

MADHYA PRADESH ELECTRICITY REGULATORY COMMISSION
5th Floor, "Metro Plaza", E-5, Arera Colony, Bittan Market, Bhopal - 462016



Petition No.02/2013

PRESENT:

Rakesh Sahni, Chairman

A. B. Bajpai, Member

Alok Gupta, Member

IN THE MATTER OF:

Determination of Generation Tariff for the control period FY 2013-14 to FY 2015-16 based on the tariff application filed by Madhya Pradesh Power Generating Company Limited (MPPGCL), Jabalpur under Section 62 and 86(1)(a) of the Electricity Act, 2003.

M. P. Power Generating Company Ltd, Jabalpur

PETITIONER

Vs.

- 1. M. P. Power Management Company Ltd., Jabalpur**
- 2. M. P. Power Transmission Co. Ltd., Jabalpur**
- 3. Rajasthan Rajya Vidyut Prasaran Nigam Ltd., Jaipur**
- 4. Uttar Pradesh Power Corporation Ltd., Lucknow**
- 5. MSEB (Holding Co) & Maharashtra State Transmission Co. Ltd., Mumbai**

RESPONDENTS

ORDER

(Passed on this day of 1st April, 2013)

1. Madhya Pradesh Electricity Regulatory Commission (hereinafter called “the Commission”) issued MPERC (Terms and Conditions for determination of Generation Tariff) Regulations, 2012 { RG-26(II) of 2012} (hereinafter referred to as “the Regulations”) for the new control period i.e. FY 2013-14 to FY 2015-16. These were notified in the official gazette on 28th December, 2012.
2. M.P. Power Generating Co.Ltd. filed the proposal of generation tariff for the new control period of FY 2013-14 to FY 2015-16 on 10th January, 2013. The Commission has scrutinized the petition filed by Madhya Pradesh Power Generating Company Limited ((hereinafter called “MPPGCL” or “Generating Company” or “the petitioner”) based on the principles, methodology and the norms specified in the MPERC (Terms & Conditions for determination of Generation Tariff) Regulations, 2012.
3. Motion hearing in the matter held on 5th February, 2013. Vide Commission’s daily order dated 6th February, 2013, the petition was admitted and the petitioner was directed to serve copy of the petition on all respondents and publish the gist of the petition in newspapers in Hindi and English version inviting comments/suggestions from various stake holders. The petitioner was also directed to submit additional information on several issues along with all supporting data/documents by 20th February, 2013 for further scrutiny of the petition.
4. In response, vide letter dated 20th February, 2013, MPPGCL submitted its response to the issues raised by the Commission in its daily order dated 6th February, 2013. The petitioner further filed supplementary submissions through its letter dated 7th March, 2013 in response to the issues raised by the Commission in its letter dated 27th February, 2013.
5. The public hearing in the matter was conducted on 12th March, 2013 in the office of the Commission. The Commission has considered the documents available on records and additional information filed by the petitioner while finalizing this order.

6. The summary of annual capacity (fixed) charges and energy (variable) charges filed by the petitioner are given below :

Table : 1 Station-wise generation cost filed in the petition

Name of Power House	Fixed Cost (in Rs. Crores)			Energy Charge (Paise/Unit) FY 14 - FY 16
	FY 13-14	FY 14-15	FY 15-16	
ATPS PH-II	124.19	128.01	132.29	142.233
ATPS PH-III	219.47	216.68	214.19	99.919
STPS Complex	440.73	461.34	483.99	171.127
SGTPS PH-I & II	499.04	508.74	523.96	279.938
SGTPS PH-III	492.66	486.10	480.13	252.839
Thermal Total	1776.10	1800.87	1834.56	
G. Sagar	25.64	27.58	29.61	-
Pench	27.96	29.46	31.10	-
Birsinghpur	7.61	7.85	8.11	-
Bansagar PH-I, II & III	200.05	201.30	206.14	-
Bansagar PH-IV	21.60	21.29	20.95	-
Madhikedha	41.52	41.02	40.57	-
Baroi	32.16	33.98	35.87	-
Rajghat	16.74	17.34	17.98	-
Hydro Total	373.27	379.81	390.33	-
Total	2149.37	2180.68	2224.89	

Table : 2 Element-wise generation cost filed in the petition: (in Rs. Cr.)

	Elements	FY 13-14	FY 14-15	FY 15-16
Fuel cost	Coal Cost	3882.45	3882.45	3893.09
Capacity Charges	Return on Equity	455.26	455.26	455.26
	Depreciation	353.87	353.87	353.87
	Interest & Finance Charges	217.18	187.03	164.83
	O&M Expenses	644.94	696.04	751.35
	Compensation Allowance	11.63	13.31	14.36
	Special Allowance	23.44	25.30	27.30
	Interest Charges on Working	244.77	247.32	250.79
	Cost of Secondary Fuel Oil	149.51	149.51	149.82
	Other Charges	48.77	53.03	57.31
	Annual Capacity Charges	2149.37	2180.68	2224.89

7. As informed by the petitioner, the Unit No.3 (62.5MW) of STPS, Sarni PH-I has been de-commissioned on 1st October, 2012. Therefore, the gross fixed assets and equity of this unit as filed by the petitioner is not considered in this order and the same is deducted from the gross fixed asset and equity of STPS, Sarni Complex.
8. The petitioner has also filed the assets addition during FY09-10 to FY11-12 against some need based R&M works in old generating units. In this regard, last proviso under Regulation 17.2 of the Regulations, 2012 is referred to which provides that the capital cost admitted as on 31.03.2013 and projected additional capitalization during the control

period shall be the basis for determination of tariff. The assets addition filed by the petitioner for FY2009-10 to FY2011-12 are yet to be admitted by the Commission after prudence check. Therefore, the gross fixed assets and other capital cost components for old power stations (admitted under the true-up order for FY2009-10) are considered in this order as per the last true-up order for FY2009-10 issued on 23rd March, 2012. The additional capitalization due to need based R&M in old power stations during FY09-10 to FY11-12 shall be considered separately by the Commission after prudence check as per provisions under relevant Regulations while undertaking trueing up exercise for the respective year. However, for new generating units (like ATPS PH-III, SGTPS PH-III and Madhikheda HPS) the capital cost as on 31st March, 2012 as admitted by the Commission in its final tariff orders is considered in this order. The petitioner has not filed any projected additional capitalization during the tariff period.

9. While determining the generation tariff in this order, the Commission has followed the principles and methodology on certain issues as decided by the Hon'ble Appellate Tribunal for Electricity in its judgment passed on 21.04.2011 and 30.09.2011 in Appeal No. 24/2010 and 105/2010 respectively.
10. Based on the above, the summary of Annual Capacity (fixed) Charges and Energy (variable) Charges approved by the Commission for the control period FY 2013-14 to FY 2015-16 is as given below:

Table : 3 Head-wise Annual Capacity (Fixed) Charges allowed in this order

Sr. No.	Particular	AFC Allowed (in Rs. Cr.)		
		FY2013-14	FY2014-15	FY2015-16
1	Return on Equity	339.71	339.71	339.71
2	Interest on Loan (including interest on excess equity)	190.64	170.76	151.91
3	Depreciation	349.37	284.92	268.36
4	O& M Expenses	631.43	681.46	735.61
5	Cost of sec. fuel oil	145.02	145.02	145.02
6	Compensation /Special Allow.	30.38	33.55	36.21
7	Interest on working capital	240.58	241.76	244.32
Total Capacity (fixed) Charges		1927.13	1897.18	1921.13

Table : 4 Power station-wise Capacity (Fixed) charges allowed in this order

Sr. No.	Particular	AFC Allowed (in Rs. Cr.)		
		FY2013-14	FY2014-15	FY2015-16
1	ATPS Chachai (PH-II)	107.93	112.62	117.72
2	ATPS Chachai (PH-III)	206.50	204.47	202.70
3	STPS Sarni Complex	420.35	431.09	436.45
4	SGTPS (PH-I &II)	467.93	424.82	439.81
5	SGTPS (PH-III) 500 MW	429.63	423.81	418.41
6	Gandhi Sagar	14.35	15.20	16.38
7	Pench	25.08	26.59	28.22
8	Rajghat	13.40	13.82	14.28
9	Bargi	17.83	18.68	18.52
10	Bansagar (I to III)	167.78	170.53	174.67
11	Bansagar-IV (Jhinna)	14.76	14.45	14.16
12	Madhikheda	35.02	34.37	33.77
13	Birsingpur	6.56	6.75	6.03
14	Total	1927.13	1897.18	1921.13

Table : 5 Energy (Variable) Charges determined in this order (Rs./Unit)

Sr. No.	Power Station	Energy Charges at ex-bus for FY13-14 to FY15-16 (Rs./Unit)
1	ATPS PH-II	1.422
2	ATPS PH-III	0.988
3	STPS, Complex	1.711
4	SGTPS PH-I&II	2.799
5	SGTPS PH-III	2.528

11. The Commission issued the tariff order in respect of Bansagar-IV (Jhinna) allowing recovery of charges on provisional basis. The petition for determination of final generation tariff of this power station has been filed by the petitioner on 29th January, 2013 which is yet to be admitted by the Commission. Therefore, the petitioner is allowed to recover only 95% of the annual capacity (fixed) charges determined in this order on the basis of MPERC (Terms and Conditions for determination of Generation Tariff) Regulations, 2012 on provisional basis subject to retrospective adjustment on determination of final tariff by the Commission.
12. In addition to the above, the petitioner is allowed to recover the actual fee paid/to be paid by the petitioner to MPERC for each year of the control period for determination of Multi Year Generation Tariff, water charges for thermal and hydel power stations as filed in the petition subject to true-up on actual basis and other charges being levied by statutory authorities from the beneficiaries on pro-rata basis as per the Regulations, 2012.
13. The recovery of annual capacity (fixed) charges shall be made by the petitioner in accordance with Regulations 40.2 and 40.3 in case of thermal power stations and Regulation 53 in case of hydro generating stations of the Regulations, 2012. The recovery of energy charges shall be made in accordance with Regulations 41.2 and 41.3 in case of thermal power stations and Regulations 53.4 to 53.7 of the Regulations, 2012 in case of hydro power stations.
14. In exercise of the powers vested in it under Section 64 of the Electricity Act, 2003, the Commission directs that the generation tariff determined in this order shall be applicable from 1st April, 2013 and will continue to be operative till 31st March, 2016 under Multi Year Tariff Principles. The petitioner must take steps to implement this order after giving public notice in accordance to Regulation 1.30 of MPERC (Details to be furnished and fee payable by licensee or generating company for determination of tariff and manner of making application) Regulations, 2004 and its amendments and must also provide information to the Commission in support of having complied with this order.
15. Ordered as above read with attached detailed reasons and grounds.

(Alok Gupta)
Member

(A. B. Bajpai)
Member

(Rakesh Sahni)
Chairman

Date: 1st April, 2013

Place: Bhopal

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CHAPTER 1

Background of the order

- 1.1. This order relates to petition number 02 of 2013 filed by the Madhya Pradesh Power Generating Company Limited (MPPGCL) for determination of generation tariff for FY 2013-14 to FY 2015-16 under multi year tariff principles. MPPGCL is the owner of the generating plants previously owned by MPSEB.

The petitioner broadly submitted the following:

- 1.2. *“The petitioner is wholly owned company of Government of M.P engaged in generation of electricity in Madhya Pradesh. It is a successor entity of erstwhile Madhya Pradesh State Electricity Board (MPSEB).*
- 1.3. *M.P. Power Management Co.Ltd. (MPPMCL) and the three DISCOMS entered into a management and corporate functions agreement on 05.06.2012, whereby the three DISCOMS engaged MPPMCL to represent them in all the proceedings relating to power procurement and tariff petitions filed or to be defended before CERC, MPERC and other regulatory authorities, Appellate Tribunals, High Courts, Supreme Court and CEA etc.. Therefore, the three Discoms have not been made as respondents separately.*
- 1.4. *Rajasthan Rajya Vidyut Prasaran Nigam, (RRVPL), Jaipur, (hereinafter referred as Respondent No. 3) has 40% share in the PH-1 of STPS Sarni and 50% share in Gandhi Sagar Hydro Station operated by MPPGCL. At the same time MPPGCL has 50% share in the Ranapratap Sagar Hydro Power Station and Jawahar Sagar Hydro Power Station operated by the Respondent No.3. Similarly Uttar Pradesh Power Corporation Ltd (UPPCL), Lucknow (hereinafter referred as Respondent No.4) and MSEB (Holding Co) & Maharashtra State Transmission Co. Ltd., Mumbai (hereinafter referred as Respondent No.5) have 50% share in Rajghat Hydro Power Station and 33.3% share in Pench Hydro Power Station operated by MPPGCL respectively.*
- 1.5. *GoMP vide its notification dated 3rd June, 2006 provided that MP Tradeco now MP Power Management Company Ltd shall purchase entire power from the Genco at the tariff to be determined by MPERC.*
- 1.6. *The subject petition is filed under Section 62 of Electricity Act, 2003 which provides determination of tariff by the Appropriate Commission for supply of electricity by a Generating Company. The Commission is vested with the jurisdiction to determine the tariff of Generating Companies owned or controlled by a State Government and other Generating Companies as envisaged under Section 86(1)(a) of Electricity Act 2003*
- 1.7. *The Commission notified Madhya Pradesh Electricity Regulatory Commission (Terms & Conditions for determination of Generation Tariff) Regulation 2012 on 12th December, 2012. These Regulations are on multiyear tariff principles and incorporated norms of operation for control period of FY 2013-14 to FY 2015-16. MPERC vide its*

letter No. MPERC/D(T)/2012/3533 Bhopal dated 26.12.2012 desired to file the Multi Year Tariff petition for FY 2013-14 to FY 2015-16 in accordance with the new Regulations by 10th January, 2013. This petition is being filed in compliance to the Commission's above directives.

- 1.8. *The petition has been prepared on the terms & conditions of tariff notified by the Commission vide MPERC (Terms & Conditions for determination of Generation Tariff) (Revision-II) Regulations, 2012 {RG-26(II) of 2012}.*
- 1.9. *MPPGCL has not paid any tax in FY11-12, however MPPGCL has been performing progressively and reducing its financial losses considerably and the company is likely to pay MAT (@20.008%) in FY12-13. Accordingly the RoE for FY 2013-14, FY 2014-15 & FY 2015-16 has been computed on the Base Rate grossed up to 19.38%.*
- 1.10. *For 500 MW, SGTPS, Unit No. 5, the Gross block of Fixed Assets has been considered as on 31.03.2012. Further a petition for determination of final generation tariff of this unit is already under consideration of the Commission. The additional capitalization beyond 01.04.2012 for this unit is estimated to Rs.85.35 Crores on account of deferred works and liabilities covered under the original scope of work. Its impact on the Fixed charges shall be claimed separately during True up Petition on finalization of capital cost by the Commission.*
- 1.11. *The Gross Block of fixed assets of Madhikheda HPS and Bansagar IV (Jhinna) have been taken from the Books of Account as on 31.03.2012. Accordingly, the power station-wise capacity (fixed) charges and energy are filed.”*
- 1.12. The petitioner prayed the following:
 - a) *To determine the generation tariff of power stations of MPPGCL for FY2013-14 to FY 2015-16.*
 - b) *To permit additional recovery on actual payment basis, on account of levies, taxes, duties, service tax, SLDC charges, Pension & Terminal Benefits as and when applicable, Cost of Chemicals & Consumables, Arrears to be paid to employees, Publication expenses etc., as and when paid.*
 - c) *To permit additional recovery on actual payment basis, in case due to any change in the Government policy or otherwise if any tax liability arises during the year*

Procedural History

- 1.13 Motion hearing in the matter was held on 5th February, 2013. Vide Commission's daily order dated 6th February, 2013, the petition was admitted and the petitioner was directed to serve copy of the petition on all respondents in the matter. On preliminary scrutiny of the petition, the petitioner was directed to submit additional information on several issues along with all supporting data/documents by 20th February, 2013.

1.14 In response, vide letter No.07-12/CS-MPPGCL/MPERC/P.No.02 of 2013/222 dated 20th February, 2013 the petitioner submitted its response. The response of the petitioner vis-à-vis issues raised by the Commission is given as below :

- i. **Issue : “ The subject petition is based on the annual audited accounts for FY 2011-12, which are still not filed by the petitioner. The annual audited accounts for FY 2011-12 be filed at the earliest for further scrutiny of the petition.”**

MPPGCL’s response

A copy of audited Annual Statement of Accounts of MPPGCL for FY 2011-12 is filed herewith (Annexure-1).

- ii. **Issue : “Vide Commission’s letter dated 01.01.2013, the petitioner was specifically asked to file the power station wise Asset-cum-Depreciation Register for FY 2011-12 and onwards with the tariff petition for new control period. These registers be filed with the Commission for scrutiny of depreciation claimed in the petition.”**

MPPGCL’s response

The power station wise Asset-Cum-Depreciation registers have already been submitted before the Commission on 05.02.2013 vide letter No. 07-12/CS-MPPGCL/MPERC/MYT Petition –FY14 toFY16/138 dated 04.02.2013.

- iii. **Issue : “With regard to the additional capitalization filed in the petition, the petitioner is required to submit the details of additional capitalization made in FY 2009-10 to FY 2011-12 as per Regulation 20 of the Regulations, 2012 and also to file a comprehensive reply on the following issues with all relevant supporting documents in favour of its claim for additional capitalization”:**

- Whether the addition of asset is on account of (a) to (g) of the reasons in Regulation 20 of the Regulation.

MPPGCL’s response

Yes

- Whether the petitioner has taken due care in writing off the gross value of the original asset from the original cost in case of any expenditure on replacement of old asset.

MPPGCL’s response

No expenditure booked on replacement of old assets.

- Whether the effect of writing off the gross value of the original asset from the original cost on replacement of the old asset has been considered in the asset registers.

MPPGCL’s response

Not applicable.

- The year-wise schemes of asset addition with full details for each work along with approved estimated completion cost.
- The nature of additional works executed in each unit with its cost.

MPPGCL's response

- *Year wise and Power House wise details of asset addition and nature of additional works for projects other than newly commissioned power projects (210 MW ATPS, 500 MW SGTPS, Madhikheda HPS & Bansagar PH-4 HPS) which have already been submitted to the Commission with their respective Final Tariff petitions.*
- **The approval, if accorded by any competent authority.**

MPPGCL's response

Approvals of competent authority are enclosed with respective loan agreements as per reply to para 4(v).

- **The details of cost benefit earned for each need based R&M work.**

MPPGCL's response

Works carried out were essential to efficiently run the power house therefore benefit earned is not measurable.

- iv. **Issue : “The petitioner in Para 8.2 of the petition has filed the power station-wise details of total equity addition as on 01.04.2013 without providing the year-wise break-up of the same. Therefore, the petitioner is required to file the year-wise break-up of the aforesaid information as provided for interest and finance charges in para 9.2 of the petition.”**

MPPGCL's response

Year-wise and Power house wise break-up of equity addition as on 01.04.2012 for the projects other than newly commissioned power projects is annexed (Annexure-3).

- v. **Issue: “It is observed that some of the loan schemes under additional capitalization are new. The petitioner is required to file the loan documents/agreements for new schemes along with the terms and conditions and other details of all such loans. The petitioner is also required to file the power station wise details of assets capitalized/to be capitalized against each loan.”**

MPPGCL's response

The documents/agreements pertaining to new loan schemes of PFC & GoMP other than newly commissioned power projects is annexed (Annexure-4A & 4B).The details of funding in respect of additional capitalization claimed in MYT petition for the control period FY 14 to FY 16 is annexed (Annexure-4C).

- vi. **Issue : “With regard to the new loans, the petitioner is required to file the scheme wise details like lending agency, period of loan, date and amount of sanction, year-wise drawal and balances, details of the assets created and capitalized in books of accounts for each loan.”**

MPPGCL's response

The details of new loans in respect of lending agency, period of loan, date & amount of Sanction, Year wise drawls & balances & allocation to respective Power stations is annexed (Annexure-5A & 5B). Further the funding details of assets capitalized in the Audited books of accounts are annexed as (Annexure-4v).

- vii. **Issue : “Regarding the power station-wise weighted average rate of interest, the petitioner is required to file all supporting documents in respect of power station wise weighted average rate of interest claimed in the petition.”**

MPPGCL's response

The Power station wise details of weighted average rate of interest as claimed in the MYT petition for control period FY 14 to FY 16 is annexed (Annexure-6 A, 6B & 6C).

- viii. **Issue: “The petitioner is required to file the supporting documents (bills/invoices) in respect of price of (power station-wise) secondary fuel oil purchased during the month of Sept. to Nov. 2012 along with actual GCV of oil.”**

MPPGCL's response

The power station wise cost of secondary fuel oil purchased during the month of July 2012 for ATPS Chachai and Sept.2012 to Nov. 2012 for STPS Sarni and SGTPS Birsinghpur, are annexed (Annexure-7A, 7B & 7C). In regard to GCV of Secondary fuel oil it is to state that a statement depicting Schedule of Guaranteed Technical particulars confirming to BIS:1593-1982 & 1988 and IS:1460 as applicable indicating average calorific value as 10,000 Kcal/Kg of Furnace Oil (FO), High Speed Diesel (HSD) and Light Diesel Oil (LDO)

- ix. **Issue : “The basis of water charges payable to GoMP and claimed in the petition be submitted.”**

MPPGCL's response

The Water Charges payable to GoMP has been worked out on the rate notified by Water Resource Department (WRD), GoMP vide Notification No. 18-1/91/Madhyam/31 /797 dated 30.11.2010 (Annexure-9). These rates are applicable for a calendar year, hence the rate vary in a financial year i.e. From April to December and from January to March. Based on type of Source of water viz Govt. or Own source for Hydro Power Stations of MPPGCL and month wise design energy spectrum as approved by CEA for a year, which was duly informed to Hon'ble Commission vide letter No.07-12/CS-MPPGCL/MPERC/New Norms/642 dated 29.06.2012, the water charges for Hydro Power Stations have been worked out for FY 14 to FY 16 and annexed (Annexure-10).

For evaluating the cost of water, the actual water charges paid during April to Nov'2012 (8 months) have been considered for projecting water charges for entire financial year 2012-13. As is evident from the table above, the rate of water charges is changing with an increment of 20 Paise/CM for each progressive calendar year. Taking this into consideration the cost of water charges for projected energy for FY 13 has been worked out and multiplying factors have been derived

for evaluating the Rate of increase in water charges and that for increase in Energy (considering normative annual PAF), accordingly the power station wise water charges have been worked out for FY 14 , FY 15 and FY 16 which are annexed (Annexure-11).

x. Issue : “With regard to energy charges, the petitioner is required to submit the following details:

a. Reason of higher rate of coal in STPS Sarni during Nov. 2012.

MPPGCL’s response

As regard to higher rate of coal in STPS Sarni during November 2012 it is to submit that the same has been wrongly mentioned as Rs. 3831/MT due to typographical mistake which may please be read as Rs.2225/MT. However there is no change in Wt Average Rate of Coal. The corrected Table on page no. 26 of the instant petition is reproduced below:-

<i>in Rs./MT</i>				
Power Station	Sep-12	Oct-12	Nov-12	Wt. Avg. Rate of Coal
ATPS PH-II	1883	1884	1887	1884
ATPS PH-III	1337	1383	1411	1377
STPS Complex	2110	2169	2225	2176
SGTPS PH I&II	4037	3484	3831	3754

The aforesaid correction has already been incorporated in the copies of Tariff Petition forwarded for sale vide letter No. 214 dated 18.02.2013.

b. Detailed calculation sheet for arriving at the weighted average rate of coal claimed in the petition along with supporting documents.

MPPGCL’s response

The Calculation details for arriving at the Wt. Average rate of Coal for all the thermal power stations considered in the instant petition is enclosed herewith as Annexure-12.

c. Whether the transit losses were considered while calculating the rate of coal in the petition.

MPPGCL’s response

It is here to mention that the Transit & Handling Loss are not embedded in the Wt. Average price of coal as shown in Table No. 7.1.1. The impact of Transit & Handling Losses on Normative basis has however been considered in calculating the Rate of ex-bus Energy charges as shown in table No. 7.3.1 for respective thermal power stations.

d. Monthly coal analysis report for all thermal power stations indicating the wt. average GCV of coal for the respective month.

MPPGCL's response

The Calculation details for arriving at the Wt. Average GCV of Coal for all the thermal power stations considered in the instant petition are enclosed herewith as Annexure-13. Further as desired the power station wise monthly coal analysis reports are enclosed as Annexure-14A, 14B & 14C.

- e. Detailed break-up of different grades of coal along with the rate and GCV received for SGTPS, Birsinghpur during September, 2012 to November, 2012. The monthly coal analysis report and the joint sampling reports in respect of coal received at SGTPS Birsinghpur be also submitted.**

MPPGCL's response

The month wise detailed breakup of different grades of coal along its rate received at SGTPS Birsinghpur is annexed (Annexure-15). The requisite month wise coal analysis report is annexed (Annexure-16).

- f. Linkage of coal for ATPS 210 MW as per Regulation 41.5 of the Regulations, 2012.**

MPPGCL's response

It is to submit that the Long Term Coal Linkage to ATPS PH-3 (210MW) has been awarded by the Standing Linkage Committee (Long Term), Ministry of Coal & Mines vide No.47011/4/2002-CPAM (Vol-II) New Delhi dated 04.02.2003 (Annexure-17). The coal is being supplied to ATPS PH-3 (210MW) by South Eastern Coalfields Limited (SECL) from their Korba-Area mines through Indian Railways. To demonstrate the receipt of Coal for ATPS PH-2 (2x120MW) from Sangma siding through own Rail (Departmental wagons) and that for ATPS PH-3 (1x210MW) from Korba- Area through Indian railway, a copy of relevant document is annexed.

- g. The station-wise details regarding the rate, cost and GCV of coal if, received from sources other than linkages with any subsidiary company of Coal India Limited.**

MPPGCL's response

MPPGCL is procuring Imported Coal other than the linkage from CIL as per the directives of Ministry of Power, GoI to mitigate the shortage of Indigenous Coal for its Thermal Power Stations. The latest order vide no.07-03/TS-44/Import_Coal/Ord/3714 dated 20.11.2012 placed on M/s Adani Enterprises Ltd, Ahmedabad for supply of coal of foreign origin to STPS, Sarni, SGTPS Birsinghpur and ATPS Chachai is annexed (Annexure- 19).

The Guaranteed Base Parameters of foreign origin coal is as under:

a)	Gross Calorific Value (ADB)	=6300 Kcal/Kg.
b)	Ash Content (ADB)	=10%
c)	Sulphur Content (ADB)	=0.8%
d)	Total Moisture (ARB)	=14%

- 1.15 On perusal of the petition and additional submission filed by the petitioner, the Commission observed that the response was still lacking clarity on certain issues like

additional capitalization and depreciation claimed in the petition. Vide Commission's letter dated 27th February, 2013, the petitioner was asked to clarify these issues for further scrutiny of the petition. The petitioner vide its letter dated 7th March, 2013 filed its response on the issues raised by the Commission. The response of the petitioner vis-a-vis the issues raised by the Commission is given below:

- (i) **Issue- “The petitioner has not filed the power station-wise break-up of cost components in the annual audited accounts for FY 2011-12. Therefore, the petitioner is required to file the power station-wise break-up of capital cost and the components under P&L Accounts of the audited balance sheet of the Company as a whole.”**

MPPGCL's response

The Power Station wise breakup of Gross Block of Fixed Assets of MPPGCL as per Schedule 11 of Audited Annual Statement of Accounts for FY 12 is annexed as Annexure-1. However, as desired, the power station wise breakup of the components of Profit and Loss Statement of the Audited Annual Statement of Accounts for FY 12 is presently under preparation and same shall be submitted in due course of time.

- (ii) **Issue- “The response filed by the petitioner on additional capitalization is inadequate and lacks clarity. For proper scrutiny of the additional capitalization filed in the petition, the following details need to be clarified by the petitioner” :**

- (a) **Power station-wise details of amount originally sanctioned for additional capitalization for each year as claimed in the petition.**

MPPGCL's response

The power station wise details of amount originally sanctioned for additional capitalization as claimed in the petition are as under:

1. ATPS PH-2, Chachai:

The Board of erstwhile MPSEB had accorded approval for availing financial assistance from M/s PFC towards R&M works at 2x120MW Units 3 & 4 (Power House-2) of ATPS Chachai. Accordingly PFC Loan bearing No. 20104021 amounting to Rs. 99.00 Crores against the estimated project cost of Rs.124.30 Crores was availed by MPSEB supported by GoMP guarantee & undertaking. (Copy enclosed as Annexure-2). The Commission has already acknowledged this loan and permitted Interest & Finance Charges in the True-up order for FY2009-10.

2. STPS Sarni:

The Energy Department, GoMP, had accorded approval towards R&M activities & works at STPS Sarni vide order dated 21.02.2007 & 07.05.2007 amounting to Rs. 12.00 Crores & Rs.13.40 Crores respectively. Copies of said approvals are enclosed as Annexure-3A & 3B. The said amount has been funded from M/s PFC Loan bearing No. 20704001 and GoMP Loans. The details / Agreements of these loans have already been submitted before Commission vide letter dated 20.02.2013.

3. SGTPS PH-1&2 Birsinghpur:

The Energy Department, GoMP, had accorded approval towards R&M activities & works at SGTPS PH-1&2, Birsinghpur vide order dated 21.02.2007 amounting to Rs. 24.00 Crores. The copy of said approval is enclosed as Annexure-4. The said amount has been funded from M/s PFC Loan bearing No. 20704002. The details / Agreements of this loan has already been submitted before the Commission vide letter dated 20.02.2013.

(b) Details of all such works (along with their estimated amount or actual expenditure) which are either completed or to be completed under additional capitalization as on 31st March, 2012.

MPPGCL's response

The details of R&M activities and works completed upto 31.03.2012 in respect of ATPS PH-2, Chachai; STPS Sarni & SGTPS PH-1&2 Birsinghpur are annexed as Annexure-5A, 5B & 5C respectively.

(c) Reference of any approval if accorded for above works from competent authority.

MPPGCL's response

The details of competent approval for above said R&M activities and works have already been stated in reply to point (a) above (refer Annexure-2, 3A, 3B & 4).

(d) Approval of the Commission, if any.

MPPGCL's response

It is pertinent to mention here that the Hon'ble commission while allowing True Up of generation tariff for FY 09 has approved the additional capitalization in respect of ATPS PH-2 for above R&M activities & works. In addition to above, the R&M activities and works of capital nature at STPS & SGTPS PH-1&2 have also been approved by Energy Department, GoMP as stated in reply (1) & (2) to Point (a) above respectively. Further, the Commission in its order dated 25.04.2011 para 3 in Petition No. 24/2011 has directed to claim the capital expenditure as and when incurred through tariff petitions and In-principle approval is not required separately. Accordingly honoring the directives of Hon'ble Commission, MPPGCL has now considered the additional capitalization in the MYT petition for FY 14 to FY 16. However, the same is being covered in the True up tariff petition of FY 11, which shall be submitted shortly before Hon'ble Commission.

(e) The petitioner has claimed additional capitalizations in PH-2 & 3 of STPS Sarni also. Vide Order dated 07th November, 2012 in Petition No. 56/2012, the Commission accorded In-principle approval of `336.80 Crore for need based R&M Scheme in Unit 6, 7, 8 & 9 of STPS, Sarni. The petitioner may be asked to clarify whether the aforesaid additional capitalization claimed in the instant petition is a part of capital expenditure approved by the Commission.

MPPGCL's response

It is relevant to mention here that an amount of Rs. 40.79 Crores towards various R&M works claimed as additional capitalization for STPS PH-2&3 in FY 12 pertains to need based R&M Scheme in Unit 6, 7, 8 & 9 of STPS, Sarni as approved by the Hon'ble Commission vide order dated 07.11.2012 in petition No.56/2012. This capital expenditure is over and above the additional capitalization detailed in point No. (a), (b) & (c) above. The work wise details carried out are enclosed as Annexure-6.

(f) In STPS, Sarni PH-1, the petitioner opted for special allowance as per the provision under Regulation 18.4 of the Regulations, 2012, which provides that “once the generating company opted the option of special allowance, in such an extent, revision of capital cost shall not be considered.” The petitioner is required to justify its claim of additional capitalization in STPS PH-1 in light of the Regulation.

MPPGCL's response

Here it is to clarify that the additional capitalization shown towards STPS PH-1 are indicative and to match with the Gross Block as per books of accounts just for the purpose of convenience to facilitate prudence check, if required, by Hon'ble Commission and no depreciation has been claimed against it as detailed in Table No. 10.5.1 at page No.46 of MYT petition FY14 to FY16.

(g) In the true-up petition for FY 2009-10, no additional capitalization in any power station was filed by the petitioner whereas, in the subject MYT petition, the additional capitalization is claimed for FY 2009-10 also. The reason of filing for FY 2009-10 even after true-up for the same year may be sought from the petitioner in this regard.

MPPGCL's response

During the course of extensive discussions with the officials of the Commission held after the public hearing of the True up of generation tariff of FY-10, the issue of additional capitalization was also discussed and it was inferred that the additional capitalization for FY-10 along with the additional capitalization for FY-11, as per Audited Annual Statements of Accounts, are to be considered while filing the true up of generation tariff for FY-11 which is being submitted shortly. Further, it is to submit that the additional capitalizations of assets as per Audited Annual Statements of Accounts upto FY-12 have also been considered in the instant MYT petition for control period FY-14 to FY-16.

- (iii) Issue- “The accumulated depreciation in SGTSPS, Birsinghpur PH-1 & 2 has reached beyond 70% during FY 2013-14. As per Regulation 24(1) (f) of the Regulations, 2012, “the rate of depreciation shall be continued to be charged at the rate specified in the Regulation till cumulative depreciation reaches 70%. Thereafter, the remaining depreciable value shall be spread over the remaining life of the assets such that the maximum depreciation does not exceed 90%”. MPPGCL has not charged the depreciation in terms of aforesaid provision under Regulation during FY 2015 and FY 2016. The reasons for charging depreciation in FY 2015 and FY 2016 at the applicable rate even after achieving 70% limit of accumulated depreciation be clarified.”**

MPPGCL's response

The amount of depreciation claimed in MYT petition for the control period FY 14 to FY 16 is calculated on the basis of Gross Block as on 31.03.2012 as per Audited Annual Statement of Accounts for FY 12. Further the life completed by the power houses of SGTPS i.e. PH-1 & 2 as on 31.03.2013 is 20 years and 14 years respectively, against the useful life of 25 years as per the MPERC Regulations 2012. The details of Accumulated depreciation and Gross block of SGTPS PH-1 & 2 as on 31.03.2012 is detailed as under:-

Particulars	Amount Rs. Crs.
Gross Block as on 01-04-2012	2172.83
Accumulated depreciation as on 01-04-2012	1385.98
Acc. Dep. as a % of Gross Block	63.79%

It is evident from the above that the accumulated depreciation works out to be 63.79 % of Gross Block, which is less than 70% as on 31.03.2012. No additional capitalization for FY 13 and onwards has been estimated by MPPGCL while filing the instant MYT petition, thus it would be very difficult to foresee as to when the accumulated depreciation shall reach upto 70% of Gross block. It would therefore be prudent to address this issue at the time of true up of generation tariff based on Audited Annual Statement of Accounts for respective Years.

- (iv) **Issue- “While going through the rate of depreciation charged for ATPS PH-II, it is observed that, the rate of depreciation is charged at 6.85%, which is even higher than the average rate of depreciation as per Regulation. Since, most of the assets in ATPS PH-II have been depreciated, the petitioner is required to file the reason for claiming a higher rate of depreciation.”**

MPPGCL's response

The ATPS PH-2 has already outlived its specified useful life i.e.25 years as per MPERC Regulation 2012 & at present its life is 36 years. It may be appreciated that the issue of charging depreciation on power stations which have lived their useful life was discussed at length with the Commission by the Joint Director (Accounts) of MPPGCL during the hearings on MYT petition for approval of generation Tariff for FY-10 to FY-12. Wherein it was clearly spelled out as to how the balance depreciation of the power stations who outlived their useful life is to be calculated, as the Appendix-II indicating the Depreciation rate of MPERC Regulation,2009 as well as Regulation,2012 does not specify the life of individual assets and speaks only for newly commissioned power stations.

- (v) **Issue- “While going through the Asset-cum-Depreciation Registers filed by MPPGCL, it is observed that the rate of depreciation has been charged at higher rates than the applicable rate of depreciation in some cases. The petitioner was asked to file Justification of claiming the higher depreciation rate.”**

MPPGCL's response: Same as above

Public Hearing

- 1.16 The gist of the application and the tariff proposal filed by MPPGCL was published in the following newspapers on 14th February, 2013 :
- a) Dainik Nav Bharat, Jabalpur (Hindi)
 - b) Dainik Aacharan, Gwalior (Hindi)
 - c) Dainik Sandhya Prakash, Bhopal (Hindi)
 - d) Dainik Patrika, Indore (Hindi)
 - e) Daily Hindustan Times, Bhopal (English)
- 1.17 The Commission received no comments in the matter. The petitioner vide letter dated 8th March, 2013 also confirmed that no comments from any stake holder received by it in the matter.
- 1.18 The public hearing on the application was conducted in the Commission's office on 12th March, 2013 when the representatives of the petitioner were present.

CHAPTER 2

Status of Generation Capacity filed in the petition

Installed Capacity of MPPGCL

- 2.1 The installed capacity of the MPPGCL share, as on 26.12.2012 is 3687.2 MW (including its share in bilateral interstate projects), consisting of 2770 MW Thermal and 917.2 MW Hydro power. The plant wise details are as under:

Table 6: Details of Power Plants:

				Installed Capacity (MW)			
Power Station				Total		MPPGCL Share	
Thermal Power Stations	1	Amarkantak Thermal Power Station (Chachai)	PH II	2 x 120 =	240	100%	240
			PH III	1 x 210 =	210	100%	210
			Complex		450	100%	450
	2	Satpura Thermal Power Station (Sarni)	PH I	4 x 62.5 =	250	60%	150
			PH II	200 + 210 =	410	100%	410
			PH III	2 x 210 =	420	100%	420
			Complex		1080	89%	980
	3	Sanjay Gandhi Thermal Power Station (Birsinghpur)	PH I	2 x 210 =	420	100%	420
			PH II	2 x 210 =	420	100%	420
			PH III	1 x 500 =	500	100%	500
			Complex		1340	100%	1340
	4	Total Thermal Generation			2870	95%	2770
Hydro Power Stations	1	Chambal HPS	Gandhi Sagar	5 x 23 =	115	50%	57.5
			R.P. Sagar	4 x 43 =	172	50%	86
			Jawahar Sagar	3 x 33 =	99	50%	49.5
			Complex		386	50%	193
	2	Pench Totladoh HPS		2 x 80 =	160	67%	106.7
	3	Bansagar HPS	Tons PH I	3 x 105 =	315	100%	315
			Silpara PH II	2 x 15 =	30	100%	30
			Devlond PH III	3 x 20 =	60	100%	60
			Jhinna PH IV	2 x 10 =	20	100%	20
	Complex		425	100%	425		
	4	Birsinghpur HPS		1 x 20 =	20	100%	20
	5	Bargi HPS		2 x 45 =	90	100%	90
	6	Rajghat HPS		3 x 15 =	45	50%	22.5
7	Madhikheda HPS		3 x 20 =	60	100%	60	
8	Total Hydro Generation			1186	100%	917.2	
Total Generation Capacity				4056	90%	3687.2	

Generation Capacity operated by MPPGCL

- 2.2 As on 01.01.2013, MPPGCL is operating 3785 MW, consisting of 2870 MW thermal and 915.0 MW Hydro power. Out of this, 233.33 MW capacity belongs to other States. The plant wise details are as under:

Table 7: Generation Capacity operated by MPPGCL: (MW)

Station	Installed Capacity	MP Share	Other State's Share		
			MW	%	Name of State
ATPS Chachai,	450.0	450.0	0.0		
STPS Sarni PH I	250.0	150.0	100	40.00%	Rajasthan
STPS Sarni PH II & III	830.0	830.0	0.0		
SGTPS Birsinghpur	1340.0	1340.0	0.0		
Total Thermal	2870	2770.0	100.0		
Gandhi Sagar	115.0	57.5	57.5	50.00%	Rajasthan
Pench	160.0	106.7	53.3	33.33%	Maharashtra
Bansagar Complex	425.0	425.0	0.0		
Birsinghpur	20.0	20.0	0.0		
Madhikheda	60.0	60.0	0.0		
Bargi	90.0	90.0	0.0		
Rajghat	45.0	22.5	22.5	50.00%	Uttar Pradesh
Total Hydro	915.0	781.7	133.3		
Total Capacity	3785.0	3551.5	233.3		

MPPGCL's Share in Generation Capacity installed in other States

- 2.3 Similarly, MPPGCL has a share of 135.5 MW also in hydro generation capacity installed in neighboring States, as under:

Table 8: Generation Capacity installed in other States: (MW)

Station	Installed Capacity	MPPGCL Share		Other
		MW	%	Name of State
Rana Pratap Sagar	172.0	86.0	50.00%	Rajasthan
Jawahar Sagar HPS	99.0	49.5	50.00%	Rajasthan
Total	271.0	135.5		

Status of Ongoing Capacity addition and proposed new projects

2.4 MPPGCL submitted the following status of its ongoing/proposed projects:

(i) **Satpura Thermal Power Station Extn. Unit 10 & 11 (2x250 MW)**

Units at Satpura Thermal Power Station as Extension, Unit No.10 & 11 are under construction. Administrative approval was accorded by State Govt., in Jun'06 and by BoD MPPGCL in August 06. MoEF clearance also received in Feb.2009. For execution of Main Power Block on EPC basis, LOI was issued to M/s BHEL on 10.03.08 and subsequently an amended LOI was issued to M/s BHEL on 07.04.2008. LoA for balance of plants has been issued to M/s. Macnally Bharat Engg. (MBEL) Kolkata on 3.4.2010 on EPC basis.

The revised commissioning dates for Extn. Unit No.10 & 11 is Feb. 2013 and May 2013 respectively. The revised estimated project cost is Rs. 3298 Crores.

(ii) **Shri Singaji Thermal Power Project (2x600 MW) – Phase I.**

The administrative approval has been accorded by GoMP in May 2001. The Main Power Block package has been finalized through ICB routing and accordingly EPC contract of Main Power Block have been awarded to M/s. BHEL vide order dated 12.12.2008. For execution of BoP, LOI has been issued on L&T on 26.10.2009. All the clearances for the project have been obtained.

The first unit is scheduled for commissioning in March 2013 and second unit in August 2013. The revised estimated project cost is Rs. 6750 Crores.

(iii) **2x660 MW Shri Singaji TPP (Stage-II) District Khandwa (MP)**

Administrative approval accorded in January 2011. PPA signed with Tradeco on 4-1-2011. The estimated cost of the project is Rs.6,500 Crores.

(iv) **Dada Dhuniwale Thermal Power Project (2x800 MW). Village – Goradia, District Khandwa**

The Project is being set up under joint venture with BHEL. BHEL will set up the project as nominated EPC contractor for installing the main plant with other associated equipments. Estimated Project Cost is Rs.10500 Crores.

Age of the Power Stations as on 01/01/2012 as filed by the petitioner:

2.5 The petitioner submitted the following:

“The life of Thermal Power Station is 25 years. During this life span also, the performance of the plants gradually goes down unless required maintenance is carried out regularly. After completion of normal life, the plants are either to be retired or major Renovation and Modernization is to be done to bring their performance back to a reasonable level. The table below elaborates the average age of thermal generating units of MPPGCL as on 01.01.2012, from which it may be seen that the average age of thermal generating units of MPPGCL is around 20 years. Out of total 17 thermal generating units, 11 units having 47% of installed capacity have lived their life for more than 25 years.

Table 9: Average age of Thermal Power Stations:

Power Station			Commissioning year	Capacity in MW	Avg. age in years, as on 01/01/2013	
Thermal Power Stations	1	Amarkantak Thermal Power Station, Chachai	PH-2 (2 units)	1977-78	240	36
			PH-3 (1 unit)	2009	210	4
			Complex (3 units)		450	21
	2	Satpura Thermal Power Station Sarni	PH-1 (5 units)	1967-70	312.5	45
			PH-2 (2 units)	1979-80	410	33
			PH-3 (2 units)	1983-84	420	30
			Complex (9 units)		1142.5	35
	3	Sanjay Gandhi Thermal Power Station Birsinghpur	PH-1 (2 units)	1993-94	420	20
			PH-2 (2 units)	1999	420	14
			PH-3 (1 unit)	2008	500	5
			Complex (5 units)		1340	12
	4	Total Thermal Generation (17 units)			2772.5	22

2.6 Fair life of Hydro Generating Stations is about 35 years. Out of total 26 units including 10 units having installed capacity of 385 MW (42% of installed hydro capacity) have lived for 20 years or more than 20 years. The Station wise details are as under:-

Table 10: Average age of Hydel Power Stations:

Power Station		Commissioning year	Capacity in MW	Avg. age in years, as on 01/01/2013	
1	Gandhi Sagar (5 units)	1960-66	115	50	
2	Pench Totladoh Hydro Station (2 units)	1986-87	160	27	
3	Bansagar Tons HPS	I-Tons (3 units)	1991-92	315	21
		II-Silpara (2 units)	2002	30	11
		III-Devlond (3 units)	2001-02	60	12
		IV-Jhinna (2 units)	2006	20	7
		Complex (10 units)		425	19
4	Birsinghpur HPS (1 unit)	1991	20	21	
5	Bargi HPS (2 units)	1988-1992	90	25	
6	Rajghat HPS (3 units)	1999	45	13	
7	Madhikheda HPS (3 units)	2006-07	60	7	
	Total Hydro Generation (26 units)		915	28	

CHAPTER 3

Capital Cost

Gross Fixed Assets as on 01.04.2013:

Petitioner's submission:

- 3.1 The petitioner filed the following power station- wise opening Gross Block of fixed assets and Accumulated Depreciation (as on 1.4.2013) for FY2011-12 as per its Audited Statement of Account:

Table 11: Opening Balance as on 01-04-2013 filed by the petitioner:

Sr. No.	Power Station	Opening Balance as on 01-04-2013 (Rs. Cr.)	
		Fixed Asset (Gross Block)	Accumulative Depreciation
1	ATPS PH-II	209.08	123.83
2	ATPS PH-III	1117.20	173.92
3	ATPS Chachai	1326.29	297.75
4	STPS PH-I	47.36	42.58
5	STPS PH II & III	676.18	571.34
6	STPS Total	723.55	613.92
7	SGTPS PH I & II	2172.83	1478.21
8	SGTPS PH III	2066.56	460.88
9	SGTPS Total	4239.39	1939.09
10	Total Thermal	6289.22	2850.75
11	Gandhi Sagar	10.33	9.30
12	Pench	96.27	73.98
13	Rajghat	82.81	41.12
14	Bargi	88.19	60.95
15	Bansagar PH-I, II & III	1249.57	566.30
16	Bansagar PH-IV	119.72	30.76
17	Madhikheda	215.67	55.37
18	Birsinghpur	52.15	31.93
19	Total Hydro	1913.54	869.30
	Total	8203.93	3720.46

- 3.2 The petitioner filed the power station wise permissible equity (limited up to 30% of the Gross fixed assets) for the purpose of RoE as on 01.04.2013. With regard to the power station wise loan, the petitioner considered the opening loan balance as on 01.04.2009 and addition in loan amount during FY2009-10 to FY 2011-12 for capital works and need based R&M in old power houses and additional capitalization in new generating units (like ATPS PH-I, SGTPS PH-III, Madhikheda and Jhinna). The petitioner also considered repayments in FY2009-10 to FY2011-12 equal to depreciation in the respective power stations. Based on the above, the petitioner filed the power station wise opening equity and loan balances as on 01.04.2013 as given below:

Table 12:
Opening balances of Equity and Loan as on 01.04.2013 filed in the petition
(Amount in Rs. Crores)

Sr. No.	Power Stations	Equity as on permissible for RoE as on 01.04.2013	Opening loan balances as on 01.04.2013
1	ATPS PH-II	62.73	54.02
2	ATPS PH-III	223.42	600.38
3	ATPS Chachai	286.15	654.40
4	STPS	217.06	0.00
5	SGTPS PH-I & II	651.85	24.55
6	SGPTS PH-III	619.97	1105.45
7	SGTPS Total	1271.82	1130.00
8	Total Thermal	1775.03	1784.40
9	Gandhi Sagar	3.1	0.00
10	Pench	28.88	0.00
11	Rajghat	24.84	0.00
12	Bargi	26.11	0.00
13	Bansagar PH-I, II & III	374.87	37.34
14	Bansagar PH-IV	35.92	15.48
15	Madhikheda	64.7	73.06
16	Birsinghpur	15.64	0.00
17	Total Hydro	574.06	125.88
18	HQ	0.35	0.69
	Total	2349.44	1910.97

Provisions of the Regulation:

3.3 Regulation 17 of MPERC (Terms and Conditions for determination of Generation tariff) Regulation, 2012 provides that,

“17.1 Capital cost for a Project shall include:

- (a) *the Expenditure Incurred or Projected to be incurred on original scope of work, including interest during construction and financing charges, any gain or loss on account of foreign exchange risk variation during construction on the loan - (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed, - up to the Date of Commercial operation of the Project, as admitted by the Commission, after prudent check shall form the basis for determination of Tariff.*
- (b) *capitalized initial spares subject to the ceiling norms as specified below:*
- (i) *Coal-based/lignite-fired thermal generating stations - 2.5% of original Project Cost.*
- (ii) *Hydro generating stations - 1.5% of original Project Cost.*

Provided that where the benchmark norms for initial spares have been published as part of the benchmark norms for capital cost under first proviso to 17.2, such norms shall apply to the exclusion of the norms specified herein.

(c) additional capital expenditure determined under Regulation 20.

17.2 Subject to prudent check, the capital cost admitted by the Commission shall form the basis for determination of Tariff:

Provided that, prudent check of capital cost may be carried out based on the benchmark norms specified by the Central Commission from time to time :

Provided further that in cases where benchmark norms have not been specified by the Central Commission, prudent check may include scrutiny of the reasonableness of the capital expenditure, financing plan, interest during construction, use of efficient technology, cost over-run and time over-run, and such other matters as may be considered appropriate by the Commission for determination of Tariff :

Provided also that the Commission has issued guidelines for vetting of capital cost of hydro-electric Projects by independent agency or expert and the capital cost as vetted by such agency or expert shall be considered by the Commission while determining the Tariff for the new hydro generating station:

Provided also that in case the site of a Hydro generating station is awarded to a developer (not being a State controlled or owned Company), by a State Government by following a two stage transparent process of bidding, any Expenditure Incurred or committed to be incurred by the Project developer for getting the Project site allotted shall not be included in the capital cost :

Provided also that the capital cost in case of such hydro generating station shall include: -----

Provided also that where the power purchase agreement entered into between the Generating Company and the Beneficiaries or the implementation agreement provide for ceiling of actual expenditure, the capital expenditure admitted by the Commission shall take into consideration such ceiling for determination of Tariff :

Provided also that in case of the existing Projects, the capital cost admitted by the Commission prior to 1.4.2013 duly trued up by excluding un-discharged liability, if any, as on 1.4.2013 and the additional capital expenditure projected to be incurred for the respective Year of the Tariff period during 2013-16, as may be admitted by the Commission, shall form the basis for determination of Tariff.”

Commission's analysis on capital cost:

3.4 For capital cost of the existing projects, last proviso to Regulation 17 of MPERC (Terms & Conditions for determination of Generation Tariff) Regulations, 2012 provides that, “ the capital cost admitted by the Commission prior to 1.4.2013 duly trued up by excluding un-discharged liability, if any, as on 1.4.2013 and the additional capital expenditure projected to be incurred for the respective Year of the Tariff period during

2013-16, as may be admitted by the Commission, shall form the basis for determination of Tariff.”

- 3.5 In view of the above provision under Regulation, the capital cost for the existing power stations admitted by the Commission and the additional capital expenditure projected to be incurred during the control period shall be the basis for determination of tariff. The Commission issued the last true-up order for FY 2009-10 on 23rd January, 2013 on the basis of the audited accounts for FY2009-10. Further, the Commission issued the final tariff orders for some new generating stations (like ATPS Extn. Unit-5, SGTPS, Extn. Unit-5 and Madhikheda Hydro Power Station etc.) as given below :

Table 13: Last true-up/final tariff order issued by the Commission

S. No.	Particulars	Period of Tariff/true-up	Date of order
1	ATPS 210 MW final tariff order	CoD to FY 2011-12	01.05.2012
2	True-up of generation tariff	FY 2009-10	23.01.2013
3	Madhikheda HPS	CoD to FY 2011	31.01.2013
4	SGTPS 500 MW final tariff order	CoD to FY 2011	28.02.2013

- 3.6 The Commission also issued the provisional tariff order for Bansagar IV (Jhinna). The petition for determination of final generation tariff of this hydro power station has now been filed by the petitioner on 29th January, 2013 which is yet to be admitted by the Commission.
- 3.7 In Para 10.4 of the petition, the petitioner filed the additions in the assets during FY 2009-10 to FY 2011-12 on account of some need based renovation and modernization works in old power stations (which is yet to be admitted by the Commission) and additional capitalization in new generating units. The petitioner has not filed any projections for additional capitalization in any power station during the control period. Vide daily order dated 6th February, 2012, the Commission sought several clarifications regarding the need based renovation and modernization works during FY 2009-10 to FY 2011-12 filed in the petition (as addition to the gross block). On perusal of the reply submitted by the petitioner, the Commission observed that the response on additional capitalization filed by the petitioner through its letter dated 20th February, 2013 was inadequate and lacking clarity. For proper scrutiny of the additional capitalization filed in the petition, vide Commission’s letter dated 27th February, 2013, the petitioner was further asked to submit some more information/clarification.
- 3.8 Vide letter dated 7th March, 2013, the petitioner filed its reply to the issues related to additional capitalization. Issue-wise response filed by the petitioner has been discussed in para 1.15 of this order.
- 3.9 On perusal of the response filed by MPPGCL on the issues related to additional capitalization vis-à-vis the provisions under the MPERC (Terms and Conditions for determination of Generation Tariff) Regulations, 2012, it was found that detailed scrutiny and analysis of all such need based renovation and modernization works shall be required in terms of the Regulation 20 of the aforesaid Regulations. Moreover Regulation 17.2 of the Regulations, 2012 in its last proviso provides that the capital cost admitted by the Commission prior to 1.04.2013 duly true-up shall form the basis for determination of tariff in case of existing projects.

- 3.10 The power station-wise additions of assets during FY 2009-10 to FY 2011-12 are required to be scrutinized for each year on several counts specified in the Regulations and this exercise may be possible while undertaking true-up for the respective year. It is further observed that the petitioner did not file any additional capitalization in its true-up petition for FY 2009-10 whereas it has filed additional capitalization for FY 2009-10 also. Hence, the Commission shall consider the impact of asset addition due to need based R&M works during FY 2009-10 to FY 2011-12 at the time of dealing with the true-up petitions for the respective years.
- 3.11 Accordingly, the Commission has considered the opening gross block and other components of capital cost as on 1st April, 2010 for all old generating stations as per the true-up order for FY 2009-10 issued by the Commission on 23rd January, 2013. Regarding new generating units/stations (like ATPS Extn. Unit-5 210 MW, SGTPS Extn. Unit-5 500 MW and Madhikheda Hydro Power Station), the Commission has now issued the final tariff orders. Therefore, the opening gross fixed assets and other capital cost components as on 1st April, 2012 are considered as admitted by the Commission in the final tariff orders. In the aforesaid final tariff orders, the Commission admitted the additional capitalization up to 31st March, 2011 as per audited books of accounts. However, it is pertinent to mention that the additional capitalization for these new stations for FY 2011-12 was admitted on provisional basis only due to non-availability of audited accounts for FY 2011-12 subject to true-up based on audited books of accounts.
- 3.12 With regard to Bansagar-IV (Jhinna) Hydro Power Station, the petition for determination of final tariff is under scrutiny with the Commission. Therefore, the opening gross fixed assets and other capital cost components of this power station provisionally admitted by the Commission and considered in the tariff order for FY 2012-13 dated 16th April, 2012 are considered in this order.
- 3.13 Vide letter No.CEA/PLG/DMLF/545/2012/219 dated 22nd January, 2013, CEA accorded approval for de-commissioning of Unit No.3 of 62.5 MW at STPS, Sarni PH-I w.e.f. 1st October, 2012. Vide Commission's letter dated 15th February, 2012, the petitioner was asked to inform the following details in respect of de-capitalized Unit No.3 of STPS, Sarni PH-I :
- a) Gross Block, Equity and Loan amount as on 31st March, 2013.
 - b) Cumulative depreciation as on 31st March, 2013.
 - c) Balance depreciation, if any.
- 3.14 In response, vide letter dated 23rd February, 2013, the petitioner submitted the following :
- a) **“Gross Block**
The total gross block of 5x62.5 MW STPS Sarni PH-I pertaining to MPPGCL transferred through Final Opening Balance Sheet as on 1-06-2005 amounts to Rs.41.13 crs. This gross block has increased to Rs.47.36 crs. as on 1-4-2012 as per Audited Books of Accounts due to asset addition in subsequent years. On pro-rata basis, the gross block for Unit No.3 of STPS PH-I provisionally works out to Rs.9.47 crs. as on 01-04-2012.
 - b) **Equity**
The equity transferred through Final Opening Balance Sheet and apportioned to PH-I of STPS Sarni is Rs.14.10 crs. as on 01-06-2005. On pro-rata basis, the

equity for Unit No.3 of STPS PH-I provisionally works out to Rs.2.82 crs. as on 01-04-2012.

c) Loan Amount

As per the Proviso 23 of MPERC Generation Tariff Regulation 2009, the principal repayment of the loan assigned to STPS Sarni have been carried out by the way of depreciation, hence in the MYT petition for the control period FY 14 to FY 16 no loan balance stands as on 01-04-2012 in respect of PH-I of STPS Sarni.

d) Accumulated Depreciation and Balance Depreciation

The accumulated depreciation in accordance to the proviso 24 of MPERC Generation Tariff Regulation 2009 read with proviso 24 of MPERC Generation Tariff Regulation 2012, in respect of STPS PH-I as on 31.03.2013 is Rs.42.58 crores and therefore, the balance depreciation stands nil in respect of PH-I of STPS Sarni.”

3.15 In view of the above, the Commission has not considered the gross fixed assets of STPS PH-I Unit No.3 while arriving at the opening gross fixed assets of STPS Complex as on 1st April, 2013. The opening gross fixed asset of complete STPS Complex as per true-up order for FY 2009-10 was Rs.631.19 crores. The opening gross fixed assets for STPS Complex is considered as Rs.621.72 crores as on 1st April, 2013 in this order after deducting the gross fixed assets of Rs.9.47 crores as on 1st April, 2012 for STPS PH-I Unit No.3 as informed by the petitioner,.

3.16 The status of opening gross fixed assets as on 1st April, 2013 including additional capitalization in new generating units during FY 2009-10 to FY 2011-12 as per their final tariff order is given below

Table 14: Gross Fixed Assets as on 01.04.2013 considered in this order: (Rs. Cr.)

Sr. No	Power Station	Gross Block as on 31.03.2010 admitted in true-up order for old projects and prov./final orders for new units	Additions due to Additional Capitalization in new units admitted by the Commission in final tariff order			Opening Gross Block as on 01.04.2013 considered in this order
			FY 2010-11	FY 2011-12	FY 2012-13	
1	ATPS Chachai (PH-II)	141.12				141.12
2	ATPS Chachai (PH-III)	906.10	70.56	*21.07		997.73
3	STPS Sarni Complex	631.19			*(-9.47)	621.72
4	SGTPS (PH-I & II)	2163.73				2163.73
5	SGTPS (PH-III) 500 MW	1879.97	13.92	*42.00		1935.89
6	Gandhi Sagar	10.29				10.29
7	Pench	96.24				96.24
8	Rajghat	82.80				82.80
9	Bargi	87.03				87.03
10	Bansagar (I to III)	1243.92				1243.92
11	Bansagar-IV (Jhinna)	*97.18				97.18
12	Madhikheda	214.71	0.22			214.93
13	Birsingpur	52.15				52.15
14	HQ	0.44				0.44
15	Total	7606.87	84.70	63.07	(-9.47)	7745.17

* Figures are provisional as per Commission's order/petitioner's filing subject to true-up.

Cumulative depreciation as on 1st April, 2013:

- 3.17 In this order, the Commission has considered the closing cumulative depreciation for old power stations (as on 31st March, 2010) as approved in true-up order for FY 2009-10. Thereafter, the depreciation during FY 2010-11 to FY 2011-12 is considered as per MYT order dated 3rd March, 2010 whereas the depreciation for FY2012-13 is considered as per tariff order for FY 2012-13 dated 16th April, 2012.
- 3.18 Regarding the cumulative depreciation of STPS, Sarni, the petitioner informed that the cumulative depreciation in respect of STPS PH-I as on 31st March, 2013 is Rs.42.58 crores. Therefore, the balance depreciation stands nil in respect of PH-I of STPS, Sarni. The petitioner has not informed the amount of cumulative depreciation of de-capitalized Unit-3 separately.
- 3.19 For new generating units (like ATPS Extn. Unit-5, 210MW, SGTPS Extn. Unit-5, 500 MW and Madhikheda Hydro Power Station), the closing cumulative depreciation as on 31st March, 2012 is considered as per final tariff orders of the respective power stations and depreciation during FY 2012-13 for these new generating units is considered from the tariff order for FY 2012-13 issued on 16th April, 2012.
- 3.20 The Commission issued provisional tariff order for Bansagar-IV (Jhinna) and the petition for determination of final generation tariff has been filed with the Commission on 29th January, 2013 which is yet to be admitted by the Commission. Therefore, the cumulative depreciation for this power station is considered as admitted in tariff order for FY 2012-13.
- 3.21 In view of the above, the status of opening cumulative depreciation as on 1st April, 2013 is worked out as given below :

Table 15: Accumulated Depreciation as on 01.04.2013 considered in this order: (Rs. Cr.)

Sr. No	Power Station	Acc. Dep. as on 31.03.2010 admitted in true-up order for old projects and prov./final orders for new projects	Depreciation charged as per Commission's orders (MYT order/order for FY12-13/final orders for new units)			Acc. Dep. as on 01.04.2013 considered in this order
			FY 2010-11	FY 2011-12	FY 2012-13	
1	ATPS Chachai (PH-II)	83.72	1.21	1.21	1.93	88.07
2	ATPS Chachai (PH-III)	23.94	41.99	44.03	40.94	150.90
3	STPS Sarni Complex	497.11	8.50	8.31	8.58	522.50
4	SGTPS (PH-I & II)	1199.83	90.92	88.20	90.23	1469.18
5	SGTPS (PH-III) 500 MW	134.65	97.55	99.00	89.42	420.62
6	Gandhi Sagar	8.37	0.23	0.22	0.21	9.03
7	Pench	64.41	1.51	1.51	1.51	68.94
8	Rajghat	29.03	4.02	4.02	4.03	41.10
9	Bargi	51.63	3.26	1.18	1.18	57.25
10	Bansagar (I to III)	390.43	62.57	62.57	62.69	578.26
11	Bansagar-IV (Jhinna)	20.88	4.90	4.90	4.90	35.58
12	Madhikheda	21.48	11.21	11.22	9.15	53.06
13	Birsingpur	26.92	2.47	2.47	2.46	34.32
14	HQ					
15	Total	2552.40	330.34	328.84	317.23	3528.81

Equity as on 1st April, 2013:

- 3.22 The Commission has considered the opening equity as on 1st April, 2010 for old power stations as per true-up order for FY2009-10 dated 23rd January, 2013. As discussed in preceding paragraphs of this order, the additional capitalization against need based R&M during FY 2010-11 to FY 2012-13 in respect of old power stations is yet to be admitted by the Commission. Therefore, the equity of these power stations as on 31st March, 2013 remains unchanged.
- 3.23 With regard to equity of STPS, Sarni, the petitioner has informed that the equity for de-commissioned Unit-3 of STPS PH-I is provisionally worked out to Rs.2.82 crores as on 1st April, 2012. Hence, this equity amount has been deducted from the total equity amount of STPS, Sarni considered in true-up order for FY 2009-10. The opening equity of STPS Complex as per true-up order for FY 2009-10 was Rs.187.82 crores. After deducting the equity of Rs.2.82 crores of STPS PH-I Unit-3 (as filed by the petitioner), the opening equity of STPS Complex becomes Rs.185 crores as on 1st April, 2013 and the same is considered in this order.
- 3.24 The Commission issued final tariff orders for new units (ATPS, SGTPS and Madhikheda HPS). Therefore, the closing equity for these new units as on 31st March, 2012 as approved by the Commission in the final tariff orders is considered in this order. The final tariff petition for Bansagar-IV (Jhinna) is under process with the Commission. Therefore, the equity as on 31st March, 2013 for this power house is considered as per tariff order for FY 2012-13.
- 3.25 Based on the above, the power station-wise status of opening equity as on 1st April, 2013 is worked out as given below :

Table 16: Normative opening Equity as on 01.04.2013 considered in this order:
Rs. Cr.

Sr. No.	Power Station	Closing Equity as on 31.03.2010 as admitted in true-up order for existing proj. and prov./final orders for new units	Equity addition due to Additional Capitalization in new units admitted by the Commission			Opening Equity as on 01.04.2013
			FY 2010-11	FY 2011-12	FY 2012-13	
1	ATPS Chachai (PH-II)	33.46				33.46
2	ATPS Chachai (PH-III)	214.24	8.20	0.98		223.42
3	STPS Sarni Complex	187.82			-2.82	185.00
4	SGTPS (PH-I & II)	649.12				649.12
5	SGTPS (PH-III) 500 MW	553.62				553.62
6	Gandhi Sagar	3.09				3.09
7	Pench	28.87				28.87
8	Rajghat	24.84				24.84
9	Bargi	26.11				26.11
10	Bansagar (I to III)	373.18				373.18
11	Bansagar-IV (Jhinna)	29.98				29.98
12	Madhikheda	45.28	0.066			45.35
13	Birsingpur	15.65				15.65
14	Total	2185.26	8.27	0.98	-2.82	2191.69

Loan balances as on 1st April, 2013:

- 3.26 Regulation 21.1 of MPERC (Terms & Conditions for determination of Generation Tariff) Regulations, 2012 states that “in case of the generating station declared under commercial operation prior to 1st April, 2013, the debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31st March, 2013 shall be considered”. Thus, the Commission has considered the opening balances of loan as on 1st April, 2010 for old power stations based on the true-up order for FY 2009-10 issued on 23rd January, 2013. Repayment of loans during FY 2010-11 to FY 2012-13 for each power station is considered equal to depreciation for the year as allowed in MYT order dated 3rd March, 2010 and tariff order for FY 2012-13 dated 16th April, 2012.
- 3.27 Regarding the de-commissioned Unit-3 of STPS, Sarni PH-I, as mentioned in preceding para, the petitioner confirmed that no loan balance stands as on 1st April, 2012 in respect of PH-I of STPS, Sarni.
- 3.28 The final tariff orders for new generating units (like ATPS Extn. Unit-5, 210MW, SGTPS Extn. Unit-5, 500 MW and Madhikheda Hydro Power Station) have been issued by the Commission,. Therefore, the closing balance of loans as on 31st March, 2012 is considered as opening balance of loan as on 1st April, 2012 and depreciation for these new generating units allowed in tariff order for FY 2012-13 is considered as repayment during FY 2012-13. Hence, the opening balance of loan as on 1st April, 2013 for these new generating units is worked out accordingly. For Bansagar-IV (Jhinna), the closing balance as on 31st March, 2012 (as per tariff order for FY 2012-13) is provisionally considered as the opening balance as on 1st April, 2013.
- 3.29 In its true-up order for FY 2009-10, the Commission worked out the power station-wise closing balance of excess equity (normative loan) of Rs.114.09 crores. The treatment of this excess equity with respect to repayment, weighted average rate of interest is same as for loan on capital. Therefore, the amount of excess equity has been added in the loan balances and total loan balances including excess equity as on 31st March, 2010 is worked out accordingly.
- 3.30 The details of the power station-wise opening balance of loans as on 1st April, 2013 is worked out as given below :

Table 17: Opening Loan Balances as on 01.04.2010:**Rs. Cr.**

Sr. No.	Power Station	Loan as on 31.03.2010 as admitted in true-up order for old projects and prov./final orders for new units	Excess Equity considered as normative loan as on 31.03.2010	Total loan amount including excess equity as on 31.03.2010
1	ATPS Chachai (PH-II)	53.50	3.71	57.21
2	ATPS Chachai (PH-III)	667.94	0.00	667.94
3	STPS Sarni Complex	0.00	15.07	15.07
4	SGTPS (PH-I & II)	168.01	60.04	228.05
5	SGTPS (PH-III) 500 MW	1188.28	0.00	1188.28
6	Gandhi Sagar	0.00	0.00	0.00
7	Pench	0.00	3.28	3.28
8	Rajghat	0.00	0.00	0.00
9	Bargi	0.00	0.00	0.00
10	Bansagar (I to III)	176.74	31.99	208.73
11	Bansagar-IV (Jhinna)	43.03	0.00	43.03
12	Madhikheda	122.58	0.00	122.58
13	Birsingpur	0.00	0.00	0.00
14	Total	2420.08	114.09	2534.17

Table 18: Loan Balances as on 01.04.2013 considered in this order: (Rs. Cr.)

Sr. No	Power Station	Loan addition due to Additional Capitalization in new units allowed in final tariff order			Repayment considered in MYT order for existing projects and prov./final orders for new units and for FY 2013 as per order dated 16/04/2012			Opening Balance of loan as on 01.04.2013
		FY 10-11	FY 11-12	FY 12-13	FY 10-11	FY 11-12	FY 12-13	
1	ATPS Chachai (PH-II)				1.21	1.21	1.93	52.86
2	ATPS Chachai (PH-III)	62.35	20.08		41.99	44.03	40.94	623.41
3	STPS Sarni Complex				8.50	6.57	0.00	0.00
4	SGTPS (PH-I & II)				90.92	88.20	48.93	0.00
5	SGTPS (PH-III) 500 MW	13.92	42.00		97.55	98.81	89.42	958.42
6	Gandhi Sagar							0.00
7	Pench				1.51	1.51	0.26	0.00
8	Rajghat							0.00
9	Bargi							0.00
10	Bansagar (I to III)				62.57	62.57	62.69	20.90
11	Bansagar-IV (Jhinna)				4.90	4.90	4.90	28.33
12	Madhikheda	0.154			11.21	11.22	9.15	91.15
13	Birsingpur							0.00
14	Total	76.42	62.08	0.00	320.3	319.02	258.2	1775.07

Additional Capitalization during the control period:**Petitioner's submission:**

3.31 The petitioner filed the power station-wise details of asset addition during FY 2009-10 to FY 2011-12 and Gross Fixed Assets as on 01.04.2013. The petitioner has not filed any projected additional capitalization during the control period of FY2013-14 to FY2015-16. The details of the assets addition during FY 2009-10 to FY 2011-12 filed by the petitioner are given below :

Table 19: Opening gross fixed assets filed by the petitioner: (Rs. Cr.)

Sr. No.	Power Station	FY 09-10	FY 10-11	FY 11-12	Total	Gross Block 01.04.2013
1	ATPS PH-II	0	60.14	7.83	67.96	209.08
2	ATPS PH-III	954.25	70.54	89.92	1114.71	1117.2
3	ATPS Chachai	954.25	130.68	97.74	1182.67	1326.29
4	STPS PH-I	3.85	3.43	0.07	7.35	47.36
5	STPS PH-II & III	10.22	31.92	42.86	85.01	676.18
6	STPS Total	14.07	35.35	42.93	92.35	723.55
7	SGTPS PH-I & II	4.51	4.59	0.01	9.11	2172.83
8	SGTPS PH-III	33.99	14.55	61.13	109.67	2066.56
9	SGTPS Total	38.5	19.14	61.14	118.78	4239.39
10	Total Thermal	1006.82	185.17	201.81	1393.8	6289.22
11	Gandhi Sagar	0.03	0.01	0	0.04	10.33
12	Pench	0.02	0	0	0.02	96.27
13	Rajghat	0	0	0	0.01	82.81
14	Bargi	0	0	0	0	87.03
15	Bansagar PH-I, II & III	0	5.07	0.57	5.64	1249.57
16	Bansagar PH-IV	2.3	0.18	0	2.48	119.72
17	Madhikheda	0.04	0.22	0.74	0.99	215.67
18	Birsinghpur	0	0	0	0	52.15
19	Total Hydro	2.4	5.48	1.31	9.19	1913.54
20	HQ	0.6	0.05	0.08	0.72	1.16
	Total	1009.82	190.69	203.2	1403.71	8203.93

Provisions of the Regulation:

3.32 Regulation 20 of the Regulations'2012 provides that,

“The capital Expenditure Incurred or projected to be Incurred, on the following counts within the original scope of work, after the Date of Commercial operation and up to cut-off date may be admitted by the Commission, subject to prudent check:

- (a) Undischarged liabilities*
- (b) Works deferred for execution*
- (c) liabilities to meet award of arbitration or for compliance of order or decree of a court,*
- (d) Change in Law,*
- (e) Procurement of initial capital spares within the original scope of work, subject to the provisions of Regulation 17.1(b)*

Provided that the details of works included in the original scope of work along with estimates of expenditure, un-discharged liabilities and works deferred for execution shall be submitted along with the application for Tariff.

The capital expenditure of the following nature actually incurred on the following counts after the Cut off date may, in its discretion, be admitted by the Commission, subject to prudent check:

- (a) liabilities to meet award of arbitration or for compliance of the order or decree of a court;*
- (b) Change in Law.*
- (c) Deferred works relating to ash pond or ash handling system in the original scope of work;*
- (d) In case of Hydro generating stations, any expenditure which has become necessary on account of damage caused by natural calamities (but not due to flooding of power house attributable to the negligence of the Generating Company) including due to geological reasons after adjusting for proceeds from any insurance scheme, and Expenditure Incurred due to any additional work which has become necessary for successful and efficient plant operation :*

Provided that in respect sub-Regulations (d) above, any expenditure on acquiring the minor items or the assets like tools and tackles, furniture, air-conditioners, voltage stabilizers, refrigerators, coolers, fans, washing machines, heat convectors, mattresses, carpets etc. brought after the cut-off date shall not be considered for Additional Capitalization for determination of Tariff for the Tariff period under these Regulations.

Commission's analysis:

3.33 The petitioner filed the asset addition during FY09-10 to FY11-12 against the need based R&M works in old power stations and additional capitalization in new generating units. The petitioner has not filed any projected additional capitalization during the control period FY 2013-14 to FY 2015-16 in any power station.

3.34 The reasons for not considering the additional capitalization of old power stations during FY 2009-10 to FY 2011-12 have already been mentioned in paras 3.7 to 3.10 in this order. However, the same shall be considered in the true-up order of the respective year in light

of provision under Regulations based on the audited books of accounts after prudence check.

- 3.35 For new power stations (like ATPS Extn. Unit-5, 210MW, SGTPS Extn. Unit-5, 500 MW and Madhikheda Hydro Power Station), the additional capitalization up to 31st March, 2012 is considered only to the extent that it has been admitted in the final tariff order issued by the Commission. In the final tariff orders, the additional capitalization up to 31st March, 2011 was admitted as per audited accounts whereas for FY 2011-12 it was considered on projection basis subject to true-up based on audited accounts for FY 2011-12.

CHAPTER 4

Annual Capacity (fixed) Charges

- 4.1 As per Regulation 34.2 of the Regulations, 2012, the annual Capacity (fixed) Charges shall consist of:
- (a) Return on Equity;
 - (b) Interest and Financing Charges on Loan Capital;
 - (c) Depreciation;
 - (d) Lease/Hire Purchase Charges;
 - (e) Operation and Maintenance Expenses;
 - (f) Interest Charges on Working Capital;
 - (g) Cost of Secondary Fuel Oil;
 - (h) Special allowance in lieu of R&M or separate compensation allowance, wherever applicable

Return on Equity

Petitioner's submission:

- 4.2 The petitioner filed the power station wise Opening Gross fixed asset as on 1.4.2013 as per Audited Statement of Account of MPPGCL for FY2011-12.
- 4.3 The petitioner submitted that the MPERC Generation Tariff Regulation provides Return on Equity to be computed on pre tax @15.5% grossing up as per Regulation 22.3. MPPGCL has not paid any tax in FY12. However, MPPGCL submitted that it has been performing progressively and reducing its financial losses considerably and the company is likely to pay MAT (@20.008%) in FY 13. Accordingly the RoE for FY 14, FY 15 & FY 16 has been computed on Base Rate of grossed up to 19.38%. The Power Station wise RoE as filed in the petition is given below:

Table 20: RoE filed by the petitioner (in Rs. Crores)

Stations		Return on Equity @ 19.38%		
		FY 14	FY 15	FY 16
1	ATPS PH-II	12.15	12.15	12.15
2	ATPS PH-III	43.29	43.29	43.29
3	ATPS Chachai	55.45	55.45	55.45
4	STPS	42.06	42.06	42.06
5	SGTPS PH-I & II	126.31	126.31	126.31
6	SGPTS PH-III	120.13	120.13	120.13
7	SGTPS Total	246.45	246.45	246.45
8	Total Thermal	343.95	343.95	343.95
9	Gandhi Sagar	0.60	0.60	0.60
10	Pench	5.60	5.60	5.60
11	Rajghat	4.81	4.81	4.81
12	Bargi	5.13	5.13	5.13
13	Bansagar PH-I, II & III	72.64	72.64	72.64
14	Bansagar PH-IV	6.96	6.96	6.96
15	Madhikheda	12.54	12.54	12.54
16	Birsinghpur	3.03	3.03	3.03
17	Total Hydro	111.31	111.31	111.31
Total		455.26	455.26	455.26

- 4.4 The petitioner has mentioned that the Return on Equity of head quarters has been allocated to Bargi HPS it being the nearest Power Station.

Provisions of the Regulation:

- 4.5 Regulation 22 of the Regulations provides that,

“Return on equity shall be computed in rupee terms, on the paid up equity capital determined in accordance with Regulation 21.

Return on equity shall be computed on pre-tax basis at the base rate of 15.5% to be grossed up as per Regulation 22.3 of this Regulation:

*Provided that in case of Projects commissioned on or after 1st April, 2013, an additional return of 0.5% shall be allowed if such Projects are completed within the timeline specified in **Appendix-I** :*

Provided further that the additional return of 0.5% shall not be admissible if the Project is not completed within the timeline specified above for reasons whatsoever.

The rate of return on equity shall be computed by grossing up the base rate with the normal tax rate for the Year 2012-13 applicable to the Generating Company:

Provided that return on equity with respect to the actual tax rate applicable to the Generating Company, in line with the provisions of the relevant Finance Acts of the respective Year during the Tariff period shall be trued up separately.

Rate of return on equity shall be rounded off to three decimal points and be computed as per the formula given below:

Rate of pre-tax return on equity = Base rate / (1-t)

Where t is the applicable tax rate in accordance with Regulation 22.3 of this Regulation.

Illustration.-

(i) In case of Generating Company paying Minimum Alternate Tax (MAT) say @ 20.01% including surcharge and cess:

Rate of return on equity = 15.50/ (1-0.2001) = 19.377%

(ii) In case of Generating Company paying normal corporate tax say @ 33.99% including surcharge and cess: Rate of return on equity = 15.50/ (1-0.3399) = 23.481%”

Commission’s analysis:

- 4.6 The Commission has worked out the opening equity amount as on 1st April, 2013 considering the base figure of normative equity as per true-up order for FY 2009-10 for power stations covered under the aforesaid true-up order and final tariff orders for new generating units/stations issued by the Commission. The petition for Bansagar-IV (Jhinna) is under process with the Commission. Therefore, the base figure of normative equity for this hydro power station is considered as per tariff order for FY 2012-13

provisionally allowed by the Commission.

- 4.7 The Unit No.3 of STPS PH-I has been de-capitalized. Therefore; the normative equity amount of this unit, as informed by the petitioner is provisionally deducted from the equity of STPS Complex subject to adjustment based on the actual figure in the audited accounts.
- 4.8 In Para 14 of the petition, the petitioner mentioned that MPPGCL has not paid any tax in FY11-12 however, it has been performing progressively and reducing its financial losses considerably and the company is likely to pay MAT (@ 20.008%) in FY 12-13. Accordingly, RoE for FY 2013-14 to FY 2015-16 has been computed by the petitioner on base rate of 19.38%. The petitioner has further submitted that in case the company pays any other tax in FY 2012-13 onwards or due to any change in the Government policy or otherwise if any, tax liability arises during the year, the petitioner shall be allowed to bill this amount on actuals.
- 4.9 As per Regulation 22.3 of MPERC (Terms and Conditions for determination of Generation tariff) Regulations, 2012, grossing up of base rate of equity is to be done based on tax rate for FY 2012-13 applicable to the generating company. The petitioner confirmed that no tax was paid by the petitioner during FY 2011-12. The audited accounts for FY 2012-13 are still to be finalized at its end. Therefore, the return on equity @ 15.5% is allowed without any grossing up subject to the true-up on actual tax if any, paid by the petitioner.
- 4.10 Accordingly, the Return on Equity for FY 2013-14 to FY 2015-16 is worked out in this order as given below :

Table 21: Return on Equity allowed in this order:

Rs. Cr.

Sr. No.	Power Station	Opening Equity as on 01.04.2013 eligible for ROE	Rate of return on equity	Return on Equity		
				FY 2013-14	FY 2014-15	FY 2015-16
				Rs. Cr.	Rs. Cr.	Rs. Cr.
1	ATPS Chachai (PH-II)	33.46	15.5	5.19	5.19	5.19
2	ATPS Chachai (PH-III)	223.42	15.5	34.63	34.63	34.63
3	STPS Sarni Complex	185.00	15.5	28.68	28.68	28.68
4	SGTPS (PH-I & II)	649.12	15.5	100.61	100.61	100.61
5	SGTPS (PH-III) 500 MW	553.62	15.5	85.81	85.81	85.81
6	Gandhi Sagar	3.09	15.5	0.48	0.48	0.48
7	Pench	28.87	15.5	4.47	4.47	4.47
8	Rajghat	24.84	15.5	3.85	3.85	3.85
9	Bargi	26.11	15.5	4.05	4.05	4.05
10	Bansagar (I to III)	373.18	15.5	57.84	57.84	57.84
11	Bansagar-IV (Jhinna)	29.98	15.5	4.65	4.65	4.65
12	Madhikheda	45.35	15.5	7.03	7.03	7.03
13	Birsingpur	15.65	15.5	2.43	2.43	2.43
14	Total	2191.69		339.71	339.71	339.71

Interest and finance charges on Loan Capital

Petitioner's submission:

- 4.11 Considering the opening Gross Block (including the additional capitalization) filed in the petition, the petitioner filed the Power Station wise Opening Loan balance as on 1.4.2009 indicating the lender wise amount. The petitioner also considered the loan taken from M/s PFC & GoMP during FY10, FY 11 & FY 12 for Capital Works & need based R & M of ATPS PH-2, STPS PH-2&3 & SGTPS PH-1&2 and also towards additional capitalization for 210 MW ATPS Unit No.5, SGTPS Unit No.5 during FY2009-10 to FY2011-12.
- 4.12 The petitioner filed the power station wise closing balance of loans as on 31.03.2013 by considering the repayments equal to depreciation for FY09-10 to FY12-13 as filed in the petition.
- 4.13 Station-wise weighted average rate of Interest as on 1-4-2012 as per the terms of each loan is filed by the petitioner as given below:

Table 22: Weighted average rate of interest filed by the petitioner:

Particulars		Rate of Interest of Loans as on 1-4-2012				
		PFC	LIC	REC	GoMP	Total
1	ATPS Chachai	11.52%			10.50%	11.52%
2	STPS Sarni	13.27%			12.50%	13.27%
3	SGTPS PH I & II	11.66%	8.50%		10.50%	8.72%
4	SGTPS PH III	11.34%				11.34%
5	SGTPS Total	11.34%	8.50%		10.50%	10.93%
6	Malwa	13.00%				13.00%
7	Total Thermal	12.59%	8.50%	0.00%	10.54%	12.47%
8	Gandhi Sagar					
9	Pench					
10	Rajghat					
11	Bargi					
12	Bansagar PH-I to IV	12.10%		8.50%	10.50%	9.92%
13	Madhikheda	10.56%			10.50%	10.56%
14	Birsinghpur					
15	Total Hydro	10.91%	0.00%	8.50%	10.50%	10.29%
16	HQ				10.50%	10.50%
Tot		12.57%	8.50%	8.50%	10.53%	12.42%

- 4.14 In table No. 9.5.1 to 9.5.3, the petitioner filed the following Power station-wise loan balances & interest charges for FY14, FY 15 & FY 16 by applying weighted average rate of interest on loans :

Table 23: Station-wise interest on loans filed by the petitioner (in Rs. Cr)

Power Stations	Opening balance of the loan			Interest amount		
	FY13-14	FY14-15	FY15-16	FY13-14	FY14-15	FY15-16
ATPS PH-II	54.02	39.70	25.37	5.40	3.75	2.10
ATPS PH-III	600.38	549.04	497.70	66.18	60.27	54.36
ATPS Chachai	654.40	588.74	523.07	71.58	64.02	56.46
SGTPS PH I & II	24.55			1.07		
SGTPS PH-III	1105.45	998.62	891.79	119.30	107.19	95.07
SGTPS Total	1130.00	998.62	891.79	120.37	107.19	95.07
Total Thermal	1784.40	1587.36	1414.86	191.95	171.20	151.53
Bansagar PH-I, II & III	37.34			1.85		
Bansagar PH-IV	15.48	9.15	2.82	1.22	0.59	0.14
Madhikheda	73.06	61.81	50.55	7.12	5.93	4.75
Total Hydro	125.88	70.96	53.37	10.20	6.53	4.89
HQ	0.69	0.59	0.49	0.07	0.06	0.05
Total	1910.97	1658.90	1468.72	202.21	177.79	156.46

4.15 The petitioner further submitted the following:

“The Proviso of Regulation 21.2 of MPERC (Terms and Conditions for determination of Generation Tariff) Regulation 2012 provides that where equity actually employed is in excess of 30%, the amount of equity for the purpose of tariff shall be limited to 30% and the balance amount shall be considered as loan. Further, the Commission vide order dated 27.12.2012 has determined the Power Station wise amount of excess equity for the Power Stations transferred through Final Opening Balance Sheet after making normative repayment upto 31.3.08 , same has been considered for the purpose of calculation of interest on excess equity for the control period FY 14 to FY 16. For the new units i.e. Madhikheda HPS, Bansagar PH-4(Jhinna), SGTPS PH-3, excess equity as on 1.4.2009 has been considered.”

4.16 The petitioner also filed the power station wise average balances & Interest on excess equity for FY14, FY15 & FY 16 by applying weighted average rate of interest on loans.

4.17 Based on the above, the petitioner claimed the following total interest charges on the Loan Capital & Excess equity for FY14, FY 15 and FY 16 :

Table 24: Total interest (including interest on excess equity) filed (Rs. Cr.)

Stations	FY13 - 14	FY14 - 15	FY15 - 16
ATPS PH-II	5.77	4.12	2.47
ATPS PH-III	66.18	60.27	54.36
ATPS Chachai	71.95	64.39	56.82
SGTPS PH-I & II	4.80	0.00	0.00
SGTPS PH-III	124.01	111.90	99.78
SGTPS Total	128.81	111.90	99.78
Total Thermal	200.76	176.28	156.61
Bansagar PH-I, II & III	4.50	0.66	0.00
Bansagar Ph-IV	3.78	3.16	2.48
Madhikheda	7.90	6.72	5.53
Bargi	0.23	0.22	0.21
Total Hydro	16.42	10.75	8.22
Total	217.18	187.03	164.83

Provisions of the Regulation:

4.18 Regulation 23 of MPERC (Terms and Conditions for determination of Generation tariff) Regulation, 2012, provides that,

“The loans arrived at in the manner indicated in Regulation 21 shall be considered as gross normative loan for calculation of interest on loan.

The normative loan outstanding as on 1.4.2013 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2013 from the gross normative loan.

The repayment for the Year of the Tariff period 2013-16 shall be deemed to be equal to the depreciation allowed for that Year.

Notwithstanding any moratorium period availed by the Generating Company, the repayment of loan shall be considered from the first Year of commercial operation of the Project and shall be equal to the annual depreciation allowed.

The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each Year applicable to the Project:

Provided that if there is no actual loan for a particular Year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered:

Provided further that if the generating station does not have actual loan, then the weighted average rate of interest of the Generating Company as a whole shall be considered.

The interest on loan shall be calculated on the normative average loan of the Year by applying the weighted average rate of interest.

The Generating Company shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the Beneficiaries and the net savings shall be shared between the Beneficiaries and the Generating Company, in the ratio of 2:1.

The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing.

In case of dispute, any of the parties may make an application in accordance with the MPERC (Conduct of Business) Regulation, 2004, as amended from time to time:

Provided that the Beneficiaries shall not withhold any payment on account of the interest claimed by the Generating Company during the pendency of any dispute arising out of re-financing of loan.”

Commission's analysis:

- 4.19 Regulation 23.2 of MPERC (Terms and Conditions for determination of Generation tariff) Regulation, 2012, provides that the normative loan outstanding as on 1st April, 2013 shall be worked out by deducting the cumulative repayment **as admitted by the Commission** up to 31st March, 2013 from the gross normative loan.
- 4.20 The petitioner worked out the opening loan as on 1st April, 2013 by considering the power station-wise and lender-wise loan balances as on 1st April, 2009. The petitioner also considered the loan taken from PFC and GoMP during FY 2009-10 to FY 2011-12 for capital works and need based R&M of ATPS PH-II, STPS PH-II & III and SGTPS PH-I & II (which is yet to be admitted by the Commission) and also towards additional capitalization for 210 MW ATPS Unit No.5 and SGTPS Unit No.5.
- 4.21 In preceding paras of this order, the Commission has worked out the power station-wise loan balances as on 1st April, 2013 as per the above-mentioned provision under the Regulations, 2012 considering the following approach:
- a) Loan balances (as on 31st March, 2010) admitted by the Commission in last true-up order for FY 2009-10 for old power stations covered under that true-up order are considered as the base figures for loan balances.
 - b) Thereafter, depreciation during FY 2010-11 and FY 2011-12 allowed in MYT order dated 3rd March, 2010 is considered equal to repayment during the respective year for arriving at the opening balances of loan as on 01.04.2013.
 - c) Loan balances (as on 31st March, 2012) admitted by the Commission for new power stations (like ATPS Extn. Unit-5, 210MW, SGTPS Extn. Unit-5, 500 MW and Madhikheda Hydro Power Station) are considered as per the final tariff orders for respective generating unit(s) issued by the Commission. For Bansagar-IV (Jhinna), the loan balance is considered as provisionally admitted by the Commission in tariff order for FY 2012-13.
 - d) Repayment for FY 2012-13 for all the power stations (old and new) is considered equal to depreciation for the respective power stations allowed in tariff order for FY 2012-13 dated 16th April, 2012.
 - e) Power station wise Weighted average rate of interest is considered as worked out by the petitioner and filed in this petition. The petitioner has also filed supporting documents in this regard.
- 4.22 The opening loan balances as on 1st April, 2013 are worked out by considering excess equity. The interest so calculated and allowed on the aforesaid opening loan balances includes the interest on excess equity. Therefore, the interest on excess equity is not indicated separately in this order during the control period. The repayment during the control period FY2013-14 to FY2015-16 is considered equal to depreciation allowed in this order for the respective power station as per Regulations, 2012.
- 4.23 Based on the above, the interest on loan capital including the interest on excess equity (considered as normative loan) is worked out in this order as given below :

Table 25: Interest and Financing Charges on loan (including excess equity) allowed in this order:**ATPS PH-II**

Particulars	Unit	FY13-14	FY14-15	FY15-16
Opening loan balance for the year	Rs. Cr.	52.86	46.78	40.70
Repayment during the year	Rs. Cr.	6.08	6.08	6.08
Closing balance of loan for the year	Rs. Cr.	46.78	40.70	34.61
Average of loan for the financial year	Rs. Cr.	49.82	43.74	37.65
Wt. average rate of interest	%	11.52	11.52	11.52
Interest amount	Rs. Cr.	5.74	5.04	4.34

ATPS PH-III

Particulars	Unit	FY13-14	FY14-15	FY15-16
Opening loan balance for the year	Rs. Cr.	623.41	578.91	534.41
Repayment during the year	Rs. Cr.	44.50	44.50	44.50
Closing balance of loan for the year	Rs. Cr.	578.91	534.41	489.91
Average of loan for the financial year	Rs. Cr.	601.16	556.66	512.16
Wt. average rate of interest	%	11.52	11.52	11.52
Interest amount	Rs. Cr.	69.25	64.13	59.00

SGTPS PH-III

Particulars	Unit	FY13-14	FY14-15	FY15-16
Opening loan balance for the year	Rs. Cr.	958.42	858.33	758.25
Repayment during the year	Rs. Cr.	100.09	100.09	100.09
Closing balance of loan for the year	Rs. Cr.	858.33	758.25	658.16
Average of loan for the financial year	Rs. Cr.	908.38	808.29	708.21
Wt. average rate of interest	%	11.34	11.34	11.34
Interest amount	Rs. Cr.	103.01	91.66	80.31

Bansagar (I-III):

Particulars	Unit	FY13-14	FY14-15	FY15-16
Opening loan balance for the year	Rs. Cr.	20.90	0.00	0.00
Repayment during the year	Rs. Cr.	20.90	0.00	0.00
Closing balance of loan for the year	Rs. Cr.	0.00	0.00	0.00
Average of loan for the financial year	Rs. Cr.	10.45	0.00	0.00
Wt. average rate of interest	%	9.92	9.92	9.92
Interest amount	Rs. Cr.	1.04	0.00	0.00

Bansagar IV (Jhinna):

Particulars	Unit	FY13-14	FY14-15	FY15-16
Opening loan balance for the year	Rs. Cr.	28.33	23.43	18.53
Repayment during the year	Rs. Cr.	4.90	4.90	4.90
Closing balance of loan for the year	Rs. Cr.	23.43	18.53	13.64
Average of loan for the financial year	Rs. Cr.	25.88	20.98	16.09
Wt. average rate of interest	%	9.92	9.92	9.92
Interest amount	Rs. Cr.	2.57	2.08	1.60

Madhikheda:

Particulars	Unit	FY13-14	FY14-15	FY15-16
Opening loan balance for the year	Rs. Cr.	91.15	79.93	68.72
Repayment during the year	Rs. Cr.	11.22	11.22	11.22
Closing balance of loan for the year	Rs. Cr.	79.93	68.72	57.50
Average of loan for the financial year	Rs. Cr.	85.54	74.32	63.11
Wt. average rate of interest	%	10.56	10.56	10.56
Interest amount	Rs. Cr.	9.03	7.85	6.66

MPPGCL Total:

Particulars	Unit	FY13-14	FY14-15	FY15-16
Opening loan balance for the year	Rs. Cr.	1775.07	1587.39	1420.61
Repayment during the year	Rs. Cr.	187.68	166.78	166.78
Closing balance of loan for the year	Rs. Cr.	1587.39	1420.61	1253.82
Average of loan for the financial year	Rs. Cr.	1681.23	1504.00	1337.21
Wt. average rate of interest*	%	11.34	11.35	11.36
Interest amount	Rs. Cr.	190.64	170.76	151.91

* The weighted average rate of interest for MPPGCL as a whole has been worked out on the basis of total average loan and interest amount of all the power stations as calculated above in each year of the tariff period.

Depreciation**Petitioner's submission:**

The petitioner broadly submitted the following:-

- 4.24 *"The Commission in its regulation "MPERC (Terms and Conditions of Generation Tariff) (Revision II) Regulations, 2012 {RG-26 (II) of 2012}" has specified the principles of charging depreciation. MPPGCL has determined the depreciation as per Regulation 2012.*
- 4.25 *The depreciation on the gross block computed based on the following:*
- (i) *The rates for depreciation are considered as approved by the Commission in Appendix II of Regulation RG-26(II) of 2012.*
 - (ii) *The salvage value of assets is considered as 10% i.e. none of the assets is depreciated more than 90% of the gross value.*

4.26 The station wise break up of depreciation chargeable to various plants during the year FY 13-14 to FY 15-16 is filed in the petition as given below:

Table 26: Station wise Depreciation filed by the petitioner: (in Rs.Crores)

Sr. No.	Station	Op. Balance as on 1-4-2013		Depreciation			Cl. Acc. Dep	Cl. Acc. Dep as % of GB
		Asset GB	Acc. Dep.	FY 14	FY 15	FY 16		
1	ATPS PH-II	209.08	123.83	14.32	14.32	14.32	166.80	80%
2	ATPS PH-III	1117.20	173.92	51.34	51.34	51.34	327.95	29%
3	ATPS Chachai	1326.29	297.75	65.66	65.66	65.66	494.74	37%
4	STPS PH-I	47.36	42.58	0.00	0.00	0.00	42.58	90%
5	STPS PH II & III	676.18	571.34	0.92	0.92	0.92	574.11	85%
6	STPS Total	723.55	613.92	0.93	0.93	0.93	616.69	85%
7	SGTPS PH I & II	2172.83	1478.21	92.23	92.23	92.23	1754.90	81%
8	SGTPS PH III	2066.56	460.88	106.83	106.83	106.83	781.37	38%
9	SGTPS Total	4239.39	1939.09	199.06	199.06	199.06	2536.27	60%
10	Total Thermal	6289.22	2850.75	265.65	265.65	265.65	3647.71	58%
11	Gandhi Sagar *	10.33	9.30	0.00	0.00	0.00	9.30	90%
12	Pench	96.27	73.98	3.17	3.17	3.17	83.50	87%
13	Rajghat	82.81	41.12	4.03	4.03	4.03	53.22	64%
14	Bargi	88.19	60.95	3.07	3.07	3.07	70.16	80%
15	Bansagar PH I-III	1249.57	566.30	58.69	58.69	58.69	742.36	59%
16	Bansagar PH-IV	119.72	30.76	6.33	6.33	6.33	49.75	42%
17	Madhikheda	215.67	55.37	11.25	11.25	11.25	89.13	41%
18	Birsinghpur	52.15	31.93	1.67	1.67	1.67	36.94	71%
19	Total Hydro	1913.54	869.30	88.12	88.12	88.12	1133.65	59%
Total		8203.93	3720.46	353.87	353.87	353.87	4782.07	58%

* Since the Accumulated depreciation reached upto 90% of GB hence no depreciation charged

The depreciation chargeable on the Gross Block of HQ has been allocated on Bargi HPS the nearest Power station.”

Provisions of the Regulation:

4.27 Regulation 24 of MPERC (Terms and Conditions for determination of Generation tariff) Regulation, 2012 provides that,

“For the purpose of Tariff, depreciation shall be computed in the following manner:

- The value base for the purpose of depreciation shall be the capital cost of the assets as admitted by the Commission
- The approved/accepted cost shall include foreign currency funding converted to equivalent rupee at the exchange rate prevalent on the date of foreign currency actually availed.

- (c) *The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset:*

Provided that in case of Hydro generating stations, the salvage value shall be as provided in the agreement signed by the developers with the State Government for creation of the site:

Provided further that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciable value shall correspond to the percentage of sale of electricity under Long-term power purchase agreement at regulated Tariff.

- (d) *Land other than land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.*
- (e) *Depreciation shall be calculated annually based on 'Straight Line Method' and at rates specified in **Appendix-II** to these Regulations for the assets of the generating station:*

Provided that, the remaining depreciable value as on 31st March of the Year closing after a period of 12 Years from the Date of Commercial operation shall be spread over the balance Useful life of the assets.

- (f) *In case of the existing Projects, the balance depreciable value as on 1.4.2013 shall be worked out by deducting the cumulative depreciation including Advance Against Depreciation if any as admitted by the Commission upto 31.3.2013 from the gross depreciable value of the assets. The rate of Depreciation shall be continued to be charged at the rate specified in **Appendix-II** till cumulative depreciation reaches 70%. Thereafter the remaining depreciable value shall be spread over the remaining life of the asset such that the maximum depreciation does not exceed 90%.*
- (g) *Depreciation shall be chargeable from the first Year of commercial operation. In case of commercial operation of the asset for part of the Year, depreciation shall be charged on pro rata basis."*

Commission's analysis:

- 4.28 Regulation 24.1(a) of the Regulations, 2012 provides that the base value for the purpose of depreciation shall be the capital cost of the assets as admitted by the Commission.
- 4.29 The Commission has worked out the opening gross fixed assets as on 1st April, 2013 based on the power station-wise gross fixed assets last admitted by the Commission in earlier true-up order for FY 2009-10 (for old power stations) and in final tariff orders for new generating units (like ATPS Extn. Unit-5, 210MW, SGTPS Extn. Unit-5, 500 MW and Madhikheda Hydro Power Station). The final tariff petition for Bansagar-IV (Jhinna) is under process with the Commission. Therefore, the gross fixed assets admitted in its provisional tariff order is considered in this order. The unit-3 of STPS PH-I has been de-commissioned on 1st October, 2012. Therefore, the gross fixed assets of Rs.9.47

crores of this unit (as informed by the petitioner) has been deducted from the gross fixed assets of STPS Complex subject to true-up based on the actual figure in the audited accounts for the respectively year. Accordingly, the opening gross block as on 1st April, 2013 has been worked out in para 3.16 of this order.

4.30 The petitioner has filed the Asset-cum-Depreciation registers for FY 2011-12 in its additional submission. With regard to the depreciation and Asset-cum-Depreciation Registers filed by the petitioner, vide letter dated 27th February, 2013 the Commission sought following clarifications from the petitioner:

- (i) *The accumulated depreciation in SGTPS, Birsinghpur PH-1 & 2 has reached beyond 70% during FY 2013-14. As per Regulation 24(1) (f) of the Regulations, 2012, "the rate of depreciation shall be continued to be charged at the rate specified in the Regulation till cumulative depreciation reaches 70%. Thereafter, the remaining depreciable value shall be spread over the remaining life of the assets such that the maximum depreciation does not exceed 90%". MPPGCL has not filed the depreciation in SGTPS PH I & II in terms of aforesaid provision under Regulation during FY 2015 and FY 2016. The reasons for charging depreciation in FY 2015 and FY 2016 at the applicable rate even after achieving 70% limit of accumulated depreciation be submitted.*
- (ii) *While going through the rate of depreciation charged for ATPS PH-II, it is observed that, the rate of depreciation is charged at 6.85% which is higher than the average rate of depreciation as per Regulation. Since most of the assets in ATPS PH II have been depreciated, the reason for claiming a higher rate of depreciation be submitted.*
- (iii) *While going through the Asset-cum-Depreciation Registers filed by MPPGCL, it is observed that the rate of depreciation has been charged at higher rates than the applicable rate of depreciation in some cases. The reasons for claiming the high depreciation rate be submitted.*

4.31 Vide letter dated 7th March, 2013, the petitioner submitted the following :

- *The amount of depreciation claimed in MYT petition for the control period FY 14 to FY 16 is calculated on the basis of Gross Block as on 31.03.2012 as per Audited Annual Statement of Accounts for FY 12. Further the life completed by the power houses of SGTPS i.e. PH-1 & 2 as on 31.03.2013 is 20 years and 14 years respectively, against the useful life of 25 years as per the MPERC Regulations 2012. The details of Accumulated depreciation and Gross block of SGTPS PH-1 & 2 as on 31.03.2012 is detailed as under:-*

<i>Particulars</i>	<i>Amount in Rs. Crs.</i>
<i>Gross Block as on 01-04-2012</i>	<i>2172.83</i>
<i>Accumulated depreciation as on 01-04-2012</i>	<i>1385.98</i>
<i>Acc. Dep. as a % of Gross Block</i>	<i>63.79%</i>

It is evident from the above that the accumulated depreciation works out to be 63.79 % of Gross Block, which is less than 70% as on 31.03.2012. No additional

capitalization for FY 13 and onwards has been estimated by MPPGCL while filing the instant MYT petition, thus it would be very difficult to foresee as to when the accumulated depreciation shall reach upto 70% of Gross block. It would therefore be prudent to address this issue at the time of true up of generation tariff based on Audited Annual Statement of Accounts for respective Years.

- *The ATPS PH-2 has already outlived its specified useful life i.e.25 years as per MPERC Regulation 2012 & at present its life is 36 years. It may be appreciated that the issue of charging depreciation on power stations which have lived their useful life was discussed at length with the Commission by the Joint Director (Accounts) of MPPGCL during the hearings on MYT petition for approval of generation Tariff for FY-10 to FY-12. Wherein it was clearly spelled out as to how the balance depreciation of the power stations who outlived their useful life is to be calculated, as the Appendix-II indicating the Depreciation rate of MPERC Regulation,2009 as well as Regulation,2012 does not specify the life of individual assets and speaks only for newly commissioned power stations.*

- 4.32 Regulation 24.1(f) of the Regulations, 2012 provides that the balance depreciation value as on 1st April, 2013 shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to 31st March, 2013 from the gross depreciation value of the assets.
- 4.33 Accordingly, the Cumulative depreciation as on 1st April, 2013 is worked out based on the power station-wise cumulative depreciation admitted by the Commission in the earlier true-up order for FY 2009-10 and in final tariff orders for new generating units. The depreciation during FY 2010-11 to FY 2011-12 and for FY 2012-13 is considered as per the depreciation allowed in MYT order dated 3rd March, 2010 and tariff order for FY 2012-13 dated 16th April, 2012. For new generating units (like ATPS Extn. Unit-5, 210MW, SGTGS Extn. Unit-5, 500 MW and Madhikheda Hydro Power Station), the cumulative depreciation as on 31st March, 2012 (as per final tariff order) is considered as the base figure and depreciation during FY 2012-13 as allowed in tariff order is considered to work out the cumulative depreciation as on 1st April, 2013 for these new generating units.
- 4.34 The depreciation on the gross fixed assets (considered as on 1st April, 2013) is worked out on the following basis :
- (i) The rate of depreciation as worked out in Asset-cum-Depreciation registers and also in the petition includes the asset additions during FY 2009-10 to FY 2011-12 in respect of need based R&M which are not considered by the Commission as discussed in previous paragraphs in this order. Therefore, the rate of depreciation is considered as per the power station-wise rate of depreciation allowed in last true-up order/final tariff order.
 - (ii) The salvage value of assets is considered as 10% of the gross fixed assets i.e. none of the assets is depreciated more than 90% of the gross fixed assets. The final tariff order of Jhinna HPS is under process. Therefore the rate of depreciation for this hydro power station is considered as per the tariff order for FY2012-13.

- (iii) No projected additional capitalization is filed by the petitioner during the control period hence, the gross fixed assets during the control period remain unchanged.
- (iv) The rate of depreciation is continued to be charged at the rate specified in the Regulations till cumulative depreciation reaches 70%. Therefore, the remaining depreciation value is spread over the remaining life of the asset such that the maximum depreciation does not exceed 90%.
- (v) It is observed that in some of the power stations, the cumulative depreciation reaches up to 70% of gross fixed assets whereas they have also completed their useful life. The depreciation on all such power stations is allowed to charge at the rate specified in the Regulations till the cumulative depreciation reaches 90% of the gross fixed assets.

4.35 Based on the above, the power station-wise depreciation as worked out in this order is given below :

Table 27: Depreciation allowed in this order:

ATPS PH-II

Particulars	Unit	FY13-14	FY14-15	FY15-16
Opening gross fixed assets for the financial year	Rs. Cr.	141.12	141.12	141.12
Opening Cumulative Dep.	Rs. Cr.	88.07	94.15	100.23
Opening Cumulative Dep. % of the Gross Fixed Assets	%	62.41	66.72	71.03
Rate of depreciation charged during the year	%	4.31	4.31	4.31
Depreciation amount	Rs. Cr.	6.08	6.08	6.08
Closing Cumulative Dep.	Rs. Cr.	94.15	100.23	106.32
Closing Cumulative Dep. % of the Gross Fixed Assets	%	66.72	71.03	75.34

ATPS PH-III

Particulars	Unit	FY13-14	FY14-15	FY15-16
Opening gross fixed assets for the financial year	Rs. Cr.	997.73	997.73	997.73
Opening Cumulative Dep.	Rs. Cr.	150.90	195.40	239.90
Opening Cumulative Dep. % of the Gross Fixed Assets	%	15.12	19.58	24.04
Rate of depreciation charged during the year	%	4.46	4.46	4.46
Depreciation amount	Rs. Cr.	44.50	44.50	44.50
Closing Cumulative Dep.	Rs. Cr.	195.40	239.90	284.40
Closing Cumulative Dep. % of the Gross Fixed Assets	%	19.58	24.04	28.50

STPS Complex

Particulars	Unit	FY13-14	FY14-15	FY15-16
Opening gross fixed assets for the financial year	Rs. Cr.	621.72	621.72	621.72
Opening Cumulative Dep.	Rs. Cr.	522.50	544.94	559.55
Opening Cumulative Dep. % of the Gross Fixed Assets	%	84.04	87.65	90.00
Rate of depreciation charged during the year	%	3.61	2.35	0.00
Depreciation amount	Rs. Cr.	22.44	14.60	0.00
Closing Cumulative Dep.	Rs. Cr.	544.94	559.55	559.55
Closing Cumulative Dep. % of the Gross Fixed Assets	%	87.65	90.00	90.00

SGTSPS PH-I&II

Particulars	Unit	FY13-14	FY14-15	FY15-16
Opening gross fixed assets for the financial year	Rs. Cr.	2163.73	2163.73	2163.73
Opening Cumulative Dep.	Rs. Cr.	1469.18	1560.71	1595.86
Opening Cumulative Dep. % of the Gross Fixed Assets	%	67.90	72.13	73.75
Rate of depreciation charged during the year	%	4.23	1.62	1.62
Depreciation amount	Rs. Cr.	91.53	35.15	35.15
Closing Cumulative Dep.	Rs. Cr.	1560.71	1595.86	1631.01
Closing Cumulative Dep. % of the Gross Fixed Assets	%	72.13	73.75	75.38

SGTSPS PH-III

Particulars	Unit	FY13-14	FY14-15	FY15-16
Opening gross fixed assets for the financial year	Rs. Cr.	1935.89	1935.89	1935.89
Opening Cumulative Dep.	Rs. Cr.	420.62	520.71	620.79
Opening Cumulative Dep. % of the Gross Fixed Assets	%	21.72	26.89	32.06
Rate of depreciation charged during the year	%	5.17	5.17	5.17
Depreciation amount	Rs. Cr.	100.09	100.09	100.09
Closing Cumulative Dep.	Rs. Cr.	520.71	620.79	720.88
Closing Cumulative Dep. % of the Gross Fixed Assets	%	26.90	32.07	37.24

Gandhi Sagar:

Particulars	Unit	FY13-14	FY14-15	FY15-16
Opening gross fixed assets for the financial year	Rs. Cr.	10.29	10.29	10.29
Opening Cumulative Dep.	Rs. Cr.	9.03	9.26	9.26
Opening Cumulative Dep. % of the Gross Fixed Assets	%	87.76	90.00	90.00
Rate of depreciation charged during the year	%	2.24	0.00	0.00
Depreciation amount	Rs. Cr.	0.23	0.00	0.00
Closing Cumulative Dep.	Rs. Cr.	9.26	9.26	9.26
Closing Cumulative Dep. % of the Gross Fixed Assets	%	90.00	90.00	90.00

Pench:

Particulars	Unit	FY13-14	FY14-15	FY15-16
Opening gross fixed assets for the financial year	Rs. Cr.	96.24	96.24	96.24
Opening Cumulative Dep.	Rs. Cr.	68.94	70.45	71.96
Opening Cumulative Dep. % of the Gross Fixed Assets	%	71.63	73.20	74.77
Rate of depreciation charged during the year	%	1.57	1.57	1.57
Depreciation amount	Rs. Cr.	1.51	1.51	1.51
Closing Cumulative Dep.	Rs. Cr.	70.45	71.96	73.47
Closing Cumulative Dep. % of the Gross Fixed Assets	%	73.20	74.77	76.34

Rajghat:

Particulars	Unit	FY13-14	FY14-15	FY15-16
Opening gross fixed assets for the financial year	Rs. Cr.	82.80	82.80	82.80
Opening Cumulative Dep.	Rs. Cr.	41.10	45.13	49.16
Opening Cumulative Dep. % of the Gross Fixed Assets	%	49.64	54.51	59.38
Rate of depreciation charged during the year	%	4.87	4.87	4.87
Depreciation amount	Rs. Cr.	4.03	4.03	4.03
Closing Cumulative Dep.	Rs. Cr.	45.13	49.16	53.20
Closing Cumulative Dep. % of the Gross Fixed Assets	%	54.51	59.38	64.25

Bargi:

Particulars	Unit	FY13-14	FY14-15	FY15-16
Opening gross fixed assets for the financial year	Rs. Cr.	87.03	87.03	87.03
Opening Cumulative Dep.	Rs. Cr.	57.25	60.21	63.17
Opening Cumulative Dep. % of the Gross Fixed Assets	%	65.78	69.18	72.58
Rate of depreciation charged during the year	%	3.40	3.40	2.18
Depreciation amount	Rs. Cr.	2.96	2.96	1.90
Closing Cumulative Dep.	Rs. Cr.	60.21	63.17	65.07
Closing Cumulative Dep. % of the Gross Fixed Assets	%	69.18	72.58	74.77

Bansagar (I-III):

Particulars	Unit	FY13-14	FY14-15	FY15-16
Opening gross fixed assets for the financial year	Rs. Cr.	1243.92	1243.92	1243.92
Opening Cumulative Dep.	Rs. Cr.	578.26	636.48	694.69
Opening Cumulative Dep. % of the Gross Fixed Assets	%	46.49	51.17	55.85
Rate of depreciation charged during the year	%	4.68	4.68	4.68
Depreciation amount	Rs. Cr.	58.22	58.22	58.22
Closing Cumulative Dep.	Rs. Cr.	636.48	694.69	752.91
Closing Cumulative Dep. % of the Gross Fixed Assets	%	51.17	55.85	60.53

Bansagar IV (Jhinna):

Particulars	Unit	FY13-14	FY14-15	FY15-16
Opening gross fixed assets for the financial year	Rs. Cr.	97.18	97.18	97.18
Opening Cumulative Dep.	Rs. Cr.	35.58	40.48	45.38
Opening Cumulative Dep. % of the Gross Fixed Assets	%	36.61	41.65	46.69
Rate of depreciation charged during the year	%	5.04	5.04	5.04
Depreciation amount	Rs. Cr.	4.90	4.90	4.90
Closing Cumulative Dep.	Rs. Cr.	40.48	45.38	50.27
Closing Cumulative Dep. % of the Gross Fixed Assets	%	41.65	46.69	51.73

Madhikheda:

Particulars	Unit	FY13-14	FY14-15	FY15-16
Opening gross fixed assets for the financial year	Rs. Cr.	214.93	214.93	214.93
Opening Cumulative Dep.	Rs. Cr.	53.06	64.28	75.50
Opening Cumulative Dep. % of the Gross Fixed Assets	%	24.69	29.91	35.13
Rate of depreciation charged during the year	%	5.22	5.22	5.22
Depreciation amount	Rs. Cr.	11.22	11.22	11.22
Closing Cumulative Dep.	Rs. Cr.	64.28	75.50	86.72
Closing Cumulative Dep. % of the Gross Fixed Assets	%	29.91	35.13	40.35

Birsing'pur Hydel:

Particulars	Unit	FY13-14	FY14-15	FY15-16
Opening gross fixed assets for the financial year	Rs. Cr.	52.15	52.15	52.15
Opening Cumulative Dep.	Rs. Cr.	34.32	35.99	37.66
Opening Cumulative Dep. % of the Gross Fixed Assets	%	65.81	69.01	72.21
Rate of depreciation charged during the year	%	3.20	3.20	1.48
Depreciation amount	Rs. Cr.	1.67	1.67	0.77
Closing Cumulative Dep.	Rs. Cr.	35.99	37.66	38.43
Closing Cumulative Dep. % of the Gross Fixed Assets	%	69.01	72.21	73.69

MPPGCL Total:

Particulars	Unit	FY13-14	FY14-15	FY15-16
Opening gross fixed assets for the financial year	Rs. Cr.	7744.73	7744.73	7744.73
Opening Cumulative Dep.	Rs. Cr.	3528.81	3878.18	4163.11
Opening Cumulative Dep. % of the Gross Fixed Assets	%	45.56	50.08	53.75
Rate of depreciation charged during the year	%	4.51	3.68	3.47
Depreciation amount	Rs. Cr.	349.37	284.92	268.36
Closing Cumulative Dep.	Rs. Cr.	3878.18	4163.11	4431.47
Closing Cumulative Dep. % of the Gross Fixed Assets	%	50.08	53.75	57.22

4.36 The following is observed from the above :

- i) The cumulative depreciation of Gandhi Sagar Hydro Power Station and STPS Sarni shall reach at 90% of gross fixed assets during the control period.

- ii) The cumulative depreciation of Pench, Bargi and Birsinghpur Hydro Power Stations shall reach up to 70% during the control period. Therefore, the balance depreciation spread over the balance life of the power stations. The depreciation of SGTPS, PH-1 & 2 has also reached up to 70% during FY 2013-14 and balance depreciation of this power station is spread over the balance life. For this purpose, the CoD of last unit of the power house is considered as the CoD of power station in accordance with the Regulation 4.1 (l) (i) of the Regulations, 2012.
- iii) ATPS Chachai PH-II has recovered depreciation more than 70% of its gross fixed assets. This thermal power station has already completed its useful life. Therefore, the depreciation of this power station is allowed to charge at the rate specified in the Regulations up to the cumulative depreciation reaches 90% of the gross fixed assets.

Operation & Maintenance Expenses

Petitioner's submission:

- 4.37 The petitioner filed the O&M expenses for thermal and hydel power stations based on the norms prescribed in the Regulations as given below:

Table 28: O&M expenses filed in the petition (in Rs. Crores)

Name of Power House	Capacity in MW	FY 14	FY 15	FY 16
ATPS-PH II	240.00	64.10	69.19	74.66
ATPS PH III	210.00	38.20	41.22	44.50
STPS PH I (100%)	312.50	67.56	72.91	78.69
STPS PH (II & III3)	830.00	150.98	162.93	175.88
STPS Total (100%)	1142.50	218.54	235.84	254.56
SGTPS PH(I & II)	840.00	152.80	164.89	178.00
SGTPS PH III	500.00	68.55	74.00	79.85
Thermal (100%)	2932.50	542.19	585.14	631.57
G. Sagar (100%)	115.00	12.91	13.94	15.05
Pench (100%)	160.00	17.97	19.39	20.94
Birsinghpur Hydro	20.00	2.25	2.42	2.62
Bansagar PH-I, II & III	405.00	45.48	49.09	53.01
Bansagar PH-IV	20.00	2.25	2.42	2.62
Madhikedha	60.00	6.74	7.27	7.85
Bargi	90.00	10.11	10.91	11.78
Rajghat (100%)	45.00	5.05	5.45	5.89
Hydro Total	915.00	102.75	110.90	119.77
Total (100%)	3847.50	644.94	696.04	751.35

Provisions of the Regulation:

- 4.38 Regulation 36 of the Regulations, 2012 regarding O&M of Thermal Power Stations provides that,

“Operation and Maintenance Expenses of Thermal Power Stations including MPPGCL’s

The Operation and Maintenance expenses admissible to existing thermal power stations comprise of employee cost, Repair & Maintenance (R&M) cost and Administrative and General (A&G) cost . These norms exclude Pension, Terminal Benefits and Incentive, arrears to be paid to employees, taxes payable to the Government, and fees payable to MPERC. The Generating Company shall claim the rate, rent & taxes payable to the Government, cost of chemicals and consumables, fees to be paid to MPERC and any arrears paid to employees separately as actuals. The claim of pension and Terminal Benefits shall be dealt as per Regulation 26.5.

O&M Norms for Thermal Generating Units: Rs. In lakh/MW

Units (MW)	FY13-14	FY14-15	FY15-16
62.5	21.62	23.33	25.18
120	26.71	28.83	31.11
200/210/250	18.19	19.63	21.19
500	13.71	14.80	15.97

- 4.39 Further, Regulation 50 of the Regulations regarding Hydel Power Stations provides that, **“Operation and Maintenance Expenses of Hydel Power Stations**

The Operation and Maintenance expenses admissible to existing hydro power stations comprise of employee cost, Repair & Maintenance (R&M) cost and Administrative and General (A&G) cost . These norms exclude Pension, Terminal Benefits and Incentive, arrears to be paid to employees, taxes payable to the Government, and fees payable to MPERC. The Generating Company shall claim the rate, rent & taxes payable to the Government, cost of chemicals and consumables, fees to be paid to MPERC and any arrears paid to employees separately as actuals. The claim of pension and Terminal Benefits shall be dealt as per Regulation 26.5.

O&M Norms for Hydel Power Stations:

Year	O&M Expenses in Rs. in lakh/MW
FY 13-14	11.23
FY 14-15	12.12
FY 15-16	13.09

Commission’s analysis:

- 4.40 The petitioner filed the operation and maintenance expenses for thermal and hydel power stations based on the Regulations, 2012.
- 4.41 Considering the MW capacity of the units (excluding unit-3 of STPS PH-1) as on 1st

April, 2013, the Commission computed the O&M expenses as per the norms prescribed for thermal and hydel power stations. Accordingly, the O&M expenses approved for FY 2013-14 to FY 2015-16 are given below :

Table 29: O&M Expenses allowed in this order

Operation and Maintenance Expenses:					
Sr. No.	Power Station	Installed Capacity	O&M Expenses allowed		
			FY 2013-14	FY 2014-15	FY 2015-16
		MW	Rs. Cr.	Rs. Cr.	Rs. Cr.
1	ATPS Chachai (PH-II)	240.00	64.10	69.19	74.66
2	ATPS Chachai (PH-III)	210.00	38.20	41.22	44.50
3	STPS, Sarni PH-I	250.00	54.05	58.33	62.95
4	STPS, Sarni PH-II&III	830.00	150.98	162.93	175.88
5	STPS, Sarni Complex	1080.00	205.03	221.25	238.83
6	SGTPS (PH-I & II)	840.00	152.80	164.89	178.00
7	SGTPS (PH-III) 500 MW	500.00	68.55	74.00	79.85
8	Gandhi Sagar	115.00	12.91	13.94	15.05
9	Pench	160.00	17.97	19.39	20.94
10	Rajghat	45.00	5.05	5.45	5.89
11	Bargi	90.00	10.11	10.91	11.78
12	Bansagar (I to III)	405.00	45.48	49.09	53.01
13	Bansagar-IV (Jhinna)	20.00	2.25	2.42	2.62
14	Madhikheda	60.00	6.74	7.27	7.85
15	Birsing'pur	20.00	2.25	2.42	2.62
Total		3785.00	631.43	681.46	735.61

- 4.42 In addition to the aforesaid normative O&M expenses, the petitioner is allowed to recover the rate, rent and taxes payable to the Government, cost of chemicals and consumables, fees to be paid to MPERC as per Regulations 36 and 50 of MPERC (Terms and Conditions for determination of generation tariff) Regulations, 2012.

Pension and Terminal Benefits Expenses:

- 4.43 MPPGCL in para 14.4 of the petition submitted the following: -

“The Hon’ble Commission in “MPERC (Terms and Conditions of Generation Tariff) (Revision-II) Regulations, 2012 {RG-26(II) of 2012}, Clause 36.1 has specified that the expenses towards Rent, Rates & Taxes payable to Government, Cost of Chemicals and Consumables, Pension & Terminal Benefits as and when applicable, any arrears paid to employees shall be claimed separately. MPPGCL shall claim the same on actual at the time of True-up of respective years.”

- 4.44 Later, MPPGCL through its additional submission dated 04th February, 2013 filed actuarial valuation report as on 31st March, 2012 got done by it through a consultant under the requirements of the Accounting Standards 15(R).
- 4.45 As per provisions under MPERC (Terms & Conditions for allowing Pension and Terminal Benefit Liabilities of Personnel of the Board and Successor Entities) Regulation, 2012, the following is observed:

- a) The Actuarial Analysis for the contribution of terminal benefits as per Regulations 3(2)(ii) and (iii) is to be undertaken by MPPTCL from time to time as per the directions of the Commission.
- b) MPPTCL shall be the nodal agency for all intent and purpose to implement the Pension and Terminal Benefits Trust Funds under the Regulations.
- c) MPPTCL is required to coordinate with the representatives of other Successor Entities as well as the Personnel for all matters relating to management and administration of the funds for the pension and terminal benefits funds.
- d) The liabilities referred to in Regulation 3(2)(i) related to Personnel who retired after 1st June, 2005 shall be allowed as a pass through in the ARR of such Successor Entities in the relevant year for the period of service rendered after 1st June, 2005.
- e) Apportionment of liabilities amongst MPPTCL and other Successor Entities shall be as determined through actuarial analysis undertaken by MPPTCL.

4.46 In so far as provision for contribution for pension and terminal benefit liabilities of personnel of the Board and the successor entities) is concerned, this provision can only be made after proper actuarial analysis for which action shall be set in motion shortly. This, however, shall be a separate exercise to be undertaken by Transco on directions of the Commission. Results of this exercise shall get reflected in generation tariff orders at the discretion of the Commission as per the Regulation referred to above.

4.47 In view of the above, the Commission has dealt with this issue appropriately in its Retail Tariff Order for FY 2013-14 issued on 23rd March, 2013 and Multi Year Transmission Tariff Order issued by the Commission in Petition No. 06/2013.

Special Allowance

Petitioner's Submission

The petitioner broadly submitted the following:

4.48 *The Units of STPS, Sarni PH-1 are planned for their closure, soon after the commencement of 2x250 MW Units of STPS, Sarni. MPPGCL opts to avail this special allowance for these five units. Based on the above fact and applying the norm, the Special Allowance is Rs.7.50 Lakhs/MW/Year in FY 14 and thereafter escalated @ 7.93% every year during the tariff period FY-15 & FY-16. On applying the same to the 5 Units of STPS PH-I, the total Special allowance works out to be:*

in Rs. Crores

<i>Power House</i>	<i>Capacity in MW</i>	<i>FY 14</i>	<i>FY 15</i>	<i>FY 16</i>
<i>STPS PH1 (100%)</i>	<i>312.50</i>	<i>23.44</i>	<i>25.30</i>	<i>27.30</i>

Provisions of the Regulation:

4.49 With regard to the special allowance, Regulation 18.5 of the Regulations, 2012 provides that:

A Generating Company on opting for alternative option in Regulation 18.4 of this Regulation shall be allowed special allowance @ Rs.7.50 lakh/MW/Year in 2013-14 and thereafter escalated @ 7.93 % every Year during the Tariff period in 2013-16, Unit-wise from the next financial Year from the respective date of the completion of Useful life with reference to the COD of respective Units of generating station.

Provided that in respect of a Unit in commercial operation for more than 25 Years as on 1.4.2013, this allowance shall be admissible from the Year 2013-14.”

Commission’s analysis:

- 4.50 The aforesaid Regulations has provided that the generating company, in case of thermal generating stations may at its discretion avail a special allowance either for a unit or a group of units as compensation for meeting the requirement of expenses including R&M works beyond the useful life of the generating stations. In such case, the revision of capital cost shall not be considered and the option once exercise shall be final.
- 4.51 The petitioner in last MYT order dated 3rd March, 2010 availed this option (special allowance) for STPS PH-I (5x62.5 MW) units. The petitioner in the subject petition also filed the special allowance for the units of STPS PH-I as per norms in the Regulations, 2012.
- 4.52 The Unit No.3 of STPS PH-I has already been de-commissioned on 1st October, 2012. Therefore, the special allowance for this unit is not allowed in this order. As per Regulation 18.5 of the Regulations, 2012, the norms for special allowance for FY 2013-14 is Rs.7.50 lacs/MW/year and thereafter, escalated @ 7.93% every year up to FY 2015-16.
- 4.53 Accordingly, the special allowance for STPS PH-I is worked out in this order as given below :

Table: 30 Special Allowance allowed in this order

Installed Capacity STPS PH-I	FY2013-14		FY2014-15		FY2015-16	
	Applicable Special Allowance	Amount of Special Allowance	Applicable Special Allowance	Amount of Special Allowance	Applicable Special Allowance	Amount of Special Allowance
MW	Rs. L/MW	Rs. Cr.	Rs. L/MW	Rs. Cr.	Rs. L/MW	Rs. Cr.
250.00	7.50	18.75	8.09	20.24	8.74	21.84

Compensation Allowance

Petitioner’s Submission

- 4.54 The petitioner submitted that the Commission, in "MPERC (Terms and Conditions of Generation Tariff) (Revision II) Regulations, 2012 {RG-26 (II) of 2012}" Regulation 36.2 has permitted “Compensation Allowances” to the Thermal Generating stations depending upon their age to meet the requirement of capital nature of minor assets.

- 4.55 The petitioner further submitted that the amount of Compensation Allowance is worked out for FY 14 to FY16 for various thermal power stations of MPPGCL as per above norms as given below:

Table: 31 Compensation allowance filed in the petition: in Rs. Crores

Power House	Capacity in MW	FY 14	FY 15	FY 16
ATPS-PH II	240.00	2.02	2.02	2.02
ATPS PH III	210.00	0.00	0.00	0.00
STPS PH I	312.50	0.00	0.00	0.00
STPS PH (II & III)	830.00	6.97	6.97	6.97
STPS Total	1142.50	6.97	6.97	6.97
SGTPS PH I	420.00	1.85	3.53	3.53
SGTPS PH II	420.00	0.80	0.80	1.85
SGTPS PH III	500.00	0.00	0.00	0.00
Thermal (100%)	2932.50	11.63	13.31	14.36

Provisions of the Regulation:

- 4.56 With regard to the compensation allowance, Regulation 36.2 of the Regulations, 2012 provides as under:

In case of coal-based or lignite-fired thermal generating station, a separate compensation allowance Unit-wise shall be admissible to meet expenses on new assets of capital nature including in the nature of minor assets, in the following manner from the Year following the Year of completion of 10, 15, or 20 Years of Useful life:”

Years of Operation	Compensation Allowance (Rs lakh/MW/Year)
0-10	Nil
11-15	0.19
16-20	0.44
21-25	0.84

Commission’s analysis:

- 4.57 The Commission in its Regulations 2012 has permitted “compensation allowance” to the thermal power stations depending upon their age to meet the expenses on new assets of capital nature including the nature of minor assets.
- 4.58 The petitioner filed the station-wise compensation allowance based on the life of the thermal generating units. The petitioner has already availed the special allowance for units of STPS PH-I. Therefore, the compensation allowance for the units of this power house is not considered as per the Regulation. The details of the average age of thermal power houses as on 1st January, 2012 as filed by the petitioner is given in preceding para of this order.

- 4.59 Accordingly, the power station-wise compensation allowance based on the age of the thermal power station and norms prescribed in the Regulation is allowed in this order as given below :

Table:31 Compensation Allowance for Thermal Power Stations:

Power House	Installed Capacity	CoD	Compensation Allowance (Rs. Cr.)		
	MW	FY	FY13-14	FY14-15	FY15-16
ATPS PH-II	240	1977-78	2.02	2.02	2.02
STPS PH-II	410	1979-80	3.44	3.44	3.44
STPS PH-III	420	1983-84	3.52	3.52	3.52
SGTPS PH-I	420	1993-94	1.85	3.52	3.52
SGTPS PH-II	420	1998-99	0.80	0.80	1.85
Total	1910		11.63	13.31	14.35

Interest on Working Capital**Petitioner's submission:**

The petitioner broadly submitted the following:

- 4.60 *Interest on working capital has been worked out on the Working capital elements determined in pursuance with the norms for working capital prescribed in "MPERC (Terms and Conditions of Generation Tariff) (Revision-II) Regulations, 2012 {RG-26 (II) of 2012}", Rate of interest on working capital has been taken equal to Base Rate of SBI (9.75% + 3.5%) = 13.25%.*
- 4.61 *Based on above norms, the Power station wise Working capital and Interest on Working Capital is filed by the petitioner as given below:*

Table:32 Interest on working capital filed in the petition (Amount in Cr. Rs.)

Power Station	Working Capital			Interest on working capital		
	FY13-14	FY14-15	FY15-16	FY13-14	FY14-15	FY15-16
ATPS PH II	91.72	93.80	96.21	12.15	12.43	12.75
ATPS PH III	96.02	96.41	97.05	12.72	12.77	12.86
STPS	541.33	549.66	559.86	71.73	72.83	74.18
SGTPS PH I & II	632.30	637.34	644.96	83.78	84.45	85.46
SGTPS PH III	399.76	400.21	401.69	52.97	53.03	53.22
Thermal	1761.12	1777.41	1799.76	233.35	235.51	238.47
G. Sagar	7.29	7.85	8.45	0.97	1.04	1.12
Pench	8.85	9.43	10.07	1.17	1.25	1.33
Birsinhothur	1.79	1.87	1.96	0.24	0.25	0.26
Bansagar PH-I, II & III	43.95	45.00	46.73	5.82	5.96	6.19
Bansagar PH-IV	4.12	4.11	4.10	0.55	0.55	0.54
Madhikedha	8.49	8.53	8.59	1.13	1.13	1.14
Bargi	7.72	8.21	8.73	1.02	1.09	1.16
Rajghat	3.97	4.16	4.37	0.53	0.55	0.58
Hvdro Total	86.19	89.18	93.00	11.42	11.82	12.32
Total	1847.30	1866.59	1892.76	244.77	247.32	250.79

Provisions of the Regulation:

4.62 Regarding interest on working capital, Regulation 27 of the Regulations, 2012 provides that,

“Rate of interest on working capital to be computed as provided subsequently in these Regulations shall be on normative basis and shall be equal to the State Bank of India’s Base Rate as on 1st of April of that year plus 3.50%. The interest on working capital shall be payable on normative basis notwithstanding that the Generating Company has not taken working capital loan from any outside agency or has exceeded the working capital loan compared to the working capital required on the normative basis.

4.63 Further, Regulation 37 of the Regulations, 2012 regarding working capital for coal based generating stations provides that,

“The Working Capital for Coal based generating stations shall cover:

- (i) Cost of coal for 45 Days for pit-head generating stations and two months for non-pit-head generating stations, corresponding to the normative availability;*
- (ii) Cost of secondary fuel oil for two months corresponding to the normative availability:*

Provided that in case of use of more than one secondary fuel oil, cost of fuel oil stock shall be provided for the main secondary fuel oil.

- (iii) Maintenance spares @ 20% of the normative O&M expenses;*
- (iv) Receivables equivalent to two months of capacity charges and energy charges for sale of electricity calculated on the Normative Annual Plant Availability Factor; and*
- (v) Operation and Maintenance expenses for one month.*

The cost of fuel shall be based on the landed cost incurred (taking into account normative transit and handling losses) by the Generating Company and Gross Calorific Value of the fuel as per actual for the preceding three months and no fuel price escalation shall be provided during the Tariff period.”

4.64 Further, Regulation 51 of the Regulations, 2012 regarding working capital for hydel power stations provides that,

“The Working Capital for hydro power stations shall cover:

- (i) Maintenance spares @ 15% of normative O&M expenses;*
- (ii) Receivables equivalent to two months of fixed cost; and*
- (iii) Operation and Maintenance Expenses for one month.”*

Commission's analysis:

4.65 The working capital for thermal and hydel power stations is worked out based on the aforesaid norms for working capital as given below :

(a) Coal Cost :

The cost of coal for thermal power stations is worked out for 45 days for pit-head generating stations and two months for non-pit-head generating stations on the basis of operational norms specified in the Regulations and weighted average GCV and rate of coal in three preceding months. ATPS PH-II is considered as pit-head coal based station. The power station-wise cost of coal for working capital is worked out as given below:

Table: 33 Cost of Coal for working capital:

Particulars	Unit	ATPS PH-II	ATPS PH-III	STPS Complex	SGTPS PH-I&II	SGTPS PH-III
Wt.avg. GCV of Coal	kCal/kg	4691	3767	3885	3846	3846
Heat contributed by Coal	kCal/kWh	3180	2440	2735	2589	2415
Specific Coal consumption (including transit loss)	kg/kWh	0.6793	0.6530	0.7096	0.6785	0.6330
Annual requirement of Coal	MT	928239	1020998	5126893	3993931	2356618
Coal stock (45 days in pit head station and two months for non pit-head)	MT	114440	170166.3	854482.23	665655.226	392769.69
Wt. Avg. price of Coal	Rs./MT	1884	1377	2176	3754	3754
Cost of Coal stock mentioned above	Rs.Cr	21.56	23.43	185.94	249.89	147.45

(b) Secondary Fuel Oil Cost

The petitioner filed the cost of secondary fuel oil based on the fuel oil procured during financial year FY 2012-13. In Para 13.2 and 13.3 of the petition, the petitioner provided the power station-wise details of different fuel oil procured and worked out the weighted average rate of secondary fuel oil.

Regulation 37.1 of the Regulations, 2012 provides that, in case of use of more than one secondary fuel oil, cost of fuel oil stock shall be provided for the main secondary fuel oil. Accordingly, the fuel oil components in working capital is worked out as given below :

Table: 34 Cost of Secondary fuel oil for working capital

Particulars	Unit	ATPS PH-II	ATPS PH-III	STPS Complex	SGTPS PH-I&II	SGTPS PH-III
Wt.avg. GCV of Oil	kCal/ltr.	10,000	10,000	10,000	10,000	10,000
Sp. Oil consumption	kg/kWh	2.00	1.00	2.02	1.15	1.00
Heat contributed by oil	kCal/kWh	20	10	20	12	10
Annual requirement of oil	KL	2733.1	1563.7	14619.93	6769.73	3723
Oil stock for two months	KL	455.52	260.61	2436.654	1128.29	620.5
Wt. Avg. price of furnace Oil	Rs./KL	43445	43445	47445	47692	47692
Cost of Oil stock mentioned above	Rs.Cr	1.98	1.13	11.56	5.38	2.96

(c) O&M Expenses

Operation and Maintenance expenses of one month out of the O&M expenses approved in this order have been considered for working capital of thermal and hydel power stations.

(d) Maintenance Spares

Maintenance spares for the purpose of working capital for thermal and hydel power stations is worked out as 20% and 15% of the normative annual O&M expenses respectively as per the provision under Regulations.

(e) Receivables

Receivables for thermal power stations is worked out equivalent to two months of capacity charges and energy charges for sale of electricity and calculated on the normative annual plant availability factor. The receivables for hydel power stations shall be equivalent to two months of capacity (fixed) charges.

- 4.66 The interest on working capital equal to Base Rate of SBI as on 1st April, 2012 (10.00% + 3.50%) i.e. 13.50% is considered in this order. Accordingly, the power station-wise interest on working capital for the control period FY 2013-14 to FY 2015-16 is worked out as follows :

Table: 35 Interest on working capital allowed in this order
ATPS PH-II

Particulars	Unit	FY13-14	FY14-15	FY15-16
Cost of 45 days Coal stock for pit head power stations	Rs. Cr.	21.56	21.56	21.56
Cost of two months oil stock	Rs. Cr.	1.98	1.98	1.98
O&M expenses-one month	Rs. Cr.	5.34	5.77	6.22
Spares-20% of normative O&M expenses	Rs. Cr.	12.82	13.84	14.93
Receivables-2 months	Rs. Cr.	47.14	47.92	48.77
Total working capital	Rs. Cr.	88.84	91.06	93.46
Rate of interest	%	13.50%	13.50%	13.50%
Interest on working capital	Rs. Cr.	11.99	12.29	12.62

ATPS PH-III

Particulars	Unit	FY13-14	FY14-15	FY15-16
Cost of two months Coal stock for non pit head power stations	Rs. Cr.	23.43	23.43	23.43
Cost of two months oil stock	Rs. Cr.	1.13	1.13	1.13
O&M expenses-one month	Rs. Cr.	3.18	3.44	3.71
Spares-20% of normative O&M expenses	Rs. Cr.	7.64	8.24	8.90
Receivables-2 months	Rs. Cr.	57.85	57.51	57.22
Total working capital	Rs. Cr.	93.24	93.75	94.39
Rate of interest	%	13.50%	13.50%	13.50%
Interest on working capital	Rs. Cr.	12.59	12.66	12.74

STPS Complex

Particulars	Unit	FY13-14	FY14-15	FY15-16
Cost of two months Coal stock for non pit head power stations	Rs. Cr.	185.94	185.94	185.94
Cost of two months oil stock	Rs. Cr.	11.56	11.56	11.56
O&M expenses-one month	Rs. Cr.	17.09	18.44	19.90
Spares-20% of normative O&M expenses	Rs. Cr.	41.01	44.25	47.765
Receivables-2 months	Rs. Cr.	255.99	257.78	258.68
Total working capital	Rs. Cr.	511.58	517.97	523.84
Rate of interest	%	13.50%	13.50%	13.50%
Interest on working capital	Rs. Cr.	69.06	69.93	70.72

SGTPS PH-I&II

Particulars	Unit	FY13-14	FY14-15	FY15-16
Cost of two months Coal stock for non pit head power stations	Rs. Cr.	249.89	249.89	249.89
Cost of two months oil stock	Rs. Cr.	5.38	5.38	5.38
O&M expenses-one month	Rs. Cr.	12.73	13.74	14.83
Spares-20% of normative O&M expenses	Rs. Cr.	30.56	32.98	35.599
Receivables-2 months	Rs. Cr.	327.88	320.69	323.19
Total working capital	Rs. Cr.	626.44	622.68	628.89
Rate of interest	%	13.50%	13.50%	13.50%
Interest on working capital	Rs. Cr.	84.57	84.06	84.90

SGTPS PH-III

Particulars	Unit	FY13-14	FY14-15	FY15-16
Cost of two months Coal stock for non pit head power stations	Rs. Cr.	147.45	147.45	147.45
Cost of two months oil stock	Rs. Cr.	2.96	2.96	2.96
O&M expenses-one month	Rs. Cr.	5.71	6.17	6.65
Spares-20% of normative O&M expenses	Rs. Cr.	13.71	14.80	15.970
Receivables-2 months	Rs. Cr.	219.05	218.08	217.18
Total working capital	Rs. Cr.	388.88	389.45	390.21
Rate of interest	%	13.50%	13.50%	13.50%
Interest on working capital	Rs. Cr.	52.50	52.58	52.68

Gandhi Sagar:

Particulars	Unit	FY13-14	FY14-15	FY15-16
O&M expenses-one month	Rs. Cr.	1.08	1.16	1.25
Spares-15% of normative O&M expenses	Rs. Cr.	1.94	2.09	2.26
Receivables-2 months	Rs. Cr.	2.39	2.53	2.73
Total working capital	Rs. Cr.	5.41	5.79	6.24
Rate of interest	%	13.50%	13.50%	13.50%
Interest on working capital	Rs. Cr.	0.73	0.78	0.84

Pench:

Particulars	Unit	FY13-14	FY14-15	FY15-16
O&M expenses-one month	Rs. Cr.	1.50	1.62	1.75
Spares-15% of normative O&M expenses	Rs. Cr.	2.70	2.91	3.14
Receivables-2 months	Rs. Cr.	4.18	4.43	4.70
Total working capital	Rs. Cr.	8.37	8.96	9.59
Rate of interest	%	13.50%	13.50%	13.50%
Interest on working capital	Rs. Cr.	1.13	1.21	1.29

Rajghat:

Particulars	Unit	FY13-14	FY14-15	FY15-16
O&M expenses-one month	Rs. Cr.	0.42	0.45	0.49
Spares-15% of normative O&M expenses	Rs. Cr.	0.76	0.82	0.88
Receivables-2 months	Rs. Cr.	2.23	2.30	2.38
Total working capital	Rs. Cr.	3.41	3.58	3.75
Rate of interest	%	13.50%	13.50%	13.50%
Interest on working capital	Rs. Cr.	0.46	0.48	0.51

Bargi:

Particulars	Unit	FY13-14	FY14-15	FY15-16
O&M expenses-one month	Rs. Cr.	0.84	0.91	0.98
Spares-15% of normative O&M expenses	Rs. Cr.	1.52	1.64	1.77
Receivables-2 months	Rs. Cr.	2.97	3.11	3.09
Total working capital	Rs. Cr.	5.33	5.66	5.83
Rate of interest	%	13.50%	13.50%	13.50%
Interest on working capital	Rs. Cr.	0.72	0.76	0.79

Bansagar (I-III):

Particulars	Unit	FY13-14	FY14-15	FY15-16
O&M expenses-one month	Rs. Cr.	3.79	4.09	4.42
Spares-15% of normative O&M expenses	Rs. Cr.	6.82	7.36	7.95
Receivables-2 months	Rs. Cr.	27.96	28.42	29.11
Total working capital	Rs. Cr.	38.58	39.87	41.48
Rate of interest	%	13.50%	13.50%	13.50%
Interest on working capital	Rs. Cr.	5.21	5.38	5.60

Bansagar IV (Jhinna):

Particulars	Unit	FY13-14	FY14-15	FY15-16
O&M expenses-one month	Rs. Cr.	0.19	0.20	0.22
Spares-15% of normative O&M expenses	Rs. Cr.	0.34	0.36	0.39
Receivables-2 months	Rs. Cr.	2.46	2.41	2.36
Total working capital	Rs. Cr.	2.98	2.97	2.97
Rate of interest	%	13.50%	13.50%	13.50%
Interest on working capital	Rs. Cr.	0.40	0.40	0.40

Madhikheda:

Particulars	Unit	FY13-14	FY14-15	FY15-16
O&M expenses-one month	Rs. Cr.	0.56	0.61	0.65
Spares-15% of normative O&M expenses	Rs. Cr.	1.01	1.09	1.18
Receivables-2 months	Rs. Cr.	5.84	5.73	5.63
Total working capital	Rs. Cr.	7.41	7.43	7.46
Rate of interest	%	13.50%	13.50%	13.50%
Interest on working capital	Rs. Cr.	1.00	1.00	1.01

Birsing'pur Hydrel:

Particulars	Unit	FY13-14	FY14-15	FY15-16
O&M expenses-one month	Rs. Cr.	0.19	0.20	0.22
Spares-15% of normative O&M expenses	Rs. Cr.	0.34	0.36	0.39
Receivables-2 months	Rs. Cr.	1.09	1.12	1.01
Total working capital	Rs. Cr.	1.62	1.69	1.62
Rate of interest	%	13.50%	13.50%	13.50%
Interest on working capital	Rs. Cr.	0.22	0.23	0.22

MPPGCL Total:

Particulars	Unit	FY13-14	FY14-15	FY15-16
Cost of Coal stock for thermal power stations	Rs. Cr.	628.26	628.26	628.26
Cost of two months oil stock	Rs. Cr.	23.01	23.01	23.01
O&M expenses-one month	Rs. Cr.	52.62	56.79	61.30
Maintenance Spares	Rs. Cr.	121.15	130.75	141.13
Receivables-2 months	Rs. Cr.	957.04	952.04	956.04
Total working capital	Rs. Cr.	1782.08	1790.85	1809.74
Rate of interest	%	13.50%	13.50%	13.50%
Interest on working capital	Rs. Cr.	240.58	241.76	244.32

Expenses on Secondary fuel oil Consumption**Petitioner's submission:**

- 4.67 *Expenses on Secondary fuel oil consumption is computed by the petitioner corresponding to normative Specific Fuel Oil Consumption (SFC) and Normative Annual Plant Availability Factor, in accordance with the Regulation 38 of the MPERC Regulations 2012. Costs to be incurred on secondary fuel oil during FY14 to FY 16 are based on the Weighted Average Landed Price/Rate of Secondary Fuel Oil purchased in various months of FY 13 at respective Thermal Power Stations.*
- 4.68 *The petitioner submitted that the Secondary Oil at ATPS, Chachai was last purchased in July'12 falling in Financial Year (till Nov'12). The Weighted Average Landed Price/Rate of Secondary Fuel Oil for ATPS, Chachai is worked out as given below:*

Table: 36

ATPS	FO			LDO			Wt. Average Secondary Oil		
Month	Rate in Rs./KL	Quantity in KL	Cost in Rs.Lakhs	Rate in Rs./KL	Quantity in KL	Cost in Rs.Lakhs	Rate in Rs./KL	Quantity in KL	Cost in Rs.Lakhs
July'12	43444.52	2173.42	944.23	56736.76	756.29	429.09	46875.85	2929.71	1373.33
Total	43444.52	2173.42	944.23	56736.76	756.29	429.09	46875.85	2929.71	1373.33

4.69 The Weighted Average Landed Price/Rate of Secondary Fuel Oil based on actual purchases at STPS, Sarni for the three preceding months namely Sept'12, Oct'12 & Nov'12, has been worked out as given below:

Table: 37

STPS	FO			HSD			Wt. Avg. Sec. Oil		
Month	Rate in Rs./KL	Quantity in KL	Cost in Rs.Lakhs	Rate in Rs./KL	Quantity in KL	Cost in Rs.Lakhs	Rate in Rs./KL	Quantity in KL	Cost in Rs.Lakhs
Sep.'12	46808.13	5757.10	2694.79	45184.66	465.20	210.20	46686.75	6222.30	2904.99
Oct.'12	48717.52	2879.67	1402.90	51236.00	196.86	100.86	48878.67	3076.53	1503.76
Nov.'12	0.00	0.00	0.00	51235.94	175.37	89.85	51235.94	175.37	89.85
Total	47444.76	8636.77	4097.69	47874.37	837.42	400.91	47482.73	9474.19	4498.60

4.70 The Weighted Average Landed Price/Rate of Secondary Fuel Oil based on actual purchases at SGTPS, Birsinghpur for the three preceding months namely Sept'12, Oct'12 & Nov'12, has been worked out and as detailed below:

Table: 38

SGTPS	FO			LDO			Sec. Oil		
Month	Rate in Rs./KL	Quantity in KL	Cost in Rs.Lakhs	Rate in Rs./KL	Quantity in KL	Cost in Rs.Lakhs	Rate in Rs./KL	Quantity in KL	Cost in Rs.Lakhs
Sep.'12	46386.33	2116.47	981.75	61567.22	820.66	505.26	50628.00	2937.13	1487.01
Oct.'12	49116.52	1938.65	952.20	66459.73	1011.68	672.36	55063.58	2950.33	1624.56
Nov.'12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	47691.56	4055.12	1933.95	64268.50	1832.34	1177.62	52850.76	5887.46	3111.57

4.71 Based on the above, the Weighted Average Price/Rate of Secondary Oil and normative Specific Fuel Oil Consumption (SFC), Station wise Cost of Secondary Fuel oil for FY 14 to FY 16 has been filed by the petitioner as given below:

Table: 39 Cost of Secondary Fuel Oil Consumption filed in the petition
in Rs. Crores

Name of Power House	Cost of Sec. Fuel Oil Consumption		
	FY 13-14	FY 14-15	FY15-16
ATPS PH II	12.81	12.81	12.85
ATPS PH III	7.33	7.33	7.35
STPS Complex	73.91	73.91	74.11
SGTPS PH-I & II	35.78	35.78	35.78
SGTPS PH III	19.68	19.68	19.73
Total	149.51	149.51	149.82

Provisions of the Regulation:

4.72 For cost of secondary fuel oil, Regulation 38 of the Regulation, 2012 provides that,

“Expenses on Secondary fuel oil in Rupees shall be computed corresponding to normative Specific Fuel Oil Consumption (SFC) specified in Regulation 35, in accordance with the following formula:

$$= SFC \times LPSFi \times NAPAF \times 24 \times NDY \times IC \times 10$$

Where,

SFC - Normative Specific Fuel Oil Consumption in ml/kWh

LPSFi - Weighted Average Landed Price of Secondary Fuel in Rs./ml considered initially

NAPAF- Normative Annual Plant Availability Factor in percentage

NDY - Number of Days in a Year

IC - Installed Capacity in MW

Initially, the landed cost incurred by the Generating Company on secondary fuel oil shall be taken based on actuals of the weighted average price of the three preceding months and in the absence of landed costs for the three preceding months, latest procurement price for the generating station, before the start of the Year.

The secondary fuel oil expenses shall be subject to fuel price adjustment at the end of the each Year of Tariff period as per following formula:

$$SFC \times NAPAF \times 24 \times NDY \times IC \times 10 \times (LPSFy - LPSFi)$$

Where,

LPSFy = The weighted average landed price of secondary fuel oil for the Year in Rs. /ml.

Commission’s analysis:

4.73 The petitioner filed the secondary fuel oil consumption as per the norms notified in the Regulations, 2012 and the weighted average landed price/rate of secondary fuel oil purchased in various months of FY 2012-13 for respective thermal power stations.

4.74 Vide Commission’s daily order dated 6th February, 2013, the petitioner was asked to file supporting documents (bills/invoices) of fuel oil purchased during September to

November, 2012 along with actual GCV of oil. In response, vide letter dated 20th February, 2013, the petitioner filed the power station-wise fuel oil purchased/received documents indicating the rate of different oil (FO, HSD, LDO) and the weighted average rate of secondary fuel oil for the preceding three months.

- 4.75 With regard to GCV of secondary fuel oil, the petitioner filed the schedule of guaranteed technical particulars confirming to BIS:1593-1982 & 1988 and IS:1460 as applicable indicating average calorific value as 10000 kcal/kg of furnace oil, high speed diesel and light diesel oil.
- 4.76 Accordingly, the power station-wise fuel oil expenses are worked out in this order based on the norms in the Regulations, 2012 and weighted average rate filed by the petitioner as given below :

Table: 40 Cost of Sec. fuel allowed in this order

Power Station	Cost of Oil for FY2013-14 to FY2015-16						
	Capacity	NAPAF	Gross Gen.	Normative Sp. Fuel oil Consumption	Qty. of fuel oil	Wt. average rate of fuel oil	Cost of fuel oil
	MW	%	MU's	ml/kWh	KL	Rs./KL	Rs. Cr.
ATPS PH-II	240	65.00	1366.56	2.00	2,733.12	46876	12.81
ATPS PH-III	210	85.00	1563.66	1.00	1,563.66	46876	7.33
STPS Complex	1080	76.37	7224.99	2.02	14,619.93	47483	69.42
SGTPS PH I&II	840	80.00	5886.72	1.150	6,769.73	52851	35.78
SGTPS PH III	500	85.00	3723.00	1.00	3,723.00	52851	19.68
Total							145.02

- 4.77 The formula provided in Regulation 38.2 of the Regulations takes care of the cost of secondary fuel oil subject to fuel price adjustment at the end of each year of tariff period.

Normative Annual Plant Availability Factor

4.78 Normative Annual Plant Availability Factor (NAPAF) for thermal and hydel power stations as per the Regulations, 2012 shall be considered for recovery of full capacity (fixed) charges. The details of power station-wise NAPAF as per Regulations, 2012 for the control period FY 2013-14 to FY 2015-16 is given as follows :

Table: 41 Normative Annual Plant Availability Factor (%):

Sr. No.	Power Station	NAPAF for FY14 to FY16
Thermal Power Stations		
1	ATPS Chachai (PH-II)	65.00
2	ATPS Chachai (PH-III)	85.00
3	STPS Sarni Complex	76.37
4	SGTPS (PH-I & II)	80.00
5	SGTPS (PH-III) 500 MW	85.00
Hydel Power Stations		
6	Gandhi Sagar	85.00
7	Pench	85.00
8	Rajghat	85.00
9	Bargi	85.00
10	Bansagar Complex (excluding Silpara)	85.00
11	Silpara	90.00
12	Madhikheda	85.00
13	Birsingpur hydel	85.00

Summary of Annual Capacity (Fixed) Charges

4.79 The power station-wise Annual Capacity (Fixed) Charges for each year of the control period allowed in this order are summarized in the table given below :

Table: 42 Summary of Annual Capacity (fixed) Charges allowed in this order

ATPS PH-II:		Amount in Rs. Cr.		
Sr. No.	Particular	AFC Allowed		
		FY 2013-14	FY 2014-15	FY 2015-16
1	Return on Equity	5.19	5.19	5.19
2	Interest on Loan (including interest on excess equity)	5.74	5.04	4.34
3	Depreciation	6.08	6.08	6.08
4	O& M Expenses	64.10	69.19	74.66
5	Cost of sec. fuel oil	12.81	12.81	12.81
6	Compensation /Special Allowance	2.02	2.02	2.02
7	Interest on working capital	11.99	12.29	12.62
Total Capacity (fixed) Charges		107.93	112.62	117.72

ATPS PH-III:**Amount in Rs. Cr.**

Sr. No.	Particular	AFC Allowed		
		FY 2013-14	FY 2014-15	FY 2015-16
1	Return on Equity	34.63	34.63	34.63
2	Interest on Loan (including interest on excess equity)	69.25	64.13	59.00
3	Depreciation	44.50	44.50	44.50
4	O& M Expenses	38.20	41.22	44.50
5	Cost of sec. fuel oil	7.33	7.33	7.33
6	Compensation /Special Allowance	0.00	0.00	0.00
7	Interest on working capital	12.59	12.66	12.74
Total Capacity (fixed) Charges		206.50	204.47	202.70

STPS Sarni Complex:**Amount in Rs. Cr.**

Sr. No.	Particular	AFC Allowed		
		FY 2013-14	FY 2014-15	FY 2015-16
1	Return on Equity	28.68	28.68	28.68
2	Interest on Loan (including interest on excess equity)	0.00	0.00	0.00
3	Depreciation	22.44	14.60	0.00
4	O& M Expenses	205.03	221.25	238.83
5	Cost of sec. fuel oil	69.42	69.42	69.42
6	Compensation /Special Allowance	25.72	27.21	28.81
7	Interest on working capital	69.06	69.93	70.72
Total Capacity (fixed) Charges		420.35	431.09	436.45

SGTPS Birsingpur PH-I&II:**Amount in Rs. Cr.**

Sr. No.	Particular	AFC Allowed		
		FY 2013-14	FY 2014-15	FY 2015-16
1	Return on Equity	100.61	100.61	100.61
2	Interest on Loan (including interest on excess equity)	0.00	0.00	0.00
3	Depreciation	91.53	35.15	35.15
4	O& M Expenses	152.80	164.89	178.00
5	Cost of sec. fuel oil	35.78	35.78	35.78
6	Compensation /Special Allowance	2.65	4.33	5.38
7	Interest on working capital	84.57	84.06	84.90
Total Capacity (fixed) Charges		467.93	424.82	439.81

SGTPS Birsingpur PH-III:**Amount in Rs. Cr.**

Sr. No.	Particular	AFC Allowed		
		FY 2013-14	FY 2014-15	FY 2015-16
1	Return on Equity	85.81	85.81	85.81
2	Interest on Loan (including interest on excess equity)	103.01	91.66	80.31
3	Depreciation	100.09	100.09	100.09
4	O& M Expenses	68.55	74.00	79.85
5	Cost of sec. fuel oil	19.68	19.68	19.68
6	Compensation /Special Allowance	0.00	0.00	0.00
7	Interest on working capital	52.50	52.58	52.68
Total Capacity (fixed) Charges		429.63	423.81	418.41

Gandhi Sagar:**Amount in Rs. Cr.**

Sr. No.	Particular	AFC Allowed		
		FY 2013-14	FY 2014-15	FY 2015-16
1	Return on Equity	0.48	0.48	0.48
2	Interest on Loan (including interest on excess equity)	0.00	0.00	0.00
3	Depreciation	0.23	0.00	0.00
4	O& M Expenses	12.91	13.94	15.05
5	Interest on working capital	0.73	0.78	0.84
Total Capacity (fixed) Charges		14.35	15.20	16.38

Pench HPS:**Amount in Rs. Cr.**

Sr. No.	Particular	AFC Allowed		
		FY 2013-14	FY 2014-15	FY 2015-16
1	Return on Equity	4.47	4.47	4.47
2	Interest on Loan (including interest on excess equity)	0.00	0.00	0.00
3	Depreciation	1.51	1.51	1.51
4	O& M Expenses	17.97	19.39	20.94
5	Interest on working capital	1.13	1.21	1.29
Total Capacity (fixed) Charges		25.08	26.59	28.22

Rajghat HPS:**Amount in Rs. Cr.**

Sr. No.	Particular	AFC Allowed		
		FY 2013-14	FY 2014-15	FY 2015-16
1	Return on Equity	3.85	3.85	3.85
2	Interest on Loan (including interest on excess equity)	0.00	0.00	0.00
3	Depreciation	4.03	4.03	4.03
4	O& M Expenses	5.05	5.45	5.89
5	Interest on working capital	0.46	0.48	0.51
Total Capacity (fixed) Charges		13.40	13.82	14.28

Bargi HPS:**Amount in Rs. Cr.**

Sr. No.	Particular	AFC Allowed		
		FY 2013-14	FY 2014-15	FY 2015-16
1	Return on Equity	4.05	4.05	4.05
2	Interest on Loan (including interest on excess equity)	0.00	0.00	0.00
3	Depreciation	2.96	2.96	1.90
4	O& M Expenses	10.11	10.91	11.78
5	Interest on working capital	0.72	0.76	0.79
Total Capacity (fixed) Charges		17.83	18.68	18.52

Bansagar (I to III):**Amount in Rs. Cr.**

Sr. No.	Particular	AFC Allowed		
		FY 2013-14	FY 2014-15	FY 2015-16
1	Return on Equity	57.84	57.84	57.84
2	Interest on Loan (including interest on excess equity)	1.04	0.00	0.00
3	Depreciation	58.22	58.22	58.22
4	O& M Expenses	45.48	49.09	53.01
5	Interest on working capital	5.21	5.38	5.60
Total Capacity (fixed) Charges		167.78	170.53	174.67

Bansagar-IV (Jhinna):**Amount in Rs. Cr.**

Sr. No.	Particular	AFC Allowed		
		FY 2013-14	FY 2014-15	FY 2015-16
1	Return on Equity	4.65	4.65	4.65
2	Interest on Loan (including interest on excess equity)	2.57	2.08	1.60
3	Depreciation	4.90	4.90	4.90
4	O& M Expenses	2.25	2.42	2.62
5	Interest on working capital	0.40	0.40	0.40
Total Capacity (fixed) Charges		14.76	14.45	14.16

Madhikheda HPS:**Amount in Rs. Cr.**

Sr. No.	Particular	AFC Allowed		
		FY 2013-14	FY 2014-15	FY 2015-16
1	Return on Equity	7.03	7.03	7.03
2	Interest on Loan (including interest on excess equity)	9.03	7.85	6.66
3	Depreciation	11.22	11.22	11.22
4	O& M Expenses	6.74	7.27	7.85
5	Interest on working capital	1.00	1.00	1.01
Total Capacity (fixed) Charges		35.02	34.37	33.77

Birsingpur HPS:		Amount in Rs. Cr.		
Sr. No.	Particular	AFC Allowed		
		FY 2013-14	FY 2014-15	FY 2015-16
1	Return on Equity	2.43	2.43	2.43
2	Interest on Loan (including interest on excess equity)	0.00	0.00	0.00
3	Depreciation	1.67	1.67	0.77
4	O& M Expenses	2.25	2.42	2.62
5	Interest on working capital	0.22	0.23	0.22
Total Capacity (fixed) Charges		6.56	6.75	6.03

Table: 43 Head wise Total Cost:		Amount in Rs. Cr.		
Sr. No.	Particular	AFC Allowed		
		FY 2013-14	FY 2014-15	FY 2015-16
1	Return on Equity	339.71	339.71	339.71
2	Interest on Loan (including interest on excess equity)	190.64	170.76	151.91
3	Depreciation	349.37	284.92	268.36
4	O& M Expenses	631.43	681.46	735.61
5	Cost of sec. fuel oil	145.02	145.02	145.02
6	Compensation /Special Allowance	30.38	33.55	36.21
7	Interest on working capital	240.58	241.76	244.32
Total Capacity (fixed) Charges		1927.13	1897.18	1921.13

Table: 44 Power Station wise Fixed Cost: (Amount in Rs. Cr.)		AFC Allowed		
Sr. No.	Particular	FY 2013-14	FY 2014-15	FY 2015-16
		1	ATPS Chachai (PH-II)	107.93
2	ATPS Chachai (PH-III)	206.50	204.47	202.70
3	STPS Sarni Complex	420.35	431.09	436.45
4	SGTPS (PH-1&2)	467.93	424.82	439.81
5	SGTPS (PH-III) 500 MW	429.63	423.81	418.41
6	Gandhi Sagar	14.35	15.20	16.38
7	Pench	25.08	26.59	28.22
8	Rajghat	13.40	13.82	14.28
9	Bargi	17.83	18.68	18.52
10	Bansagar (I to III)	167.78	170.53	174.67
11	Bansagar-IV (Jhinna)	14.76	14.45	14.16
12	Madhikheda	35.02	34.37	33.77
13	Birsingpur	6.56	6.75	6.03
14	Total	1927.13	1897.18	1921.13

- 4.80 The recovery of annual capacity (fixed) charges shall be made by the petitioner in accordance with Regulations 40.2 and 40.3 in case of thermal power stations and Regulation 53 for hydel power stations of MPERC (Terms & Conditions for determination of Generation Tariff) Regulations, 2012. The final tariff order for Bansagar-IV (Jhinna) is under process. Therefore, the petitioner is allowed to recover the capacity (fixed) charges for this hydro power station only to the extent of 95% of the annual capacity (fixed) charges determined in this order on provisional basis subject to retrospective adjustment on determination of final tariff.

CHAPTER 5

Energy Charges (Variable Charges) and Other Charges

Petitioner's submission:

- 5.1 The petitioner has submitted that the energy charges (Variable charges) cover main fuel costs and shall be payable for the total energy scheduled to be supplied to the beneficiary during the calendar month on ex-power plant basis, at the variable charge rates approved by the Commission. The Energy Charge Rate, in Rupees per kWh, has been determined upto three decimal places, in accordance with Regulation 41.2 of the Regulations 2012. The landed price of coal incurred during Sept'12 to Nov'12 and weighted average rate of coal on power station wise has been considered for calculating energy charges. The petitioner has considered the operating norms for energy charges as per the Regulations, 2012.
- 5.2 Based on the above, the Power Station wise Energy Charges Ex-bus filed by the petitioner is as given below:-

Table: 45 Energy charges filed in the petition (in Paise/KWh)

Power Station	FY 14	FY 15	FY 16
ATPS PH-II	142.233	142.233	142.233
ATPS PH-III	99.919	99.919	99.919
STPS PH I	178.195	178.195	178.195
STPS PH II & III	168.257	168.257	168.257
SGTPS PH I	279.776	279.776	279.776
SGTPS PH II	280.100	280.100	280.100
SGTPS PH III	252.839	252.839	252.839

Provision of the Regulation:

- 5.3 For calculating the energy charges (variable charges) of thermal power stations, Regulation 41 of the Regulation, MPERC (Terms and Conditions for determination of tariff) Regulation, 2012 provides that,

“The energy (variable) charges shall cover main fuel costs and shall be payable for the total energy scheduled to be supplied to such Beneficiary during the calendar month on ex-power plant basis, at the specified variable charge rate (with fuel price adjustment).”

Energy (variable) Charges in Rupees per kWh on ex-power plant basis shall be determined to three decimal places as per the following formula:

(i) *For coal fired stations*

$$ECR = (GHR - SFC \times CVSF) \times LPPF \times 100 / \{CVPF \times (100 - AUX)\}$$

Where,

AUX= Normative Auxiliary Energy Consumption in percentage.

ECR = Energy Charge Rate, in Rupees per kWh sent out.

GHR = Gross Station Heat Rate, in kCal per kWh.

SFC = Specific Fuel Oil Consumption, in ml/kWh

CVSF = Calorific value of Secondary Fuel, in kCal/ml.

LPPF = Weighted average Landed price of Primary Fuel, in Rupees per kg, per liter or per standard cubic meter, as applicable, during the month.

CVPF = Gross Calorific Value of Primary Fuel as fired, in kCal per kg, per liter or per standard cubic meter.

Provided that Generating Company shall provide details of parameters of GCV and price of fuel i.e. domestic coal, imported coal, e-auction coal, liquid fuel etc., details of blending ratio of the imported coal with domestic coal, proportion of e-auction coal with details of the variation in energy charges billed to the beneficiaries along with the bills of the respective month:

Provided further that a copy of the bills and details of parameters of actual GCV and price of fuel i.e. domestic coal, imported coal, e-auction coal, liquid fuel etc., details of blending ratio of the imported coal with domestic coal, proportion of e-auction coal shall also be displayed on the website of the Generating Company. The details should be available on its website for a period of a quarter on monthly basis.

Variable charge for the month shall be worked out on the basis of ex-bus energy scheduled to be sent out from the generating station in accordance with the following formula:

Monthly Energy Charge (Rs) =

Variable Charge Rate in Rs/kWh X Scheduled Energy (ex-bus) for the month in kWh corresponding to Scheduled Generation.

Commission's analysis:

- 5.4 The energy (variable) charges shall cover main fuel costs and shall be payable for the total energy scheduled to be supplied to such beneficiary during the calendar month on ex-power plant basis. For coal based thermal power stations, the main fuel is coal and per unit cost of coal shall be the energy (variable) charges.
- 5.5 The details of the operating norms for thermal power stations as notified in Regulations, 2012 for the control period FY 2013-14 to FY 2015-16 is given below :

Table: 46 Norms for operating parameters

Power Station	Unit	Norms for operating parameters				
		ATPS PH-II	ATPS PH-III	STPS Complex	SGTPS PH-I & II	SGTPS PH-III
Gross station heat rate	kcal/kwh	3200	2450	2755	2600	2425
Sp. fuel oil consumption	ml/kwh	2.00	1.00	2.02	1.15	1.00
Aux. energy consumption	%	10.00	9.00	9.73	9.00	6.00
Transit loss	%	0.20	0.80	0.80	0.80	0.80

- 5.6 The petitioner filed the power station-wise landed price of coal during the three preceding months i.e. September to November, 2012 and worked out the power station-wise

weighted average rate of coal. The petitioner also filed the power station-wise weighted average GCV of coal for September to November, 2012. The details of the weighted average rate of coal and weighted average GCV of coal as filed by the petitioner is given below :

Table: 47 Weighted average rate of coal in Rs./MT

Power Station	Sep-12	Oct-12	Nov-12	Wt. Avg. Rate of Coal
ATPS PH-II	1883	1884	1887	1884
ATPS PH-III	1337	1383	1411	1377
STPS Complex	2110	2169	3831	2176
SGTPS Complex	4037	3484	3831	3754

Table: 48 Weighted average GCV of coal in kCal/Kg

Power Station	Sep-12	Oct-12	Nov-12	Wt. Avg. GCV of Coal
ATPS PH-II	4620	4750	4710	4691
ATPS PH-III	3730	3780	3790	3767
STPS Complex	3856	3943	3854	3885
SGTPS Complex	3858	3806	3879	3846

5.7 Vide daily order dated 6th February, 2013, the Commission asked the petitioner to submit several details. Vide letter dated 20th February, 2013, the petitioner filed its response. Issue-wise response as submitted by the petitioner has been discussed in the procedural history of this order. On perusal of the response filed by the petitioner, the following is observed:

- a. In regard to higher rate of coal in STPS Sarni during November 2012 it is found that the same has been wrongly mentioned as Rs. 3831/MT due to typographical mistake which is to be read as Rs.2225/MT.
- b. With regard to the Transit & Handling Loss, the petitioner submitted that the transit and handling losses are not embedded in the Wt. Average price of coal. The petitioner further mentioned that the impact of Transit & Handling Losses on Normative basis has however been considered in calculating the Rate of ex-bus Energy charges for respective thermal power stations.
- c. The petitioner filed the calculation details for arriving at the weighted average GCV of Coal for all thermal power stations along with power station-wise monthly coal analysis reports indicating the weighted average GCV of coal.
- d. The petitioner submitted the month wise detailed break-up of different grades of coal along with rate received at SGTPS, Birsingpur along with monthly coal analysis report.

- e. MPPGCL is procuring Imported Coal other than the linkage from CIL as per the directives of Ministry of Power, GoI to mitigate the shortage of Indigenous Coal for its Thermal Power Stations. The Guaranteed Base Parameters of foreign origin coal filed by the petitioner are given below:

a)	Gross Calorific Value (ADB)	=6300 Kcal/Kg.
b)	Ash Content (ADB)	=10%
c)	Sulphur Content (ADB)	=0.8%
d)	Total Moisture (ARB)	=14%

5.8 In view of the aforesaid observations, the Commission has considered the power station-wise weighted average rate of coal and weighted average GCV of coal as filed by the petitioner for calculation of energy charges. The petitioner has confirmed that the transit and handling loss are not embedded in the weighted average price of coal. The petitioner has also mentioned that the impact of transit and handling losses on normative basis shall be considered in calculating the rate of ex-bus energy charges for respective power station. Accordingly, the Commission has considered the normative transit and handling losses while calculating the energy charges in this order.

5.9 Accordingly, the power station-wise energy charges for the period FY2013-14 to FY2015-16 worked out is given as below :

Table: 49 Energy Charges:

Sr. No.	Description	Unit	FY2013-14 to FY2015-16				
			ATPS PH-II	ATPS PH-III	STPS Complex	SGTPS PH-I&II	SGTPS PH-III
1	Capacity	MW	240	210	1080.00	840	500
2	Normative annual plant availability factor	%	65.00	85.00	76.37	80.00	85.00
3	Gross Station Heat Rate	Kcal/Kwh	3200	2450	2755	2600	2425
4	Sp. Fuel Oil Consumption	ml/KWh	2.00	1.00	2.02	1.15	1.00
5	Auxiliary Energy Consumption	%	10.00	9.00	9.73	9.00	6.00
6	Transit and handling losses	%	0.20	0.80	0.80	0.80	0.80
7	Wt. Average GCV of Oil	Kcal/litre	10,000	10,000	10,000	10,000	10,000
8	Wt. Average GCV of Coal	Kcal/Kg	4691	3767	3885	3846	3846
9	Wt. Average Price of Coal	Rs./MT	1884	1377	2176	3754	3754
10	Heat Contributed from Oil	Kcal/Kwh	20	10	20	12	10
11	Heat Contributed from Coal	Kcal/Kwh	3180	2440	2735	2589	2415
12	Sp. Coal Consumption	Kg/KWh	0.6779	0.6477	0.7039	0.6730	0.6279
13	Sp. Coal Consumption incl. Transit Loss	Kg/KWh	0.6793	0.6530	0.7096	0.6785	0.6330
14	Rate of Energy Charge	Rs./KWh	1.280	0.899	1.544	2.547	2.376
15	Rate of Energy Charge Ex-Bus	Rs./KWh	1.422	0.988	1.711	2.799	2.528

- 5.10 The base rate of the energy charges shall however, be subject to month to month adjustment of actual fuel price and actual GCV of coal.
- 5.11 The aforesaid energy charges have been calculated for the purpose of calculation of interest on working capital. The actual billing of energy charges shall be as per the formula and other provisions detailed in Regulation 41 of the Regulations, 2012. The weighted average landed price of coal for the purpose of computation of energy charges shall be worked out on the basis of Regulation 41.4 of the Regulation. The petitioner is directed to comply with the proviso under Regulation 41.2 of the Regulations, 2012 and update the information related to coal on the website.
- 5.12 The energy charges for hydro generating stations shall be recovered as per Regulations 53.4 to 53.7 of the Regulations, 2012.

Other Charges:

Petitioner's Submission

- 5.13 MPPGCL has filed the Fees payable to the Commission in accordance with the MPERC Fees, Fines & Charges (Revision-I) Regulation 2010 {RG-21(I) of 2010} for FY13-14 , FY14-15 and FY15-16. The Water Charges payable to GoMP have also been worked out by the petitioner at the rates specified by WRD for Thermal and Hydro Power stations separately. The details of the power station wise MPERC fee and Water Charges for FY13-14, FY14-15 and FY15-16 are elaborated in para 14.6 of the petition.
- 5.14 The petitioner has further submitted that the Commission in "MPERC (Terms and Conditions of Generation Tariff) (Revision-II) Regulations, 2012 {RG-26 (II) of 2012}", Regulation 36.1 has specified that the expenses towards Rent, Rates & Taxes payable to Government, Cost of Chemicals and Consumables, Pension & Terminal benefits as and when applicable, any arrears paid to employees shall be claimed separately. MPPGCL shall claim the same on actuals at the time of True-up of respective years.
- 5.15 MPPGCL has submitted that in the instant tariff petition the Non-Tariff Income has not been projected and that the treatment of the same shall be considered at the time of True-up of respective years on actuals.

Commission's analysis:

- 5.16 The petitioner claimed MPERC fee payable to the Commission and water charges payable to GoMP under the head of other charges in the petition. The petitioner is allowed to recover fee paid by the petitioner to MPERC for determination of tariff and water charges on usage of water levied by the GoMP from the beneficiaries on pro-rata basis as per provisions under Regulations.
- 5.17 The petitioner is allowed to recover the rate, rent and taxes payable to the Government, cost of chemicals and consumables, fees to be paid to MPERC as per Regulations 36 and 50 of MPERC (Terms and Conditions for determination of generation tariff) Regulations, 2012 subject to true-up based on audited accounts.