.50 Crore) is approximately Rs. 11 Crore, which is less than even 1% of the project cost. Further, infusion of internal accruals had also led to reduction in IDC for these loans for the period FY 2006-07 and April to October of FY 2007-08. MSPGCL further mentioned that the equity investment is within the norms specified by the Commission. On the issue of double accounting of Rs. 11 Crore of IDC, MSPGCL requested the Commission to apply prudence check for approval of capital cost.

29. As regards MSPGCL's submission to consider the difference of Rs. 107.72 Crore on account of difference between the IDC considered in accordance with ESAAR vis-à-vis the actual interest paid on the loans actually taken for Parli Unit No. 6., the Commission analysed the supporting documents submitted by MSPGCL for the actual interest paid during the period from FY 2003-04 to FY 2007-08 for Parli Unit No. 6 and observed that interest details as provided through the supporting documents has been paid for both Parli Unit No. 6 and Paras Unit No. 3 together. The Commission asked MSPGCL to submit the reconciliation statement for interest paid for the period from FY 2003-04 to FY 2007-08 (till COD) for Parli Unit No. 6 and Paras Unit No.3 separately, which was submitted by MSPGCL.

30. The Commission enquired of MSPGCL regarding the basis and assumptions for considering the Commitment Charge as a part of the project cost. MSPGCL responded that, in accordance with PFC's policy, the loan attracts commitment charges @ 0.25%

per annum on the trailing drawal, i.e., the difference between cumulative actual drawal vis-à-vis cumulative quarterly committed drawal submitted to PFC. The total Commitment Charges paid to PFC in respect of Parli Unit No. 6 up to the date of COD is Rs 0.53 Crore.

31. The Commission enquired of MSPGCL regarding the details of the package-wise actual and estimated cost and the details of increase in actual cost with respect to the estimated cost, under the following components:

    - Head Office (HO) Expenses + General Establishment Charges (GEC) + Energy Charges;
    - Site PVC;
    - Site Service Tax;
    - Supply PVC and Transportation etc.

    The Commission further enquired of MSPGCL to clarify whether the estimated cost of the project also had the same components. In case the estimated cost had these components, MSPGCL was asked to submit the estimated cost of these components. Further, the Commission asked MSPGCL to elaborate on the terms 'HO Expenses' and 'GEC' as considered in segregating the actual cost of Parli Unit No. 6.

32. MSPGCL, in its reply, submitted that the estimated cost of the project includes the following:

    - HO expenses + GEC;
    - Local E&M;
    - Transportation of equipment required.

    MSPGCL further submitted that in the Detailed Project Report (DPR), which was submitted to CEA in October 1997, the following points were mentioned:

    - HO expenses + GEC are covered under Establishment expenses;
    - The Local E&M expenses are covered under Contingencies;
    - Transportation Expenses are covered under Individual packages.

33. The Commission asked MSPGCL to submit a detailed note on the impact of the time and cost overrun on the project cost and submit the reasons for including the same as a part of the project cost and also submit the segregation of the variation in the project cost under each head into time and cost overrun and the financial impact of each reason that MSPGCL has mentioned under the corresponding head in the Petition.

34. MSPGCL, in its reply, submitted that the project cost of Parli Unit No. 6 was estimated to be Rs. 1053.90 Crore and was envisaged to be commissioned by September 2006; however, the Unit was commissioned on November 1, 2007. Further, the increase in actual cost over the estimated cost is segregated among components as under:

    - HO+ GEC + Energy Charges + Local E&M;
    - Site PVC;
    - Site Service Tax;
    - Supply PVC and Transportation, etc.

    MSPGCL further submitted that all the above components affect the project cost overrun. Further, there is no impact on the project cost due to time overrun, as all the contracts for packages were bound by a clause, which specify that if the contract period is required to be extended beyond the cut-off dates for reasons not attributable to the owner, payment on account of price variation shall be made on selection of the indices in Price Variation (PV) formula by restricting their value to the contractual cut-off date or the actual indices prevailing at that time, whichever is lower. Hence, there is no cost variation on account of time overrun.

35. The Commission asked MSPGCL to submit the basis for computing liquidated damages for delay and whether the amount of Liquidated Damages has been finalized.

36. MSPGCL submitted the basis for computation of levying Liquidated Damages as under:

    Terms and condition of the contract:

    For Supply of equipments: Sr. No. 6.5.1 and 6.5.2 of Section 3, Special conditions of Contract

    "6.5.1 If the contractor fails to achieve the trial operation of the unit by thirty two months from the zero date due to reasons attributable to him then the owner shall levy Liquidated damages on the contractor @ 1/2% of the contract price (excluding the price of mandatory Spares and taxes and duties) alongwith applicable price variation per week of delay or part thereof subject to maximum 10% (ten percent) of the contract price (excluding the price of mandatory Spares and taxes and duties) alongwith applicable price variation"

    "6.5.2 If the contractor fails to complete the supply of all mandatory spares within contractual cut-off period i.e. by 32 months from the zero date, then the

owner shall levy liquidated damages on the contractor @ 1/2% of the contract price of mandatory Spares (excluding taxes and duties) alongwith applicable price variation per week of delay or part thereof subject to maximum 10% (ten percent) of the contract price of mandatory spares (excluding taxes and duties) along with applicable Price variation".

For Erection and commissioning of unit: Sr. No. 7.6 and 7.7 of Section 3, Special conditions of Contract

7.6 "If the contractor fails to achieve the trial operation of the unit by 32 months from the zero date due to reasons attributable to him then the owner shall levy Liquidated damages on the contractor @ 1/2% of the contract price (excluding taxes and duties) alongwith applicable price variation per week of delay or part thereof subject to the maximum 10% of the contract price (excluding taxes and duties) alongwith applicable price variation"

7.7 "For the purpose of deciding the amount of L.D. on the erection contract, contract price alongwith applicable price variation (excluding taxes and duties) as per contract price adjustment shall be considered"

Considering the Zero date of the Project, i.e., 14.01.04, in terms of Contract Agreement, the date for completion of supplies and also the Trial Operation was 13.09.06. Since M/s. BHEL could not comply with the said date, M/s. BHEL has been informed vide letter dt 19.05.07 that LD of 10% is being imposed on supply and also erection portion of the contract. The delay period for levying maximum LD of 10% of the contract value is 5 months after the due date which means if M/s. BHEL do not complete the activities by 13.02.07, then 10% LD is applicable. However, even after informing M/s. BHEL in May 07, BHEL did not comply with the requirements. As such in terms of contract, L.D. amount has been deducted from the bills received thereafter.

An amount of Rs. 46,62,91,245/- towards supply component, Rs. 6,53,58,186/- towards erection component and Rs. 46,58,186/- towards Price Variation Clause component, i.e., sum total of Rs.53,63,07,617 has been deducted so far.

It may, however, be mentioned that the final amount of LD leviable shall be finalised while closing contract after taking into consideration the deletion/ addition in the scope of the contract.

37. The Commission further enquired of MSPGCL to submit the basis and supporting computations for Liquidated Damages towards the delay and provide the same in the following formats. MSPGCL submitted the details as under:

Sr. No.	Particulars	Amount in Rs. Crore
1	**Supply of Main Equipment**	
A	Contract price	432.39
B	Taxes and duties	65.91
C	Mandatory spares	40.00
D	Contract price excluding taxes and duties and mandatory spares	432.39
E	Applicable price variation on contract price	85.20
F	Liquidated Damages amount levied	51.76
G	Liquidated Damages amount recovered	49.10
2	**Supply of Mandatory Spares**	0.00
A	Contract price of mandatory spares	40.00
B	Applicable price variation on contract price of mandatory spares	6.64
C	Liquidated Damages amount levied on (contract price including price variation) of mandatory spares	4.08
D	Liquidated Damages amount recovered on Contract price of mandatory spares	Included in 1G (Since it is a Single Contract)
3	**Erection, Testing and Commissioning**	
A	Contract price	60.70
B	Taxes and duties	At Actual
C	Contract price (including price variation) and excluding taxes and duties	72.84
D	Liquidated Damages amount levied on contract price excluding taxes and duties	7.28
E	Liquidated Damages amount recovered on contract price excluding taxes and duties	6.54

MSPGCL further submitted that the Liquidated Damages has been computed on the total contract price including price variation excluding the taxes and duties.

38. The Commission asked MSPGCL to clarify whether the actual cost for Parli Unit includes come common facilities for the other Unit yet to be commissioned at Parli and directed MSPGCL to segregate costs for such shared facilities amongst various Units. MSPGCL, in responses, submitted the details of sharing of common costs as under:

Table: Details of Common Facilities between Parli Unit 6 and Unit 7 (Rs. Crore)

Sr.	Package	Cost submitted	Cost included	Apportioned Cost

				Unit-6	Unit-7
1.	Land	1.98	1.1	0.99	0.99
2.	Approach Road	2.73	4.1	1.37	1.37
3.	Land development/wall	30.99	4.1	15.50	15.50
4.	Fire detection system	6.58	2.3.13	5.49	1.10
5.	CHP	69.37	2.3.8	34.69	34.69
6.	RWP Reservoir	9.02	4.1	4.51	4.51
7.	Lab/Workshops	3.53	4.1	1.77	1.77
8.	Chimney	11.82	4.1	8.29	3.54
9.	FOH	8.64	2.3.6	4.32	4.32
10.	Railway siding	26.69	4.1	13.35	13.35
11.	Raising of Khadka Barrage	2.81	*	1.87	0.94
12.	Fire station building	0.36	4.1	0.18	0.18
13.	**Total**	**174.52**		**92.30**	**82.23**

**Note: The expense pertaining to this head is expected to be incurred after capitalisation*

39. The Commission enquired of MSPGCL about the details of increase in cost on account of change in scope of work, if any, and also to explain the reasons for such change in the scope of the work. MSPGCL submitted the details of the increase in cost of account of change of scope of work and the reasons for such change in the scope as under:

Particulars	Agency	Reason for change in Scope
L.D. Piping	M/s Sheth & Sura Engineers Pvt. Ltd, Pune	Quantity variation, pipe rack works given which was not in order
L.D. Piping	M/s Aarti Infrastructures Pvt. Ltd, Nagpur	Additional work given which was in BHEL's scope.
Sump Pumps	M/s Balaji Associates, Nagpur	Shaft length of Transformer Oil pumps increased.

40. The Commission observed that MSPGCL has considered interest for civil works during FY 2008-09 as a part of the additional capitalisation after COD and asked MSPGCL to submit the reasons for considering this interest as IDC after the COD of the Unit. MSPGCL submitted that the total interest on long-term loans as on October 31, 2007 was Rs. 212.42 Crore and the same was capitalised in the project cost as on COD. MSPGCL further submitted that, since, the actual IDC has already been capitalized; it requested the Commission to ignore such additional capitalisation of IDC in FY 2008-09 inadvertently submitted by MPSGCL.

41. The Commission enquired of MSPGCL to explain the reasons for considering the initial spares as 2.5% of the original cost of the Parli Unit as the equipment supply contract includes the mandatory spares and asked to submit the details of the mandatory spares. In response, MSPGCL submitted that the mandatory spares were a part of the contract document and have been capitalized. Based on the terms of the contract, MSPGCL was to further ask BHEL to provide initial spares as considered necessary for the operations of the Unit. Procurement of such initial spares have been considered by MSPGCL in accordance with the provisions of the MERC (Terms and Conditions of Tariff) Regulations, 2005 and accordingly, MSPGCL has capitalized such spares at 2.5% of the capital cost as on the cut off date.

Table: Details of Mandatory spares

Sr. No.	Particular	Order Value (Rs. Crore)	Cost as on COD (Rs. Crore)
A	Mandatory Spares included in Equipment Supply Contract		
1	Main Plant Equipment Order placed on M/s. BHEL	40.00	40.00
2	Post water treatment plant. Order placed on M/s. Driplex.	0.15	0.15
3	Coal Handling Plant. Order placed on M/s. Elecon	2.99	2.99
4	Ash Handling plant. Order placed on M/s. McNally Bharat	1.94	1.93
5	Misc. Pumps. Order placed on M/s. Amogh Constn.	0.08	0.08
6	Compressed Air System. Order placed on M/s. Kirloskar	0.28	0.28
7	Fire Protection System. Order placed on M/s. Unitech Machines.	0.45	0.45
8.	Oil unloading and storage system. Order placed on M/s. Raunaq	0.12	0.12
9	EOT crane. Order placed on M/s. Anupam	0.05	0.05
10	Misc. cranes. Order placed on M/s. Shree Engineers	0.01	0.01
11	L.T. switchgears. Order placed on M/s. Control and schematics.	0.39	0.39
12	NGRs. Order placed on M/s. Urja Equipments	0.00	0.00
13	24V & 220V batteries & their charges including their distribution system. Order placed on M/s. Exide Industries	0.12	0.12
14	Air conditioning system. Order placed on M/s. Blue Star	0.04	0.04
15	Ventilation system. Order place on M/s. Hyderabad Pollution Control	0.09	0.09

Sr. No.	Particular	Order Value (Rs. Crore)	Cost as on COD (Rs. Crore)
16	Sump pumps. Order placed on M/s. Balaji.	0.06	0.06
17	Lifts. Order placed on M/s. City Lifts	0.07	0.07
18	Ozonisation. Order placed on M/s. Ozone Research.	3.07	3.07
19.	Dry Type LT Transformers. Order placed on M/s.Vijay Electricals/AMES Impex	0.05	0.05
20	Lighting. Order placed on M/s. Bajaj Electricals.	0.02	0.02

42. The Commission directed MSPGCL to submit the reasons for procuring the spares higher than the limit specified in the MERC (Terms and Conditions of Tariff) Regulations, 2005. MSPGCL submitted that the implementation of Parli Unit No. 6 commenced in January 14, 2004, and it has considered the mandatory spares while ordering the main plant equipment.

43. MSPGCL further submitted that, there had been a few expenses, which would be capitalized in FY 2008-09 and in FY 2009-10 and had inadvertently not been mentioned in the Petition. The details of the same are shown in the Table below:

Particulars	Amount capitalised/proposed to be capitalised
Upto Cut Off Date	
FY 2007-08	
Ventilation system H'bad Pollution	5.28
Fire Stop	1.77
Sub-total	**7.05**
FY 2008-09	
Main Plant and Building	0.95
Releasing stock & locomotive	0.88
CW System	10.84
Cooling Tower	0.55
Chlorisation plant	
Township and Colony	1.26
Temp Construction & enabling work	1.41
Road and drainage	1.81
Establishment	15.30
Contingency and OSL of various work	11.97
Interest during construction for civil works	-
Preliminary investigation of site development and consultancy	0.17
Site supervision	9.28
Raising of height of Khadaka barrage by 1 mtr	1.41

Particulars	Amount capitalised/proposed to be capitalised
R.W. Pump House C.W. Channel and C.W. Pump House	6.00
Augmentation to water supply errengement (1) intake structure	5.69
Sub-Total	**67.52**
FY 2009-10	
Capitalisation of initial spares @2.5% of capital cost	38.42
Sub-Total	**38.42**
Total	**112.99**

44. The Commission enquired of MSPGCL regarding the actual dates of the various activities related to Parli Unit No. 6. MSPGCL submitted the required details in the Table given below:

Sr. No.	Activity	Purpose	Start Date	End Date
1	Synchronising and Initial Operation	To achieve integrated operation of all systems after completion of commissioning checks and fine tuning on individual systems and control loops	Synchronisation- 16.02.2007 Coal Firing- 2.04.07 Full Load- 19.05.07	
2	Trial Operation	Trial operation **on bars** for 28 days, out of which 72 Hrs shall be at Full load	4.12.08	4.01.09 (72 Hrs Full Load Operation Balance)
3	Commercial Operation of Unit		1.11.2007	
4	Stabilisation of Unit	Fine tuning of all control loops, eliminating of all teething problem and stabilise unit for continuous operation at Maximum Continuous Rating (MCR)	1.11.2007	
5	**Performance Guarantee tests**			
5.1	Turbo generator	To prove guaranteed parameters of Turbo-generator set	9.3.08	13.3.08
5.2	Boiler	To prove guaranteed parameters of Boiler	11.4.08	19.4.08
6	Issue of Acceptance certificate from MSPGCL to BHEL	To accept the Performance of the unit and take over for commercial operations	Acceptance Certificate given	

45. MSPGCL submitted the details of the various activities related to the Boiler and Turbine Generation PG Test in following Table, in response to the Commission's query in this regard:

Sr. No.	Operation /Test	Date / Period	Guaranteed / Specified Values or Results as per Contract	Observations/ Result	Acceptability/ Certification by MSPGCL
1	**TG PG Tests**				
1. a	Turbine cycle Heat Rate at 100% and 80% MCR	100% - 09-03-08 - 10-03-08 for one hour 80% - 12-02-08 for one hour	1936.3 1984.5	1933.1 1980.3	Within the limit.
1. b	Capability Test	11-03-08 for one hour	250 MW	250.817	Within the limit
2	**Boiler PG Tests**				
2. a	Boiler Efficiency Test	11-04-08 for four hours	85.45 %	86.803%	Within the limit
2. b	SH, RH Temperature Control from 100% to 80% B MCR	20-04-08 for four hours	± 5 ^oC	± 5^oC	Within the limit
2. c	Steam generating capacity (BMCR)	19-04-08 for one hour	813.94 T/Hr.	810 T/Hr.	Within the limit
2. d	Auxiliary consumption	11-04-08 for four hours	8720 KW	7869.59 KW (Excluding ESP consumption)	Within the limit

MSPGCL further submitted that the Turbine PG test is still pending for approval for clarification/detailed computations from M/s. BHEL.

46. As regards the capitalisation of revenue earned before COD, the Commission observed that though MSPGCL claimed that it has capitalised the revenue earned before COD, however, Statement-1 (i.e., Revenue Account for the period ending October 2007) of the Audited Accounts for Parli Unit No. 6 does not specify any amount towards the revenue earned. The Commission asked MSPGCL to provide documentary evidence (i.e., JV, ledger copy, etc.) to prove that the revenue has been reduced from the capital cost. In reply, MSPGCL submitted that the revenue received from sale of infirm power during trial run to the extent of Rs. 59.86 Crore has been reduced from the Capital cost of Parli Unit No 6 and provided the JVs and Ledger details in this regard, which are found to be in order.

47. MSPGCL also provided the details of the month-wise actual fuel cost and revenue earned for infirm power generated before COD as under:

Sr. no.	Month	Energy Sold to MSEDCL (MU)	Total Bill Amount (Rs. Cr)	Effective Billing Rate (Rs/Kwh)	Actual Fuel Cost incurred (Rs. Cr.)	Variation (Rs. Cr.)
		a	b	c	d	e = b-d
1	February-07	0.00	0.00	1.27	0.00	0.00
2	March-07	-1.08	-0.14	1.27	1.64	(1.78)
3	April-07	4.82	0.61	1.27	11.00	(10.39)
4	May-07	43.93	6.06	1.38	0.00	6.06
5	June-07	74.09	10.22	1.38	22.92	(12.70)
6	July-07	65.36	9.02	1.38	0.08	8.94
7	August-07	60.37	8.33	1.38	0.00	8.33
8	September-07	77.44	10.69	1.38	29.27	(18.58)
9	October-07	109.16	15.06	1.38	61.00	(45.94)
	Total		**59.86**		**125.92**	**(66.05)**

48. As regards the status of the signing of the PPA for Parli Unit No. 6, it should be noted that MSPGCL had filed the Petition for approval of tariff for Parli Unit No. 6 in May 2008 and the Commission's Order on the PPA between MSEDCL and MSPGCL was issued on July 25, 2008. The above-said PPA also includes Parli Unit No. 6.

49. The Commission asked MSPGCL to submit the reasons for delay in placing the orders for this project, as the Orders for the Project were placed on January 14, 2004 while the CEA accorded its TEC on July 9, 1999. MSPGCL submitted that though it received approval from various authorities, however, in view of the impasse in the matter of Dabhol Power Corporation, the implementation of the project had been put into abeyance. Subsequently, giving due consideration to the power shortage in the State, GoM was requested for its decision to take up implementation of the Project. In response, Energy Department, GoM, vide letter dated June 27, 2003, conveyed the decision of the Government taken in the Cabinet Meeting held on June 11, 2003, wherein the Cabinet accorded the approval for taking up the implementation of the Project and Loan assistance. Subsequently, the MSEB Board vide Resolution No. 953 dated August 7, 2003 accorded the approval for the implementation of the Project. Accordingly, Notice Inviting Tenders (NIT) for main plant equipment was issued vide letter dated August 11, 2003 and the Project implementation commenced with placement of order for main plant equipment on January 14, 2004.

50. The Commission asked MSPGCL to submit the details of the Bid price submitted by the Bidders and price negotiated with the successful bidders. MSPGCL submitted that the bids were invited through the international competitive bidding route for the main plant equipment; however, only single bid was received from M/s BHEL. MSPGCL went ahead for negotiation of the price and submitted the details of such negotiation as under:

S No.	Particulars	Cost (Rs crore)
1.	Basic offer	644.41
2.	Reduction in mandatory spares, etc.	37.70
3.	Actual reduction in the total price due to negotiation	7.65
4.	Final order placed on M/s BHEL	599.00

51. MSPGCL submitted that all other contracts were placed based on International/Domestic Competitive Bidding.

Commission's Analysis and Ruling

52. Having heard MSPGCL and various objectors, and after considering the materials placed on record, the Commission is of the view as under.

I. Capital Cost (Hard Cost excluding Interest during Construction and Financing Charges)

53. As regards the capital cost for computation for tariff, Regulation 30.1 of the MERC Tariff Regulations stipulates as under:

"Subject to prudence check by the Commission, the actual expenditure incurred on completion of the project shall form the basis for determination of the original cost of project. The original cost of project shall be determined based on the approved capital expenditure actually incurred up to the date of commissioning of the generating station and shall include capitalised initial spares subject to following ceiling norms as a percentage of the original cost as on the cut-off date:…"

i) Base Hard Costs

54. The Commission observed that the CEA, in its Techno Economic Clearance (TEC) issued on July 9, 1999 for Parli Unit No. 6 stipulated as under regarding the completed cost for the Project:

"The Completed cost of the scheme shall not exceed the above cost except on account of the following:

a) Interest During Construction and the Financing Charges as per actual but not exceeding the amount as indicated in Annex-I

b) *Change in rates of Indian taxes and Duties such as excise duty, Sales tax, Custom duty, Works tax and additional taxes and duties levied subsequent to the issue of TEC*

c) *Change in Indian Law resulting in change in cost"*

55. The dates on which various approvals from different authorities were obtained before the placement of order for the main plant equipment are as follows:

S No.	Particulars	Approval Date	Project Cost (Rs crore)
1.	Board of erstwhile MSEB	October 13, 1997	875.00
2.	TEC from CEA	July 9, 1999	945.80
3.	Approval from Planning Commission	February 9, 2001	945.80
4	GoM decision for approval of implementation of the Project	June 27, 2003	
5	Approval of Board of MSEB for implementation of the Project	August 7, 2003	
6	NIT for main plant equipment	August 11, 2003	
7	Placement of Order for main equipment	January 14, 2004	1055.66

Note: above cost excludes IDC and Financing cost

56. The Commission observes that as against Rs. 945.80 Crore approved by CEA in the TEC, the actual cost as on COD has been Rs. 1249.92 crore, excluding IDC and Financing Charges (FC).

57. The Commission has analysed the variation between the capital cost as approved by CEA, Order placement cost and actual cost under major sub-head as under:

Sl. No.	Particulars	CEA Approved Cost			Order Placement Cost			Actual Cost as on COD#			Reasons for Variation				
		Base Cost	Taxes & Duties	Total Cost	Base Cost	Taxes & Duties	Total Cost	Base Cost	Taxes & Duties	Total Cost	Price variation	increase on account of change in tax	loading of HO, GEC, E&M, Energy charges	increase in scope of work	Total Variation
1	**Cost of Land & Site Development**	1.26		1.26	1.98	0.00	1.98	1.98	0.00	1.98	0.00	0.00	0.00	0.00	0.00
2	**Plant & Equipment**	601.00		601.00	533.09	65.91	599.00	695.50	73.87	769.37	73.31	0.00	97.06	0.00	170.37
3	BOP Mechanical										0.00	0.00	0.00	0.00	0.00
3.1	CW system	1.17		1.17	12.27	1.36	13.63	14.68	1.44	16.12	0.51	0.00	1.98	0.00	2.49
3.2	DM water Plant	13.06		13.06	13.80	0.10	13.90	17.47	0.18	17.65	1.52	0.00	2.23	0.00	3.75
3.3	Ash Handling System	30.90		30.90	36.62	1.47	38.09	45.39	1.82	47.21	3.16	0.00	5.96	0.00	9.12
3.4	Coal Handling Plant	60.00		60.00	51.87	5.83	57.70	61.58	7.79	69.37	2.92	0.00	8.75	0.00	11.67
3.5	Rolling Stock and Locomotives	14.66		14.66	5.93	0.00	5.93	5.93	0.00	5.93	0.00	0.00	0.00	0.00	0.00
3.6	Other BOP Mech	24.87		24.87	32.59	5.20	37.79	36.82	6.47	43.29	2.24	0.00	5.47	0.00	7.71
	Total BOP Mechanical	144.66		144.66	153.08	13.96	167.04	181.87	17.70	199.57	10.35	0.00	24.39	0.00	34.74
4	BOP Electrical										0.00	0.00	0.00	0.00	0.00
4.1	Switch Yard Package	10.00		10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4.2	Transformers Package	3.00		3.00	3.36	0.04	3.40	4.49	0.05	4.54	0.57	0.00	0.57	0.00	1.14
4.3	Switch gear Package	6.47		6.47	7.35	1.86	9.21	8.21	2.78	10.99	0.33	0.06	1.39	0.00	1.78
4.4	Cables, Cable facilities & grounding	18.42		18.42	15.66	3.20	18.86	19.09	4.90	23.99	2.00	0.19	2.94	0.00	5.13
4.5	Electrical Other	3.95		3.95	7.14	0.29	7.43	8.48	0.35	8.83	0.21	0.48	1.11	0.00	1.80
	Total BOP Electrical	41.84		41.84	33.51	5.39	38.90	40.27	8.08	48.35	3.11	0.73	6.01	0.00	9.85
5	**Total C & I Package**	0.00		0.00	3.19	0.12	3.31	3.58	0.18	3.76	0.00	0.00	0.45	0.00	0.45
6	Civil Works										0.00	0.00	0.00	0.00	0.00
6.1	Main plant/Adm. Building	84.14		84.14	171.35	8.06	179.41	174.68	8.39	183.07	3.66	0.00	0.00	0.00	3.66
6.2	Cooling Towers	12.00		12.00	21.78	1.08	22.86	22.45	1.12	23.57	0.71	0.00	0.00	0.00	0.71
6.3	Chlorination Plant / Ozonisation Plant Building	4.56		4.56	4.89	0.24	5.13	4.89	0.25	5.14	0.01	0.00	0.00	0.00	0.01

Sl. No.	Particulars	CEA Approved Cost			Order Placement Cost			Actual Cost as on COD#			Reasons for Variation				
		Base Cost	Taxes & Duties	Total Cost	Base Cost	Taxes & Duties	Total Cost	Base Cost	Taxes & Duties	Total Cost	Price variation	increase on account of change in tax	loading of HO, GEC, E&M, Energy charges	increase in scope of work	Total Variation
6.4	Pipe Line Civil Misc.	27.20		27.20	9.40	0.47	9.87	9.40	0.47	9.87	**0.00**	**0.00**	**0.00**	**0.00**	0.00
	Total Civil works	**127.90**		**127.90**	**207.42**	**9.85**	**217.27**	**186.25**	**10.23**	**221.65**	**4.38**	**0.00**	**25.17**	**0.00**	29.55
7	**Total Overheads***	**29.34**		**29.34**	**30.69**	**0.07**	**30.76**	**5.20**	**0.11**	**5.31**	**0.00**	**0.00**	**1.47**	**0.72**	2.19
8	**Capital cost Excluding IDC & FC**	**946.00**		**946.00**	**962.96**	**95.30**	**1058.26**	**1114.65**	**110.17**	**1249.99**	**91.15**	**0.73**	**154.55**	**0.72**	**247.15**
9	**Interest During Construction (IDC)**	**107.90**		**107.90**	**0.00**	**0.00**	**0.00**	**104.69**	**0.00**	**104.69**	**0.00**	**0.00**	**0.00**	**0.00**	0.00
10	**Capital cost including IDC & FC**	**1053.90**		**1053.90**	**962.96**	**95.30**	**1058.26**	**1219.34**	**110.17**	**1354.68**	**91.15**	**0.73**	**154.55**	**0.72**	**247.15**

*Note: Overheads approved in CEA amounts to Rs. 76.49 Crore. Here it has been assumed that remaining overheads have been allocated to various packages

#Cost including overheads

58. The actual capital cost works out to Rs. 5.42 crore per MW, as compared to the capital cost approved by the CEA, which worked out to Rs. 4.22 crore per MW. If the IDC is not considered, then the actual capital cost works out to Rs. 5.00 crore per MW, as compared to the capital cost of Rs. 3.78 crore per MW approved by the CEA, and order placement cost of Rs. 4.23 crore per MW. The Commission observes that considering the fact that Parli Unit No. 6 is a brown-field expansion project, the actual cost has been significantly high in absolute terms, as well as in comparison to the order placement cost.

59. The Commission is of the view that though the CEA approved hard cost is Rs 945.80 Crore, it will not be appropriate to consider the CEA approved hard cost as there was time gap of around 4.5 years between the approval granted by CEA and actual order placement. As observed from the above Table, the main variation between the order placement cost and the CEA approved cost is on account of variation in cost for cooling water system, ash handling system, and other civil works on main plant/administration building. Since this increase could be justified on account of the time gap of around 4.5 years between the CEA approval and the Order placement, the Commission has considered the Order placement cost as the base hard cost, for the purpose of arriving at capital cost of the project. This itself works out to Rs. 4.23 crore per MW for a brown-field expansion project like Parli Unit 6, and if the IDC is considered, then the effective Order cost per MW works out to be even higher.

ii) Increase in Hard Costs (Cost Overrun)

60. For analysis of increase in hard cost, the Commission obtained the details of Contract Order Value and Actual Cost till COD for various equipment/packages and also asked MSPGCL to submit the reason for increase in actual cost with respect to Contract Order Value. MSPGCL submitted that increase in costs is due to Contract Price Variation and increase in overheads. MSPGCL submitted Contract-wise details of increase in cost, and the overall summary of the same is shown in the Table below:

Sr. No.	Description	Contract Order Cost (Rs Crore)	Cost as on Commissioning (Rs Crore)	% Increase
1	Land & Land development	1.98	1.98	0.00%
2	Work Cost (Including Taxes & Duties)	1022.92	1121.64	9.65%
3	Overheads	30.76	128.28	317.04%
Project Cost (Excluding IDC & FC)		1055.66	1249.92	18.40%

61. However, the Commission observed that MSPGCL has shown an amount of Rs. 154.55 Crore under the head of 'Overheads', in its submission dated November 3, 2008. Whereas an amount of Rs. 128 Crore has been indicated, in its submission dated August 15, 2009 against 'Overhead' and asked MSPGCL to reconcile the discrepancy and submit the reasons for the variation.

62. MSPGCL, in its reply, submitted that the total amount of Overheads as per earlier submission by MSPGCL for Parli Unit No 6 is Rs 154.55 Crore. Out of Rs 154.55 Crore, Rs 129.38 Crore pertains to Overheads of Project Parli Unit No 6 and remaining Rs. 25.17 Crore pertains to Overheads of various items in Civil Works Division of Parli Unit No 6.

63. Further, the Commission obtained the detailed break-up of the cost shown under ‘Overhead’ which is reproduced as under:

S. No.	Overheads	Amount (Rs Crore)
1.	Head Office Supervision (H.O.S.) Charges excluding Civil Expenditure	42.33
2.	General Establishment Charges (G.E.C.)	85.95
3.	H.O.S. Charges pertaining to Contingency	1.10
4.	H.O.S. and G.E.C. pertaining to Civil Expenditure	25.17
	Total	**154.55**

64. Further, the Commission asked MSPGCL to submit the nature of expenses covered under each sub-head of 'Overheads' i.e., H.O., GEC, Energy charges, E&M, etc. MSPGCL, in its reply submitted that Head Office Supervision (H.O.S.) Charges includes the Salary and Other establishment expenses of Head Office Charge to Capital Works of the Project. General Establishment Charges (G.E.C.) includes the Salary and Other establishment expenses of Project Site Office Only. Energy Charges includes construction supply charges for the construction power supplied by MSEDCL. E&M includes laying of cables, extending of water supply, lighting arrangements for project site etc.

65. As regards the contract price variation, the Commission observes that the same is within the 20% price variation cap stipulated in the contract. At the same time, it is true that the price variation could have been lower, had the project been completed on time. However, the main reason for increase in completed cost with respect to contract order value is on account of increase of overheads.

66. As regards the Overheads, if the Commission strictly considers the terms of approval of TEC by CEA, then the overheads should have been limited to Rs. 76.49 Crore. However, as the Commission has considered the contract order value as base hard cost

and also considered the contract price variation for arriving at Project Cost, it would be more appropriate to consider the overheads on hard cost considered by the Commission rather than limiting the overheads to CEA approved value. The Commission analysed the overheads excluding IDC and FC as considered by CEA and booked by MSPGCL, as under:

Particulars	Unit	CEA	MSPGCL
Overheads	Rs. Crore	76.49	154.55
Capital Cost excluding IDC & FC	Rs. Crore	946.00	1249.92
Overhead as % of capital cost	%	8.09%	12.36%

As observed from the above Table, overheads considered by CEA amounts to 8.09% of the capital cost excluding IDC and FC. Accordingly, for the purpose of computing the capital cost for the Project, the Commission has considered overheads as 8.09% of the allowed capital cost excluding IDC and FC and variation on account of actual fuel cost and revenue earned for sale of infirm power and revised approved cost of spares, which amounts to Rs. 89.00 Crore as against Rs. 154.55 Crore considered by MSPGCL.

iii) Cost of Spares

67. As regards the cost of spares, Regulation 30.1 of the MERC Tariff Regulations, 2005 stipulates as under:

> *"Subject to prudence check by the Commission, the actual expenditure incurred on completion of the project shall form the basis for determination of the original cost of project. The original cost of project shall be determined based on the approved capital expenditure actually incurred up to the date of commissioning of the generating station and shall include capitalised initial spares subject to following ceiling norms as a percentage of the original cost as on the cut-off date:*
> *(i) Coal-based/lignite-fired generating stations - 2.5%*
> *..."*

68. The Commission observed that the cost of spares procured till COD is more than the norm of 2.5% of project cost as stipulated in Regulation 30.1 of the MERC (Terms and Conditions of Tariff) Regulations, 2005. Further, the Commission observed that MSPGCL, in its own cost estimates as submitted to CEA had proposed spares @3% of capital cost, for Plant and Equipments. Further, the Central Electricity Regulatory Commission has also specified a ceiling norm of 2.5% of the capital cost for capitalisation of spares. Though the MERC Tariff Regulations, 2005, were not notified

when the erstwhile MSEB placed the Order, the industry norm for spares is 2.5% of the capital cost, and accordingly, the Commission has restricted the cost of spares to 2.5% of the approved project cost accordingly. The summary of the cost of spares as considered by MSPGCL and as approved by the Commission is shown in the Table below:

Rs. Crore

Particulars	MSPGCL	Approved
Spares	47.25	29.60

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69. MSPGCL has further considered the capitalisation of additional spares of Rs 38.41 Crore after COD of the Project. The Commission has not considered any additional spares after COD as the cost of the mandatory spares has already been capitalised for efficient operation of the Unit along with the Project Cost.

iv) Cost of Common Facilities

70. CEA, in its TEC approval letter, has stipulated the cost of common facility as Rs. 23 Crore for the future Unit and recommended that MSPGCL may take up implementation of second Unit so as to utilize the common facilities being built up at this stage.

71. The Commission obtained the cost of the common facilities, which have been considered as part of Project Cost of this Unit, but the facilities are proposed to be shared with the other Unit yet to be commissioned at Parli. MSPGCL submitted the allocation of common facilities cost into Rs. 92.33 Crore for Parli Unit No. 6 and Rs. 82.23 Crore for Parli Unit No. 7 (yet to be commissioned). Accordingly, the Commission has considered the reduction in capital cost as on COD to the extent of Rs. 81.29 Crore (i.e., not considering the cost of Rs. 0.94 Crore towards rising of Khadka Barrage as such expenses has been petitioned by MSPGCL to be incurred after COD) pertaining to Parli Unit No. 7.

72. The summary of the capital cost excluding IDC and FC as submitted by MSPGCL and considered by the Commission is shown in the Table below:

Sr. No.	Description	Cost as on Commissioning (Rs Crore)	
		As per MSPGCL	As approved by MERC
1	Cost of Common Facilities	(81.29)	(81.29)

v) Revenue Earned before COD

73. As regards the capitalisation of revenue earned before COD, the Commission observes that MSPGCL has capitalised the net of fuel costs less revenue, on account of infirm generation of power. However, since fuel cost is of a revenue nature, whether incurred during infirm generation or firm generation, the Commission while allowing the actual expense incurred on this account (Rs. 125.92 crore), directs that the same be recovered from MSEDCL. Similarly, since Rs. 59.86 crore of revenue has been stated to have been recovered by MSPGCL, the Commission hereby allows MSPGCL to recover the under-recovered fuel cost, i.e., Rs. 66.06 Crore (Rs. 125.92 crore – Rs. 59.86 crore) from MSEDCL in six equal monthly instalments, after the issue of this Order.

vi) Summary of Approved Capital cost, excluding IDC and FC

74. Accordingly, the Commission has approved the capital cost excluding IDC and FC as Rs. 1019.38 Crore. The summary of the Capital Cost approved by the Commission is shown in the Table below:

Sr. No.	Description	Cost as on COD (Rs Crore)			Difference
		Actual	Revised as submitted by MSPGCL	As approved by the Commission	
			1	2	3=2-1
1	Land & Land development	1.98	1.98	1.98	Nil
2	Work Cost (Including Taxes & Duties)	1,115.93	1,095.37	1011.67	83.70 (on account of not considering the variation of Rs. 66.05 Crore as variation in fuel cost for infirm power and disallowance of Rs. 17.65 of cost of spares)
3	Overheads	132.01	154.55	89.00	65.55 (on account of restricting overheads)
Project Cost (Excluding IDC & FC)		1,249.92	1,249.92	**1,100.67**	**149.25**
4	Less: Cost of Common Facilities	-	(81.29)	(81.29)	81.29 (on account of cost of shared facility)
5	**Net Project Cost (Excluding IDC & FC)**	**1,249.92**	**1,168.63**	**1,019.38**	**149.25**

II. Interest During Construction and Financing Charges (IDC and FC)

75. The Commission observed that the CEA, in its Techno Economic Clearance (TEC) issued on July 9, 1999 for Parli Unit No. 6, stipulated as under regarding the IDC for the Project:

    "The Completed cost of the scheme shall not exceed the above cost except on account of the following:

    > *d) Interest During Construction and the Financing Charges as per actual but not exceeding the amount as indicated in Annex-I*

    Accordingly, CEA has approved IDC of Rs. 107.90 Crore for Parli Unit No. 6.

76. As regards the increase in capital cost and impact of the delay on the project cost and levy of liquidated damages on M/s BHEL, the Commission has deliberated on the same in detail in the subsequent paragraphs.

77. As regards the impact of time over run on account of delay in the project commissioning, MSPGCL has considered the entire IDC incurred till actual COD of the Project and has proposed to reduce the same by the Liquidated Damages levied on the Contractors for delay in project. The Commission agrees with the views of some of the stakeholders raised during the hearing that the burden of increase in IDC due to delay in Project should not be loaded to the consumers. The Commission has therefore, re-computed the IDC considering original schedule and original phasing of expenditure. The Commission obtained the detail of the phasing of expenditure (scheduled and actual) and accordingly re-computed the IDC based on the original phasing of expenditure as per the original schedule of the Project.

78. As regards MSPGCL's submission to modify the Debt:Equity ratio and revision in debt amount from Rs. 1139.86 Crore to Rs. 1063.88 Crore by considering the repayment of Rs. 47.11 Crore of PFC loans and Rs. 28.88 Crore of GoM loans before COD of the project, the Commission observed that the RoE on internal accrual used for funding debt repayment prior to COD may result in double accounting as the interest on some loans has been considered as part of the IDC and asked MSPGCL to revisit this aspect to optimise the overall tariff. MSPGCL submitted that the infusion of internal accruals also leads to reduction in IDC for these amounts of loans for the period FY 2006-07 and April to October of FY 2007-08. MSPGCL submitted that the total reduction in IDC on account of such loan repayment is approximately around Rs 11 Crore and on this issue of double accounting of Rs. 11 Crore of IDC, requested the Commission to apply prudence check for approval of capital cost.

79. As per the prudent industry practice, any project is funded in the following pattern

    - Certain proportion of Upfront Equity (30% or 50%)

- Similar proportion of Upfront Debt
- Debt and Equity in proportion to Debt:Equity Ratio

In case the project is initially funded with debt and equity is infused at later stage to repay the debt, the IDC component will increase as compared to proportionate debt and equity funding. This will have a cascading effect on tariff determined on cost plus approach as the Project Cost will increase due to higher IDC and the Return will also be admissible on the equity infused at later stage to repay the debt component, which will amount to double-accounting, since both IDC and Returns would be passed through on the same amount of funds. Accordingly, the Commission has re-computed the IDC considering equity funding in proportion to revised debt:equity ratio arrived based on total equity funding including equity funded to repay certain proportion of debt.

80. The IDC re-computed by the Commission considering the original schedule (phasing of expenditure) and revised debt equity ratio arrived based on total equity funding including equity funded to repay certain proportion of debt, works out to Rs. 99 Crore.

81. As regards the liquidated damages levied and collected by MSPGCL from BHEL, the Commission obtained the updated information and MSPGCL submitted that it has levied the liquidated damages for Supply of main equipment, Mandatory spares and Erection, Testing and Commissioning. The details of the same submitted by MSPGCL are as under:

S No.	Particulars	Rs. Crore
A.	**Supply of Main Equipment**	
	Liquidated Damages amount levied	51.76
	Liquidated Damages amount recovered	49.10
B.	**Supply of Mandatory Spares**	
	Liquidated Damages amount levied on (contract price including price variation) of mandatory spares	4.08
	Liquidated Damages amount recovered on Contract price of mandatory spares	Included in supply of main equipment contract
C.	**Erection, Testing and Commissioning**	
	Contract price (including price variation) and excluding taxes and duties	72.84
	Liquidated Damages amount recovered on contract price excluding taxes and duties	6.54
D.	**Total Liquidated Amount levied**	63.12
E	**Total Liquidated Amount Recovered**	55.64

82. As discussed earlier in this Section, the Commission has re-computed the IDC by considering the original schedule and phasing of expenditure and as the Commission has not allowed the higher IDC due to delay in commissioning of the Project, the Commission has not reduced the IDC by the liquidated damages recovered from

BHEL. The reduction in the IDC as approved by the Commission will get compensated by the liquidated damages recovered by MSPGCL, to a certain extent.

83. The Commission further enquired regarding the delays in various other contracts and whether liquidated damages can be levied based on the contracts. MSPGCL submitted the details of the various contracts and liquidated damages in percentages that may be levied on account of delay, reproduced as under. The Commission has estimated the amount of the liquidated damages that may be levied based on the contract conditions, as shown in the Table below:

Sr. No.	Particular	Base Contract Value (Excluding Taxes & Duties) (Rs Cr)			Delay in completion of contract (Days)	Liquidated Damage that may be levied		
		As per Contract	Price variation allowed	Total		Can be levied as per contract conditions		Actual Levied
1	Main Plant & Equipment	533.09	73.31	606.40	912	10%	60.64*	55.54
2	CW system	12.27	0.51	12.78	537	10%	1.28	0.00
3	DM water Plant	13.80	1.52	15.32	321	10%	1.53	0.00
4	Chlorination Plant / Ozonisation Plant	9.09	0.47	9.56	784	10%	0.96	0.00
5	Fuel Handling & Storage system	6.47	0.82	7.29	453	10%	0.73	0.00
6	Ash Handling System	36.62	3.16	39.78	454	10%	3.98	0.00
7	Coal Handling Plant	51.87	2.92	54.79	695	10%	5.48	0.00
8	Air Compressor System	4.46	0.00	4.46	256	10%	0.45	0.00
9	Air Condition & Ventilation System	2.75	0.08	2.83	844	10%	0.28	0.00
10	Fire fighting System	5.35	0.63	5.98	631	10%	0.60	0.00
11	EOT Misc Crane	3.29	0.00	3.29	331	10%	0.33	0.00
12	Transformers Package	3.36	0.57	3.93	335	10%	0.39	0.00
13	Cables, Cable facilities & grounding	15.66	2.00	17.66	447	10%	1.77	0.00
14	Emergency D.G. set	0.71	0.05	0.76	146	10%	0.08	0.00
15	Battery Charger & Stack Elevator	2.76	0.00	2.76	29	10%	0.06	0.00
16	Communication & Lab Equipment	3.19	0.00	3.19	131	10%	0.30	0.00
17	Main plant/Adm. Building	171.35	3.66	175.01	331	10%	17.50	0.00
18	Cooling Towers	21.78	0.71	22.49	382	10%	2.25	0.00
19	Chlorination Plant / Ozonisation Plant Building	4.89	0.01	4.90	254	10%	0.49	0.00
Total Liquidated Damages							**99.08***	**55.54**

**Note: based on MSPGCL submission, the Commission has estimated the total amount that may be levied based on contract conditions*

84. As observed from the above Table, the total amount of liquidated damages that may be levied is around Rs. 99.08 Crore as for various contracts for delay depending upon the delay in each contract. As discussed earlier, the Commission has not reduced the LD from the capital cost as the Commission has not allowed the increase in IDC.

85. As regards the financing charges (i.e., Guarantee fee of Rs. 36.44 Crore and Commitment charge of Rs. 0.53 Crore) paid for Parli Unit No. 6 till COD, the Commission observes that for FY 2005-06 (in MYT Petition in Case No. 68 of 2006) and FY 2006-07 (in APR Petition in Case No. 71 of 2007), MSPGCL has claimed the entire financing charges including Government Guarantee fee for Parli Unit No. 6 based on the Audited Accounts for the relevant years in its ARR.

86. The Commission asked specific queries in this regard and asked MSPGCL to confirm whether it has claimed financing charges for Parli Unit No. 6 and Paras Unit No. 3 for previous years including FY 2005-06 and FY 2006-07 in its MYT and APR Petitions for these years. The Commission also asked MSPGCL to provide the year-wise details of financing charges (separately under various heads like guarantee fee, commitment charges, etc.) pertaining to Parli Unit No. 6, Paras Unit No. 3 and any other up-coming stations from FY 2005-06 onwards.

87. MSPGCL, in its reply, confirmed that the financing charges for Parli Unit-6 and Paras Unit-3 were inadvertently accounted for in the books of accounts of MSPGCL for the respective years and submitted the detailed break-up of the said charges as summarised in the table below:

(Rs. Crore)

Parameter	FY 2005-06				FY 2006-07			
	Existing TPS	Paras Unit-3	Parli Unit-6	Total	Existing TPS	Paras Unit-3	Parli Unit-6	Total
Finance Charges	0.46	0.24	0.3	1.00	3.89	0.2	0.10	4.11
Guarantee Charges	7.58	-	7.6	16.54	9.0	-	16.04	25.1
SBI Lease Rentals	5.37	-	-	5.37	6.56	-	-	6.56
Total	13.41	0.24	7.9	22.91	19.50	0.2	16.14	35.75

88. As observed from the above Table, financing charges including guarantee fees has been claimed in previous years and already passed to the consumers. Since, the financing charges including guarantee fee pertaining to Parli Unit No. 6 is part of the capital cost of Parli Unit No. 6, accordingly, the Commission has considered the same as a part of the capital cost for Parli Unit No. 6. As regards the claims of such expenses in the tariff of existing generating stations, since the final truing up for existing stations for FY 2005-06 and FY 2006-07 is yet to be carried out by the Commission,

the Commission rules that the financing expenses pertaining to these Units, which has already been allowed in tariff of existing stations, would be written back while carrying out the final truing up for FY 2005-06 and FY 2006-07.

89. The summary of the total capital cost (including IDC and FC) as submitted by MSPGCL and approved by the Commission as on COD is shown in the Table below:

Sr. No.	Description	Cost as on COD (Rs Crore)		
		Actual	Revised submission of MSPGCL	As approved by the Commission
1	Land & Land development	1.98	1.98	1.98
2	Work Cost (Including Taxes & Duties)	1,115.93	1,095.37	1011.67
3	Overheads	132.01	154.55	89.00
Project Cost (Excluding IDC & FC)		1,249.92	1,249.92	1,087.68
4	Less: Cost of Common Facilities	-	(81.29)	(81.29)
5	Net Project Cost (Excluding IDC & FC)	**1,249.92**	**1,168.63**	**1,019.38**
6	IDC & FC	212.41	212.41	
7	Less: Interest on account of repayment of loan		(11.00)	
8	Less: Liquidated Damages		(54.66)	135.97
Net Project Cost		**1462.33**	**1,315.38**	**1,155.35**

Accordingly, the Commission has approved the capital cost including IDC and FC as Rs. 1155.35 Crore as against the cost of Rs. 1462.33 Crore considered by MSPGCL in its Petition, and Rs. 1315.38 crore considered in its revised submissions.

The Capital Cost approved by the Commission is significantly lower than that projected by MSPGCL, primarily due to the following reasons:

- Reduction in base capital cost, primarily on account of considering the under-recovery of revenue for infirm generation before COD, and allowing the same to be recovered through energy charges rather than capitalising the same. Hence, this does not affect MSPGCL.
- Reduction in overheads, by limiting the overheads to the same percentage as that approved by the CEA in the TEC.
- Reduction due to cost of common facilities for Parli new Unit No. 7, which has been admitted by MSPGCL. Hence, this does not affect MSPGCL.
- Considering IDC and FC as if the project has been completed on time, and by not considering the Liquidated Damages that MSPGCL is entitled to recover from its suppliers. Since the Liquidated Damages that MSPGCL may recover appear to be

higher than that already claimed, the treatment adopted by MSPGCL does not affect MSPGCL.

III. Means of Finance

90. In accordance with the MERC (Terms and Conditions of Tariff) Regulations, 2005, the normative debt:equity ratio is 70:30 or actual debt if the same is higher than 70%. The Parli Unit No. 6 has been financed by loan availed from PFC and GoM. The Commission observed that as against the sanctioned loan of Rs. 886 Crore from PFC, MSPGCL has availed a loan of Rs. 974.86 Crore, and asked for a copy of the loan agreement for the additional loan availed from PFC, which was submitted by MSPGCL.

91. The revised debt:equity ratio as submitted by MSPGCL after repayment of loans from internal accruals is 72.75 : 27.25. As the debt component is higher than the normative debt of 70% as stipulated in the MERC (Terms and Conditions of Tariff) Regulations, 2005, the Commission has considered the Debt:Equity ratio of 72.75 : 27.25.

92. As the Project Cost approved by the Commission is lower than the actual Project Cost on account of the reasons mentioned in the previous paragraphs, the Commission has considered such reduction in the capital cost from the loan and internal accruals in the ratio of debt:equity as submitted by MSPGCL. The summary of the debt:equity as submitted by MSPGCL and approved by the Commission is shown in the Table below:

(Rs. Crore)

Project Funding	MSPGCL Original Petition	MSPGCL Rejoinder Petition	Approved
Debt	1139.86	1063.87	840.52
Equity	322.479	398.46	314.83
Total	1462.335	1462.33	**1,155.35**

IV. Additional Capitalisation

93. Regulation 30.2 of the MERC (Terms and Conditions of Tariff) Regulations, 2005 stipulates regarding additional capitalisation as under:

"30.2 Additional Capitalisation: The following capital expenditure within the original scope of work actually incurred after the date of commissioning and up to the cut off date may be allowed by the Commission for inclusion in the original cost of project, subject to prudence check:

(i) Deferred liabilities;

(ii) Works deferred for execution;

(iii) Procurement of initial capital spares in the original scope of work, subject to ceiling specified in Regulation 30.1;

(iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and

(v) On account of change in law.

Provided that original scope of work along with estimates of expenditure shall be submitted along with the application for determination of tariff:

Provided further that a list of the deferred liabilities and works deferred for execution shall be submitted along with the application for determination of tariff after the date of commissioning of the generating station." **(Emphasis added)**

94. The Commission observed that though MSPGCL has submitted the amount of additional capitalisation, it has not submitted the detailed scope of work along with estimate, list of deferred liabilities and works deferred for execution. Accordingly, the Commission has not considered the additional capitalisation as submitted by MSPGCL for FY 2007-08 and FY 2008-09, and directs MSPGCL to submit the details of the additional capitalisation in accordance with the MERC (Terms and Conditions of Tariff) Regulations, 2005 based on the actual expenditure incurred. Though the Commission has not considered the impact of the additional capitalisation at this stage, the Commission may consider the same after detailed scrutiny of the additional capitalisation actually incurred subject to prudence check during final truing up.

V. Depreciation and Advance Against Depreciation

95. In accordance with Regulation 34.4.1 of the MERC (Terms and Conditions of Tariff) Regulations, 2005, the Commission has considered the classification of assets as submitted by MSPGCL and considered the rates as submitted by MSPGCL, which are based on the depreciation schedule specified in the MERC (Terms and Conditions of Tariff) Regulations, 2005 to compute the depreciation.

96. Regulation 32.3 of the MERC (Terms and Conditions of Tariff) Regulations, 2005 stipulates that where the actual amount of loan repayment in any financial year exceeds the amount of depreciation allowable under Regulation 34.4.1, the Generating Company shall be allowed an advance against depreciation for the difference between the actual amount of such repayment and the allowable depreciation for such financial year.

97. As regards the computation of AAD for FY 2007-08, the Commission observed that MSPGCL has considered the loan repayment as Rs. 88.03 Crore, which also includes loan repayment of Rs 59.49 Crore from internal accruals before COD. MSPGCL also considered repayment of such loan of Rs 59.49 Crore before COD as increase in equity as on COD. If the amount of Rs. 59.49 Crore is considered at both places, i.e., as repayment for computing AAD as well as increase in equity, it would lead to double accounting of the same amount. As the Commission has considered the repayment of loan before COD as part of the increase in the equity contribution in the project cost, the Commission has not considered the same while computing the AAD.

98. The Commission also considered the depreciation and loan repayment approved by the Commission for the period from FY 2007-08 to FY 2009-10 for the existing stations along with the depreciation and loan repayment for Parli Unit No. 6. The summary of the depreciation and loan repayment as approved by the Commission in its Order in Case No. 115 of 2008 for existing generating stations, as submitted by MSPGCL in that Petition and as approved by the Commission is shown in the Table below:

(Rs. Crore)

Particulars	FY 2007-08		FY 2008-09		FY 2009-10	
	MSPGCL	Approved	MSPGCL	Approved	MSPGCL	Approved
A. Existing Stations						
Opening Loan Balance	954.9	954.9	979.37	867.99	1060.89	792.89
Approved Loan Repayment	254.49	230.03	199.7	199.7	171.59	171.59
Depreciation	337.01	337.07	339.72	339.6	359.81	354.92
B. Parli Unit No. 6						
Opening Loan Balance	1063.87	840.52	1035.33	817.86	921.17	725.15
Loan Repayment	28.54	22.66	114.16	92.71	114.16	92.71
Depreciation	21.55	17.04	51.98	40.89	53.19	40.89
C. Total						
Opening Loan Balance	2018.77	1795.42	2014.70	1685.85	1982.06	1518.04
Loan Repayment	283.03	252.69	313.86	292.41	285.75	264.30
Depreciation	358.56	354.11	391.70	380.49	413.00	395.81

**Note: For existing stations, approved loan repayment and depreciation considered as per APR Order in Case No. 115 of 2008*

99. As observed from the above Table, loan repayment for the period from FY 2007-08 to FY 2009-10 does not exceed depreciation of each year for MSPGCL as a whole. The Commission is of the view that AAD is intended to meet shortfall in meeting loan repayment obligations of the Generating Company, and is not intended to provide additional cash flow to the Generation Company. While tariff is determined on a station-wise basis, AAD is a special provision, which enables the Utility to meet its

loan repayment obligations as a whole rather than for each Station. Giving AAD on a station-wise basis may result in a situation, where the generation tariffs are determined higher to account for the component of AAD, even though the Company has enough funds to meet its loan repayment obligations.

100. Accordingly, for the purpose of determination of tariff for Parli Unit No. 6, the Commission has not considered any AAD. The summary of depreciation and AAD as proposed by MSGPCL and as approved by the Commission is given in the Table below:

(Rs. Crore)

Particulars	FY 2007-08		FY 2008-09		FY 2009-10	
	MSPGCL	Approved	MSPGCL	Approved	MSPGCL	Approved
Depreciation	21.55	17.04	51.98	40.89	53.19	40.89
Advance Against Depreciation	66.47	-	62.01	-	60.80	-
Total	**88.03**	**17.04**	**113.99**	**40.89**	**113.99**	**40.89**

VI. Interest Rate and Loan Repayment

101. As stipulated earlier, the project has been financed through debt taken from PFC and GoM. The summary of the loan amount and interest expenses as submitted by MSPGCL is shown below:

(Rs. Crore)

Particulars	FY 2007-08	FY 2008-09	FY 2009-10
A. PFC			
Opening Loan Balance	927.74	903.33	805.67
Repayment during the year	24.41	97.66	97.66
Closing Balance	903.33	805.67	708.02
Interest Expense	42.78	94.66	91.83
B. GoM			
Opening Loan Balance	136.13	132.00	115.50
Repayment during the year	4.13	16.50	16.50
Closing Balance	132.00	115.50	99.00
Interest Expense	6.52	14.31	12.41

Note: interest paid during FY 2007-08 is for the period from November 2007 to March 2008

Based on loan agreements, the tenure of the loan has been considered as 10 years by MSPGCL.

102. As regards the interest rate for the loan availed from PFC and GoM, the Commission has considered the interest rate as submitted by MSPGCL; however, the

Commission has considered the opening balance of loan on pro-rata basis based on the Capital Cost and means of finance approved by the Commission in this Order. The Commission has also considered tenure of loan as 10 years.

103. The summary of loan balance and interest expenses as approved by the Commission in this Order is shown as below:

Rs. Crore

Particulars	FY 2007-08	FY 2008-09	FY 2009-10
A. PFC			
Opening Loan Balance	704.39	685.85	609.65
Repayment during the year	18.54	76.21	76.21
Closing Balance	685.85	609.65	533.44
Interest Expense	32.48	71.76	69.35
B. GoM			
Opening Loan Balance	136.13	132.01	115.50
Repayment during the year	4.13	16.50	16.50
Closing Balance	132.01	115.50	99.00
Interest Expense	6.52	14.31	12.41

VII. Return on Equity

104. In accordance with Regulation 34.1 of MERC (Terms and Conditions of Tariff) Regulations, 2005, the Commission has considered the applicable return on equity of 14% per annum in Indian Rupee terms on the equity portion as approved in the Order. For FY 2007-08, the Commission has considered the return on equity on pro-rata basis considering the period of operation post commissioning.

105. Further, the Commission observes that MSPGCL has also considered the return on equity on the additional capitalisation during the year. However, in accordance with the MERC (Terms and Conditions of Tariff) Regulations, 2005, return on equity needs to be computed only on the opening equity and not on the assets added during the year. Accordingly, while working out the return on equity for FY 2008-09 and FY 2009-10, the Commission has considered the opening equity only. The summary of Return on Equity as proposed by MSGPCL and as approved by the Commission is given in the Table below:

(Rs. Crore)

S.No.	Particulars	FY 2007-08		FY 2008-09		FY 2009-10	
		MSPGCL	Approved	MSPGCL	Approved	MSPGCL	Approved
1	Equity on COD as per Debt: Equity Ratio	398.48	314.83	405.53	314.83	472.71	314.83

S.No.	Particulars	FY 2007-08		FY 2008-09		FY 2009-10	
		MSPGCL	Approved	MSPGCL	Approved	MSPGCL	Approved
2	Equity toward Additional Capitalisation	7.05	-	67.18	-	38.41	-
	Return Computation						
3	Return on Equity as on COD	23.24	18.37	56.77	44.08	66.18	44.08
4	Return on Equity toward Additional Capitalisation	0.49	-	4.70	-	2.69	-
5	**Total Return on Equity**	23.74	18.37	61.48	44.08	68.87	44.08

VIII. Interest on Working Capital

106. In accordance with Regulation 34.5 of MERC (Terms and Conditions of Tariff) Regulations, the Commission has considered the following elements for determining the working capital requirement:

a. Cost of coal for two months for non-pit-head generating stations, corresponding to target availability;

b. Cost of secondary fuel oil for two months corresponding to target availability;

c. Operation and Maintenance expenses for one month;

d. Maintenance spares @ 1 per cent of the historical cost; and

e. Receivables for sale of electricity equivalent to two months of the sum of annual fixed charges and energy charges calculated on target availability; minus

f. Payables for fuel (including oil and secondary fuel oil) to the extent of one month of the cost of fuel calculated on target availability.

Further, while computing the interest on working capital, the Commission has considered the interest rate of 12.25% considering the prevalent SBI PLR on the date of filing of the Petition for determination of tariff.

The summary of interest on working capital as proposed by MSGPCL and as approved by the Commission is given in the Table below:

(Rs. Crore)

S. No.	Particulars	FY 2007-08		FY 2008-09		FY 2009-10	

		MSPGCL	Approved	MSPGCL	Approved	MSPG CL	Approved
1	Interest on working capital	7.78	5.27	18.00	14.58	17.60	12.67

IX. O&M Expenses

107. The Commission has considered the O&M expenses on normative basis for FY 2005-06 as Rs. 10.82 Lakh/MW as specified in Regulation 34.6.2 of the MERC (Terms and Conditions of Tariff) Regulations, 2005 for a new generating station. Further, the Commission has considered an escalation rate of 4% per annum to arrive at O&M expenses for FY 2006-07. The normative O&M expenses for FY 2007-08, FY 2008-09 and FY 2009-10 has been considered based on escalation rate as approved by the Commission in the MYT Order and APR Orders of MSPGCL, in accordance with the increase in Wholesale Price Index (WPI) and Consumer Price Index (CPI).

108. The summary of O&M expenses considered by MSPGCL and as approved by the Commission is provided in the Table below:

Rs Crore

Particulars	FY 2007-08*		FY 2008-09		FY 2009-10	
	MSPGCL	Approved	MSPGCL	Approved	MSPGCL	Approved
Operation & Maintenance Expenses	12.35	12.35	31.24	31.24	32.92	33.13

* Considered on pro-rata basis for five months (November - March) in FY 2007-08

X. Income Tax

109. The Commission has estimated the income tax for the period from FY 2007-08 to FY 2009-10 considering the return on equity approved in this Order and estimated the income tax considering MAT rate of 11.33% for FY 2007-08 and FY 2008-09; however, for FY 2009-10, the Commission has estimated the income tax after considering the change in MAT rate from 11.33% to 17% (15% + 10% surcharge + 3% cess). However, as regards the income tax for FY 2007-08, in its Order in Case No. 115 of 2008 in the matter of Annual Performance Review for FY 2008-09 and Tariff Determination for FY 2009-10 for MSPGCL, the actual income tax paid by MSPGCL as a whole for FY 2007-08 has already been allowed as under:

"The summary of the income tax as allowed for FY 2007-08 is shown below:

Particulars	***APR Order***	***Actual***	***Allowed***

			after truing up
Income Tax	*41.58*	*81.54*	*80.98*

Though the Commission has considered the actual income tax paid during FY 2007-08, the Commission directs that as per ITRV, MSPGCL is entitled for a refund of Rs. 25.55 Crore and it should ensure that such refunds are availed at the earliest and the exact amount of such refund should be incorporated during the truing up for FY 2008-09."

110. As regards the income tax for FY 2008-09 and FY 2009-10, since the Income Tax for Parli Unit No. 6 will be assessed as part of assessment of overall income tax of MSPGCL, which has been allowed separately in the Tariff order for MSPGCL. In case there is any variation in the Income Tax payment, the same may be claimed at the appropriate time, upon submission of due documentary evidence. Hence, the Commission has not considered any income tax separately for Parli Unit No. 6.

XI. Increased Stabilisation Period and Performance Parameters during Stabilisation and Post-Stabilisation Period

a. Target Availability

111. MSPGCL, in its Petition, has submitted the target availability for Parli Unit No. 6 as 64.85% for FY 2007-08, and 80% for FY 2007-08 and FY 2008-09. It is to be noted that the normative availability stipulated in the MERC (Terms and Conditions of Tariff) Regulations, 2005, for full recovery of annual fixed charges, is 80%.

112. The issue of relaxation of target availability norm for the generating station during the period from November 1, 2007 to March 31 2008 (post Commercial Operation Date of the Unit), as submitted by MSPGCL has been analysed by the Commission. It may be observed that MSPGCL, within 6 months of synchronisation of the Unit, has declared the "commercial operation of Parli Unit No. 6" on November 1, 2007, even though sustained performance of the Unit for 28 days with 72 hours at full load, was not established and MSPGCL had full knowledge that the generating Unit was not in a position to perform on sustained basis. In accordance with standard industry practice, the Performance Guarantee (PG) test has to be conduced before declaring COD. However, MSPGCL declared COD before conducting the PG test, and the PG test was conduced well after the COD. There was no compulsion on MSPGCL to declare commercial operation of the Unit prior to its stabilization. Given the above background, the Commission is of the view that relaxation of target availability norms for the generating station to the level of actual availability for the purpose of tariff is not justified. The risk of such low level of operation of the generating station has to be

borne by the generator. Hence, the target availability for the generating station for the period from FY 2007-08 to FY 2009-10 has been considered as 80 % in accordance with the norms stipulated in the MERC (Terms and Conditions of Tariff) Regulations, 2005.

b. Stabilisation Period and Performance Parameters during Stabilisation Period

113. MERC (Terms and Conditions of Tariff) Regulations, 2005, stipulate that stabilisation period of coal based and lignite fired stations shall be reckoned as 180 days from the date of commissioning. As against this, MSPGCL has requested for consideration of a higher period of stabilisation of 427 days. The Commission has observed that the reasons provided by MSPGCL such as "frequent tripping during the initial period due to mal-operation of flame failure detection system", "faulty performance of the coal mills", "inexperience of the operating staff", etc., are not tenable as it is an acknowledged fact that machine size of 250 MW and all the accessories and auxiliaries are a proven technology and it is expected that it would be of good quality, proven performance and well matched with the requirements. The Commission is of the opinion that it is the duty of the owner of the plant to ensure thorough inspection and testing that the equipment being procured are of good quality, these are stored at site as required and imparting training to its operating personnel well in advance, and any losses incurred through not performing these elementary duties properly cannot be passed on to the consumers.

114. The Commission is of the view that the poor performance of the equipment and systems at the beginning itself can be attributed singly or collectively to any or all of the following reasons :

a. Failure of Quality Assurance and Quality Control systems at site, not observing proper Customer Hold Points (CHPs) during the manufacturing, assembly and Commissioning process and not conducting proper inspections at the works, not conducting proper pre-commissioning tests/checks, improper storage of material at site, etc.

b. Inexperience of the operating staff can be attributed to inadequate training given to the staff and lack of ability and experience to perform the given tasks (operating the Unit)

c. Parli Unit No. 6 was commissioned by MSPGCL, even when all the systems were not fully checked out and integrated operation and continuous operation for stipulated period were not carried out.

115. Further, as observed from the results of the Performance Guarantee tests (PG tests) conducted on the major equipment, viz., the Boiler efficiency test, the Turbine Heat Rate and the capacity test on the Unit have given test results, which **are better than the guaranteed design values**, in each case. It is to be noted that the PG test was carried out within 6 months of Commercial operation date, when the Unit had not stabilised. However, stable operation of the Unit at the required levels of load was ensured by the testing team of the manufacturer/supplier, during the test period in March-April 2008. Hence, although the test results have proven that the major equipments (Boiler, Turbine etc), per se, are capable of performing to the specified levels, subsequent to the PG tests, MSPGCL could not operate the Unit in a stable manner for a long time.

116. Given the above background, relaxation of stabilisation period and normative performance parameters for the generating station for the purpose of tariff is not justified and the Commission is of the opinion that the risk of such low level of operation of the generating station and under-performance should be borne by the generator. In view of this, the stabilisation period for the generating station for the period from COD has been considered as 180 days and the performance parameters like station heat rate, secondary fuel oil consumption and auxiliary consumption has been considered on the basis of norms as specified in the MERC (Terms and Conditions of Tariff) Regulations, 2005. The summary of the stabilisation period and performance parameters during the stabilisation period as considered by MSPGCL and approved by the Commission is shown in the Table below:

Parameter	Unit	MERC Tariff Regulations	MSPGCL	Approved
Stabilisation Period	Days	180	427 (up to Dec 2008)	180
SHR	kcal/kWh	2600	2797	2600
Secondary fuel oil consumption	ml/kWh	4.5	12.83 in FY 2007-08 4.50 in FY 2008-09	4.5
Auxiliary consumption	%	9.5	10.6	9.5

c. Performance Parameters post Stabilisation Period

117. The Commission has considered the normative values of the performance parameters viz., station heat rate, auxiliary consumption and secondary fuel oil consumption as specified in the MERC (Terms and Conditions of Tariff) Regulations,

2005, for post stabilisation period. The summary of the performance parameters post stabilisation period as considered by MSPGCL and approved by the Commission is shown in the Table below:

Parameter	Unit	MERC Tariff Regulations	MSPGCL*	Approved
SHR	kcal/kWh	2500	2500	2500
Secondary fuel oil consumption	ml/kWh	2	2	2
Auxiliary consumption	%	9	9	9

Note: MSPGCL has also considered the normative performance parameters post stabilisation period (however, stabilisation period requested by MSPGCL is for 427 days as against 180 days stipulated in the Tariff Regulations)

d. Transit Loss

118. In accordance with Regulation 33.1.6 of the MERC (Terms and Conditions of Tariff) Regulations, 2005, allowable transit losses for coal based generating stations, as a percentage of quantity of coal dispatched by the coal supply company during the month, is 0.8% for non-pit head generating stations. Accordingly, the Commission has considered the same in its tariff computations.

XII. Variable Cost

A. Impact of Performance parameters on fuel cost in FY 2007-08 and FY 2009-10

119. The Commission has re-computed the fuel cost based on the performance parameters as approved by the Commission in this Order, as shown in the Table below:

Parameter	Unit	MERC Tariff Regulations	Projected by MSPGCL	Approved by the Commission
Stabilisation Period	Days	180.00	427 (up to Dec 08)	180.00
SHR	kcal/kWh	2,600.00	2,797.00	2600 (during stabilisation period)
				2500 (after stabilisation period
Sec. oil consumption	ml/kWh	4.50	12.83 in FY 2007-08	4.5 (during stabilisation period)
			4.50 in FY 2008-09	2 (after stabilisation period
Auxiliary consumption	%	9.50	10.60	9.5 (during stabilisation period)
				9 (after stabilisation period
Fuel cost (2007-08)	Rs. Crore	89.32*	104.90	89.41

Parameter	Unit	MERC Tariff Regulations	Projected by MSPGCL	Approved by the Commission
Fuel cost (2008-09)	Rs. Crore	266.15	294.00	267.13

*Note: impact as submitted by MSPGCL

B. Fuel Price and Fuel Calorific Value for FY 2009-10

120. For FY 2009-10, in accordance with the practice adopted in Tariff Orders issued for MSPGCL, the Commission has considered the price of fuel equivalent to average actual fuel price and the average calorific value of fuel for the last quarter of the previous year, i.e., from January 2009 to March 2009, as submitted by MSPGCL in FAC submissions. The Commission has not considered any escalation in fuel prices as the adjustments for variation in fuel prices is allowed under the Fuel Adjustment Cost (FAC) mechanism. Further, the Commission has considered the utilisation of washed coal and imported coal as proposed by MSPGCL in its Petition. The summary of fuel prices and calorific value as projected by MSPGCL and as considered by the Commission for FY 2009-10 is given in the Tables below:

Table: Summary of Fuel Price and Calorific Value for Indian Coal

Station	MSPGCL		Approved	
	Price	Calorific Value	Price	Calorific Value
	Rs/MT	kcal/kg	Rs/MT	kcal/kg
Parli Unit No. 6	2,077.04	3,400.00	1,875.09	3,975.85

Table: Summary of Fuel Price and Calorific Value for Washed Coal

Station	MSPGCL		Approved	
	Price	Calorific Value	Price	Calorific Value
	Rs/MT	kcal/kg	Rs/MT	kcal/kg
Parli Unit No. 6	2,324.16	4,000.00	2,154.05	4,774.37

Table: Summary of Fuel Price and Calorific Value for Secondary Fuels as approved by the Commission

Station	FO			LDO		
	Sp. Cons.	Price	Cal. Value	Sp. Cons.	Price	Cal. Value
	ml/kWh	Rs/KL	kcal/kg	ml/kWh	Rs/KL	kcal/kg
Parli Unit No. 6	1.60	19,159.08	10,110.96	0.40	38,142.30	10,422.26

C. Cost of Lubricants, Other Consumables and Water Charges, etc.

121. MSPGCL, in its Petition, submitted that it has considered the cost of lubricants, chemicals and water charges, etc., as part of energy charge. The Commission has also included the cost of these other items, viz., lubricants, chemicals and water charges,

etc., as part of variable costs while estimating the energy charges. The Commission has considered these costs for FY 2009-10 as submitted by MSPGCL. The summary of the cost of these other charges considered by MSPGCL and the Commission is given in the following Table:

Table: Summary of Other Variable Costs and Adjustments for FY 2009-10 (Rs Crore)

Station	MSPGCL	Approved
Parli Unit No. 6	11.52	11.52

The variation in other variable costs and adjustments shall not be considered as part of FAC computations and the FAC computations should only include the variations in fuel prices. Any variations in other charges and adjustments shall be considered at the time of truing up.

D. Rate of Energy Charge

122. Based on performance parameters, i.e., heat rate and auxiliary consumption approved for FY 2009-10 and considering the fuel prices and fuel calorific value as discussed in above paragraphs, the rate of energy charge for Parli Unit No. 6 for FY 2009-10 as approved by the Commission is given in the Table below:

Table: Rate of Energy Charge for FY 2009-10

Station	Fuel Cost excluding other fuel charges (Rs Crore)		Other Variable Cost (Rs Crore)		Rate of Energy Charge to be considered for FAC (Rs/kWh)		Rate of Energy Charge (Rs/kWh)	
	MSPGCL	Approved	MSPGCL	Approved	MSPGCL	Approved	MSPGCL	Approved
Parli Unit No. 6	267.31	207.21	11.52	11.52	1.68	1.30	1.75	1.37

XIII. Incentive

123. MSPGCL would be entitled to earn incentives in accordance with Regulation 37.1 of the MERC (Terms and Conditions of Tariff) Regulations, 2005, wherein incentive is payable at a flat rate of 25 paise/kWh for ex-bus actual energy corresponding to actual generation in excess of ex-bus energy corresponding to target PLF.

XIV. Annual Fixed Charges (AFC)

124. Based on the above principles, the approved AFC is shown in the Table below:

Rs. Crore

Particulars	FY 2007-08*		FY 2008-09		FY 2009-10	
	MSPGCL	Approved	MSPGCL	Approved	MSPGCL	Approved
Depreciation	21.55	17.04	51.98	40.89	53.19	40.89
Advance Against Depreciation	66.47	0.00	62.01	0.00	60.80	0.00
Operation & Maintenance Expenses	12.35	12.35	31.24	31.24	32.92	33.13
Interest on Long Term Loan	49.30	39.00	108.97	86.07	104.25	81.76
Interest on Working Capital	7.78	5.27	18.00	14.58	17.60	12.67
Return on Equity Capital	23.74	18.37	61.48	44.08	68.87	44.08
Income tax paid/payable	2.69	0.00	6.97	0.00	7.80	0.00
Total Annual Fixed Charges	**183.88**	**92.03**	**340.64**	**216.85**	**345.42**	**212.52**

*Note: For FY 2007-08, expenses have been approved for 5 months i.e., for the period post COD

With this Order, the Commission disposes of MSPGCL's Petition in Case No. 26 of 2008.

Sd/- Sd/-

(S.B. Kulkarni) (V.P. Raja)

Member Chairman

(Sanjay Sethi)
Secretary, MERC