



**MAHARASHTRA STATE POWER
GENERATION COMPANY LIMITED
(MSPGCL/MAHAGENCO)**

**PETITION FOR CAPITAL COST AND TARIFF
DETERMINATION FOR FY 2012-13 TO FY 2015-
16 INCLUDING TRUE UP FOR FY 2012-13 & FY
2013-14 OF BHUSAWAL UNIT # 4&5
(CASE NO. 201 OF 2014)**

EXECUTIVE SUMMARY

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1. Overview of the Project

MSPGCL in its endeavor to increase the power generating capacity in the state of Maharashtra, commissioned Bhusawal Unit-4 on November 16, 2012 and Bhusawal Unit 5 on January 3, 2014, with an installed capacity of 500 MW each. Power generated from this unit shall be supplied to MSEDCL.

MSPGCL has filed this Petition before MERC to seek approval of the Capital cost of Bhusawal Unit 4 & 5 and for determination of ARR and Tariff of Bhusawal Unit 4 for FY 2012-13 and FY 2013-14 (until the commissioning of Unit 5) and ARR and Tariff for Bhusawal Unit 4 &5 in a consolidated manner (subsequent to commissioning of unit 5) for FY 2013-14 to FY 2015-16 under the enabling provisions of Section 61, 62 and 86(1) (a)(b) of Electricity Act, 2003 and Part E of the MERC (Terms and Conditions of Tariff) Regulations, 2005 and Part F of MERC MYT Regulations, 2011.

2. Capital Cost of the Project

To ensure transparency and competitiveness of cost, MSPGCL had invited tenders through Competitive Bidding process for placement of orders for the Main Plant packages of this project along with the associated auxiliaries and sub-systems. Pursuant to such process, the contract for supply and installation of Main Plant & Equipment was awarded to M/s BHEL. The contract for Balance of Plant (BoP) and civil and structural works of the main plant was awarded to M/s Tata Projects Limited through domestic competitive bidding. Remaining small non-critical Civil Contracts were awarded to other Contractors for construction of railway siding, staff quarters etc.

As per the Tariff Regulations, actual expenditure incurred up to the Commercial Operation date (COD) of the unit shall form the basis of the capital cost of the project subject to prudence check by the Hon'ble Commission. The overall break-up of capital cost of the project as on COD of respective units is provided in the table below:

Capital Cost Element	Capital Cost (Rs. Crore)		
	Unit 4	Unit 5	Unit 4&5
	As on November 16, 2012	As on January 3, 2014	As on January 3, 2014
Land and Site Development	41.51	5.83	47.33
BTG	1369.09	1386.98	2756.08
BOP	771.27	160.57	931.84

Capital Cost Element	Capital Cost (Rs. Crore)		
	Unit 4	Unit 5	Unit 4&5
	As on November 16, 2012	As on January 3, 2014	As on January 3, 2014
Civil Works	750.78	362.43	1113.21
Start-up Fuel	-36.93*	67.00	30.08
Overheads	69.67	64.79	134.45
C&I	61.85	25.09	86.94
IDC	952.95	677.46	1630.40
Total	3980.19	2750.15	6730.33

*Revenue from infirm power being higher than the actual expenses.

3. Financing Plan

MSPGCL had tied up common long term debt from Rural Electrification Corporation for development of the new units. Further, Government of Maharashtra (GoM) provided an equity contribution of Rs. 1292.99 crore. The overall deployment of funds as on COD of the project is shown in the table below:

Parameter	As on CoD of Unit 4		As on CoD of Unit 5		Total	
	Amount (Rs Cr.)	%	Amount (Rs Cr.)	%	Amount (Rs Cr.)	%
Debt	3184.15	80%	1764.56	78.86%	4948.71	79.59%
Equity from GoM	796.04	20%	473.05	21.14%	1269.09**	20.41%
Undischarged /unfunded Liabilities	0.00		512.53*		512.53*	
Total	3980.19	100%	2750.14	100%	6730.33	100%

* No funding is considered towards undischarged/unfunded Liabilities of Rs 512.53 crore as on the COD of Unit-5. It is considered that such liabilities excluding the retention amount against probable Liquidated damages (around Rs 339.54 crore) would be discharged in 2015-16.

** While the actual equity disbursed by GoM is Rs. 1292.99 Crore, only Rs. 1269.09 Crore has been utilized. Balance amount of Rs. 23.90 Crore is being utilized to fund additional capitalization post COD.

4. Project timeline and levy of Liquidated Damages

MSPGCL had envisaged an aggressive timeline of 43 months for trial operations of Unit 4 and 47 months for Unit-5. As per the contract, M/s BHEL agreed for the following timelines from the LOA date for Project execution:

	Bhusawal Unit 4	Bhusawal Unit 5
Unit Synchronization	40 Months	44 Months
Trial Operation	43 Months	47 Months

The actual trial operations of the units got extended beyond the envisaged schedule on account of reasons elaborated subsequently in the petition. As per the provisions of the contract,

MSPGCL has retained payments of its contractors against possible Liquidated damages to the extent of Rs. 339.54 crore as on COD of Unit -5 towards such extension in project completion schedule.

Aggregate Revenue Requirement for 2012-13 to 2015-16

A. Fixed Charges:

Fixed Charges have been calculated considering a capital cost of Rs 3980.19 Crore for Bhusawal Unit 4 (COD) and Rs 2750.14 crore for Bhusawal Unit 5 (COD). It may be appreciated that two units in a generating station share certain common facilities viz. water treatment plant, CHP, Ash handling system, Laboratory equipment etc. However, declaration of COD of first unit essentially requires that all facilities should be operational. It is for this reason that expenditure on such common facilities of Rs. 1504.51 crores is capitalized along with the capital cost of Bhusawal Unit 4 in the books of accounts. (Details of shared facilities are attached as **Annexure 2**)

Further additional capitalization as proposed in the formats has been considered in the tariff calculations. No funding is considered towards undischarged/unfunded Liabilities of Rs 512.53 crore as on the COD of Unit-5. It is considered that such liabilities excluding the retention amount against probable Liquidated damages (around Rs 339.54 crore) would be discharged in 2015-16. The fixed charge components have been worked out in the following manner:

- a. O & M Expenses: Normative (Rs lakhs /MW as per prevailing regulations as already approved for Khaperkheda Unit 5 (500 MW)
- b. Depreciation: as per rates defined in the depreciation schedule in tariff regulations.
- c. Interest on long term loans: Actual interest expenses as per Tariff Regulations 2005 and normative interest as per MYT Regulations 2011
- d. Interest on Working capital: as per norms and applying normative interest rate (SBI PLR as on date of filing of petition).
- e. Return on Equity: 14% in FY 2012-13 and 15.5% thereafter on opening equity base for the years as per Regulations
- f. Income Tax: No Tax liability assumed for 2012-13 (considered in True-up for MSPGCL for 2012-13 in Case 122 of 2014). Tax liability from 2013-14 onwards assumed at MAT rate of 20.01%.

B. Energy Charges

At the time of CoD of Bhusawal Unit 4, MSPGCL had a MoU of 2.7744 MMT with M/s MCL for procurement of domestic coal. Subsequently on Jan 31, 2013, MSPGCL signed FSA with MCL for supply of 4.624 MMT of coal of around 4000 kcal/kg of Gross calorific value. The quantum of FSA is sufficient to operate the plant at 86 % PLF. However, post signing of FSA, the overall supply of coal is around 40 % of the assured quantum with a much inferior GCV which is barely sufficient to operate the station at 34.57 % PLF.

In order to improve the performance of the stations, MSPGCL has entered into agreement with M/s Knowledge infrastructure Pvt. Ltd on Aug 31, 2013 for supply of 1.148 MMT of imported coal. MSPGCL has recently entered into fresh contracts for supply of imported coal and accordingly an overall blending of 25% of imported coal by heat content is considered in FY 2015-16 in order to meet the normative parameters.

The summary of ARR projected for FY 2012-13 to FY 2015-16 is as provided in the table below:

Particulars	Unit	FY 13	FY 14	FY 15	FY 16
		Unit 4	Unit 4&5	Unit 4&5	Unit 4&5
		Actuals	Actuals	Estimates	Projections
Depreciation	Rs Cr.	51.69	237.78	354.44	361.31
Advance Against Depreciation	Rs Cr.	0.00	Not Applicable		
Operations & Maintenance Expenses	Rs Cr.	26.54	67.82	190.84	206.78
Interest on Long Term Loan	Rs Cr.	139.20	427.32	576.45	554.87
Interest on Working Capital	Rs Cr.	20.00	64.95	103.20	110.09
Return on Equity Capital	Rs Cr.	41.52	141.06	200.41	214.50
Income Tax	Rs Cr.	0.00	0.00	42.01	44.96
Less Other Income	Rs Cr.	0.13	3.85	6.56	4.87
Total Fixed Charges	Rs Cr.	278.82	935.08	1460.79	1487.64
Total Variable Charges	Rs Cr.	299.93	901.70	1627.97	1790.68
Total charges	Rs Cr.	578.75	1836.78	3088.76	3278.32

MSPGCL requests the Hon'ble Commission to kindly consider the above submissions and approve the capital cost and tariff as per the rationale submitted in the Petition.

5. True-up for 2012-13 and 2013-14

As submitted in the table above the actual expenses for 2012-13 and 2013-14 are Rs 578.75 crore and Rs 1836.78 crore respectively. For the purpose of true-up, MSPGCL has considered that the actual capital cost would be approved by the Hon'ble Commission. Given this assumption, the

Regulations would consider the sharing of gains and losses on account of O &M expenses and fuel cost and correspondingly the interest on working capital would get worked out on a normative basis. Further, MSPGCL has billed invoices to MSEDCL against sale of power for Rs 449.32 crore and Rs 1332.53 crore for 2012-13 and 2013-14 respectively.

Considering the above, the overall revenue gap for the previous two years after considering sharing of gains and losses and considering probable disallowance in recovery of fixed cost due to deviation from normative availability is provided below:

Table: True-up for 2012-13 and 2013-14 (Rs Crore)

Particulars	2012-13				2013-14			
	Actual	Normative	Deviation	Net Entitlement after sharing of gains/losses	Actual	Normative	Deviation	Net Entitlement after sharing of gains/losses
Depreciation	51.69	51.69	0.00	51.69	237.78	237.78	0.00	237.78
AAD	0.00	0.00	0.00	0.00	0	0	0.00	0.00
O & M	26.54	30.29	3.75	29.04	67.82	109.3	41.48	95.47
Interest on Loan	139.20	139.20	0.00	139.20	427.32	427.32	0.00	427.32
IOWC	20.00	19.88		19.88	64.95	60.04	0.00	60.04
ROE	41.52	41.52	0.00	41.52	141.06	141.06	0.00	141.06
Tax	0.00	0.00	0.00	0.00	0	0	0.00	0.00
Less: Other Income	0.13	0.13	0.00	0.13	3.85	3.85	0.00	3.85
Fixed Charges	278.82	282.45	3.63	281.20	935.05	971.65	36.60	957.82
Energy Charges	299.93	294.00 ¹	-5.93	295.98	901.7	803.85 ¹	-97.85	836.47
Total ARR	578.75	576.45	-2.30	577.18	1836.78	1775.50	-61.25	1794.29
Fixed Cost Disallowance due to low availability¹				71.78				286.00
Net ARR				505.40				1508.29
Revenue earned during the year.				449.32				1332.53

Gap				-56.08				-175.76
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¹ Worked out on normative basis without considering the reasons for deviation viz. coal shortages and excessive monsoon in Khandesh region as detailed in the petition.

6. Prayers

The Petitioner humbly prays to the Hon'ble Commission to:

- a. Approve the Capital cost and tariff of Bhusawal Unit 4 and 5 as computed for FY 2012-13 to FY 2015-16.
- b. Approve the true-up for 2012-13 and 2013-14 considering the issues of coal/heat realisation for FY 12-13 and effects of abnormal rain submitted by MSPGCL in its submissions
- c. Allow the carrying cost for delay in recovery of provisional charges from MSEDCL as detailed in the petition.
- d. Allow the carrying cost on the final true-up amounts for 2012-13 and 2013-14 till the actual recovery of the aforesaid amount from MSEDCL.
- e. Condone any shortcomings in the petition and allow the Petitioner to submit additional information as may be required by the Commission.
- f. Allow MSPGCL to recover difference between approved tariff vis-à-vis the provisional tariff in three monthly installments from the date of order from MSEDCL.
- g. Issue appropriate directives to MSEDCL for payment of the approved charges as prayed by MSPGCL.
- h. Provide the Petitioner with the workable excel model used to determine the final tariff for the unit.
- i. Issue any such further orders as the Commission may deem fit.