## MADHYA PRADESH ELECTRICITY REGULATORY COMMISSION

5<sup>th</sup> Floor, "Metro Plaza", Bittan Market, Bhopal - 462 016



Petition No.11 of 2013

PRESENT:

Rakesh Sahni, Chairman

A. B. Bajpai, Member

Alok Gupta, Member

#### IN THE MATTER OF:

Approval of provisional Generation Tariff for 2X250MW Ext. Unit No. 10 and 11 of Satpura Thermal Power Station, Sarni from CoD to 31.03.2016.

M.P. Power Generating Company Ltd, Rampur, Jabalpur

PETITIONER

Vs.

1. M. P. Power Management Company Ltd., Jabalpur

**RESPONDENTS** 

2. M. P. Power Transmission Co. Ltd., Jabalpur

### **ORDER**

# (Passed on this day of 8th October, 2013)

- The petitioner M.P. Power Generation Company Ltd. (hereinafter called "MPPGCL") filed the subject petition on 26<sup>th</sup> February, 2013 for approval of Generation Tariff for 2x250 MW, STPS, Sarni Extn. Units No. 10 & 11 on provisional basis from anticipated CoD of Unit No. 10 to 31.03.2016. The subject petition is based on MPERC (Terms and Conditions for determination of Generation Tariff) Regulation, 2012 (hereinafter referred to as "the Regulations, 2012"). These Regulations are based on multiyear tariff principles prescribing norms of operation for the control period from FY 2013-14 to FY 2015-16. Madhya Pradesh Electricity Regulatory Commission (hereinafter called "the Commission) has scrutinized the subject petition based on the principles and methodology specified in the aforesaid Regulations, 2012.
- 2. The petitioner submitted that M.P. Power Management Co. Ltd. (MPPMCL) and the three DISCOMS of MP have 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 Tribunal, High Courts, Supreme Court and CEA etc.. Therefore, the three DISCOMS were not made respondents separately in this petition
- 3. The petitioner broadly submitted the following:
  - (i) "The Petitioner is having various power stations/projects in the state of Madhya Pradesh. Satpura Thermal Power Station (STPS) is one such coal based power stations of the Petitioner located at Sarni in Betul District of Madhya Pradesh. STPS complex had existing nine Units with installed capacity of 1142.5MW [PH-I (5\*62.5 MW), PH-II (1x200 + 1x210 MW) and PH-III (2x210MW)]. In view of severe power crisis prevailing in the State and to bridge the increasing gap between power demand and supply, it was decided by GoMP to install two additional Units of 250/210 MW each at STPS Sarni premises as extension Units No. 10 & 11, which were identified by CEA for implementation during 11<sup>th</sup> Plan period. These

- Units were decided for installation adjacent to the existing nine Units in STPS Sarni complex.
- (ii) Administrative approval for setting up of 2x250 MW Extn. Units 10 & 11 at Satpura Thermal Power Station, Sarni was accorded by the Government of Madhya Pradesh vide letter No. 4019/13/2006 dated 29/06/2006. Thereafter, the Board Of Directors (BoD) of MPPGCL, vide Resolution passed in its 21<sup>St</sup> meeting held on 26/08/2006 at Bhopal, accorded approval for installation of 2x250 MW Extension Units No. 10 & 11 at STPS Sarni at a total tentative project cost of ₹2350 Crs. which was subject to updation based on DPR/Scope of works of the main EPC contracts of BHEL and other systems. In its aforesaid meeting, dated 26/08/2006, the BoD also decided to:
  - a. Award the contract for main power block of STPS Extension Units No.10 & 11, including civil works, to M/s BHEL on EPC basis and for this purpose to seek Technical & Commercial offer (un-priced) from M/s BHEL based on the latest order for 2\*250 MW Units received by them from any Government agency/Utility.
  - b. Seek prices from M/s BHEL on the basis of scope of work finalized with them for the main power block, subject to negotiation by the Negotiation Committee to be constituted by GoMP.
  - c. Finalize/decide contracts for all balance of plants (BoPs) as per Board's procedure.
  - d. Formally approach institutions like PFC/REC for financial assistance for the project.
- (iii) The above decisions of BoD MPPGCL were approved by the GoMP and its approval was conveyed by Energy Department, GoMP, vide letter No. 4155/13/2007 dated 25/06/2007. In its aforesaid letter the GoMP also communicated its approval regarding:
  - a. Formation of a Negotiation Committee for negotiation with M/s BHEL for award of contract for main power block, including civil works, on EPC basis on single offer basis and nomination of members of the Negotiation Committee.

- b. Financing of the Project through debt and equity in 80:20 ratio, obtaining the 80% loan component from PFC/REC and financing of the 20% Equity component by GoMP.
- c. Formation of a Project Monitoring Group for expediting the Project activities by way of obtaining services of external consultants.
- (iv) The estimated tentative project cost of ₹2350 Crs., as approved by the BoD in its 21<sup>St</sup> meeting, was subsequently updated by the Project Consultant, M/s Desein, in the DPR submitted in March 2008 to ₹2637 Crs. based on the cost for E&M works of Main Power Block as negotiated by the Negotiation Committee with M/s BHEL on single offer basis. This updated cost estimate was, however, subject to further revision after placement of orders for civil work of Main Power Block, Balance of Plant (BoP) and Non EPC works (like Railway Siding, land acquisition for Ash Dam and Rail Yard, construction of plant roads, Drainage, Sanitary, Sewage System, Plant Boundary Wall, construction of Store Building, Bus Stand, School, environmental measures, site development, etc.). The updated project cost estimate of ₹2637 Crs. was approved by the BoD, MPPGCL, vide resolution passed in its 33<sup>rd</sup> meeting held on 11-12/02/2008 and by the GoMP, vide dated 07/03/2008.
- (v) Subsequently, keeping in view the high prices received while finalizing the contract of BoP vis-à-vis the cost considered in DPR, the project cost estimate was again revised to ₹ 3032.34 Crore. This revised project cost estimate of ₹ 3032.34 Crore. was approved by the BoD vide Resolution passed in its 46<sup>th</sup> meeting held on 26/11/2009 at Bhopal, subject to further revision after placement of order for BoP and Railway Siding, etc. The revised cost estimate of ₹ 3032.34 Crore, as approved by the BoD was submitted to the GoMP for its approval. GoMP, vide Energy Department letter No. 1192/13/2010 dated 15/02/2010, directed MPPGCL to submit a consolidated proposal for approval of revised project cost estimate after placement of Orders

for BoP and Railway Siding, etc. However, the GoMP has taken into cognizance the revised cost estimate of ₹3032.34 Crore, as indicated in the Energy Department, GoMP, letter No.F-5-15/12/13 dated 22/08/2012 vide which it has forwarded the list of schemes approved by the Project Screening Committee and also approved balance equity amount of ₹253.32 Crore for the Years FY13 and FY14.

- (vi) The project cost estimate of ₹ 3032.34 Crs. was subject to further revision after placement of orders for BoP and Railway Siding, etc. The project cost estimate has since been revised to ₹3298.00 Crore based on the remaining orders finalized since then. Approval for the revised project cost estimate of ₹ 3298.00 Crore is being obtained from the BoD and GoMP. Copy of the approvals shall be filed before the Commission in due course.
- Since the subject Extension Units No. 10 and 11 at STPS Sarni were (vii) being installed to meet the growing demand of power in the State of M.P., MPPGCL, the Petitioner, offered 100% power to be generated from these Units to Respondent No. 1 (M.P. Power Trading Co. Ltd., now M.P. Power Management Co. Ltd.) for onward sale to the Discoms of M.P. on the rates to be determined Commission. Respondent No. 1 conveyed its consent for purchase of 100% power from these Units. A Power Purchase Agreement to effect has been signed between the Petitioner Respondent No. 1 on 04/01/2011.
- The instant petition is filed under Section 62 of Electricity Act, (viii) which provides determination of tariff by the Appropriate 2003 Commission for supply of electricity by a generating company. The Commission is vested with the jurisdiction to regulate the tariff of Companies owned or controlled by State Generating Government and other Generating Companies as envisaged under Section 86(1)(a) & (b) of Electricity Act, 2003.
- (ix) MPERC (Terms and Conditions for Determination of Generation Tariff) (Revision-II) Regulations, 2012, for the control period FY 2013-14 to FY 2015-16, notified on 12/12/2012, shall come into

force from 01/04/2013. The Petitioner is filing the present petition for determination of tariff for 2x250 MW, STPS Ext. Units No. 10 & 11, Sarni, for the period w.e.f. anticipated COD of Unit No. 10, i.e., 1<sup>st</sup> April, 2013 to 31<sup>st</sup> March, 2016 in accordance to MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2012.

- (x) Anticipated capitalization of the Project as on the COD of Unit No. 10 (01<sup>St</sup> Apr,2013) is ₹469.49 Crore and the total anticipated capitalization as on Station COD, i.e., COD of Unit No. 11 (30<sup>th</sup> Jun, 2013), is ₹ 3008.54 Crore, as detailed in attached Form TPS-5B. This has been considered for tariff determination purpose.
- (xi) Since the instant Petition has been filed on the basis of anticipated dates of COD of Units No. 10 and 11, no estimation for net revenue earned from the sale of Infirm Power has been done at this juncture. As such presently no impact of net revenue earned from sale of Infirm Power has been applied for reduction in capital cost. In case any revenue is generated from sale of Infirm Power before the declaration of COD of the subject Units, the same shall be billed at the rates specified in CERC/MPERC Regulations and its impact to the Project Cost shall be duly accounted for while filing the Petition for final tariff of these Units.
- (xii) Additional capital expenditure after the Station COD and up to completion of balance works of the two Units, during FY14 to FY16, is projected to be ₹289.46 Crore The Projected estimated completed cost of the project is ₹3298.00 Crore.
- (xiii) The Petitioner has filed this petition for approval of provisional tariff of 2x250 MW, STPS Extension Units No. 10 & 11 w.e.f. the anticipated date of commercial operation (COD) of Unit No. 10 up to 31/03/2016 based on expected capitalization figures on the COD of Unit No. 10 and 11 respectively, as available with the project execution authority. The projected additional capital expenditure up to the Cut off date is within the original scope of works of the Project and is in accordance with regulations 20.1 of MPERC Tariff

- regulations 2009 and 2012. It is submitted that such expenditure estimated by the petitioner may not be considered as the ceiling expenditure and that the Petitioner may be allowed to claim/amend the impact of additional capitalization for revision of tariff.
- (xiv) The expenditure figures submitted in the Petition are actual expenditure figures till September 2012, on provisional basis, and on projected basis thereafter. Audited expenditure shall be filed at the time of filing petition for final generation tariff for these Units.
- (xv) Necessary formats to be filed with the petition have been filled in and enclosed with this petition. It is submitted that the Petitioner has furnished the information/details as required under the aforesaid formats to the extent the same is available with the Petitioner. However, the Petitioner submits that where the data/information has not been submitted as per the format due to its non-availability/ non-applicability with the petition, the same has been marked accordingly.
- (xvi) The other expenses comprising of Electricity duty and Cess on Auxiliary Consumption, Rent Rates and Taxes payable Government, MPERC Fee, Cost of Chemicals & Consumables, Arrears paid to employees, Water Charges, Publication Expenses and SLDC/RLDC/NLDC and Transmission Charges, etc., levied by various authorities on the Petitioner in accordance with law shall be billed to eneficiaries additionally on actuals. Minimum Alternate Tax (MAT) including surcharge and cess has been considered for tariff calculations. In case, due to any change in Government policy or otherwise, if any liability of tax and duties arises for any Year of the control period, the same shall be charged extra.
- (xvii) The performance parameters and cost elements have been duly elaborated in different Chapters as enclosures to the petition.

  Anticipated CoD of Unit No. 10 is 01<sup>St</sup> Apr, 2013 and that of Unit No. 11 is 30<sup>th</sup> Jun, 2013. Calculations for the fixed and variable cost components have been done for the anticipated period of generation from the respective Units during FY14 to FY16.

- (xviii) Unit No. 10 has been synchronized on 22/02/2013. Regulation 19 of MPERC Generation Tariff Regulations 2012 provides accounting of Infirm Power as Unschedule Interchange (UI) and paid for from the Regional/State UI pool account. Commission may kindly permit billing of infirm power w.e.f. 22/02/2013 till COD at UI charges subject to ceiling as per CERC (Unscheduled Interchange Charges and related matters) (Second Amendment) Regulations, 2012.
- (xix) The year-wise cost of generation is worked out by the petitioner as given below:

Particulars	Units		FY14		FY15	FY16
		COD of Unit 10 to COD of Unit 11 Unit 10	COD of Unit No. 11 to 31/03/14 Units 10 & 11	Total for FY14	Units 10 & 11	Units 10 & 11
Normative Net Gen.	MU	419.99	2566.58	2986.56	3406.55	3415.88
ROE (Pre Tax)	Cr.₹	13.50	91.60	105.10	127.81	127.81
Intt. Charges on Loan	Cr. ₹	32.09	212.14	244.23	291.32	277.65
Depreciation	Cr. ₹	17.21	110.34	127.55	152.86	154.83
O&M Expenses	Cr. ₹	11.35	69.39	80.75	99.50	107.30
Intt. on W. Capital	Cr. ₹	4.99	31.20	36.19	42.36	42.56
Cost of Sec. Fuel Oil	Cr. ₹	2.18	13.32	15.50	17.68	17.73
Total Fixed Cost	Cr.₹	81.34	527.98	609.32	731.53	727.87
	p/u	193.67	205.72	204.02	214.74	213.08
Variable Charges	Cr. ₹	61.88	378.15	440.03	501.91	503.29
	p/u	147.34	147.34	147.34	147.34	147.34
Other Charges						
MPERC Fee	Cr.₹	0.04	0.11	0.15	0.15	0.15
Water Charges	Cr.₹	0.28	1.79	2.07	2.62	2.90
Total Other Charges	Cr. ₹	0.32	1.90	2.22	2.77	3.05
Total	Cr. ₹	143.54	908.03	1051.58	1236.22	1234.21
Indicative Avg. Rate	p/u	341.78	353.79	352.10	362.89	361.32

- 4. With the above submission, the petitioner prayed for the following in the petition:
  - a. Approve the tariff of 2x250 MW, Satpura Thermal Power Station Extension Units No. 10 and 11 from their respective dates of

Commercial Operation till 31/03/2016, as given in Para 25, on provisional basis.

- b. Permit additional recovery on account of Electricity duty and Cess on Auxiliary Consumption, Rent Rates and Taxes payable to Government, MPERC Fee, Cost of Chemicals & Consumables, Arrears paid to employees, Water Charges, Publication Expenses and SLDC/RLDC/NLDC and Transmission Charges, etc., levied by various authorities on the Petitioner in accordance with law, on actual basis, over and above the fixed and variable charges.
- c. Allow recovery of cost of Infirm Power generated from the subject Units w.e.f. 22/02/2013 till the declaration of COD of the respective Unit, at the rates specified in CERC/MPERC Regulations and to account for its impact on the Project Cost while filing the Petition for final tariff of these Units.
- 5. The petitioner filed the following documents:

#### **Particulars**

- Management & Corporate Functions Agreement between MPPMCL and the M.P.Discoms.
- ii. GoMP's Administrative approval dated 29.06.2006
- iii Approval of BoD MPPGCL, dated 26.08.2006
- iv. Approval of GoMP dated 25.06.2007
- v. BoD approval dated 11/12-02-2008 for project cost of ₹2637 Cr.
- vi. Approval of GoMP for updated project cost estimate of ₹2637 Crs., dated 07.03.2008.
- vii BoD Approval for revised project cost estimate of ₹3032.33 Crs., dated 26.11.2009
- viii GoMP, Energy Department letter No. 1192/13/2010 dated 15.02.2010
- ix Energy Department, GoMP letter No. F-5-15/12/13 dated 22.08.2012
- x. PPA signed between MPPGCL and M.P. Tradeco/MPPMCL, dated 04.01.2011
- xi. Energy Department, GoMP letter dated 12.06.06, regarding water usage.
- xii. Approval of M.P.P.C.B. dated 06.09.2011, granting permission to establish the extn.units
- xiii. Environment & Forest clearances dated 27.02.2009.

- xiv Coal Linkage-accorded by M/s. WCL, Nagpur dated 12-13.07.2010
- xv. Civil Aviation Clearance from Airport Authority of India dated 25.07.2007
- xvi. Civil Aviation Revised NOC dated 17.06.2009, allowing construction of proposed Chimney to a height of 275 M, above ground level.
- xvii. Certificate of possession of available land of 4695.8 Acres, issued by Collector Betul, dated 24.01.2009
- xviii. Possession letter dated 06.01.2011m alongwith Panchnama issued by the Tehsildar Ghoradongri, indicating handing over of 130 Hectare land.
- xix. Panchnama & Khasra No. 490 & 491, 17.06.2011 dor 0.87 Hectare Private land acquired at Ghoradongri near Railway Siding for construction of Railway Line.
- xx. GoMP Equity release letters
- xxi. PFC sanction letter dated 31.03.2008 for loan (No. 20701003) amounting to ₹ 1878.20 Crore.
- xxii. PFC's Loan enhancement letter for an amount of ₹422 Crore, dated 25.03.2010
- xxiii. Copy of the MOA signed between MPPGCL and PFC in respect of Loan No.20701003.
- xxiv Amendatory MOA between PFC and MPPGCL
- xxv. Party wise loan drawl details.
- xxvi. Chartered Accountant Certificate dated 09.09.2013 for actual capital expenditure as on CoD of Unit No. 10
- xxvii. SLDC monthly bills/ statements for infirm power supplied and revenue for sale of infirm power.
- 6. Motion hearing in the matter was held on 9<sup>th</sup> April, 2013. Vide Commission's Order dated 10<sup>th</sup> April, 2013, the petition was admitted and the petitioner was directed to serve copy of the petition on all the respondents in the matter. The petitioner was also asked to submit some additional information along with supporting data/documents by 30<sup>th</sup> April' 2013. Vide letter dated 29<sup>th</sup> April, 2013 the petitioner sought time extension for filing the additional information by 15<sup>th</sup> June, 2013. The petitioner also confirmed that the copy of petition has been served to all the respondents. By affidavit dated 14<sup>th</sup> June 2013, MPPGCL submitted its response to the issues raised by the Commission. Issue wise response filed by the petitioner is as given below:
  - i) Issue:-The date of synchronization of the units duly certified by SLDC and the expected date of commercial operation of both the units.

## MPPGCL's response:

"STPS Extn. Unit No. 10, Sarni, was synchronized for the first time, with oil, on 22/02/2013 at 06:10 Hrs. A letter issued by the SLDC, MPPTCL, Jabalpur, in support of the aforesaid date of synchronization of Unit No. 10, is annexed (Annexure-1). Unit No. 11 has not yet been synchronized.

Expected dates of commercial operation (CoD) of the two Units are as given below:

Unit No. 10 - 30/06/2013 Unit No. 11 - 30/09/2013"

ii) Issue:- Details regarding infirm power supplied to grid and actual fuel expenses for generation of infirm power along with Auditor's Certificate.

## MPPGCL's response:

"Details regarding infirm power supplied to grid and actual fuel expenses for generation of infirm power along with Auditor's certificate shall be submitted after achieving CoD of the respective Units".

iii) Issue:- The details of revenue billed and revenue earned from sale of infirm power along with SLDC certificate/bills and Chartered Accountant's Certificate.

### MPPGCL's response:

"The details of revenue billed and revenue earned from sale of infirm power along with SLDC certificate/bills and Chartered Accountant's Certificate shall be submitted after achieving CoD of the respective Units."

iv) Issue:- Supplier's/manufacturer's certificate indicating guaranteed station heat rate, boiler efficiency and turbine efficiency etc.

#### **MPPGCL's response:**

"Functional Guarantees for Boiler & Turbine have been given in contract agreement signed with BHEL for the BTG package awarded to them. The relevant parameters as given in the schedule of guarantees (appended as Appendix-8 to said contract agreement) are as under:-

- (i) Guaranteed Turbine Cycle Heat Rate under rated -1947.1 kcal/kwhr steam conditions at 77mm Hg condenser pressure with zero makeup
- (ii) Guaranteed efficiency of Steam Generator at 100% **86.51%**TMCR with Design Coal

Copy of the relevant portion of contract agreement in support of the above is annexed (Annexure-2).

Further, as per the Technical offer submitted by BHEL for this project, the Generator efficiency at 100% load is 98.88%. Copy of data sheet for Generator portion as contained in the aforesaid offer is annexed (Annexure-3)."

v) Issue:- Copy of the FSA for supply of coal to Unit No. 10 & 11.

## MPPGCL's response:

"A copy of the Coal Supply Agreement between WCL and MPPGCL, dated 02/01/2013, is annexed (Annexure-4)."

vi) Issue:- The common facilities between Unit 10 & Unit 11 be mentioned and the cost of all such common facilities between Unit 10 & Unit 11 be apportioned appropriately in terms of provisions under Regulation.

#### MPPGCL's response:

"The common facilities between units 10&11 (except the civil works included in the EPC contract of M/s BHEL) have been listed out and annexed (Annexure-5), wherein the total cost for such facilities based on the price break-up provided by M/s BHEL/ MBEL (McNally Bharat Engineering Co. Ltd.) have been indicated. The cost of all such common facilities between Unit 10 & 11 have been apportioned in terms of provisions under Regulation.

Total estimated cost of civil works for unit 10&11 executed by M/s BHEL (EPC contractor for Main Power Block) is ₹257 Crore which is based on the order for civil works of Main Power Block sublet by M/s BHEL on Cost + 10% basis. This cost also includes common components for Units No.10 & 11 like PH Building, DG Set Building, Compressor House, Service/Technical Building, Transformer Yard, Foundation for Station Transformer and Civil Works for Fuel Oil Handling System. The segregation of cost of these items from total price of civil contract

is not possible being a single contract on item rate basis involving around 1600 items."

vii) Issue:- Whether any common facility of other existing units under STPS Complex is shared with the Unit No. 10 & 11. If so, the capital cost be apportioned appropriately.

## MPPGCL's response:

"The existing units of Satpura PH II and III have completed the fair life of 25 years. The oldest 5 units of 62.5MW capacity each of PH-I, which are running since more than 40 years, are being de-commissioned. The common facilities between the existing and the new units may be listed out as Water Reservoir, Colony, Railway Siding, Fuel Oil Unloading facility and Office Complex which were developed since the inception of PH-I and progressively augmented till the commissioning of units 8&9. Although, water for new Units 10&11 is being drawn from the existing reservoir but with a separate "Intake Structure" and "Raw Water Pipings" constructed/laid for the purpose, the cost of which is included in the capital cost of new Units. Further, for transportation of coal for new Units from Ghoradongri to Sarni the existing Railway infrastructure is being used. Though the aforesaid existing facilities are being shared by the new Units, however, since all these facilities were developed long back and their book value has suffered depreciation over the past, these costs have not been shared with new Units."

viii) Issue:- What are the scheduled dates of commercial operation of these units in light of Para 9.5 of the DPR.

## MPPGCL's response:

"As per the completion schedule given under chapter 9.5 of the DPR, the first unit (Unit no. 10) was to be commissioned in 35 months from zero date whereas second unit (Unit no.11) was to be commissioned in 39 months. The zero date was envisaged to be the date of acceptance of LoI by BHEL for the Main Power Block. Subsequently, the LoIs for Main Power Block were issued to BHEL on 7<sup>th</sup> April 2008 wherein the zero date was stipulated at clause no. 6 as under:-

"The zero date of the contract shall be the date of release of interest free initial advance against supply contract to BHEL".

Further, as per Clause No. 11 of the LoI for first contract, the aforesaid stipulation was subject to Environmental Clearance which was not granted till then. The Environmental Clearance was granted on 27<sup>th</sup> Feb 2009 and, therefore, in light of the agreements, the effective date of contract (zero date) has been considered as 27<sup>th</sup> Feb 2009. Accordingly, the dates of completion as agreed with M/s BHEL are under:-

SN	Unit No.	Time of Completion of Trial Run				
1	Unit 10	Jan-2012				
2	Unit 11	May-2012				

The above mentioned time of completion of facilities have been incorporated in the contract agreements signed with M/s BHEL. Relevant portions of contract agreements for all the three contracts are annexed (Annexure-6 to Annexure-8)."

ix) Issue:- How the projected capital cost of the project (2x250 MW) is comparable with the bench mark norms specified by CERC in its Order dated 4th June, 2012.

#### MPPGCL's response:

"CERC in its Order dated 04/06/2012 has specified benchmark norms for hard cost of Units of size 500/660/800 MW only. Bench mark norms for the Unit size of 250 MW have not been specified in the aforesaid CERC Order. As such the projected capital cost of 2X250 MW STPS Extension Units 10 & 11 can not be compared with the bench mark norms given in the CERC Order dated 04/06/2012."

x) Issue:- The petitioner has claimed the provisional tariff on the total capital cost of ₹ 3008.54 Crore with additional capitalization of ₹ 289.46 Crore making a total estimated cost of ₹ 3298.00 Crore for these extension units. The petitioner has not filed the Chartered Accountant's certificate in support of its claim. Therefore, the capital cost being claimed for the provisional tariff be supported with the certificate from a Chartered Accountant.

#### MPPGCL's response:

"Action for certification of the capital cost claimed for provisional tariff, by a Chartered Accountant, has been initiated. MPPGCL in its letter No.533 dated 27/04/2013 had submitted that COD of Unit No.10 was expected by 15<sup>th</sup> of May 2013 and it was proposed to file the desired certificate from a C.A. in support of the capital expenditure and funding figures till the COD of Unit No.10. However, the CoD of Unit No. 10 could not be achieved as expected, for reasons beyond control of MPPGCL, and it is now expected to be achieved by 30/06/2013.

Since the certification of project cost, i.e., expenditure and funding as on COD, in respect of the subject project by a Chartered Accountant may take at least a month's time subsequent to the COD of Unit No.10, it is humbly requested to kindly allow one month time after the CoD of Unit No. 10 for filing the CA certified cost.

Financial position of MPPGCL is not healthy and it is facing cash crunch. In the absence of provisional tariff MPPGCL may find difficulty in paying coal and oil bills. It is, therefore, humbly requested to grant provisional tariff on projected or estimated capital cost and based on the information submitted in the Petition and the replies being filed through this submission without waiting for the CA certified cost. The certificate from a Chartered Accountant shall be submitted at the earliest possible after achieving the COD of Unit No. 10 and completion of certification process by the CA."

xi) Issue:- Details of liquidated damages (LD), if recovered from any vendor/contractor due to delay in execution of contract.

## MPPGCL's response:

"MPGCL has granted provisional time extension to M/s BHEL and M/s MBEL for completion of all facilities of Unit No. 10 and 11 up to 15<sup>th</sup> of April 2013 and 15<sup>th</sup> of Aug 2013 respectively, without prejudice to the recovery of LD as per Contract. As such deduction of LD has so far been kept in abeyance. Therefore, no recovery on account of LD due to delay in commissioning has been made till date. The amount of LD to be imposed on the respective contractor will be determined after completion of the work. Copies of MPPGCL letters No.870 & 871 dated 01/05/2013 regarding the provisional time extensions are annexed (Annexure-9 & Annexure-10). Actual position in respect of the LD amount

deducted from contractors' bills shall be submitted at the time of filing the petition for final generation tariff for these Units."

xii) Issue:- The cost of coal needs to be filed as per provision under Regulation 37.2 of MPERC (Terms and Conditions for determination of Generation Tariff) Regulation, 2012. The landed cost of coal filed in the petition with complete break-up of basic price and other applicable taxes, duties, royalties and cess etc. as per CIL notification be informed.

## MPPGCL's response:

"The cost of coal, based on the landed cost incurred by MPPGCL (taking into account normative transit and handling losses) and Gross Calorific Value of coal as per actual, for the preceding three months prior to the CoD of Unit No. 10 and 11 shall be submitted after achieving CoD of the respective Units.

However, necessary documents in support of the breakup of the latest available information in respect of landed cost of coal and weighted average GCV of coal as fired at STPS Sarni for the months of Jan, 2013 to March, 2013 are annexed (Annexure-11 to Annexure-13). A summary of the monthly weighted average price and GCV of coal for the period Jan 2013 to March 2013 is given in table below:

Month	Wtd. Avg Price of Coal	Wtd. Avg GCV of Coal
	₹/MT	kCal/Kg
Jan-2013	2575.55	3792
Feb-2013	2705.25	3794
Mar 2013	2557.55	3833
Average	2612.78	3806

xiii) Issue:- The cost of secondary fuel oil needs to be filed as per provision under Regulation 38.2 of MPERC (Terms and Conditions for determination of Generation Tariff) Regulation, 2012. The supporting documents in support of the cost claimed for secondary fuel oil be also filed.

#### MPPGCL's response:

"The cost of secondary fuel oil as per provision under Regulation 38.2 of MPERC (Terms and Conditions for determination of Generation Tariff) Regulation, 2012, based on actuals of the weighted average price of the three preceding months prior to COD of the Unit 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 shall be submitted after achieving CoD of the respective Units.

However, the supporting documents in respect of the latest available information in respect of secondary fuel oil for the months of Jan, 2013 to March, 2013 are annexed herewith (Annexure-14 to Annexure-16). A summary of the monthly weighted average price of secondary fuel oil for the period Jan 2013 to March 2013 is given in table below:

	•			
Month	Sec. Oil			
	Qty	Rate	Amount	
	KL	₹/KL	₹	
Jan-2013	1091.61	53378.48	58268485	
Feb-2013	3532.58	49112.88	173495190	
Mar 2013	823.32	71192.29	58614039	
Total	5447.51		290377714	
Wtd. Avg. Rate		53304.67		

Rate of Secondary oil

xiv) Issue:- Whether imported coal is supplied to these Units. If so, the quantity of domestic and imported coal supplied be furnished separately along with the detailed break-up of landed price and GCV of imported and domestic coal.

## MPPGCL's response:

"As per the Fuel Supply Agreement (FSA) dated 02/01/2013 signed between WCL and MPPGCL, WCL shall endeavor to supply coal from own sources as mentioned in Schedule-I of the FSA. However, the guaranteed supply is limited to 65% of the ACQ during FY13 to FY15, 70% of the ACQ during FY16 and 80% of the ACQ during FY17 and onwards. The shortfall in the quantity is to be met through imported coal. Presently indigenous and imported coal from the stocks of existing Units at STPS Sarni is being utilized in Unit No. 10 during Infirm Power generation in trial stage."

xv) Issue:- Calculation details showing the normative transit and handling loss while working out quantity of coal as mentioned in para 12.3 of the petition.

### MPPGCL's response:

"The calculation details showing normative transit and handling loss while working out quantity of coal as mentioned in para 12.3 of the petition are shown in Table No.12.4.1 on page 49 of the petition."

xvi) Issue:- The weighted average rate of secondary fuel oil as filed in Form 17 of the petition, is worked out by considering the furnace oil and HSD (High speed Diesel) whereas FO & LDO are mentioned to be used as secondary fuel oil in DPR. The correct status be informed. If LDO is used, then the revised weighted average rate with GCV of secondary fuel oil along with supporting documents and bill/invoice be submitted.

## MPPGCL's response:

"LDO is not being used in the subject project and instead of that HSD has been used."

xvii) Issue:- The petitioner has provided the information "As per Estimate" in 3rd Column of Format-5B whereas the details in this column is to be provided "As per original estimate" in the prescribed form. Therefore, revised Form 5B with correct status of information as per original estimate be submitted.

### MPPGCL's response:

"As desired, Format 5B has been revised as per original estimate and is annexed (Annexure-17)."

xviii) Issue:- Copy of the contract awards as indicated in Form 5C of the petition along with amendment, if any.

## MPPGCL's response:

"Copies of the contract awards as indicated in Form 5C of the petition are enclosed as (Annexure-18 to Annexure-41)."

xix) Issue:- Revised Form TPS-14 indicating the draw down schedule separately for unit 10 and unit 11.

#### MPPGCL's response:

"Providing Unit wise draw down schedule for Unit No. 10 and 11 is not possible as the loan is not drawn Unit wise. However, revised Form TPS-14 based on actual drawls till May 2013 and projected drawls till Station COD is annexed

(Annexure-42). As on 31/05/2013 a cumulative amount of ₹ 1981.69 Crore has been drawn through PFC loan and a cumulative amount of ₹ 582.87 Crore has been drawn through GoMP equity. Copies of Equity release letters for the period from Jan 2013 to Mar 2013 are annexed (Annexure-43 to Annexure-45). No equity has been drawn from GoMP in April 2013 and May 2013."

xx) Issue:- Copy of the approval of the revised project cost estimate of ₹3298 Cr. from the Board of Director of the Company.

## MPPGCL's response:

"Proposal for approval of revised estimated completed project cost of ₹3298.00 Crore was submitted before the BoD MPPGCL in its 67<sup>th</sup> meeting held at Bhopal on 23/03/2013. The BoD, after review of the proposal, resolved that project cost of STPS Extension Units 10&11 (2x250MW) is revised to ₹3265.00 Crore. A copy of Board's resolution is annexed herewith (Annexure-46)."

xxi) Issue:- Calculation sheet along with documents in support of the weighted average rate of interest applied loan.

## MPPGCL's response:

"Calculation sheet along with documents in support of weighted average rates of interest applied on loan are enclosed herewith (Annexure-47 to Annexure-49.")

xxii) Issue:- Details of IDC calculation (along with soft copy in excel sheet) in respect of interest up to CoD of each unit showing the date-wise drawls and interest amount along with applicable rate of interest and financing charges.

## MPPGCL's response:

"Details of IDC calculation up to Station COD is annexed (Annexure-50). Date wise drawls and interest amount along with applicable rate of interest are indicated in Annexures-45 & 46. Unit wise details of IDC up to the respective COD is not available since the PFC loan drawls are not made Unit wise.

However, Unit wise bifurcation of total IDC amount has been indicated in the Petition on prorata basis in the ratio of Unit wise expenditures indicated therein."

# xxiii) Issue:- Loan amount of ₹ 2300 Cr. is sanctioned by PFC. The sanction letter along with the terms and conditions for balance loan amount.

## MPPGCL's response:

"As submitted in the Petition, the balance loan funding with reference to the revised project cost estimate is yet to be tied up. The exact balance loan requirement may, however, be determined only after the project cost is finalized, although the revised project cost estimate of ₹3265.00 crore has been approved by the BoD MPPGCL in March 2013. As such, M/s PFC shall be approached for the exact requirement of balance loan only after finalizing of the project cost and obtaining necessary approval from the BoD/GoMP."

# xxiv) Issue:- Repayment schedule with respect to loans considered for tariff calculation.

## MPPGCL's response:

"Repayment of PFC loan (No. 20701003) has to be made in 60 equal quarterly installments and the first repayment installment is due on 15/06/2014. Supporting documents in this regard are annexed Annexure-51."

- 7. On perusal of the response filed by the petitioner, it was observed that some information and documents which were necessary for determination of provisional tariff were yet to be filed by MPPGCL. Vide letter dated 11<sup>th</sup> July, 2013, the petitioner was asked to file additional information/ documents by 31<sup>st</sup> July, 2013. Vide letter dated 31<sup>st</sup> July, 2013, MPPGCL mentioned that the CoD of extension unit 10 at STPS, Sarni which was expected by 30<sup>th</sup> June, 2013, could not be achieved due to unforeseen constraints beyond the control of MPPGCL and CoD was expected by 15<sup>th</sup> August, 2013. Therefore, MPPGCL requested for time extension for submission of additional information and CA certificate upto 31<sup>st</sup> August, 2013.
- 8. Vide letter dated 30<sup>th</sup> August 2013, the petitioner further submitted that "the Unit No. 10 of STPS Extension has been put to commercial operation w.e.f 18.08.2013. The capital expenditure incurred as on CoD and its certification by CA is in the process and expected to be completed by 15<sup>th</sup> September, 2013. The revenue from sale of infirm power and its certification by SLDC can be filed after issue of UI

account for the month of August, 2013 by SLDC which will be issued by the end of Sept, 2013. As such, this information can be furnished by 30<sup>th</sup> Sept, 2013". Meanwhile the petitioner has filed the response on the issue raised by the Commission vide letter dated 11<sup>th</sup> June, 2013. Issue-wise response filed by MPPGCL is as given below:

## i) Issue: Delay in achieving CoD of the units MPPGCL's response:

- "The main reasons for delay in commissioning of the project are as given below:
  - a) Delay in submission of Design & engineering documents by the contractors.
  - b) Non availability of required grade cement at some occasions and non deployment of manpower by the contractor, especially skilled.
  - c) Delay in fixing sub contractors by the contractors.
  - d) Delay in supplying materials by the contractors as per requirement of work.
  - e) Delay in deployment of adequate T&Ps by the contractor.
  - f) Delay in handing over of few fronts to Balance of Plant (BOP) contractor by Main Power Block (MPB) contractor.
  - g) Unprecedented heavy rains during last two monsoons sometimes causing flooding of works sites thereby affecting the progress of work.
- Reasons for delay attributable to the contractor are as given below:
  - a) Delay in submission of Design & Engineering documents by the contractors.
  - b) Non availability of required grade cement at some occasions and non deployment of manpower, especially skilled.
  - c) Delay in fixing sub contractors by contractors.
  - d) Delay in supplying materials by the contractors as per requirement of work.
  - e) Delay in deployment of adequate T&Ps.
  - f) Delay in handing over of few fronts to Balance of Plant (BOP) contractor by Main Power Block (MPB) contractor.

- Copies of the correspondence between the petitioner and the contractors regarding delay in project execution are enclosed.
- The present status regarding Liquidated Damages (LD) is submitted as below:

MPPGCL had granted provisional time extension to M/s BHEL (MPB contractor) and M/s MBEL (BOP contractor) for completion of all facilities of Unit No. 10 & 11 up to 15<sup>th</sup>April 2013 & 15<sup>th</sup>August 2013 respectively, without prejudice to the recovery of LD as per contract. As such deduction of LD has so far been kept in abeyance. Therefore, no recovery on account of LD due to delay in commissioning has been made till date. However, estimation of LD amount to be levied provisionally shall be made after achieving the COD of Unit No 11, i.e., Station COD."

ii) Issues: Details of the sale of infirm power and revenue generated from sale of infirm power as on CoD of respective Units along with SLDC statement.

## MPPGCL's response:

"Details of sale of Infirm Power & revenue generated from sale of Infirm Power from Unit No. 10 for the period w.e.f. 22/02/2013 till 31/07/2013 are given in table below. Since the energy accounting is being done at SLDC's end month wise, the details of Infirm Power and revenue generated from sale of infirm power from STPS Extn. Unit No. 10 for the period 01/08/2013 till COD (18/08/2013) shall be available from SLDC only by the last week of Sep 2013. The same shall, therefore, be submitted before the Commission after receipt from SLDC. monthyear wise UI Charges Bills issued by SLDC in respect of STPS Extn. Unit No. 10, for the period Mar 2013 to July 2013 are attached (Annexure-2)."

iii) Issues: Fuel expenditure for generation of infirm power along with revenue earned from sale of infirm power duly certified by the Chartered Accountant.

## MPPGCL's response:

"Certification of the project expenditure by a Chartered Accountant is under process and it may take about another week's time. As such, the details regarding

fuel expenditure for generation of Infirm Power, duly certified by the Chartered Accountant, would be submitted by 15<sup>th</sup> Sep 2013. The revenue earned from sale of Infirm Power upto July 2013 is ₹8.12 Crore as indicated above. The revenue earned during the period wef 01/08/2013 to 17/08/2013 shall be submitted after finalization of UI accounts by SLDC which is expected to be in the last week of Sep 2013. The same shall be submitted by 30<sup>th</sup> Sep 2013."

iv) Issues: The Capital expenditure along with its funding from equity and loan as on CoD of units duly certified by the Charted Accountant.

## MPPGCL's response:

"As submitted above, the certification of project expenditure and funding by a Chartered Accountant is under process and it may take about another week's time. As such, the details regarding capital expenditure along with its funding from equity and loan as on COD of Unit No. 10, duly certified by the Chartered Accountant, shall be submitted by 15<sup>th</sup> Sep 2013."

v) Issues: The details of loan amounts scheduled to be drawn and actually drawn along with the Interest during construction up to scheduled CoD of the units.

## MPPGCL's response:

"The details of loan amount scheduled to be drawn and actually drawn up to the scheduled CoDs of units 10 & 11 (i.e., Jan'12 and May'12) are as below:Scheduled Loan Drawls (upto scheduled CODs)

Loan drawl scheduled upto Jan 2012
₹2062.65 Crore
Loan drawl scheduled upto May 2012
₹2425.88 Crore.

Actual Loan Drawls (upto scheduled CODs)

Loan actually drawn upto Jan 2012
₹ 1167.57 Crore
Loan actually draw upto May 2012
₹ 1499.60 Crore.

The IDC & FC associated with the scheduled loan drawl upto the scheduled Station COD, i.e., May 2012, was worked out as ₹387.87 Crore."

vi) Issues: While going through the draw-down schedule filed in Annexure 42, it is observed that the IDC as on scheduled CoD is ₹150 Cr. whereas the total IDC up to actual CoD is ₹. 460 Cr. The reasons of abnormal increase in IDC after scheduled CoD need to be explained.

## **MPPGCL's response:**

"The project cost estimate of ₹ 3032.34 crore was approved by the BoD MPPGCL during its 46<sup>th</sup> meeting held on 26/11/2009 at Bhopal with the stipulation that this cost would be subject to revision on placement of order for BoP and Railway siding etc. By this time, it was envisaged that the project would be commissioned as per the contractual schedules finalized with BHEL having commissioning targets of units 10 & 11 as Jan 2012 and May 2012, respectively. As per this estimate, the IDC & FC was estimated as ₹ 387.87 Crore assuming flow of funds through PFC and GoMP Equity commensurate with the commissioning of units as per the aforesaid targets. Thus, it may be stated that had the project been commissioned as per the contractual targets, the burden of IDC could have been limited to ₹387.87 crore.

However, the commissioning targets of the two units went on revising again and again due to delay in execution of works for the reasons mentioned above. This ultimately resulted in less drawl of funds through PFC and therefore lesser commitment on account of IDC till the contractual completion dates (Jan 2012 and May 2012). As such, the IDC amount based on the actual loan drawls till the scheduled CoDs of the two Units (Jan 2012 and May 2012) works out far less than the then estimated IDC of ₹387.87 Crore.

The further increase in IDC, over and above ₹ 387.87 crore, has been caused due to subsequent delays, which are not attributable to MPPGCL, and also due to interest rate hikes. Broadly, the increase in IDC is due to following reasons:-

- a. Unit No.10 was satisfactorily synchronized on 22/02/2013 followed by coal loading in March 2013. However, due to teething troubles faced with this unit, CoD could be achieved only on 18<sup>th</sup> August 2013.
- b. Delays on part of BHEL, leading to slowed progress of work of Unit No. 11.
- c. Change in rate of interest on PFC loan from 11.5% to 13%."

vii) Issues: Detailed break-up of the project cost items in Form 5B based on the estimated original project cost and also on all the project costs revised from time to time with justification for any abnormal rise in the actual cost.

## MPPGCL's response:

"Detailed break-up of the project cost items in Form 5B based on the project cost estimate of ₹3298.00 Crore (now approved by BoD MPPGCL as ₹3265.00 Crore) was submitted in the Petition and that based on the project cost estimate of ₹3032.34 Crore was submitted in the additional submission filed on 14/06/2013. A statement showing breakup of all the project cost estimates (from initial estimate of ₹2350.00 Crore to the latest BoD approved estimate of ₹3265.00 Crore), broadly covering items of Form 5B, is enclosed herewith (Annexure- 3).

The reasons/justification for various revisions in the project cost estimates have already been submitted in the Petition."

viii) Issues: The landed cost of coal during the month of February, 2013 is higher as compared to other months whereas the wt. average GCV of the same is inferior. The reasons for the aforesaid increase in coal cost with supporting documents be explained.

#### **MPPGCL's response:**

"The figures of landed cost of coal furnished earlier were on provisional basis. The books of accounts of MPPGCL for FY13 have now been finalized and the final landed prices of coal for the period Jan 2013 to Mar 2013 are indicated in table below. A summary sheet of landed price of coal for STPS Sarni for FY13 is also enclosed (Annexure-4)."

ix) Issue: It is observed from the documents filed (as Annexure 14) in support of rate of secondary fuel oil, that some past period adjustment of ₹50,73,604 during the month of March, 2013 is also included while arriving at the rate of secondary fuel oil. The actual cost of secondary fuel oil for three preceding months without considering any past period adjustment be submitted.

## MPPGCL's response:

"The actual cost of secondary fuel oil for the months of Jan 2013 to May 2013, without considering any past period adjustment, is attached herewith (Annexure-5)."

## **Capital Cost:**

9. With regard to the capital cost, Regulation 17 of MPERC (Terms and Conditions for determination of Generation tariff) Regulations, 2012 provides that,

"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.

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-

- 10. The petitioner submitted that the project cost for STPS Extension Units No. 10 & 11 (2x250MW) was initially tentatively estimated at ₹ 2350 Crores based on per MW cost of ₹ 4.7 Crore This initial tentative project cost estimate of ₹ 2350 Crore was subsequently updated by the project consultant to ₹2637 Crore in the DPR based on the LOIs placed on M/s BHEL for BTG package in March 2008, on single offer negotiation basis. Orders for Civil Works of Main Power Block, Balance of Plant and Non-EPC works, etc., were, however, not placed by then. Therefore, the cost of civil work and BOP was taken as indicated by the Consultant in the DPR. This updated cost estimate was, however, subject to further revision after placement of orders for civil work of Main Power Block, Balance of Plant (BoP) and Non EPC works.
- 11. The petitioner further submitted that the project cost estimate was, therefore, again revised to ₹ 3032.34 Crore. Revision in the cost estimate to ₹ 3032.34 Crore was mainly on account of the reasons mentioned in para 2.3 of the petition subject to further revision after placement of orders for BoP and Railway Siding. The petitioner mentioned that Certain additional works have been identified. Railway siding works, especially those related to Overhead Electrification (OHE) and Signaling & Telecommunication (S&T) have got increased due to Railway's requirement which, in

any case, have to be met. Therefore, considering above facts, the project cost has been re-estimated as ₹3298.00 Crore. Revision in the cost estimate to ₹3298 Crore is mainly on account of the reasons mentioned in para 2.5 of the petition.

12. The break-up of the original capital cost estimate and its revisions are given below:

**₹ Crores** 

S. No	Particulars	Initial Estimate (Aug 2006)	First Revision (Mar 2008)	Second Revision (Nov 2009)	Third Revision (Jan 2013)
1	Turnkey EPC Cost	1832.13	2184.87	2450.25	2574.54
2	Non EPC Cost	23.50	63.10	132.30	232.21
3	Land and R&R	34.00	10.00	15.00	14.00
4	Overheads	160.46	39.83	46.91	81.87
5	IDC+ Fin Cost	300.00	339.12	387.87	395.00
6	Total	2350.09	2636.92	3032.34	3297.62
	Say	2350.00	2637.00	3032.00	3298.00

- 13. By affidavit dated 14<sup>th</sup> June, 2013 the petitioner submitted that the proposal for approval of revised estimated completed project cost of ₹3298.00 Crores was submitted before the BoD MPPGCL in its 67<sup>th</sup> meeting held on 23<sup>rd</sup> March, 2013. The BoD after review of the proposal, resolved that project cost of STPS Extn. Units 10 & 11 (2x250 MW) is revised to ₹3265.00 Crores. The petitioner has also filed the copy of Board's resolution in this regard.
- 14. By affidavit dated 13<sup>th</sup> Sept. 2013, the petitioner filed CA certified project cost along with project funding and fuel expenses for generation of infirm power up to CoD of unit No. 10. Further, through another letter dated 27<sup>th</sup> Sept. 2013 MPPGCL has filed the details of infirm power generated and revenue from sale of infirm power along with month wise copy of the bill for UI charges issued by SLDC in support of their claim.
- 15. On perusal of the aforesaid details filed by the petitioner, the Commission observed the following:
  - (i) The Extn. Unit No. 10 of STPS, Sarni was synchronized on 22<sup>nd</sup> Feb. 2013 and achieved CoD on 18<sup>th</sup> August, 2013.

- (ii) The infirm power generated during the above-mentioned period was 120.93 MU's and the revenue received as UI charges is ₹ 8.82 Crores. The fuel expenditure for generation of infirm power is ₹ 106.69 Crores. Therefore, no revenue earned from sale of infirm power after accounting for the fuel expenses, in terms of Regulation 19 of MPERC (Terms and Conditions for determination of Generation tariff) Regulations, 2012.
- (iii) As certified by the Chartered Accountant the total capital expenditure incurred in the project (Unit 10&11) till 17<sup>th</sup> August, 2013 i.e. CoD of unit No. 10, is ₹2952.33 Crores. The break-up of the aforesaid capital expenditure of ₹2952.33 Crores is as given below:
  - a. The expenditures towards Unit No. 10 as on CoD is ₹1508.68 Crores. The actual IDC for Unit No. 10 as on CoD of this unit is ₹238.26 Crores.
  - b. The capital expenditure towards Unit No. 11 as on 17<sup>th</sup> August, 2013 is ₹1443.65 Crores and anticipated CoD of this unit is November, 2013.
- (iv) The project cost has been funded through PFC loan of ₹2090.20 Crores and equity of ₹594.13 Crores till 17.08.2013.
- 16. With regard to the recovery of liquidated damages for delay in project, the petitioner in para 2.9 of the petition submitted the following:

"As per the contract, COD of Unit No. 10 & 11 were to be achieved within 35<sup>th</sup> and 39<sup>th</sup> months from the effective date of contract (27/02/2009), i.e., by Jan'2012 & May'2012 respectively. However, the commissioning targets have slipped by about twelve months in respect of each of the two units. Presently, to avoid contractual problems, which may further affect the commissioning of these Units, provisional time extension has been granted to M/s BHEL and M/s MBEL, without prejudice to the recovery of LD as per Contract. As such deduction of LD has been kept in abeyance. Therefore, no recovery on account of LD due to delay in commissioning has been made till date. Subsequent course of action in this regard shall be taken after synchronization of Unit No. 10. The actual position in respect of the LD amount deducted from contractors' bills shall be submitted at the time of filing the petition for final generation tariff for these Units."

17. In view of the above, the Commission has considered the capital cost as on CoD of Unit No. 10 as per the Chartered Accountant's Certificate dated 9<sup>th</sup> September,

2013 filed by the petitioner through affidavit dated 13<sup>th</sup> September, 2013. As submitted by the petitioner, the liquidated damages (LD) are yet to be finalized. Therefore, reasons for delay in commissioning of the unit and the issue of IDC beyond the schedule CoD of the unit is not dealt with in this provisional Order. The aforesaid issue shall be examined in the final tariff petition for the subject units to be filed by MPPGCL. The petitioner is directed to submit the complete details regarding the reasons for delay in commissioning of the units, recovery against liquidated damages and the complete IDC details up to scheduled CoD and the actual CoD of the units along with the petition for determination of final tariff.

18. In view of the above, the Commission has provisionally considered the following capital cost of Unit No. 10 as on CoD of the unit as per CA certificate filed by the petitioner:

Capital Cost of Unit No. 10 as on CoD (17.08.2013) as per CA's Certificate:

Sr. No.	Particular	Unit	Capital Cost of Unit No. 10 as on CoD
1	Cost of Land and site development	₹Cr.	40.87
i	Plant and Equipment	₹Cr.	503.59
ij	BOP Mechanical and Electrical	₹Cr.	257.16
iii	Taxes and Duties	₹Cr.	55.45
2	Plant and Equipment including taxes & Duties	₹Cr.	816.19
i	Main power Block Civil works	₹Cr.	96.44
ii	Balance of Plant Civil works	₹Cr.	163.33
iii	MGR and Marshalling Yard (Railway Siding)	₹Cr.	24.76
3	Total Civil work including railway siding	₹Cr.	284.53
4	Construction and pre-commissioning expenses	₹Cr.	82.10
5	Initial Spares	₹Cr.	18.07
6	Overheads	₹Cr.	28.64
С	apital Cost excluding IDC & FC	₹Cr.	1270.41
7	IDC and FC	₹Cr.	238.26
	Total Capital Cost including IDC and FC	₹Cr.	1508.68

19. The Chartered Accountant certificate dated 9<sup>th</sup> September, 2013 also indicated an actual capital expenditure of Unit No. 11 as on 17<sup>th</sup> August, 2013, but the unit has not achieved its CoD. Therefore, the provisional tariff of unit No. 11 shall be determined after CoD of the Unit and submission of all other required details regarding infirm power as on CoD.

#### **Details of Infirm Power:**

20. By affidavit dated 13<sup>th</sup> September, 2013, the petitioner filed a Chartered Accountant's certificate dated 09.09.2013 certifying the details of actual fuel expenses incurred for generation of infirm power from Unit No.10. The Chartered Accountant has certified that the total direct fuel expenditure incurred for generation of infirm power is ₹106.69 Crores A break-up of fuel expenditure incurred for generation of infirm power from 22.02.2013 (date of synchronization) to 17.08.2013 is as given below:

Details of the fuel Cost for generation of Infirm Power as per CA Certificate: (Amount in ₹ Crores)

Sr.					Total fuel
No.	Month	Coal	Furnace Oil	HSD	Cost
1	22 <sup>nd</sup> to 28 <sup>th</sup> Feb. 2013	0.14	0.00	0.00	0.14
2	March, 2013	1.14	0.00	5.24	6.38
3	April, 2013	7.94	13.02	7.77	28.73
4	May, 2013	2.77	3.37	0.90	7.04
5	June, 2013	9.26	16.26	2.25	27.77
6	July, 2013	13.96	12.77	0.47	27.20
7	1 <sup>st</sup> to 17 <sup>th</sup> August, 2013	3.99	4.41	1.03	9.42
•	Total	39.20	49.83	17.65	106.69

21. Vide letter dated 27<sup>th</sup> September, 2013, the petitioner filed statement of SLDC regarding UI account pertaining to Unit No. 10 of STPS Extn. Project containing the UI details of from 22<sup>nd</sup> February, 2013 to 17<sup>th</sup> Sep. 2013. The petitioner mentioned that the infirm power generated from Unit No. 10 up to CoD is 120.93 MU's and revenue of ₹ 8.83 Crores was generated from sale of infirm power from this Unit for the period from 22<sup>nd</sup> February, 2013 to 17<sup>th</sup> Sept. 2013. No revenue was earned from sale of infirm power. The following details were filed by the petitioner for extension Unit 10:

#### **Details of Infirm Power:**

Sr. No.	Month	Infirm Energy Supplied (MU's)	Revenue from sale of infirm power (₹Cr.)
1	22 <sup>nd</sup> to 28 <sup>th</sup> Feb. 2013	Nil	Nil
2	March, 2013	-0.27	-0.33
3	April, 2013	18.78	1.59
4	May, 2013	12.86	0.72
5	June, 2013	40.02	3.00
6	July, 2013	36.28	3.15
7	1 <sup>st</sup> to 17 <sup>th</sup> August, 2013	13.26	0.70
	Total	120.93	8.83

## A. Annual Capacity (fixed) Charges:

- 22. The tariff for supply of electricity from a thermal power generating station shall comprise of capacity charge and energy charge to be derived in the manner specified in Regulations 40 and 41 of "Madhya Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Generation Tariff) Regulations, 2012. {RG-26 (II) of 2012}." The annual Capacity (fixed) Charges 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:
- 23. While determining the Annual Capacity (Fixed) Charges of STPS Extn. Unit No. 10 of, the following are considered:
  - i. Capital Cost of ₹1508.68 Crores for Unit No.10 up to 17<sup>th</sup> August, 2013 (CoD) is considered as per the auditor's certificate dated 9<sup>th</sup> September, 2013 filed by the petitioner. The aforesaid capital cost includes ₹1068.12 Crores loan component and ₹303.61 Crores equity component for Unit 10 as indicated in **Annexure 3A** filed with the additional submission dated 13<sup>th</sup> September, 2013 for apportionment of the total funding in the ratio of the cumulative provisional expenditure of each unit up to 17<sup>th</sup> August, 2013.
  - ii. Revenue earned from sale of infirm power has been considered as per Regulation 19 of MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2012. As per information provided by the petitioner, there is no revenue earned from sale of infirm power after accounting for the fuel expenses.
  - iii. The opening equity of ₹303.61 Crores as on CoD of Unit No. 10 as filed by the petitioner in Annexure 3A based on CA certificate is considered. The equity amount actually incurred as on CoD as per auditor's certificate

- is under the limit of normative equity as specified in the Regulations. Base rate of Return on equity @ 15.5% as per Regulations is considered in this order.
- iv. Loan amount ₹1068.12 Crores (as on CoD) of Unit No. 10 as filed by the petitioner in Annexure 3A based on CA certificate is considered as the opening loan amount for calculation of interest and finance charges. Weighted average rate of interest on loan @ 13.00% as indicated in the documents filed by the petitioner is considered. Repayment equivalent to depreciation determined for the year is considered as per Regulations, 2012.
- v. Weighted average rate of depreciation @ 4.75 % is considered as filed by the petitioner based on the rate of depreciation for different capital cost components as per Regulations, 2012 and the detailed beak-up of cost components filed in the petition.
- vi. O & M expenses are considered as per norms specified in the 36.1 of MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2012.
- vii. Specific secondary fuel oil consumption is considered as per Regulations, 2012. The weighted average rate of secondary oil is initially considered as filed by the petitioner in additional submission dated 30<sup>th</sup> August, 2013 as given below:

Weighted average rate of Oil:

Particular	Unit	January	February	March	Wt. average rate <b>∄</b> KL
	Quantity (KL)	-	2932.60	-	
Furnace Oil	Rate (₹/KL)	-	46594.00	-	46594.00
	Quantity (KL)	1091.61	599.98	823.31	
HSD	Rate (₹KL)	53378.95	61423.54	65030.32	59112.49
	Quantity (KL)	1091.61	3532.58	823.31	
Total	Rate (₹/KL)	53378.95	49112.68	65030.32	52373.30

Further, Regulation 38.2 of the Regulations takes care of the cost of secondary fuel oil subject to fuel price adjustment at the end of the each year of tariff period as per the formula mentioned under Regulation 36.2 of the Regulations, 2012.

- viii. Working capital is worked out as per Regulation 37.1 and interest on working capital is considered as per Regulation 27.1 of the MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2012.
- ix. Regarding the cost of secondary fuel oil for calculating the working capital, proviso of clause 37.1 (ii) provides as under;

"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".

In view of the above, the cost of main fuel oil (HFO) is taken by considering the cost per KL filed by the petitioner in additional submission dated 30<sup>th</sup> August, 2013.

- x. Normative Annual Plant Availability Factor for recovery of annual capacity charges is considered at 85% as per Regulation 35.2 (A) of MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2012.
- xi. For FY2013-14, the annual capacity (fixed) charges have been prorated for 226 days. Considering the above, the annual capacity (fixed) charges of STPS Extn. Unit No. 10 are provisionally determined as given below:

(a) Return on equity:

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Sr.			FY	FY	FY
No.	Particular	Unit	2013-14	2014-15	2015-16
1	Opening Equity	₹. Cr.	303.61	303.61	303.61
2	Equity addition during the year	₹ Cr.	0.00	0.00	0.00
3	Closing equity	₹Cr.	303.61	303.61	303.61
4	Average equity	₹Cr.	303.61	303.61	303.61
5	Base rate of Return on Equity	%	15.50	15.50	15.50
7	Return on equity	₹Cr.	47.06	47.06	47.06

(b) Interest charges on loan:

Sr.			FY	FY	FY
No.	Particular	Unit	2013-14	2014-15	2015-16
1	Opening Loan	₹Cr.	1068.12	996.46	924.80
4	Loan addition during the year	₹Cr.	0.00	0.00	0.00
5	Repayment during the year	₹Cr.	71.66	71.66	71.66
6	Closing Loan	₹Cr.	996.46	924.80	853.13
7	Average Loan	₹Cr.	1032.29	960.63	888.96

Г		Interest amount	<b>₹</b> 0	134.20	124.88	115.57
I	8	Wt. average rate of interest	%	13.00	13.00	13.00

## (c) Depreciation:

Sr.			FY	FY	FY
No.	Particular	Unit	2013-14	2014-15	2015-16
1	Opening Gross Block	₹Cr.	1508.68	1508.68	1508.68
	Gross Block addition during the				
2	year	₹Cr.	0.00	0.00	0.00
3	Closing Gross Block	₹Cr.	1508.68	1508.68	1508.68
4	Average Gross Block	₹Cr.	1508.68	1508.68	1508.68
5	Annual wt. average rate of dep.	%	4.75	4.75	4.75
6	Depreciation amount	₹Cr.	71.66	71.66	71.66
7	Cumulative Depreciation		44.37	116.03	187.70

(d) Operation & Maintenance expenses:

Sr.			FY	FY	FY
No.	Particular	Unit	2013-14	2014-15	2015-16
1	Installed Capacity	MW	250	250	250
	Per MW O&M				
2	expenses	₹ L/MW	18.42	19.90	21.46
3	Total O&M expenses	₹Cr.	46.05	49.75	53.65

(e) Secondary fuel oil expenses:

Sr. No.	Particular	Unit	FY 2013-14	FY 2014-15	FY 2015-16
1	Capacity of the generating unit	MW	250	250	250
2	Normative Plant Availability Factor	%	85	85	85
3	Annual Gross Generation	MU's	1861.50	1861.50	1861.50
4	Normative Sp. Oil consumption	ml/kWh	1.00	1.00	1.00
5	Quantity of oil required	KL	1861.50	1861.50	1861.50
6	Wt. average rate of oil	₹/KL	52373	52373	52373
7	Annual cost of oil	₹Cr.	9.75	9.75	9.75

(f) Int	(f) Interest on working capital:					
Sr.			FY	FY	FY	
No.	Particular	Unit	2013-14	2014-15	2015-16	
1	Coal Stock for two months	₹ Crs.	50.65	50.65	50.65	
	Secondary Oil Stock for two					
2	months	₹ Crs.	1.45	1.45	1.45	
	O & M Expenses for one					
3	month	₹ Crs.	3.84	4.15	4.47	
	Maint. Spares 20% of					
4	Normative O&M Expenses	₹ Crs.	9.21	9.95	10.73	
5	Receivables for two months	₹ Crs.	105.86	104.93	104.03	

8	Interest on working capital	₹ Crs.	22.57	22.59	22.61
7	Rate of interest	%	13.20	13.20	13.20
6	Total Working Capital	₹ Crs.	171.00	171.12	171.32

Annual capacity (fixed) charges determined in this Order:

Sr.			FY	FY	FY
No.	Particular	Unit	2013-14	2014-15	2015-16
1	Return on equity	₹Cr.	47.06	47.06	47.06
2	Interest charges on loan	₹ Cr.	134.20	124.88	115.57
3	Depreciation	₹ Cr.	71.66	71.66	71.66
4	O & M expenses	₹ Cr.	46.05	49.75	53.65
5	Cost of secondary fuel oil	₹ Cr.	9.75	9.75	9.75
6	Interest on working capital	₹ Cr.	22.57	22.59	22.61
7	Annual capacity charges	₹ Cr.	331.29	325.69	320.30
8	AFC for 226 days for FY2013-14	₹ Cr.	205.13	325.69	320.30
	95% of the above fixed cost				
9	allowed to be recovered	₹ Cr.	194.87	309.41	304.29

24. The above-mentioned annual capacity (fixed) charges as provisionally allowed in this order are on normative plant availability factor (NAPAF) of the thermal generating unit. The recovery of annual capacity (fixed) charges shall be made by the petitioner in accordance with Regulations 40.2 and 40.3 of MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2012.

## (B) Energy (Variable) Charges:

- 25. While calculating the energy (variable) charges for STPS, Extn. Unit No. 10, the following is considered:
  - i. Gross Station Heat rate is worked out as per provisions under Regulation 35.2 (B) of MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2012. The petitioner filed the certificate for guaranteed operating parameters for the generating unit. Considering the guaranteed Turbine Cycle heat at zero make-up and steam generator efficiency at 100% MCR, the gross station heat rate of the unit works out as follows:

Turbine Cycle heat rate 1947.10 Kcal/kWh

Efficiency of steam generator 86.51%

Design Heat Rate 2250.72 Kcal/kWh

Gross Station Heat Rate

1.065 x 2250.72 =2400 Kcal/kWh (App.)

- ii. The unit has natural draft Cooling Tower. Therefore, the norms for Auxiliary Energy consumption and Specific Oil consumption are considered as specified under Regulation 35.2 of MPERC (Terms and Conditions for determination of Generation Tariff) Regulations, 2012.
- iii. STPS Extn unit 10 (250 MW) is considered as non pit-head and normative transit loss has been considered as per Regulations, 2009.
- iv. Weighted average GCV of coal is considered as informed by the petitioner in the additional submission dated 30<sup>th</sup> August, 2013 as given below;

Weighted average rate of Coal:

Weighted average rate of coal.					
	Rate of Coal		Wt. Avg. Rate		
Month	MT	₹MT	₹MT		
January	726290	2458.10			
February	689607	2611.74			
March	868524	2653.69	2579		

v. Weighted average rate and GCV of Coal is considered as worked out and informed by the petitioner by affidavit dated 14<sup>th</sup> June, 2013 based on the laboratory coal analysis report, as given below:

Weighted average GCV of Coal:

Month	Wt. Avg. GCV of Coal (Kcal/kg)
January, 2013	3792
February, 2013	3794
March, 2013	3833
Total Wt. Avg. GCV of Coal	3806

vi. Based on the above, the details of the Energy Charges ex-bus for STPS Extn. Unit No. 10 are determined as given below:

**Energy charges (variable charges):** 

			FY2013-14
Sr. No.	Particular	Unit	To FY2015-16
1	Capacity	MW	250
2	NAPAF	%	85.00
3	Gross Station Heat Rate	kCal/kWh	2400
4	Sp. Fuel Oil Consumption	ml/kWh	1.00
5	Aux. Energy Consumption	%	8.50
6	Transit Loss	%	0.80
7	Weighted average GCV of Oil	kCal/ltr.	10000
8	Weighted average GCV of Coal	kCal/kg	3806
9	Weighted Average price of Coal	₹MT	2579
10	Heat Contributed from HFO	kCal/kWh	10
11	Heat Contributed from Coal	kCal/kWh	2390
12	Sp. Coal Consumption	kg/kWh	0.6280
13	Sp. Coal consumption including trans loss	kg/kWh	0.6330
14	Energy Charge Rate	Paise/kWh	1.632
15	Rate of Energy Charge from Coal at ex-bus	₹kWh	1.784

26. The base rate of the energy charges shall however, be subject to month to month adjustment of fuel price and GCV of main fuel. The above energy charges have been calculated for the purpose of calculation of two months' billing, which is used for calculation of interest on working capital. However, the actual billing of energy charges shall be as per the formula and other provisions detailed in Regulation 31 of MPERC (Terms and Conditions for determination of Generation Tariff) Regulations, 2012.

## (C) Other Charges

- 27. In addition to the annual capacity (fixed) charges and energy (variable) charges determined in this order, the petitioner is allowed to recover other expenses in accordance with the provisions under MPERC (Terms and Conditions for determination of generation tariff) Regulations, 2012.
- 28. The above tariff is provisionally determined by the Commission w.e.f. the CoD of the Unit No. 10 i.e. 18<sup>th</sup> August, 2013 to 31<sup>st</sup> March, 2016, based on the Auditor's Certificate and other documents placed before the Commission during proceedings held in the matter. The provisional tariff so determined in this order shall be subject

to adjustment as per Regulation 15.3 of the MPERC (Terms and Conditions for determination of generation tariff) Regulations, 2012 after the final tariff order is issued. However, this tariff is subject to revision after filing of the audited accounts along with all other details/documents and clarifications which are still lacking to the satisfaction of the Commission.

- 29. The petitioner is directed to file the final tariff petition for Unit-10 at the earliest along with the Audited Accounts as on CoD and all other required details / documents. The Unit-wise break-up of the figures in the audited accounts be also submitted by the petitioner with the final tariff petition in favour of its claims. All discrepancies and information gaps observed by the Commission in this order be also eliminated while filing the final tariff petition.
- 30. The instant petition is for STPS, Extn. Unit No. 10 and 11. The provisional tariff of Unit No. 11 shall be determined only after CoD of this unit (which is anticipated in Nov. 2013 as informed) and availability of details regarding infirm power from SLDC & Chartered Accountant for this unit.

Ordered accordingly.

sd/- sd/- sd/(Alok Gupta) (A. B. Bajpai) (Rakesh Sahni)
Member Member Chairman

Date: 8<sup>th</sup> October, 2013

Place : Bhopal