

MADHYA PRADESH ELECTRICITY REGULATORY COMMISSION
5th Floor, "Metro Plaza", Bittan Market, Bhopal - 462 016



Petition No. 16 of 2016

PRESENT:

Dr. Dev Raj Birdi, Chairman

A.B. Bajpai, Member

Alok Gupta, Member

IN THE MATTER OF:

Determination of the provisional tariff for 1 x 600 MW unit (Phase I) of coal based power project of the petitioner at Barela-Gorakhpur, Dist. Seoni (M.P.)

**M/s. Jhabua Power Limited,
Macmet House, 7th Floor, 10B OC Ganguly Sarani
Kolkata – 700020, West Bengal**

Petitioner

V/s

- 1. M.P. Power Management Company Ltd., Jabalpur**
- 2. M.P. Poorv Kshetra Vidyut Vitaran Company Ltd, Jabalpur**
- 3. M.P. Madhya Kshetra Vidyut Vitaran Company Ltd, Bhopal**
- 4. M.P. Paschim Kshetra Vidyut Vitaran Company Ltd, Indore**

Respondents

ORDER
(Passed on this day of 06th September' 2016)

1. M/s. Jhabua Power Limited filed the subject petition under Section 62 and Section 86(1)(a) of the Electricity Act, 2003 for determination of generation tariff for 600 MW Unit No. 1 of its coal based thermal power project (Phase-I) at District Seoni, Madhya Pradesh for the period from the anticipated CoD till 31st March' 2019. The petitioner also requested for determination of provisional tariff of its aforesaid unit, if the determination of final tariff is not feasible.
2. The Generating Unit of 600 MW (Phase-I) in the subject petition was synchronized with the grid on 23rd February, 2016 and this unit was declared under Commercial Operation on 3rd May, 2016.
3. Earlier, the petitioner had filed Petition No. 53 of 2015 with the same prayer as sought in the subject petition. On scrutiny of the aforesaid Petition No. 53 of 2015, the information gaps and the requirement of the additional details/ data/ documents in that petition were communicated to the petitioner seeking its response by 20th November' 2015. While observing that the generating unit of the petitioner's power plant was not declared under commercial operation, vide Commission's order dated 20th January' 2016, the petition No. 53 of 2015 was disposed of with the following directions to the petitioner:

“The Commission is not inclined to keep this petition pending indefinitely and therefore, has decided to dispose of this petition at this stage. However, the petitioner shall be at liberty to approach the Commission with all requisite details and documents as and when the generating unit is declared under commercial operation. The Commission may also consider to adjust the processing fees already deposited by the petitioner on early filing of the requisite details and documents in the matter.”

4. Subsequently, the petitioner filed the subject petition No. 16 of 2016 on 21st March' 2016. The aforesaid petition was based on MPERC (Terms and Conditions for determination of Generation Tariff) Regulations, 2012 and the same was filed in anticipation of CoD of the generating unit by 25th March' 2016. Motion hearing in the

aforesaid petition was held on 26th April' 2016 when the Commission had observed the following:

- (i) The generating unit of the petitioner's power plant had not achieved CoD till date.
- (ii) The subject petition was based on MPERC (Terms and Conditions for determination of Generation Tariff) Regulations' 2012.

5. In view of the above, the petitioner was directed to submit the following:

- (i) The amended petition in light of the provisions under MPERC (Terms and Conditions for determination of Generation Tariff) Regulations, 2015 (**herein after referred to as Regulations'2015**) which shall be applicable in the subject matter.
- (ii) Copy of all relevant documents in accordance with the above-mentioned Tariff Regulations for declaration of its generating unit under commercial operation.
- (iii) All information gaps/ additional details/ data and the supporting documents sought vide Commission's letter No. 1951 dated 31st October' 2015 in Petition No. 53 of 2015 in the subject matter.

6. The petitioner was also directed to submit the following details on declaration of its generating unit under Commercial Operation:

- (i) Auditor's Certificate for actual capital expenditure as on CoD,
- (ii) Details of common expenditure and their funding certified by the Auditor,
- (iii) Details of funding and IDC as on scheduled CoD and actual CoD,
- (iv) Details of the infirm power supplied to grid and revenue earned from generation of infirm power.
- (v) CA certificate for fuel expenses for generation of infirm power,
- (vi) Details of GCV and rate of coal and oil for three preceding months etc.
- (vii) Wt. average rate of interest duly certified by the Bankers.
- (viii) List of all pending works completed and to be completed in light of the original scope of work.

7. By affidavit dated 13th May' 2016, the petitioner filed the amended petition based on MPERC (Terms and Conditions for determination of Generation Tariff) Regulations,

2015. During the course of motion hearing held on 24th May' 2016 in the amended petition, the petitioner informed the Commission that its generating unit (1X600 MW of Phase-I) has achieved CoD on 3rd May' 2016. The petitioner also filed the details and documents as sought by the Commission.

8. The petitioner broadly submitted the following in its amended petition:

“(i) The Petitioner is a Subsidiary of Avantha Power and Infrastructure Limited, a company of AVANTHA GROUP. The Group is one of the India’s most respected multinational Companies with diverse interests, represented in India and in abroad by over 50 different Companies and over 80 manufacturing plants. Crompton Greaves Ltd and Ballarpur Industries Ltd (BILT) are some of the very well-known major Companies of the group. Avantha Power & Infrastructure Ltd, a group company, was formed out of the demerger of Power assets from BILT. This Company has promoted the petitioner Company, Jhabua Power Ltd., incorporated under the Companies Act, 1956 having its Registered office at Macmet House, 7th Floor, 10B O C Ganguly Sarani, Kolkata – 700020, West Bengal, India and Corporate office at 6th Floor, Vatika City Point, M.G. Road, Gurgaon-122002 to develop and execute coal based thermal power Project in Seoni district of the State of Madhya Pradesh.

*(ii) M/s Jhabua Power Limited ("**the petitioner**" or "**JPL**"), being a generating company within the meaning of Section 2 (28) of the Electricity Act, 2003 ("**the Act**"), is filing the present petition on affidavit seeking 'Determination of Generation Tariff' for sale of power to be generated by its Phase-I, 1 x 600 MW, Coal Based Power Project at Barela-Gorakhpur, Dist. Seoni, Madhya Pradesh for the period commencing from the date of achieving Commercial Operation ("**CoD**") under Section 62 read with Section 86(1)(a) of the Act.*

That the instant power plant was synchronised with the grid on 23rd February 2016 and has been commissioned (achieving full load) on 22nd March 2016. Further, the instant power plant completed the trial run operation of 72 hours on 2nd May, 2016 and the commercial operation date of the instant power plant has been achieved on 00:00 hrs on 3rd May 2016.

- (iii) *The petitioner has entered into a Long Term Power Purchase Agreement ("PPA") with Madhya Pradesh Power Trading Company Limited ("MP Tradeco"), on 5th January 2011 for sale of Power equivalent to Thirty percent (30%) of the Installed Capacity from Phase-I, 1x600 MW Unit of the Petitioner for a period of Twenty (20) years from CoD at the Tariff determined by the Appropriate Commission, pursuant to which the present Thermal Power Project is being developed.*
- (iv) *The petitioner has also entered into a Long Term PPA with the Government of Madhya Pradesh ("GoMP") through its Secretary (Energy) on 27th June 2011 for sale of energy at all times so long the Power Station exists including in any enhanced, expanded and / or renovated and / or modernized Plant equal to five percent (5%) of the net power (the net power being the gross power generated minus the permitted auxiliary consumption) at a price equivalent to Variable Charge / Cost.*
- (v) *GoMP on 10th April 2012 notified MP Tradeco as the Holding Company of all Distribution Licensees within the state of Madhya Pradesh ("Respondent No. 2, 3 & 4") and renamed the same to Madhya Pradesh Power Management Company Ltd (herein referred to as "Respondent No. 1" or "MPPMCL").*
- (vi) *By virtue of the aforesaid Notifications the Respondent No. 1, has been authorized to sign the PPA with the petitioner, for purchase of power on behalf of Respondent No. 2, 3 & 4, who are the Distribution Licensees within the state of Madhya Pradesh under Section 14 of the Act, who are also the confirming parties to the PPA. Copy of the PPAs dated 5th January 2011 and 27th June 2011 are annexed hereto and marked as Annexure 2-A & 2-B respectively.*
- (vii) *The PPA entered between the petitioner and the Respondents also contemplates that the tariff is to be determined by this Commission. The relevant extracts of the PPA are reproduced as follows:-*
- “10.1.1 The Tariff shall comprise Capacity Charge, Variable Charge and any other charges as may be determined by the Appropriate Commission under Law and as per the norms contained in the tariff regulation notified by the Appropriate Commissions.”***

- (viii) *The MPERC has also granted approval to the aforesaid PPA for sale of 30% power to the Respondents vide Order dated 7th September, 2012 with consequent amendments.*
- (ix) *In view of above mentioned provisions of the Electricity Act, 2003 and the MPERC Tariff Regulations, 2015 read with Clause 10.1.1 of the PPA, it is humbly submitted that this Hon'ble Commission is the Appropriate Authority for determination of Tariff for supply of power to the Respondents from the thermal generating unit being developed by the Petitioner. **Thus, the Petitioner is hereby submitting this petition seeking approval of capital cost and determination of tariff of Phase-I, 1x 600 MW Unit starting from the COD up to the balance control period of MPERC Tariff Regulations, 2015 i.e. up to 31st March 2019. (Emphasis supplied)***
- (x) *The petitioner had originally envisaged the said Power Project to have a capacity of 1260 MW comprising of Phase-I having a Unit of 600 MW and Phase-II having a Unit of 660 MW and a Memorandum of Understanding was entered into with the Government of Madhya Pradesh to such effect. The share of State Government is about 35% of the capacity from this Project. This was in line with the then prevailing demand supply scenario in the State of Madhya Pradesh, in 2011.*
- (xi) *However, Phase-II is still awaiting fuel linkage and no financial closure could be achieved towards the same. Additionally, in view of the slackness in the conventional power sector scenario and the overall macro-economic outlook of the country, the decision to move ahead with implementation of Phase-II could not be proceeded with, by the Petitioner. As such, the Phase-II is currently in the conceptual stages only.*
- (xii) *The Petitioner submits that it has not been conferred mega power status as only Phase-I comprising of 1 Unit of 600 MW is being developed and financial closure of Phase-II could not be achieved.*
- (xiii) *The Petitioner respectfully submits that as per the PPAs signed with the Respondents herein and subsequent approval from the Respondent No. 1, the*

Scheduled COD of Unit-1 of the Petitioner's Project was 31st March 2015 ("SCOD"). The approval of SCOD of 31st March 2015 was granted by the Respondent No. 1 vide its letter no. 05-01/1484 dated 10th November, 2014. A copy of the letter dated 10th November, 2014 granting the approval of SCOD to be 31st March 2015 is annexed hereto and marked as **Annexure-20**.

(xiv) *The Project implementation was hampered owing to the delay in availability of start-up power, raw water intake system and other uncontrollable reasons and delays in obtaining clearances. The Petitioner respectfully submits here under the circumstances leading to postponement of the commissioning of the generating station:*

(a) *It has constructed the 400KV D/C dedicated transmission line to Jabalpur new pooling station which is being used for drawing start-up power as well. The approval under Section 68 of the Electricity Act, 2003 for construction of transmission line was granted to the Petitioner on 7th May 2012 by the Govt. of India, based on an application by the Petitioner dated 25th January 2012. With a view to expedite the construction of the transmission line, the Petitioner, in anticipation of Section 68 approval, awarded the contract for construction of the transmission line to M/s L&T on 10th April 2012 with a completion period of nine months. The readiness of the line was therefore planned latest by January 2013. After sorting out route alignment and forest related issues, the application for Section-164 notification was submitted on 26th December 2012 and gazette notification for Section-164 was published on 31st July 2013 i.e. after 7 months.*

(b) *In the meantime, an unfortunate incident in which one of the labourers of a sub-agency involved in project development was the prime accused, resulted in severe IR problems in and around village Ghansore. This led to large scale demobilisation of site labourers as well as labourers involved in the construction of the transmission line. Though the agencies were constantly persuaded to remobilise again, the labourers were reluctant to return back to site on personal security grounds. There was approximately a loss of six effective months of site and transmission line progress on account of this.*

- (c) *Subsequent to the approval under Section 164, the negotiations for acquisition of land for Right Of Way (ROW) was started from August 2013. In spite of Gazette notification for Section-164 and press notification in local newspapers, severe ROW issues were encountered during the construction of the transmission lines. Additionally, there were delays on account of Public Interest Litigations which affected the construction of the transmission line. The same have been elaborated upon hereinafter:*
- (i) *There was a stay order dated 22nd July 2014 from the Hon'ble High Court, Jabalpur, which was vacated on 22nd September 2014, resulting in complete stoppage of work for two months. Skilled labourers and technicians deployed at site by the contractor left and full-fledged remobilisation delayed the progress by more than four months.*
 - (ii) *There was another stay order dated 9th March 2015 from the Hon'ble High Court, Jabalpur, which was vacated on 30th March 2015, resulting in complete stoppage of work for about three weeks. The construction was nearing completion and the Petitioner was targeting to complete the transmission line by 31st March 2015. This stay order resulted in further delay and we were able to complete the lines by 24th April 2015.*
- (d) *Further, in respect of the raw water intake system, the Petitioner respectfully submits that during the construction of the raw water pipeline, the Project witnessed constant disturbances / unrest on account of the protest carried out by residents / villagers over compensation for ROW provided by the Petitioner at the instance of external and unscrupulous elements and as such, could not carry out uninterrupted construction activities. There was strong unrest and opposition toward laying of pipeline under the farm land of locals which was supplemented by the local political forces and motivated elements. Due to this, the Petitioner was compelled to involve locals by giving them temporary job along with good ROW premiums toward the land for laying of pipeline.*

Notwithstanding the above, the Petitioner had considered aggressive timelines for achievement of milestones by planning the unit commissioning by 30th September 2015 (in about five months of receiving start-up power) on the basis of the fact that it had successfully achieved steam blowing by June 2015 by adopting various alternate arrangements in view of the delay in start-up power.

The Petitioner respectfully submits that the Project could not be commissioned on 30th September 2015 as planned due to some unforeseeable circumstances beyond the control of the Petitioner. The Petitioner, through its diligent pursuit has since resolved the problems and finally achieved commissioning (achieving full load) on 22nd March 2016 and thereafter completed 72 hour trial run operations and declared COD w.e.f. 3rd May 2016.

- (xv) For development of the Project (Phase-I), the petitioner has awarded various contracts including BTG, BOP, Civil works, other associated works, transmission lines for evacuation of power etc. The order for main plant equipment (BTG) has been placed on M/s BHEL, a public sector undertaking, being a leading BTG package manufacturer and supplier in India. The contracts for balance of plant and civil works have been awarded through competitive bidding process to various reputed suppliers based on their past performances. The details of various contracts, placed by the petitioner, towards development of the Project have been provided in Form TPS-5C.
- (xvi) It is further submitted that a Common Rupee Loan Facility Agreement dated 30th December 2009 was executed between the petitioner as the “Borrower” and the Banks and Financial Institutions as “Lenders” under the lead of Axis Bank. The Axis Bank was appointed as “Facility Agent” and “Security Trustee”. Breakup of loan amount sanctioned by each Bank is given in following table:

Table 1: Banks and Financial Institutions wise loan amount

| Financing Institute | Loan Amt (₹ Lakhs) |
|----------------------------|-------------------------------|
| Tranche I | |
| Axis Bank | 20000 |

| | |
|----------------------------------|---------------|
| Bank of India | 20000 |
| Corporation Bank | 17500 |
| LIC of India | 18000 |
| Oriental Bank of Commerce | 7000 |
| Punjab national bank | 17500 |
| State Bank of Bikaner and Jaipur | 7000 |
| State Bank of Hyderabad | 7000 |
| State Bank of India | 7000 |
| State Bank of Mysore | 7000 |
| State Bank of Patiala | 14000 |
| State Bank of Travancore | 7000 |
| UCO bank | 21500 |
| Union Bank of India | 30000 |
| United Bank of India | 17500 |
| Tranche II | |
| Axis Bank Ltd. | 5000 |
| REC | 24600 |
| PFC | 25000 |
| Tranche III | |
| Axis Bank Ltd. | 7500 |
| REC | 7900 |
| PFC | 7500 |
| Union Bank of India | 4200 |
| Bank of India | 2100 |
| Total | 301800 |

(xvii) The current weighted average rate of interest on long term loans is 14.41%. The excel workable model towards calculation of the weighted average rate of interest is enclosed as Tariff Forms. The certificates towards the interest charged by each lender are enclosed herewith and marked as **Annexure-21**.

(xviii) **Primary Fuel (Coal):**

The Petitioner has been awarded Coal linkage for its Phase-I, 1x600 MW Unit, for total annual quantity of 24.50 Lakh MT from the Coal Companies of CIL viz. South Eastern Coal Ltd ('SECL') and Mahanadi Coal Ltd. ('MCL') in the ratio of 76.4 : 23.6. As per the signed FSAs with the Coal Companies (MCL/SECL), the take/supply or pay commitments is pegged at 80% of Annual Contracted Quantity, thereby, even if CIL supplied entire take or pay quantity, there will be shortfall in required coal to meet Normative Availability obligation under PPAs. Further, in case of failure to meet supply commitment, no penalty is payable by

CIL for initial three (3) contract years; and thereafter a meager penalty of 0.01% is applicable. Further, it may be clarified that the actual annual coal consumption of the Phase-I, 1x600 MW Unit would be around 28.03 Lakh MT, calculated, based on various norms prescribed by the Hon'ble Commission; whereas FSAs cover only about 24.50 Lakh MT. Balance coal shall be arranged by the Petitioner outside FSA through E-auction. The computation of the annual coal requirement has been provided as an Additional Form to the Tariff Forms being filed by the Petitioner.

(xix) **Coal Transportation arrangement from Mine to Power Station:-**

- (a) JPL would be fed coal, comprising majorly the linkage coal from SECL and MCL for which FSAs have already been executed. The railway line envisaged to feed this coal to JPL is currently a narrow gauge line from Jabalpur up till Binaiki station and distance is 66 Km (Binaiki is an intermediate station between Jabalpur – Nainpur section), which is being converted to Broad gauge by Indian Railways (SECR).
- (b) South East Central Railway (SECR) has got clearance from Forest department for Jabalpur – Nainpur section. L-Section and alignment plan has already been frozen for this section. SECR had planned to block this section in December 2011 for initiating the broad gauge conversion work; however it could not happen due to insufficient funds with Railways. In concurrence to the same, JPL has applied for the in-principle approval on 28th July 2010 and received the respective approval on 10th August 2010. Subsequently, DPR was submitted on 8th July 2011 and approved on 16th August 2012 as Railways got comfort on the execution of Jabalpur – Gondia Main line gauge conversion. Later, ESP was applied on 12th October 2012, and approved on 4th March 2015, translating the net delay to 3 years just for clearances from the government.
- (c) SECR has indicated a budgeted requirement of approximately ₹ 265 crore for completion of balance work of Broad Gauge conversion between Jabalpur to Nainpur section, out of which ₹ 100 crore is sanctioned by the Central Govt. for the FY 14-15 and ₹ 165 crore for FY

15-16. It is to be noted that there was no budget allocation in the last 3 financial years before FY 14-15 by Railways which has led to major execution delays in this project. Railways has now confirmed that gauge conversion work on the entire section is in advanced stage of completion.

(d) As per the latest progress, about 90% of work has been completed between Jabalpur to Binaiki. 95% of bridges work has been completed. Railways is targeting to complete the entire work till Binaiki by December 2016.

(e) **JPL's Railway Line:**

- A dedicated railway line has been planned from Binaiki, which is the nearest take off point from the existing main railway line, to JPL. The total length of the line is 2.9 km including the inside plant coverage.
- Total Land Envisaged for the stretch between Binaiki to plant site is 23.39 acres, out of which 10.18 acres of private land is in possession. Sec-4 has been published for 9.31 acres of tribal land Lease deed has been signed for 3.9 acres of Government land. This effectively translates to complete front availability for work.
- ESP has been approved on 4th March 2015 and subsequently detailed engineering drawings have been stamped / acknowledged by GoMP and process for obtaining approval of IR is underway.
- The award of contracts has been completed recently. Completion of Bridge Construction and Earthwork filling is planned by October 2016, leading to track linking by December 2016. Signaling and Commissioning are planned to be completed by January 2017.
- Considering the progress from railways and our preparedness, the line is expected to be completed by January 2017 and thereafter, coal transportation through rail up to plant site would be started.

(xx) Power evacuation & Start up Power Arrangement:

- a. *The original cost of transmission line for evacuation of power was estimated at ₹ 36.00 crore against which in the actual scenario, the cost incurred by the Petitioner has been to the tune of ₹ 155.12 crore. The original cost of ₹ 36.00 crore was estimated based on the original plan for termination of 400 kV transmission line at Seoni Pooling Sub-station of PGCIL, which would have a more convenient approach because of absence of inhabitation and forest areas en-route.*
 - b. *In due course it was intimated by PGCIL, that Seoni Pooling Sub-station was already loaded to its designed capacity & thus JPL power evacuation plan was not approved. Jabalpur Pooling Sub-station was the only feasible alternative available to JPL but it was more challenging in terms of difficult route & dense forestation, highways, Railway lines and PGCIL's own transmission lines, etc.*
 - c. *Power generated from JPL's 1x600 MW coal based Power Project was thus, decided to be transmitted up to the en-marked regional grid on 400 KV carrier. As per the Connectivity Intimation Letter from Power Grid Corporation of India Limited, JPL was responsible for the construction, operation & maintenance of 400kV double circuit dedicated transmission line up to New Pooling Station at Jabalpur, Madhya Pradesh. A copy of the 'Prior Approval of the Government of India under Section 68 of the Electricity Act, 2003' is enclosed herewith and marked as '**Annexure-14(i)**'. The copy of the 'Connectivity Intimation Letter' from Power Grid Corporation of India Limited is enclosed herewith and marked as **Annexure-14(ii)**.*
- (xxi) *All statutory clearances required for construction of D/C Dedicated Transmission Line have already been acquired from various Government agencies. Tower erection of all the 207 locations and stringing for total 65.2 Kms have been completed.*
- (xxii) *The construction of 2 nos of bays at PGCIL's New Pooling Station Jabalpur for connectivity of the D/c dedicated Transmission Line from Jhabua Power Limited (to be done by JPL) has been completed. This New Pooling Station at Jabalpur has been charged from the existing Jabalpur Pooling Station.*

(xxiii) The station Switchyard has been charged through the 400KV Double Circuit Lines, thus completing the connection between the power plant and Jabalpur New Pooling Station. The Petitioner submits that the transmission system for evacuation of contracted capacity has been commissioned and is ready for evacuation of contracted power from the Project.

9. The details of Annual Capacity (fixed) Charges and Energy Charges for Phase-I, 600 MW Unit claimed by the petitioner are as given below:

| Sl. No. | Particulars | Unit | FY 2016-17 | FY 2017-18 | FY 2018-19 |
|---------|--|-------------------|----------------|----------------|----------------|
| 1 | Return on Equity | Rs. Cr | 338.58 | 348.29 | 353.54 |
| 2 | Interest charges on loan | Rs. Cr | 462.81 | 440.98 | 412.27 |
| 3 | Depreciation | Rs. Cr | 243.17 | 250.97 | 250.97 |
| 4 | O&M expenses | Rs. Cr | 97.62 | 103.8 | 110.28 |
| 5 | Interest on working capital | Rs. Cr | 72.98 | 75.48 | 77.68 |
| 6 | Annual capacity (fixed) charges claimed | Rs. Cr | 1215.16 | 1219.51 | 1204.74 |
| 7 | Energy(Variable) Charge claimed | Paisa/Unit | 241.57 | 253.65 | 266.33 |

10. The petitioner has submitted the following documents to the Commission in its original and amended petition:
- MPERC Order dated 7th Sept 2012 granting approval of PPA for 30% power to MPPMCL. 'Annexure -3';
 - Certificate of incorporation dated 23rd February 1995 along with copy of Memorandum and Articles of Association of the Company 'Annexure - 4';
 - Detailed Project Report (DPR), April 2009–Vol. I & II 'Annexure - 5';
 - MOU with the Govt. of Madhya Pradesh dated 17th Jan. 2007 and subsequent amendments thereof 'Annexure - 6';
 - Implementation agreement with the Govt. of Madhya Pradesh dated 14th Jan. 2008 along with amendments thereof 'Annexure - 7';
 - Airports Authority of India NOC dated 23rd Sept. 2010 'Annexure - 8(i)';

- (g) Ministry of Environment and Forest, GoI NOC dated 17th February 2010 and amendment dated 25th January 2012 'Annexure - 8(ii)';
- (h) Water Resources Deptt., GoMP letter dated 27th July 2009 for allocation of water, consequent Agreement dated 10th December 2009 'Annexure- 8(iii)';
- (i) Ministry of Defense, Govt. of India Clearance vide letter dated 22nd February 2010 'Annexure - 8(iv)';
- (j) Copy of "Consent to Establish" Vide letter No. 11425/TS/MPPCB/2010 dated 15th December 2010 from MP Pollution Control Board 'Annexure -8(v)';
- (k) Copy of "Consent to Operate" Vide letter No. 2316/TS/MPPCB/2015 dated 13th April 2015 from MP Pollution Control Board 'Annexure -8(vi)';
- (l) Copy of "License to Work A Factory" dated 28th February 2015 from Government of MP 'Annexure -8(vii)';
- (m) Common Rupee Loan Facility Agreement with the lenders dated 30th Dec. 2009 'Annexure-9';
- (n) Audited Financial Statement of the Company for the year ending 31st March 2015 'Annexure -10';
- (o) Letter of assurance for supply of coal by Mahanadi Coal Ltd. dated 11th June 2009 along with Coal Supply Agreement executed on 8th March 2013 'Annexure -11';
- (p) Letter of assurance for supply of coal by South Eastern Coalfields Ltd dated 2nd August 2008 along with Coal Supply Agreement executed on 23rd August 2013 'Annexure - 12'
- (q) Copy of Letter dated 30th March 2016 issued by the Central Electricity Authority ("CEA") confirming the commissioning (achieving full load) of the instant power plant as Annexure-30.
- (r) Copies of the Final Test Certificate dated 3rd May 2016 issued by the Independent Engineer, Lahmeyer International (India) Pvt. Ltd., and acceptance of the Performance Test and date of COD by the Respondent No. 1 vide letter dated 5th May 2016 as Annexure-31.

- (s) Western Regional Power Committee ("WRPC") has confirmed the COD of the instant power plant w.e.f. 00:00 hrs of 3rd May 2016. Copy of the Communication dated 5th May 2016 of WRPC as Annexure-32.

11. The petitioner has made the following prayer in the amended petition:

- (i) *Determine the Generation Tariff (Fixed and Energy Charges) of Phase-I, 1x600 MW Unit of the Petitioner which has achieved COD on 3rd May 2016, as required under the PPA dated 5th January 2011 to be paid by the Respondents for 30% of the installed capacity;*
- (ii) *Determine the Energy (Variable) charges to be paid by the Respondent No.1 for and on behalf of Government of Madhya Pradesh for the energy supplied under the PPA dated 27th June 2011 equivalent to 5% of net (ex-bus) energy generated;*
- (iii) *Determine the Provisional Tariff of the Petitioner's Phase-I, 1x600 MW Unit, if determination of final tariff is not feasible;*
- (iv) *Allow to recover E.D. and Cess on auxiliary power consumption and other taxes, if any, levied by the Statutory Authorities from the beneficiaries on pro-rata basis.*
- (v) *Allow recovery of the filing fees as and when paid to the Commission and also the expenses on publication of public notice from the beneficiaries;*
- (vi) *The petitioner humbly requests to adjust the processing fees of ₹ 18,00,000/- which has already been deposited by the petitioner earlier;*
- (vii) *The petitioner respectfully seeks an opportunity to present their case prior to the finalization of the tariff order. The petitioner believes that such an approach would provide a fair treatment to all the stakeholders and may eliminate the need of a review or clarification;*

- (viii) *Condone any inadvertent omissions / errors / rounding off difference / shortcomings and permit the Petitioner to add / alter this filing and make further submissions as may be required by the Commission; and*
- (ix) *Pass such further and other Order, as the Commission may deem fit and proper, keeping in view the facts and circumstances of the case.*
12. In view of the above, the petition was admitted and the petitioner was directed to serve copies of the petition and its additional submissions on all Respondents in the matter. The respondents were also directed to file their reply to the petition and the additional submission filed by the petitioner by 15th June' 2016.
13. On preliminary scrutiny of the amended petition filed by the petitioner, the observations of the Commission were communicated to the petitioner vide Commission's letter No. 969 dated 09.06.2016 and petitioner was asked to file its reply on the same by 20th June' 2016. The petitioner filed the additional information by affidavit dated 16th June' 2016. On further scrutiny of the aforesaid additional submission filed by the petitioner, the observations of the Commission were communicated to the petitioner vide Commission's letter No. 1203 dated 20th July' 2016 seeking its reply by 30th July' 2016. By affidavit dated 3rd August'2016, the petitioner filed its reply to the aforesaid observations/ queries of the Commission. Issue-wise response filed by the petitioner are mentioned in **Annexure 1** of this order.

Comments/objections filed by Respondents

Respondent No.1 (MPPMCL) filed its comments/objections to the petition and also on the rejoinders filed by the petitioner. The comments offered by the Respondent No.1 (MPPMCL) and the response of the petitioner on the same are mentioned in **Annexure 2** of this order. The Commission has examined the comments offered by the Respondent No. 1 and also the reply filed by the petitioner on the same while processing the subject petition.

Capital cost

Petitioner's submission

14. The petitioner has submitted that the investment approval of Phase I, 1x600 MW of the project was initially accorded in its Board's meeting on 2nd July' 2008 at the project cost of ₹ 2800 Crs. by including certain additional items such as margin money, contingency etc. The Board of Directors had take on record the aforesaid estimated project expenditure of ₹ 2910 Crores in the subsequent investment approval. The project cost of Phase I was further updated and enhanced to ₹ 3777 Crores on 28th October' 2013 as approved by the Board of Directors. Further the project cost of Phase I 1x600 MW has been further increased to ₹ 4698.66 Crores as on CoD. Subsequently, on 10th March 2016, the Board of Directors of the petitioner's company has accorded investment approval for total estimated cost of ₹ 4950 Crores as on 31st March 2016. The petitioner has filed a broad break-up of the project cost for Phase I, 1x600 MW unit as given below:

Table 2: Break-up of Capital Cost filed

| Sl. No. | Particulars | Project Cost including un-disch. liabilities (₹ in Crores) | Cash as certified by CA Expenditure (₹ In Crores) |
|---|---|--|---|
| 1. | Land and Site Development | 63.59 | 63.32 |
| 2. | Boiler, Turbine, Generator (including spares) | 1818.54 | 1672.70 |
| 3. | BOP Mechanical | 532.58 | 459.59 |
| 4. | BOP Electrical | 280.64 | 263.82 |
| 5. | Civil Works | 192.55 | 173.66 |
| 6. | Construction and Pre-Commissioning Expenses | 98.24 | 97.35 |
| 7. | Overheads | 277.76 | 267.02 |
| 8. | Interest during construction period | 1434.76 | 1332.63 |
| Phase-I, 1x600 MW - Project Cost (as on CoD) | | 4698.66 | 4330.08 |

15. The break-up of funding of above capital cost as on CoD is filed as under:

Table 3: Funding pattern filed

| Sl. No. | Particulars | Project Cost including un-discharged liabilities (₹in Crores) | Cash Expenditure (₹In Crores) |
|---------|---|---|-------------------------------|
| 1 | Gross Fixed Assets | 4698.66 | 4330.08 |
| 2 | Loan from Bank & Financial Institutions | 3018.00 | 3018.00 |
| 3 | Equity | 1680.66 | 1312.08 |
| 4 | Debt : Equity Ratio | 64.23 : 35.77 | 69.70 : 30.30 |

16. It is submitted in the petition that ₹0.50 Crores has a difference between the project funding of ₹4330.58 Crores and the cash expenditure of ₹4330.08 Crores and this difference is lying as bank and cash balance. The petitioner has filed the certificate from its Chartered Accountant certifying the actual cash expenditure of ₹4330.08 (Net of current liability amounting to ₹368.58 Crores) for Phase I (1x600 MW) of its thermal power plant as on 2nd May' 2016. It is mentioned in the CA certificate that the aforesaid expenses have been made through term loans of ₹3018 Crores and Promoters Contribution of ₹1312.58 Crores. The balance is closing cash and bank balance. In its foot note, the Chartered Accountant has mentioned that the Promoters Contribution includes equity and quasi equity.

Provision under Regulations:

17. With regard to capital cost, Regulation 15.1 and 15.2 of MPERC (Terms and Conditions for determination of Generation tariff) Regulations, 2015 provides as under

The Capital cost as determined by the Commission after prudence check in accordance with this Regulation shall form the basis of determination of tariff for existing and new projects.

The Capital Cost of a new project shall include the following:

- (a) *the expenditure incurred or projected to be incurred up to the date of commercial operation of the project;*
- (b) *Interest during construction and financing charges, on the loans (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;

Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period shall form part of the capital cost.

- (c) Increase in cost in contract packages as approved by the Commission;
- (d) Interest during construction and incidental expenditure during construction as computed in accordance with Regulation 17 of these Regulations;
- (e) capitalised Initial spares subject to the ceiling rates specified in Regulation 19 of these Regulations;
- (f) expenditure on account of additional capitalization and de-capitalisation determined in accordance with Regulation 20 of these Regulations; and
- (g) adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the COD as specified under Regulation 24 of these Regulations;

18. Regulation 15.5 of the aforesaid Regulations further provides that;

The capital cost with respect to thermal generating station, incurred or projected to be incurred on account of the Perform, Achieve and Trade (PAT) scheme of Government of India will be considered by the Commission on case to case basis and shall include:

- a) *cost of plan proposed by developer in conformity with norms of PAT Scheme; and*
- b) *sharing of the benefits accrued on account of PAT Scheme.*

Commission's Analysis:

a. Scheduled CoD:

19. Regulation 4.1(zs) of MPERC (Terms and Conditions for determination of Generation tariff) Regulations, 2015 provides that:

“Scheduled Commercial Operation Date or SCOD’ shall mean the date(s) of commercial operation of a generating station or generating unit or block thereof as indicated in the Investment Approval or as agreed in power purchase agreement, whichever is earlier;”

20. Regarding scheduled CoD of the unit, Clause 4.1.6 of the PPA provides that:

"The Parties may mutually agree to revise the Scheduled CoD for Commissioning of any Unit or the Power Station (hereinafter referred to as Revised Scheduled Commercial Operation Date or Revised Scheduled COD) and such Revised Scheduled COD shall thereafter be the Scheduled COD."

21. Regarding delay in commissioning of the project, the petitioner submitted that the Project implementation was hampered owing to the delay in availability of start-up power, raw water intake system and various other uncontrollable reasons including delays in obtaining clearances. In para 5.3 of the amended petition, the petitioner broadly submitted the various circumstances leading to postponement of the commissioning of the generating unit:

22. Vide Commission’s letter dated 6th June, 2016, the petitioner was asked to submit the detailed reasons and factors attributable for excessive delay in achieving CoD of the project. The petitioner was also asked to file the details of penalty/Liquidated Damages if any, recovered from the vendor/contractor as per the provisions under the contract, if the delay is on account of the vendor/contractor side.

23. By affidavit dated 16th June, 2016, the petitioner reiterated the same reasons of delay as mentioned in the amended petition. Reasons for delay in achieving CoD of the unit has also been mentioned in **para 7** of this order. Regarding penalty/Liquidated Damages, the petitioner mentioned that the liquidated damages (LD) recovered / to be recovered in different packages would be known at the time of contract settlement once the cut-off date is achieved.

24. The Commission observed that the extension of scheduled CoD till March’ 2015 for Phase-I (600 MW) of Jhabua Power was conditionally considered by MPPMCL subject to furnishing of some undertaking by M/s. Jhabua Power Ltd.

25. By affidavit dated 3rd August, 2016, the petitioner submitted the following:

“As per the PPAs signed with the Respondents and subsequent approval from the Respondent No. 1, the Scheduled COD of Phase-I, Unit-1 of the Project was 31st March 2015 (“SCOD”). The approval of SCOD of 31st March 2015 was granted by the Respondent No. 1 vide its letter no. 05-01/1484 dated 10th November, 2014. In view of the above stipulation of the PPA, it is submitted that the SCOD is to be considered as 31st March 2015.”

26. The petitioner further submitted that MPPMCL in its letter dated 10th November 2014 allowing extension of CoD till 31st March 2015 stated that “...your request for extension of scheduled CoD for Jhabua Power Limited – Phase – I (600MW) till March 2015 has been considered and accepted subject to furnishing of undertaking by M/s Jhabua Power Limited that transmission charges and / or any other incidental charges, if any, levied by CTU with effect from April 1st, 2014 to the actual CoD, shall be borne by Jhabua Power Limited.” The petitioner further submitted that the aforementioned condition has already been stipulated in the PPA with the respondents and hence there was no occasion on the petitioner's part to submit any new undertaking in this regard.

27. Vide its letter dated 24th March, 2015, the petitioner further requested MPPMCL for extension of revised scheduled CoD of 600 MW unit of phase-I to **September, 2015**. In response to the aforesaid request of M/s. Jhabua Power, MPPMCL vide its letter No. 05-01/1670 dated 16th September’ 2015 conveyed the following to the petitioner:

“Here it would be pertinent to mention that as per Clause 4.1.5 of PPA, Jhabua Power Limited (JPL) was to achieve COD for the 1st Unit by 31.03.2013. At the request of JPL, the COD was extended by one year up to 31.3.2014. M/s. JPL again requested for extension of revised COD by one year upto 31.3.2015 and the same was considered by Board of Directors and COD was subsequently revised to 31.03.2015.

The request made vide above mentioned letter dated 24.03.2015 to extend the COD upto September, 2015 was put up before the Board of Directors of MPPMCL. The request was considered and it was decided that the reason for

delay in completion of transmission line for start-up power is not attributable to MPPMCL and the explanation does not appear plausible. Therefore, the Board declined the request for extension of COD to September, 2015.”

28. On detailed scrutiny of the details and documents regarding delay in CoD, the Commission has observed the following:
- i. As per clause 4.1.5 of PPA, M/s Jhabua Power Ltd. was to achieve CoD of Unit No. 1 by 31st March, 2013.
 - ii. At the request of the M/s Jhabua Power Ltd., the scheduled CoD was extended by MPPMCL by one year up to 31st March, 2014.
 - iii. M/s Jhabua Power Ltd., again requested to MPPMCL for extension of revised CoD by one year up to 31st March, 2015 and same was considered by MPPMCL.
 - iv. Vide letter dated 24th March, 2015, the petitioner further requested for extension of scheduled CoD till September, 2015.
 - v. Vide letter dated 16th September, 2015, declined the request of the petitioner for extension of COD from 31st March' 2015 to September, 2015.
29. In view of the above, the Commission has provisionally considered Scheduled CoD as 31st March, 2015 in this order. As submitted by the petitioner, the liquidated damages (LD) are yet to be finalized and shall be finalized after cut-off date of the project.
30. The petitioner is directed to submit the complete details regarding 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.

b. Interest during Construction (IDC):

31. Regarding Interest during Construction Regulation 17 (A) of MPERC (Terms and Conditions for determination of Generation tariff) Regulations, 2015 provides as under

“Interest during construction shall be computed corresponding to the loan from the date of infusion of debt fund, and after taking into account the prudent phasing of funds upto SCOD.

In case of additional costs on account of IDC due to delay in achieving the SCOD, the generating company shall be required to furnish detailed justifications with supporting documents for such delay including prudent phasing of funds:

Provided that if the delay is not attributable to the generating company and is due to uncontrollable factors as specified in Regulation 18 of these Regulations, IDC may be allowed after due prudence check:

Provided further that only IDC on actual loan may be allowed beyond the SCOD to the extent, the delay is found beyond the control of generating company after due prudence and taking into account prudent phasing of funds.”

32. On scrutiny of the details regarding Interest during Construction (IDC) filed by the petitioner the Commission observed that the IDC initially estimated was ₹ 388.37 Crores whereas, as per CA certificate the actual IDC as on CoD is ₹ 1332.63 Crores. The same has increased by approximately 3.5 times of the initial estimated IDC and contributing 31% of the actual capital expenditure as on CoD. Vide Commission’s letter dated 9th June, 2016, the petitioner was asked to inform/submit the following:
- i. Reasons for abnormal increased in IDC of the project with supporting documents.
 - ii. Amount of IDC increased due to delay in CoD of the project.
 - iii. The detailed break-up of IDC as on scheduled CoD and also as on actual CoD of the project.
33. By affidavit dated 16th June, 2016, the petitioner submitted the following:
- “The IDC of ₹ 388.37 crore was initially appraised based on initial estimates based on a hard cost of ₹ 2507.35 crore. However, subsequently detailed engineering was undertaken and the actual hard cost has been to the tune of ₹ 3263.90 crore. Thus, the originally estimated IDC of ₹ 388.37 was only a broad number. It is also respectfully submitted that the initial estimated IDC of ₹ 388.37 crore was computed envisaging a weighted average rate of interest of 12.50% as against the actual scenario in which the weighted average rate of interest has been to the tune of 14.41%. The actual hard cost and the actual weighted average rate of interest was beyond the reasonable control of the*

Petitioner. The Petitioner humbly submits that the IDC incurred on the Project ought to be allowed to the Petitioner as the delay was caused owing to factors beyond the reasonable control of the Petitioner.

The comparison of IDC as on Scheduled CoD vis-à-vis the Actual CoD is as follows:

Table 4: Interest During Construction

| | |
|---|---|
| <i>Approved Capital Cost as on 31st March 2015</i> | <i>IDC as on 31st March 2015</i> |
| Rs 4194 Crores | Rs 999.33 Crores |
| <i>Actual Capital Cost as on 2nd May 2016</i> | <i>IDC as on 2nd May 2016</i> |
| Rs 4698.66 Crores | Rs 1434.76 Crores |

The increase in IDC cost during the subsequent period from scheduled COD of Mar'15 till actual COD of May'16 has largely been on account of time factor. (delay of 13 months and corresponding interest cost on a high base)

34. The petitioner was asked to provide the details of IDC and financing charges till scheduled CoD. The petitioner provided such details till 31st March, 2015, which is the revised CoD as agreed to, by the procurer. Vide letter dated 20th July, 2016, the petitioner was asked to inform the IDC and financing charges till 31st March, 2013.

1) By affidavit dated 3rd August, 2016, the petitioner submitted the following:

“It is respectfully submitted that as per the PPAs signed with the Respondents herein and subsequent approval from the Respondent No. 1, the Scheduled COD of Phase-I, Unit-1 of the Petitioner’s Project was 31st March 2015 (“SCOD”). The approval of SCOD of 31st March 2015 was granted by the Respondent No. 1 vide its letter no. 05-01/1484 dated 10th November, 2014. The copy of such approval has already been furnished to the Hon'ble Commission. In view of the above stipulation of the PPA, it is humbly submitted that the SCOD is to be considered as 31st March 2015 and hence the Petitioner has provided the details of the IDC as on 31st March 2015 and as on actual COD.”

35. On scrutiny of the reasons filed by the petitioner, it was observed that the increase in IDC & FC amount from the estimated amount to the actual figure of ₹ 1332.63 Crores (as on COD) was mainly on account of delay in achieving the COD of the generating unit. The petitioner filed the detailed computation of IDC as on revised scheduled COD and as on actual COD of the unit. After considering the aforesaid response/submissions made by the petitioner, the Commission has noted that most of the aforesaid reasons for delay in CoD of generating units were mainly on account of the controllable factors covered under Regulation 18.1 of the MPERC Tariff Regulations' 2015.
36. Despite several queries and follow-up by the Commission while processing the subject petition, the petitioner has not been able to inform the position in respect of LD amount deducted from the contractor's bill. However, the petitioner is still at liberty to approach the Commission with the actual amount of LD if any, deducted from its Contractor(s)/ Vendor(s) along with all relevant supporting documents in final tariff petition.
37. In view of the aforesaid observations, the Commission has provisionally allowed IDC and financial charges only upto scheduled CoD of the unit (31st March, 2015) as agreed to by MPPMCL. The IDC and financial charges from revised SCOD to actual CoD is not considered at this stage on account of delay in commissioning of the Project.
38. Further, the Commission observed that while filling the petition No. 53 of 2015, the petitioner provided the apportionment of IDC and financing charges between units of phase-I&II of the project. It was found that 95.88% of the total IDC and financing charges filed by the petitioner allocated to phase-I and balance 4.12% allocated to phase-II of the project.
39. Considering the same allocation as filed in petition No. 53/2015, the Commission has worked out the IDC and financing charges and considered in this order as given below:

Table 5: Interest During Construction: ₹ Crores

| Sr. No. | Particular | Total Amount | Ph-I | Ph-II |
|---------|------------|--------------|------|-------|
|---------|------------|--------------|------|-------|

| | | | | |
|---|---|---------------|---------------|-------|
| 1 | IDC and financing charges as per CA certificate as on CoD | 1332.63 | 1277.78 | 54.85 |
| 2 | IDC and financing charges as on 31.03.2015 (Revised SCOD) | 999.33 | 958.20 | 41.13 |
| 3 | Increase in IDC & FC from revised SCOD to Actual CoD | 333.30 | 319.58 | 13.72 |
| 4 | Excess IDC & FC from revised SCOD to Actual CoD | 333.30 | 319.58 | 13.72 |
| 5 | Net IDC & FC considered | 999.33 | 958.20 | 41.13 |

c. Incidental expenses during Construction:

40. Regarding Incidental Expenditure during Construction Regulation 17 (B) of MPERC (Terms and Conditions for determination of Generation tariff) Regulations, 2015 provides as under:

“Incidental expenditure during construction shall be computed from the zero date and after taking into account pre-operative expenses upto SCOD:

Provided that any revenue earned during construction period up to SCOD on account of interest on deposits or advances, or any other receipts may be taken into account for reduction in incidental expenditure during construction.

In case of additional costs on account of IEDC due to delay in achieving the SCOD, the generating company shall be required to furnish detailed justification with supporting documents for such delay including the details of incidental expenditure during the period of delay and liquidated damages recovered or recoverable corresponding to the delay:

Provided that if the delay is not attributable to the generating company and is due to uncontrollable factors as specified in Regulation 18, IEDC may be allowed after due prudence check:

Provided further that where the delay is attributable to an agency or

contractor or supplier engaged by the generating company, the liquidated damages recovered from such agency or contractor or supplier shall be taken into account for computation of capital cost.

In case the time over-run beyond SCOD is not admissible after due prudence, the increase of capital cost on account of cost variation corresponding to the period of time over run may be excluded from capitalization irrespective of price variation provisions in the contracts with supplier or contractor of the generating company.”

41. In TPS 5B of the petition, the petitioner filed a detailed break-up of overhead expenses of ₹ 277.76 Crores based on the actual expenditure as on CoD of the unit. The petitioner filed CA certificate dated 21st May, 2016, certifying the actual expenditure (on cash basis) indicating total pre-operative and pre-commissioning expenses including overhead of ₹ 271.31 Crores
42. On scrutiny of the TPS forms filed with the petition, it is observed that the IEDC filed in form TPS-13D indicated employee benefit expenses of ₹ 134.64 Crores. Vide letter dated 20th July, 2016, the petitioner was asked to provide the details of these expenses with supporting documents.
43. By affidavit dated 3rd August, 2016, the petitioner filed the break-up of employee benefit expenses as given below:

Table 6: Break-up of employee benefit expenses filed

| Particulars | As on scheduled COD i.e. 31.3.2015 (₹ Crores) | As on actual COD i.e. 2.5.2016 (₹ Crores) |
|---|--|--|
| Payroll (Employees, Consultant & Contractual staff) | 96.37 | 127.64 |
| Employee training & recruitment | 4.30 | 4.37 |
| Staff Welfare | 2.43 | 2.64 |
| Total Employee Benefit Expenses | 103.10 | 134.65 |

44. It was observed that the details regarding Incidental expenses during Construction filed by the petitioner still need more clarity. Accordingly, vide letter dated 20th July, 2016, the petitioner was asked to submit the following details:

- (a) Detailed break-up of establishment expenses with all cost components.
- (b) Overhead & establishment expenses approved under initial investment approval vis-à-vis all revisions of the capital cost.
- (c) The detailed reasons for increase (if any) in Overhead & establishment expenses from initial investment approval to actual expenses as on CoD of the unit.
- (d) Details of overhead & establishment expenses as on scheduled CoD and as on actual CoD of the unit separately.
- (e) Detailed reasons for increase (if any) in Overhead & establishment expenses from schedule CoD to actual CoD of the unit.

45. By affidavit dated 3rd August, 2016, the petitioner submitted the detailed break-up of the establishment expenses and overhead expenses with all the cost components as given below:

Table 7: Break-up of establishment expenses and overhead expenses (₹ Crores)

| S No | Particulars | As on scheduled COD i.e. 31.3.2015 | As on actual COD i.e. 2.5.2016 |
|----------|---|--|--------------------------------|
| | Payroll (Employees, consultant & contractual staff) | 96.37 | 127.64 |
| | Employee training & recruitment | 4.30 | 4.37 |
| | Staff Welfare | 2.43 | 2.64 |
| 1 | Total Employee Benefit Expenses | 103.10 | 134.65 |
| 2 | Finance Costs | Included in IDC & FC | Included in IDC & FC |
| 3 | Water Charges | Not Part of Establishment expenses. Included under head "Construction Water" – Pl. refer head 2.3.3 of TPS-5B. | |
| 4 | Communication Expenses | Incl. in admin Expenses. | Incl. in admin Expenses. |
| 5 | Start-up Power Charges | 0.0 | 4.21 |
| | IT | 8.29 | 10.90 |
| | Security & Safety | 9.96 | 14.64 |
| | Environment & Horticulture | 3.23 | 3.47 |

| | | | |
|----------|---|---------------|---------------|
| | Canteen Expenses | 2.57 | 3.49 |
| | Other Assets (IT & Admin related) | 16.94 | 18.18 |
| | Rent | 11.33 | 13.12 |
| | Misc. Travelling expenses | 6.02 | 6.97 |
| | Other Admin. Expenses (Repairs & Maintenance including manpower/communication expenses / hiring equipment / Misc. project related expenses) | 29.90 | 36.57 |
| 6 | Total Other Office and Administrative /IT & Misc. Expenses | 88.23 | 107.34 |
| | | | |
| 7 | Others (Please Specify Details) | | |
| 8 | Other Pre-Operating Expenses | 21.23 | 21.23 |
| 9 | Other Pre-Operating Expenses-Project consultancy | 16.65 | 16.65 |
| | Total Overhead and Establishment Expenses | 229.21 | 284.08 |

46. Regarding other queries raised by the Commission, the petitioner submitted the following:

- “b. The various investment approvals in terms of the capital cost did not specify the break-up of the overhead and establishment expenses. This can be observed from the investment approvals submitted to the Hon'ble Commission along with the Amended Petition.*
- c. The overhead and establishment expenses as per original estimates were to the tune of ₹ 136.80 crore. The Petitioner submits that the overhead and establishment expenses were underestimated at the time of financial closure. It is respectfully submitted that the Petitioner has endeavoured to optimise the project cost by placing contracts for various BOP works on best competitive rates instead of placing an Order for entire BOP on EPC basis. This typically requires a slightly higher Project execution and monitoring team. Further, the estimated employee cost includes the required ramp-up of O&M team to ensure adequate training and readiness for start-up activities, synchronisation and stabilisation prior to COD.*

The overhead associated with establishment expenses include Employee Recruitment and Training expenses, Administrative expenses like building rentals, repair and maintenance expenses, office guest house maintenance and rent, horticulture expenses, vehicle running and maintenance expenses, printing and

stationery expenses, books and periodicals, drinking water facilities and miscellaneous consumables.

- d. *Details of overhead and establishment expenses as on scheduled CoD and as on actual CoD has been furnished in Form TPS 13D filed by the Petitioner along with Amended Petition.*
 - e. *The overhead and establishment expenses at the fag-end of the project have increased as the Petitioner had ramped up its O&M team to ensure adequate training and readiness for start-up activities, synchronisation and stabilisation prior to COD.”*
47. The Commission has observed that the increase in overhead and establishment expenses from the estimated amount to the actual figure (as on COD) was mainly on account of delay in achieving the COD of the generating unit. The petitioner filed the detailed break-up of overhead and establishment expenses as on revised scheduled COD and as on actual COD of the unit. After considering the aforesaid response/submissions made by the petitioner, the Commission has noted that most of the aforesaid reasons for delay in CoD of generating units were mainly on account of controllable factors either by the petitioner or contractor/vendors in terms of Regulation 18.1 of MPERC Tariff Regulations, 2015.
48. Regulation 17 (B) of MPERC (Terms and Conditions for determination of Generation tariff) Regulations, 2015, stipulated that *“Incidental expenditure during construction shall be computed from the zero date and after taking into account pre-operative expenses upto SCOD.”*
49. In view of the aforesaid observations, the Commission has provisionally allowed overhead and establishment expenses only till revised scheduled CoD of the unit (31st March, 2015) as agreed to by MPPMCL. The overhead and establishment expenses from revised SCOD to actual CoD are not considered at this stage on account of delay in commissioning of the Project.
50. Further, the Commission observed that while filling the petition No. 53 of 2015, the petitioner provided the detailed apportionment of overhead and establishment

expenses between units of phase-I & II of the project. It was found that 95.88% of the total overhead and establishment expenses were allocated by the petitioner to phase-I and balance 4.12% allocated to phase-II of the project.

51. Considering the same allocation as filed in petition No. 53/2015, the Commission has considered the overhead and establishment expenses in this order as given below:

Table 8: Overhead and Establishment Expenses considered: ₹ Crores

| Sr. No. | Particular | Total Amount | Ph-I | Ph-II |
|---------|---|---------------|---------------|-------|
| 1 | Overhead and Establishment Expenses as per CA certificate as on CoD | 277.63 | 266.18 | 11.45 |
| 2 | Overhead and Establishment Expenses as on 31.03.2015 (Revised SCOD) | 229.21 | 219.76 | 9.45 |
| 3 | Increase in these expenses from revised SCOD to Actual CoD | 48.42 | 46.42 | 2.00 |
| 4 | Excess IDC & FC | 48.42 | 46.42 | 2.00 |
| 5 | Net Overhead and Establishment Expenses to be considered | 229.21 | 219.76 | 9.45 |

d. Infirm Power:

52. Regarding sale of Infirm power, Regulation 24 of MPERC (Terms and Conditions for determination of Generation tariff) Regulations, 2015 provides as under:

“Supply of Infirm Power shall be accounted as deviation and shall be paid for from the regional /State deviation settlement fund accounts in accordance with the Central Electricity Regulatory Commission (Deviation Settlement Mechanism and Related matters) Regulations, 2014, as amended from time to time or any subsequent re-enactment thereof:

Provided that any revenue earned by the Generating Company from supply of Infirm Power after accounting for the fuel expenses shall be applied in adjusting the capital cost accordingly.”

53. The petitioner filed a statement for infirm power supplied to grid and revenue earned from sale of infirm power indicating that the unit was first time synchronized with the grid on 23rd Feb 2016, and achieved CoD on 3rd May, 2016. The generating unit supplied infirm power during 23rd February, 2016 to 2nd May, 2016. The aforesaid statement has been prepared by the petitioner based on the weekly statements issued by the Western Regional Power Committee (WRPC). The petitioner also filed the revised details of fuel expenses for generation of infirm power duly certified by its Chartered Accountant on 3rd August' 2016. Based on the above, the details of the infirm power filed by the petitioner are as given below:

Table 9: Infirm Power details**₹ Crores**

| S. No. | Particulars | Unit | 1X600 MW Unit of Phase-I |
|---------------|--|-----------------|---------------------------------|
| 1 | Date of synchronization | Date | 23.02.2016 |
| 2 | Date of Commercial Operation | Date | 03.05.2016 |
| 3 | Infirm Energy generated | MU's | 125.87 |
| 4 | Oil Expenses for infirm power | ₹ Crores | 27.62 |
| 5 | Coal Expenses for infirm power | ₹ Crores | 74.54 |
| 6 | Total Fuel Expenditure | ₹ Crores | 102.16 |
| 7 | Less Income from sale of Infirm Power | ₹ Crores | 15..42 |
| 8 | Net Fuel Cost Charged to Project Cost | ₹ Crores | 86.74 |

54. On perusal of the CA certificate regarding fuel expenditure for generation of infirm power till CoD of the unit, the Commission observed that the rate of coal indicated in CA certificate was ₹ 4694.58 /MT whereas, the rate of coal (actual for three preceding months) considered for determination of energy charges was ₹.3607/MT. Similarly, the rate of secondary fuel oil indicated in CA certificate was ₹43989/KL whereas, the rate of oil considered for determination of energy charges was Rs.39339/Kl. Vide 9th June, 2016, the petitioner was asked to file the reasons for considering aforesaid different rates of coal and oil for the same period.
55. By affidavit dated 16th June, 2016, the petitioner submitted that for commissioning activity, it had used market coal. The petitioner further submitted that the permission to bring linkage coal to the plant site by road, was not available from the environmental

- authorities at that point in time. Subsequently, the permission to transport linkage coal by road was approved by the environmental authorities and currently linkage coal is being used for generation of power. This is the reason for the difference in the cost of coal used for generation of infirm power and the cost of coal for preceding three months for determination of energy charges.
56. On perusal of the CA certificate regarding fuel expenditure for generation of infirm vis-à-vis weekly statements issued by WRPC for infirm power, it observed that the revenue from sale of infirm power as per CA certificate is Rs. 9.10 Crores whereas, the revenue earned from sale of infirm power as indicated in statement is ₹ 15.40 Crores. The petitioner was asked to explain the reason for this discrepancy.
57. By affidavit dated 16th June, 2016, the petitioner submitted that the actual revenue from sale of infirm power is ₹ 15.42 crore, out of which ₹ 6.32 crore has been apportioned to the cost of start-up power drawn from CTU for commissioning purposes (Rs 4.21 Cr) and other contingent miscellaneous expenditure during commissioning (Rs 2.01 Cr) and thus, ₹ 9.10 crore has been depicted in the CA certificate. Subsequently, by affidavit dated 3rd August, 2016, the petitioner filed revised CA certificate indicating that the revenue from sale of infirm power is ₹ 15.42 crore and same has been adjusted from fuel expenses to worked out the net fuel expenses for generation of infirm power.
58. With regard to the source of coal used for generation of infirm power, vide Commission's letter dated 9th June, 2016, the petitioner was asked to inform the following:
- i) Whether any coal quantity was allocated to it by the Coal Companies for commissioning activity of the unit.
 - ii) Whether the imported coal has been used for generation of infirm power. The detailed break-up of quantity, rate and cost of coal utilized for generation of infirm power from different sources was also sought.
59. In response to the above, by affidavit dated 16th June, 2016, the petitioner submitted the following:

- i) Market coal was mostly used for commissioning activity and very little quantity of linkage coal could be procured and used for commissioning activity. The linkage coal could not be used for commissioning activity as the requisite clearance for the last mile road transport from environmental authorities for transportation of linkage coal got delayed and could only be obtained on 15th February 2016.
- ii) Imported coal has not been used for generation of infirm power. The detailed break-up of quantity, rate and cost of coal utilised for generation of infirm power from different sources is given in the table below:

Table 10: Coal procurement and consumption details

| | | Procurement | | | Consumption | | | |
|-------------|---------|-------------|--|--------------|-------------|-------|--------------|----------------|
| | | Qty | Rate | Amount | Qty | Rate | Amount | |
| Carpet coal | Market | 7,641 | 2,267 | 1,73,24,822 | 7,641 | 2,267 | 1,73,24,822 | |
| Normal Coal | | 92,764 | 5,051 | 46,85,26,981 | 52,067 | 5,051 | 26,29,76,526 | |
| | Market | 91,679 | 5,070 | 46,48,52,860 | | | | |
| | Linkage | 1,085 | 3,388 | 36,74,120 | | | | |
| | | 1,93,168 | | 95,43,78,783 | 59,707 | | 28,03,01,348 | |
| | | | Average Cost of Coal Consumed (Rs/MT) | | | | | 4694.59 |

60. On perusal of the above mentioned details filed by the petitioner, the Commission observed the following:
- The rate of secondary fuel oil (LDO) used for generation of infirm power was ₹ 43989/KL and ₹ 43934 /KL for FY 2015-16 and FY 2016-17 respectively whereas, the wt. average rate of secondary fuel oil (LDO) for preceding three months used for claiming Energy Charges was ₹ 39339/KL. The petitioner had also filed a gist of invoices/bills of oil purchase during 23.02.2016 to 04.04.2016 indicating the weighted average rate of oil as ₹ 39339/KL.
 - Similarly, the rate of Coal used for generation of infirm power was ₹ 4694.58/MT and ₹4280.82 /MT for FY 2015-16 and FY 2016-17 respectively whereas, the wt.

- average rate of Coal for preceding three months used for claiming Energy Charges was ₹3607/MT.
- iii. On perusal of the details of coal used for generation of infirm power, it was observed that carpet coal of 7641 MT is considered for determining the weighted average rate of coal.
 - iv. The petitioner had confirmed that the imported coal has been not used for generation of infirm power. The rate of linkage coal used for generation of infirm power during FY 2015-16 was indicated as ₹ 3388/MT. Moreover, the petitioner had provided the details of coal used for generation of infirm power during FY 2015-16 however such details for FY 2016-17 were not provided.
61. In view of the above observation, vide Commission's letter dated 20th September, 2016, the petitioner was asked to explain/ submit the following:
- a. To explain with supporting documents the reasons for mentioning different rates of oil & coal for the same period.
 - b. To explain the reasons for high rate of oil & coal considered for generation of infirm power.
 - c. To justify the reasons for consideration of carpet coal in this regard.
 - d. Supporting documents regarding rate of linkage coal used for generation of infirm power during FY 2015-16.
 - e. To provide the detailed calculation to work out the wt. average rate of coal used during FY 2016-17 for generation of infirm power.
 - f. To clarify whether any coal quantity was allocated to the petitioner by the coal companies for commissioning activity of the unit.
62. By affidavit dated 3rd August, 2016, the petitioner filed its response on the aforesaid queries raised by the Commission. The response filed by the petitioner is summarized as given below:
- i) The unit was synchronised on 23rd Feb 2016, achieved full Load on 21st March 2016 and was declared under commercial operation on 3rd May 2016. Consumption of LDO towards generation of infirm power can therefore be accounted for the period subsequent to the date of first synchronisation i.e. 23rd February 2016. The petitioner summarized the procurement and consumption of LDO prior to first synchronization till CoD of the Unit. The average rate of LDO

for FY 2015-16 and FY 2016-17 is worked out by the petitioner was ₹ 43,989 /KL and ₹ 43,934 /KL respectively.

- ii) The LDO requirement of 6281.26 KL during the commissioning period was procured at different rates varying from Rs 27386.60 per KL to Rs 53,238.63 per KL. The cumulative expenses on account of usage of LDO has accordingly been certified by the auditor as Rs 27.62 Crores.
- iii) The petitioner submitted that the plant had received carpet coal during the months of June to August 2015, in preparation for receiving the normal coal to be fired into the boiler.
- iv) The weighted average rate of procurement of coal in the FY 2015-16 is Rs 4838.55 per MT. The cumulative coal quantity of 1, 00,404.72 MT procured in FY 2015-16 is inclusive of the carpet coal. The weighted average rate of 7640.72 MT of carpet coal @ Rs 2267.43 per MT and 52066.28 MT of Normal coal @ Rs 5050.77 per MT (which is the weighted average rate of 91679 MT of Market coal @ Rs 5070 per MT and 1085 MT of Linkage coal @ Rs 3388 per MT) is worked out to be Rs 4694.58 per MT. It is the rate at which consumption of 59,707 MT of coal in the FY 2015-16 has been booked. The total expenses against coal consumption in FY 2015-16 has accordingly been indicated as Rs 28.03 Crores.
- v) The closing stock of 40,696.87 MT @ 5050.77 MT as on 31st March 2016 and 69,541.45 MT of incoming coal @ Rs 3830.23 per MT have been considered while calculating the weighted average rate of the total stock. Accordingly, the consumption of 108637.72 MT of coal (till 02nd May 2016, the date of completion of the 72 hours Trial run) at a weighted average rate of Rs 4280.82 per MT has been indicated. The total expenses against coal consumption for FY 2016-17 has accordingly been indicated as Rs 46.51 Crores.
- vi) The 1.68 Lakh MT of coal used for commissioning till CoD, only about 0.69 Lakh MT of Linkage coal could be drawn and used. It was further informed by the petitioner that 2.0 Lakh MT of linkage coal was sanctioned out of the ACQ for use during the commissioning activities. However, the petitioner was left with

no choice but to source the coal required for commissioning from the market since the required clearance from MoEF to CIL for transportation of Linkage coal by rail up to Garha Siding and further up to the Jhabua site by road got delayed despite their best efforts. This necessitated usage of market coal procured at a comparatively higher rate prior to declaration of commercial operation and this resulted high rate of coal for generation of infirm power.

- vii) At the time of submission of the amended petition, for calculation of landed cost of coal, the petitioner had assumed sourcing as per the FSA quantities with SECL and MCL for coal requirement up to 87% of annual requirement and the balance 13% from e-auction. The landed price of coal of Rs 3607 per MT was based on the above assumptions and was submitted to the Commission in the Amended petition.
 - viii) The petitioner submitted the details of procurements of all Linkage coal with loading dates from 26th march' 2016 till 30th April 2016. The total RR quantity of linkage coal with loading date of 26.03.2016 to 30.03.2016 is 1,13,557 MT. The weighted average rate of coal is worked out is ₹ 3437.93 /MT. The petitioner also submitted that no linkage coal has been received till date from MCL and no e-auction procurement has been made till 31st May 2016.
 - ix) The petitioner further submitted that there were delays in getting the invoices from SECL during the initial phases of procurement. While GRN (Goods Receipt Note as prepared by Central Stores) for 1085 MT of linkage coal was prepared (based on the weigh bridge records of the trucks carrying coal from Garha siding to project site), its value was booked based on the first invoice received from SECL, which incidentally happened to be the invoice with loading date 03rd April 2016. The landed cost of the coal procured through this invoice was Rs 3388 per MT, as has been indicated in the petition.
63. The petitioner has filed the following detailed calculation for calculation of weighted average rate of coal used during FY 2015-16 and FY 2016-17 for generation of infirm power:

Table 11: Details of coal for infirm power filed

| Particulars | Qty (MT) | Rate (Rs / MT) | Amount (Rs) |
|------------------------------------|-----------------|----------------|------------------------|
| Coal Procured in FY 2015-16 | | | |
| Carpet Coal | 7,640.72 | 2267.43 | 1,73,24,821.95 |
| Market Coal | 91679.00 | 5070.00 | 46,48,12,530.00 |
| Linkage Coal | 1085 | 3388.00 | 36,75,980.00 |
| Total Procured in FY 15-16 | 1,00,404.72 | 4,838.55 | 48,58,13,331.95 |
| Total consumed in FY 15-16 | 59,707.00 | 4694.58 | 280301348.33 |
| Closing Stock at end of FY 15-16 | 40,696.87 | 5050.77 | 205550454.3 |
| Coal Procured in FY 2016-17 | | | |
| Linkage Coal | 69541.45 | 3830.23 | 26,63,59,748.03 |
| Total consumed in FY 16-17 | 108637.72 | 4280.82 | 465058545.31 |

64. With regard to sanction of linkage coal for generation of infirm power, the petitioner mentioned that it was sanctioned 2.0 Lakh MT of linkage coal for use during the commissioning activities out of the ACQ. However, the required clearance from MoEF to CIL for transportation of Linkage coal by rail up to Garha Siding and further up to the Jhabua site by road got delayed despite close follow-ups and the same was obtained only in the second week of March 2016.
65. On combined perusal of the details and documents filed by the petitioner for extension of the validity of environmental clearance and amendment of environmental clearance, filed under Annexure 1 by its affidavit dated 3rd August' 2016, it is observed that the following is mentioned in Para 4-6 of item No. 2.14 in the "45th Meeting of the reconstituted Expert Appraisal Committee (EAC) held on 29-30 October' 2015 in the Ministry of Environment, Forest and Climate Change, New Delhi".
- (i) *While a suitable decision on mode of coal transportation is yet to be taken by the Ministry, it has been found by the Ministry that the five years EC validity period ended on 16.02.2015 and the PPA has not applied for the same before 16.02.2015 as per EIA Notification, 2006. The PP has now (last week of September, 2015) applied to the Ministry for extension of EC validity along with permission for road transportation of coal from Gosalpur (GSPR) & Garha Sidings (GGGS).*

- (ii) The PP made a presentation before the Committee, wherein it was inter-alia noted that, Consent to Operate (CTO) was accorded by MPPCB on 13.04.2015. The Garha siding also falls on the same rail route and is 45 km ahead on the same road route as that of Gosalpur siding. Hence, an overall road distance of 90 km (to and fro) shall be reduced. The Garha siding was notified on 30.10.2015 as a full rake handling point. The detailed progress of various units/ facilities alongwith photographs including green belt and CSR activities was presented.
- (iii) Based on the information and clarifications provided, the detailed discussion and considering the status/ progress of the project, the Committee recommended **Extension of Validity of EC for two years i.e. till 16.02.2017 (considering the unexpected delays etc.) to start the production/ operations by the TPP.** Further, the Committee recommended for amendment of EC for road transportation of coal for a limited period of **two years from Gosalpur (GSPR) & Garha Sidings (GGGS)** subject to the additional conditions recommended earlier and the following condition.

66. In view of the above, the contention of the petitioner for delay in transpiration of linkage coal sanctioned for use during the commission activities is not conceded. Therefore, the full quantity of coal consumed for generation of infirm power during FY 2015-16 and FY 2016-17 is considered as filed by the petitioner and the weighted average rate of linkage coal only is applied to arrive at the total coal cost consumed for generation of infirm power.
67. Accordingly, the coal cost for infirm power is worked out by applying the wt. average rate of Linkage coal only as given below

Table 12: Coal cost for generation of infirm power

| Sr. No. | Particular | Qty. in MT | Rate ₹/MT | Amount ₹ Crores |
|---------|---|------------|-----------|-----------------|
| 1 | Coal consumed for generation of infirm power (FY 2015-16) | 59707 | 3388.00 | 20.23 |
| 2 | Coal consumed for generation of infirm power (FY 2016-17) | 108637 | 3830.23 | 41.61 |

| | | | | |
|---|---|---------------|----------------|--------------|
| 3 | Total Coal consumed for generation of infirm power | 168344 | 3673.38 | 61.84 |
|---|---|---------------|----------------|--------------|

68. Cost of Oil for infirm power is worked out by considering the quantity of oil and weighted average rate of the oil mentioned in CA certificate and considered by the petitioner.

Table 13: Oil cost for generation of infirm power

| Sr. No. | Particular | Qty. in KL | Rate ₹/KL | Amount Rs. Crores |
|---------|--|----------------|-----------------|-------------------|
| 1 | Oil consumed for generation of infirm power (FY 2015-16) | 5122.41 | 43989.89 | 22.53 |
| 2 | Oil consumed for generation of infirm power (FY 2016-17) | 1158.85 | 43934.13 | 5.09 |
| 3 | Total Oil consumed for generation of infirm power | 6281.26 | 43979.60 | 27.62 |

69. Total cost of fuel expenses for infirm power net of revenue from sale of infirm power is worked out as given below:

Table 14: Total cost for generation of infirm power Allowed: ₹ Crores

| Sr. No. | Particular | Coal Cost | Oil Cost | Total Cost ₹ Crores |
|---------|---|-----------|----------|---------------------|
| 1 | Fuel expenses for generation of infirm power (FY 2015-16) | 20.23 | 22.53 | 42.76 |
| 2 | Fuel expenses for generation of infirm power (FY 2016-17) | 41.61 | 5.09 | 46.70 |
| 3 | Fuel expenses for generation of infirm power | 61.84 | 27.62 | 89.46 |
| 4 | Less Revenue from sale of infirm power | | | 15.42 |
| 5 | Net start-up fuel expenses | | | 74.04 |

70. The above net start-up fuel expenses of ₹ 74.04 Crores are provisionally allowed by the Commission in this order. The petitioner is directed to file all the details with relevant documents and correspondence with CIL and MoEF if any, for supply of coal for commissioning activity, alongwith the final tariff petition of the generating unit.

e. Apportionment of common facilities:

71. Regulation 5.2 of MPERC (Terms and Conditions for determination of Generation Tariff) Regulations, 2015, provides as under;

“For the purpose of determination of tariff, the capital cost of a project may be broken up into stages, blocks, units, if required:

Provided that where break-up of the capital cost of the project for different stages or units or blocks is not available and in case of on-going projects, the common facilities shall be apportioned on the basis of the installed capacity of the unit;”

72. In Para 5.5 of Petition No. 53 of 2015, the petitioner submitted the following:

“As stated in aforesaid paras, the Petitioner’s power project is to be developed in two phases; however, in the first phase only Unit No. 1 of 600 MW is being installed. Since second unit is also proposed in the same premise, there would be several common facilities/ auxiliaries/ expenses which presently pertain to Unit No. 1 and may be shared by Unit No. 2 at the later stage when Unit No. 2 will be commissioned. The details of such expenses and its sharing between the two units have been shown in Form 5B of the ‘Tariff Filing Forms’ in Annexure 1 Part-1. Apportionment of the expenditure between the two units has been done as per provisions of the Regulation 2012 and as per the logic outlined at the respective places of this petition.”

73. Further, in 5.7 of Petition No. 53 of 2015, the petitioner provided salient item wise common facility and its apportionment between two units of its power plant as given below:

Table 15:

| S. No. (As in Form 5B) | Common Facilities | Ph-1 | Ph-2 | Total |
|-------------------------------|--|-------------|-------------|--------------|
| 1 | 2 | 3 | 4 | 4 |
| 1 | Land & Site Development | 43.53 | 10.43 | 53.96 |
| 2.3.1 | External water supply system (Raw Water) | 40.16 | 38.59 | 78.75 |

| | | | | |
|-------|--|--------|-------|--------|
| 2.3.6 | CHP | 151.27 | - | 151.27 |
| 2.3.8 | MGR | 1.35 | 1.49 | 2.84 |
| 2.4.1 | Switch Yard Package | 22.61 | - | 22.61 |
| 2.4.7 | Transmission Line | 147.27 | 7.85 | 115.12 |
| 4 | Civil Works | | | |
| 4.1 | Main plant/ Adm. Building & Site level/ Infra | 409.23 | - | 409.23 |
| 4.5 | Coal Handling Plant | 23.78 | 26.16 | 49.94 |
| 4.7 | Ash Pond & Reservoir | 27.38 | - | 27.38 |
| 4.8 | MGR & Marshalling Yard | 16.84 | 18.52 | 35.36 |
| 4.9 | Chimney | 44.05 | 3.0 | 47.05 |
| 4.13 | Road & Drainage (site infra) | 44.36 | - | 44.36 |

74. In Para 3.6 of the amended petition, the petitioner submitted the following:

“The petitioner had originally envisaged the said Power Project to have a capacity of 1260 MW comprising of Phase-I having a Unit of 600 MW and Phase-II having a Unit of 660 MW and a Memorandum of Understanding was entered into with the Government of Madhya Pradesh to such effect. The share of State Government is about 35% of the capacity from this Project.

However, Phase-II is still awaiting fuel linkage and no financial closure could be achieved towards the same. Additionally, in view of the slackness in the conventional power sector scenario and the overall macro-economic outlook of the country, the decision to move ahead with implementation of Phase-II could not be proceeded with, by the Petitioner. As such, the Phase-II is currently in the conceptual stages only.”

75. On scrutiny of the petition, it is observed that the petitioner has not filed the segregation of cost among common facilities between phase-I and Phase-II of the project duly certified by the Statutory Auditor. Vide letter dated 9th June, 2016, the petitioner was asked to file the details and apportionment of common facilities between Phase I&II of the project duly certified by the Auditor.

76. By affidavit dated 16th June, 2016, the petitioner submitted that the auditor certificate

towards common facilities has already been submitted along with the CA certificate for capital cost. The relevant extracts of CA certificate is reproduced below:

"We further hereby certify that the company had originally envisaged to set up a thermal power plant of 1260 MW capacity comprising of Phase-1 having a Unit of 600 MW and Phase-II having a Unit of 660 MW. However, Phase-II is currently in conceptual stages only, still awaiting fuel linkage and no financial closure could be achieved towards the same. It is certified that the entire capital cost has been attributed to Phase-I, 1x600 MW only and as such there is no common expenditure at this stage."

77. The Commission noted that the petitioner had provided a detailed break-up of various capital cost components of the project in Form-5B of Petition No. 53 of 2015 indicating apportionment of all such cost among Phase I and Phase II also. However, the petitioner has changed its approach while filling Form 5B submitted with the Petition No. 16 of 2016. The apportionment of the capital cost component among Phase I and Phase II is not provided in Form 5B filed with the amended petition. It is further observed by the Commission that the basic reason for disposing of Petition No. 53 of 2015 and filing Petition No. 16 of 2016 was only non-availability of essential details and documents for determination of tariff on account of delay in achieving CoD of the generating unit. The aforesaid reason has no bearing with the change in approach of petitioner regarding apportionment of common facilities in filling up Form 5B in amended petition.
78. In view of the above, vide letter dated 20th July, 2016, the petitioner was asked to clarify the following:
- i. The reason for changing the approach for apportionment of capital cost component among Phase I and Phase II
 - ii. Reasons for allocation of R & R expenses completely to Phase-I only.
 - iii. With regard to the apportionment of the cost of transmission line, reasons for allocation of the cost of the conductor only to Phase-II.
 - iv. Some of the expenses like Ash handling expenses, Establishment expenses, ETP Expenses, IDC etc. apportioned in Form-5B but such common facilities have not been indicated in aforesaid para 5.7.3 of the petition.

- v. The cost of coal handling and ash handling plant has been apportioned between Phase I&II whereas, this cost pertains to Phase-I exclusively as per remarks mentioned in Form 5B.
 - vi. Out of the total cost of the Chimney (Rs. 47.05 Crores), only Rs. 3 Crores is allocated to Phase-II of the project.
 - vii. The cost of Administrative Building has not been allocated to Phase-II of the project.
 - viii. Cost of allocation of External Water supply system has not been apportioned as per MW capacity of the units.
 - ix. The petitioner has filed an amount of Rs. 44.36 Crores towards the cost of approach road and drainage. On perusal of the LOA for construction of Road awarded to M/s. Shreeji Infrastructures India Pvt. Ltd., it is observed that the contract has been awarded for the construction of permanent road for 1x600 MW + 1x660 MW Units. Whereas, the petitioner has allocated the complete cost of road to Phase-I of the project only. The petitioner is required to file the reasons for allocation of the cost of road to Phase-I only instead of apportionment between Phase I&II.
79. By affidavit dated 3rd August, 2016, the petitioner submitted that through all their submissions - in earlier Petition No. 53 of 2015, Original Petition No. 16 of 2016 as well as the instant Amended Petition No. 16 of 2016 – have maintained that it had originally envisaged the said Power Project to have a capacity of 1260 MW – to be executed in two phases - Phase-I having an Unit of 600 MW and Phase-II having an Unit of 660 MW. The petitioner submitted that while filing Petition No. 53 of 2015 it had reckoned some of the costs as common costs and inadvertently allocated them between Phase – I (1X600MW) & II (1X660MW). However, the Petition No. 53 of 2015 was dismissed by the Commission. The date of commercial operation of the Phase-I unit got delayed due to reasons already informed and detailed in the Amended Petition and the Petitioner was directed by the Hon'ble Commission to approach for tariff determination with a fresh petition as and when the unit achieved CoD.
80. The petitioner further submitted that all the common facilities have been designed with philosophy of execution in two phases – first phase consisting of one 600 MW unit and the second phase consisting of one 660 MW unit. The petitioner further mentioned that the inadvertent error of treating some costs as common costs was detected by it

subsequent to the filing of Petition No. 53 of 2015. The petitioner would have filed an amendment to rectify the inadvertent error. The detailed response on aforesaid issues filed by the petitioner are mentioned in **Annexure-I** of this order.

81. On perusal of the response filed by the petitioner and detailed scrutiny of the contract/orders placed to different vendors, the Commission observed that some of the facilities which are common for the phase I&II of the project need to be apportioned at this stage as per Regulations, 2015. Moreover, the Power Purchase Agreement entered by the petitioner with MPPMCL on 05.01.2011 is for the contracted capacity equivalent to 30% of the only first unit having installed capacity of 600 MW. So, the tariff for its second unit which has a reference in aforesaid PPA (and may be in conceptual stage as awaiting fuel linkage as contended by the petitioner) may not be determined by this Commission. Therefore the Commission has provisionally considered the basis of apportionment of most of the common facilities among Phase I and Phase II as filed by the petitioner in petition No. 53/2015.
82. With regard to cost of transmission line, the Commission has observed from the contract awards filed by the petitioner that the order was placed to M/s L&T for construction of transmission line for Phase I&II of the project. Therefore, the approach for apportionment of transmission cost as submitted by the petitioner is not found satisfactory. Therefore, the cost of transmission line has been apportioned on MW capacity basis as per Regulation 5.2 of MPERC (Terms and Conditions for determination of Generation Tariff) Regulations, 2015.
83. The Commission further observed that the land was procured by the petitioner for both the phases of the project. However, the land development charges and leasehold land is dedicatedly allocated to phase-I of the project. Therefore, the the Commission has apportioned only cost of land purchased on MW capacity basis as per Regulation 5.2 of MPERC (Terms and Conditions for determination of Generation Tariff) Regulations, 2015.
84. Accordingly, the detailed break-up of apportionment of each component of the project cost as on CoD of the generating unit in the subject petition are as given below:

**Table 16: Actual Capital Expenditure provisionally considered for Phase I as on CoD:
Rs. Crores**

| Sr. No. | | Apportionment between Phase I and Phase II | |
|---------|--|--|---------------|
| | | Ph-I | Ph-II |
| | Land | | |
| 1 | Freehold Land & Rehabilitation & Site development | 35.77 | 26.08 |
| 2 | Leasehold Land | 1.47 | 0.00 |
| | Plant and Machinery | | |
| 3 | BTG and BOP (excluding transmission line) | 2198.51 | 47.12 |
| 4 | Transmission line | 71.27 | 78.39 |
| 5 | Railway Siding | 0.81 | 0.00 |
| 6 | Building and Civil Works | 134.70 | 11.93 |
| 7 | Ash Dyke | 24.83 | 2.20 |
| 8 | Pre-operative and pre-commissioning Expenses (including Overheads, startup power & Commissioning expenses) | 219.76 | 9.45 |
| 9 | Startup Fuel (Net off infirm power) | 74.04 | 0.00 |
| 10 | IDC and financing charges | 958.20 | 41.13 |
| 11 | Total Capital Expenditure considered | 3719.35 | 216.31 |

In view of the above, the actual capital expenditure as on COD of Rs. 3719.35 Crore for Unit 1 of Phase I in the subject petition is provisionally considered for determination of tariff in this order.

f. Initial Spares:

85. Regulation 19 of MPERC (Terms and Conditions for determination Generation tariff) Regulations, 2015, provides that;

“Initial spares shall be capitalised as a percentage of the Plant and Machinery cost upto cut-off date, subject to following ceiling norms:

Coal-based thermal generating stations

- 4.0%

Provided that:

- (i) where the benchmark norms for initial spares have been published as part of the benchmark norms for capital cost by the Central Commission, such norms shall apply to the exclusion of the norms specified above:*
- (ii) where the generating station has any transmission equipment forming part of the generation project, the ceiling norms for initial spares for such equipments shall be as per the ceiling norms specified for transmission system in Madhya Pradesh Electricity Regulatory Commission Regulations, 2015 :*
- (iii) for the purpose of computing the cost of initial spares, plant and machinery cost shall be considered as project cost as on cut-off date excluding Interest during Construction, Incidental Expenditure During Construction, Land Cost and cost of civil works.”*

Commission’s Analysis:

- 86. With regard to the capital spares, aforesaid Regulation stated that the ceiling norms for capitalized initial spares for coal based thermal generating stations is 4% of the original project cost.
- 87. Vide letter dated 20th July, 2016, the petitioner was asked to explain the following with respect to the provisions under MPERC Regulations’ 2015.
 - (a) The details of the initial spares ordered to different suppliers.
 - (b) On perusal of the contract awarded to BHEL for supply of BTG package, it is mentioned in para 3.1 of the contract that “the above prices include supply of commissioning spares and supply of common items for Unit 1 and Unit 2. In view of the aforesaid observation, the petitioner is required to inform such common items and their cost in this regard.
 - (c) The details of the initial spares supplied by the equipment manufacturer of all the packages and those were part of the main order be also submitted by the petitioner.
 - (d) The actual amount of initial spares claimed by the petitioner be indicated separately in the capital expenditure incurred as on CoD duly certified by the CA.
- 88. By affidavit dated 30th June, 2015, the petitioner submitted the following:

- a) As regards Query 7 (a), the extracts of the purchase order placed on various suppliers towards initial spares is enclosed herewith and marked as **Annexure-14**.
- b) A look at the scope of the supply as detailed by BHEL clearly indicates that all the systems supplied are purely and solely for Phase-I: 1X600MW. It clearly states that the supply includes one set of Boiler & Auxiliaries, One set of Steam Turbine & Generator and Auxiliaries, Other unit specific equipment like Boiler Feed Pumps, Condensate Extraction Pumps, LP / HP Heaters, HP/LP Dosing Systems, Cooling Systems, Electrical systems and Control & Instrumentations.
Besides, review of the **Para B) Terminal points** indicates that none of the common systems like CW System, DM water generation and Storage system, Compressed Air System (Instrument and Service Air), Ash Handling System, Coal Handling System, and Fuel Oil Unloading System are not part of the supply scope of BHEL.
- c) The Petitioner has incurred ₹ 9.01 crore towards initial spares as on CoD. Out of the total of Rs. 9.01 crore, initial spares of value Rs. 6.01 crore are part of the Original Package as per Form-16 of Tariff Filing Forms. Remaining Rs. 3.01 crore (Rs. 2.72 crore for BTG Package + Rs. 0.29 crore for CHP Package) are ordered separately and not part of the Original Package.
- d) The Petitioner has incurred Rs. 9.01 crore towards initial spares as on CoD. The CA certificate of the same is enclosed herewith.

89. In view of the above, it is observed that the expenditure on capital spares as on CoD, are within the norms of capital spares prescribed under the Regulations, 2015. Therefore, the same is provisionally allowed in this order.

Funding of the Project:

90. The break-up of funding of capital cost is on CoD as filed as under:

Table 17: Finding filed in the petition

| Sl. No. | Particulars | Project Cost including un-discharged liabilities (Rs. in Crores) | Cash Expenditure (Rs. In Crores) |
|----------|---|--|----------------------------------|
| 1 | Gross Fixed Assets | 4698.66 | 4330.08 |
| 2 | Loan from Bank & Financial Institutions | 3018.00 | 3018.00 |
| 3 | Equity | 1680.66 | 1312.08 |
| 4 | Debt : Equity Ratio | 64.23 : 35.77 | 69.70 : 30.30 |

91. It is submitted in the petition that ₹ 0.50 Crores has a difference between the project funding of ₹ 4330.58 Crores and the cash expenditure of ₹ 4330.08 crores and this difference is lying as bank and cash balance. The petitioner has filed the certificate from its Chartered Accountant certifying the actual cash expenditure of ₹ 4330.08 (Net of current liability amounting to ₹ 368.58 crores) for Phase I (1x600 MW) of its thermal power plant as on 2nd May' 2016. It is mentioned in the CA certificate that the aforesaid expenses have been made through term loans of ₹ 3018 Crores and Promoters Contribution of ₹ 1312.58 Crores. The balance is closing cash and bank balance. In its foot note, the Chartered Accountant has mentioned that the Promoters Contribution includes equity and quasi equity. The details of infirm power supplied to the grid and revenue earned from generation of infirm power has also been submitted by the petitioner in its amended petition. The petitioner has also submitted the relevant documents in support of its contention relating infirm power.

Provision under Regulations:

92. *Regulation 25.1 of MPERC (Terms and Conditions for determination Generation tariff) Regulations, 2015, provides that;*

“For a project declared under commercial operation on or after 1.4.2016, the debt-equity ratio would be considered as 70:30 as on COD. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:

Provided that:

- a. where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:
- b. the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:
- c. any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt : equity ratio.-----“

Commission’s Analysis:

93. The petitioner mentioned that it has incurred equity amount more than 30% (normative equity in the project. The Commission has considered debt-equity ratio of 70-30 as per norms under aforesaid Regulation for this project. This funding ratio is applied on the assets provisionally admitted in this order. The details of the funding considered for the assets admitted in this order are as given below:

Table 18: Funding as on COD of Unit considered:

| Sr. No. | Particular | Amount in ₹ Crores |
|----------------|--------------------|---------------------------|
| 1 | Gross Fixed Assets | 3719.35 |
| 2 | Opening Loan | 2603.55 |
| 3 | Opening Equity | 1115.81 |
| 4 | Normative Equity | 1115.81 |
| 5 | Debt : equity | 70 / 30 |

Annual Capacity (fixed) Charges

95. The tariff for supply of electricity from thermal generating station comprise capacity charge (for recovery of annual fixed cost) and energy charge (for recovery of primary fuel and secondary fuel cost).
96. As per Regulation 27 of the MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015, the Annual Capacity (Fixed) Charges shall consist of the following components:
- (a) Return on Equity;
 - (b) Interest on Loan Capital;
 - (c) Depreciation;
 - (d) Interest on Working Capital;
 - (e) Operation and Maintenance Expenses;

Return on Equity

Petitioner's Submission

97. With regard to return on equity, the petitioner broadly submitted the following:

“The petitioner considered amount of equity actually employed is limited to 30% of the Project capital cost for the purpose of tariff determination. Out of the total Project Cost as on COD of ₹ 4698.66 crores filed in the amended petition, the debt tie-up is to the tune of ₹ 3018 crores. Balance, ₹ 1680.66 crores has been funded through equity. Thus, the actual debt equity ratio is 64.23:35.77. However, for tariff purposes, the equity has been curtailed up to 30% and equity deployed beyond 30% has been considered as normative loan.

RoE is being claimed by the petitioner at the base rate of 15.5% of the normative equity on pre-tax basis as per proviso of Clause 25. RoE has been grossed up with the corporate tax rate of 34.608 % as per the formula given in Clause 30 and 31 of the MPERC Tariff Regulations, 2015, as shown in following Table.

Table 19: Return on Equity Filed BY the petitioner

| Particulars | Unit | FY 2016-17 | FY 2017-18 | FY 2018-19 |
|--|-----------------|-----------------------|-----------------------|-----------------------|
| Opening Equity as on COD | ₹ Crores | 1680.66 | 1718.25 | 1762.59 |
| Opening Equity Normative | ₹ Crores | 1409.60 | 1447.19 | 1491.53 |
| Add: Increase due to addition during the year/period | ₹ Crores | 37.59 | 44.34 | 0.00 |
| Closing equity | ₹ Crores | 1447.19 | 1491.53 | 1491.53 |
| Average equity | ₹ Crores | 1428.39 | 1469.36 | 1491.53 |
| Base rate of Return on Equity | % | 15.50% | 15.50% | 15.50% |
| Tax Rate (Corporate Tax) | % | 34.61% | 34.61% | 34.61% |
| Rate of return on equity | % | 23.70% | 23.70% | 23.70% |
| Return on equity | ₹ Crores | 338.58 | 348.29 | 353.54 |

The petitioner further submitted that it has claimed the applicable normal corporate tax rate for grossing up of return on Equity as prescribed by Regulation 31 of the MPERC Tariff Regulations, 2015. Further, the Regulations provide for adjustment with respect to variation in tax rate applicable to the Generating Company at the time of truing up
..... “

Provisions in the Regulation:

98. Regulation 30 and 31 of MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015 provides that,

30 Return on Equity:

“30.1 Return on equity shall be computed in rupee terms, on the equity base determined in accordance with Regulation 25.

30.2 Return on equity shall be computed at the base rate of 15.5% for thermal generating stations and hydro generating stations.

Provided that

(a) in case of Projects commissioned on or after 1st April, 2016, an additional return of 0.5% shall be allowed if such Projects are completed

within the timeline specified in Appendix-I :

- (b) the additional return of 0.5% shall not be admissible if the Project is not completed within the timeline specified above for reasons whatsoever.*
- (c) the rate of return of a new project shall be reduced by 1% for such period as may be decided by the Commission, if the Generating station is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO)/ Free Governor Mode Operation (FGMO):*
- (d) as and when any of the above requirements are found lacking in a generation station based on the report submitted by the respective SLDC/RLDC, ROE shall be reduced by 1% for the period for which the deficiency continues:*

31 Tax on Return on Equity:

- 31.1 The base rate of return on equity as allowed by the Commission under Regulation 30 shall be grossed up with the effective tax rate for the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in the respective financial year in line with the provisions of the relevant Finance Acts by the concerned generating company. The actual income tax on other income stream including deferred tax i.e., income of non generation business shall not be considered for the calculation of “effective tax rate”.*
- 31.2 Rate of return on equity shall be rounded off to three decimal places and shall be computed as per the formula given below:*

$$\text{Rate of pre-tax return on equity} = \text{Base rate} / (1-t)$$

Where t is the effective tax rate in accordance with Regulation 31.1 of this Regulation and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the

company on pro-rata basis by excluding the income of non-generation business and the corresponding tax thereon. In case of generating company paying Minimum Alternate Tax (MAT), “t” shall be considered as MAT rate including surcharge and cess. For example: - In case of the generating company paying

- (i) Minimum Alternate Tax (MAT) @ 20.96% including surcharge and cess:
Rate of return on equity = $15.50/(1-0.2096) = 19.610\%$
- (ii) In case of generating company paying normal corporate tax including surcharge and cess:
 - (a) Estimated Gross Income from gen. business for FY2016-17 is ₹ 1000 crore.
 - (b) Estimated Advance Tax for the year on above is ₹240 crore.
 - (c) Effective Tax Rate for the year 2016-17 = ₹ 240 Crore/₹ 1000 Crore =24%
 - (d) Rate of return on equity = $15.50/(1-0.24) = 20.395\%$

31.3 The actual tax paid together with any additional tax demand including interest thereon, duly adjusted for any refund of tax including interest received from the income tax authorities pertaining to the tariff period 2016-17 to 2018-19 on actual gross income of any financial year shall be trued-up every year. However, penalty, if any, arising on account of delay in deposit or short deposit of tax amount shall not be claimed by the generating company. Any under-recovery or over-recovery of grossed up rate on return on equity after truing up, shall be allowed to be recovered or refunded to beneficiaries on year to year basis.”

Commission’s Analysis

99. The petitioner filed the CA certificate for actual capital expenditure as on CoD of the generating unit. It is indicated in the CA certificate that the total equity infused as on CoD of the generating unit is ₹1312.58 Crores whereas, the petitioner has considered opening equity of ₹ 1680.66 Crores as on CoD. Vide letter dated 9th June, 2016, the petitioner was asked to explain the reason for this discrepancy.

100. By affidavit dated 16th June, 2016, the petitioner submitted that the actual equity infused towards the instant power plant is to the tune of ₹ 1312.58 crore out of which ₹ 0.50 crore is lying in the banks and remaining ₹ 1312.08 crore has been utilised towards the capital cost. It was clarified that the ₹ 1680.66 crore is the equity component which corresponds to the capital cost as on COD (including un-discharged liabilities) of ₹ 4698.66 crore.
101. The Commission observed that the project funding and debt-equity ratio filed by the petitioner in its original petition as well as the amended petition is for the total expenditure instead of actual expenditure as on CoD on cash basis only certified by the CA. It is further observed that the equity amount incurred by the petitioner is more than normative equity (30%). Therefore, while determining the equity component of the project, the Commission has considered the normative debt-equity ratio 70:30 as per provisions under the Regulations, 2015.
102. The equity amount as on CoD of the generating unit is considered to the extent of the capital cost as on CoD considered by the Commission in this order.
103. On further scrutiny of the petition, it was observed that the petitioner claimed Return on Equity by grossing up the base rate with Corporate Tax whereas, in para (a) of page 30 of the petition, it is mentioned that “no tax paid by the company due to marginal loss”. Vide Commission’s letter dated 9th June, 2016, the petitioner was asked to explain basis of claiming corporate tax in light of Regulation 31 of MPERC (Terms and Conditions for determination of Generation Tariff) Regulations, 2015.
104. In response, by affidavit dated 16th June, 2016, the petitioner submitted the following:

“It has claimed the applicable normal corporate tax rate for grossing up of return on Equity as prescribed by Regulation 31 of the MPERC Tariff Regulations, 2015. Further, the Regulations provide for adjustment with respect to variation in tax rate applicable to the Generating Company at the time of truing up. The said clause of the Regulations is reproduced below:

“31.1 The base rate of return on equity as allowed by the Commission under Regulation 30 shall be grossed up with the effective tax rate of the respective financial year.

For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in the respective financial year in line with the provisions of the relevant Finance Acts by the concerned generating company. The actual income tax on other income stream including deferred tax i.e., income of non generation business shall not be considered for the calculation of “effective tax rate”.

The petitioner submits that it is a Special Purpose Vehicle (SPV) Company and it had incurred a marginal loss in FY 2014-15 and hence, no income tax was payable by it in such year. The financial statements for FY 2015-16 would be available by September 2016. However, subsequent to commercial operation of the unit(s) in FY 2016-17, the petitioner would earn Return on Equity and as such would have to pay income tax at the normal tax rates. In view of the above, the petitioner urges that it ought to be allowed corporate tax rate for grossing up of return on equity.”

105. The petitioner mentioned that on account of loss during FY 2014-15, no income tax was payable by it in that year. For FY 2015-16, the petitioner mentioned that the audited accounts would be available by September, 2016.
106. Regulation 31.1 of the Regulations 2015, provides that the base rate of return on equity shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in the respective financial year by the generating company.
107. In terms of the above Regulation, the issue related to the tax liability shall be dealt with by the Commission during final tariff/ truing- up exercise based on the Annual Audited Accounts for respective financial year. Accordingly, the Commission has not considered the grossing up of the base rate of return i.e. 15.5% with Corporate Tax at this stage while computing the return on equity in this order. The Return on Equity for FY 2016-17 is provisionally worked out in this order at the base rate as given below:

Table 20: Return on Equity Allowed (₹ in Crores)

| Sr. No. | Particular | Unit | FY 2016-17 |
|----------------|---|-------------|-------------------|
| 1 | Opening Normative Equity | ₹ Crores | 1115.81 |
| 2 | Normative Equity addition during the year | ₹ Crores | 0.00 |

| | | | |
|---|----------------------------------|----------|----------------|
| 3 | Closing Normative equity | ₹ Crores | 1115.81 |
| 4 | Average equity | ₹ Crores | 1115.81 |
| 5 | Base rate of Return on Equity | % | 15.50 |
| 6 | Minimum Alternate Tax considered | % | 0.00 |
| 7 | Rate of pre-tax return on equity | % | 15.50 |
| 8 | Annual Return on equity | ₹ Crores | 172.95 |

108. By affidavit dated 3rd August, 2016, the petitioner confirmed that the Restricted Grid Mode of Operation (RGMO) has been implemented as per the Regulation 30.2 (c) of the Tariff Regulations, 2015. The petitioner filed a copy of the corresponding Minutes of Meeting between the Independent Engineer (M/s Lahmeyer International), Respondent No.01 (MPPMCL) and the petitioner certifying completion of the 72 hour full Load trial run as well as implementation of the RGMO.
109. The petitioner is directed to file the details of actual tax liability actual tax paid in FY 2016-17 as per Annual Audited Accounts with the tariff petition for determination of final tariff of generating unit.

Interest on Loan Capital:

Petitioner's submission:

110. Regarding interest on loan capital, the petitioner submitted the following:

"The actual loan plus excess equity, may please be considered as gross normative loan for calculation of interest on loan as prescribed in Clause 25 and 32 of the MPERC Tariff Regulations, 2015. The repayment for the year is being considered equal to the Depreciation allowed for the year. No additional loan during the year is proposed. Weighted average rate of interest of 14.41%, has been taken in the following Table:"

Table 21: Interest on Loan filed

| Particulars | Unit | FY 2016-17 | FY 2017-18 | FY 2018-19 |
|--------------------|-------------|-----------------------|-----------------------|-----------------------|
| Opening Loan | ₹ Crores | 3,018.00 | 3,018.00 | 3,018.00 |
| Excess Equity | ₹ Crores | 271.06 | 271.06 | 271.06 |

| | | | | |
|--|-----------------|---------------|---------------|---------------|
| Normative Opening Loan | ₹ Crores | 3,289.06 | 3,133.61 | 2,986.10 |
| Loan addition during the year | ₹ Crores | 87.72 | 103.45 | - |
| Repayment during the year Depreciation | ₹ Crores | 243.17 | 250.97 | 250.97 |
| Closing Loan | ₹ Crores | 3,133.61 | 2,986.10 | 2,735.13 |
| Average Loan | ₹ Crores | 3,211.34 | 3,059.85 | 2,860.61 |
| Weighted average rate of interest | % | 14.41% | 14.41% | 14.41% |
| Interest Charges | ₹ Crores | 462.81 | 440.98 | 412.27 |

Provisions in Regulation

111. Regulation 32 of MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015 provides that,

“32.1 The loans arrived at in the manner indicated in Regulation 25 shall be considered as gross normative loan for calculation of interest on loan.

32.2 The normative loan outstanding as on 1.4.2016 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2016 from the gross normative loan.

32.3 The repayment for the Year of the Tariff period 2016-19 shall be deemed to be equal to the depreciation allowed for the corresponding year/ period. In case of de- capitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered upto the date of de-capitalisation of such asset.

32.4 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 depreciation allowed for the year or part of the year.

32.5 The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after proving appropriate accounting

adjustment for interest capitalized.

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.

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

32.7 *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.*

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

32.9 *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:

112. The Common Loan Facility Agreement was executed between the petitioner and the Financial Institutions/ Banks under the lead of Axis Bank on dated 30th December 2009. The Axis Bank was appointed by the petitioner as "Facility Agent" and "Security Trustee". The detailed breakup of loan amount sanctioned by each Bank/Financial Institution provided in para 7(xvi) of this order:

-
113. The petitioner mentioned that the current weighted average rate of interest on long term loans is 14.41% and the excel model towards calculation of the weighted average rate of interest is enclosed as Tariff Forms. The petitioner also submitted the certificates towards the interest charged by each lender/ financial institutions.
114. Vide Commission's letter dated 9th June, 2016, the petitioner was asked to justify the higher rate of interest claimed by it alongwith all supporting documents of each lending agency and also the leading Bank.
115. By affidavit dated 16th June, 2016, the petitioner submitted that the funding in Power Sector is governed by various factors viz. status of the entity i.e. Govt / Public / Joint Venture / Private Limited, various macro and micro economic factors, risk exposure and allocation to individual sectors which is governed by RBI guidelines and credit policies of Govt. which vary from time to time.
116. The petitioner further submitted that it has actually been paying interest on Rupee Term Loans (RTL) based on the prevailing State Bank of India's Benchmark Prime Lending Rate (SBI BPLR) / Base Rate + margin and other terms and conditions as per the Common Loan Agreement. The movement in the SBI BPLR / Base Rate is influenced by macro economic factors over which the petitioner has no control.
117. The petitioner submitted the table indicating SBI Base Rate which is 9.30% as on 05.10.2015. Vide Commission's letter dated 20th July, 2016, the petitioner was asked to inform the details and the basis of margin money as well as the terms and conditions on account of which the weighted average rate is as high as 14.41%.
118. By affidavit dated 3rd August, 2016, the petitioner broadly submitted the following:
- e) *the interest is being paid to the commercial banks as per the Common Loan Agreement signed with the consortium of Banks. The relevant clauses for chargeability of the interest and spread have been provided in Para 2.6 (i), 2.7 and Schedule III of the Common Loan Agreement which have been reproduced below for the kind reference of the Hon'ble Commission.*

"2.6 (i) Interest

The Borrower shall pay on the dates set out in Schedule III ("Interest Payment Dates") to each of the Senior Lenders interest at the Applicable Interest Rate (s) on the principal amounts of their respective Rupee Loan Facility outstanding from time to time, and on all monies accruing due under this Facility Agreement and not paid on due dates. The payment of interest shall commence on the first Interest Payment Date falling immediately after the date of Initial Disbursement."

"2.7 RESET OF INTEREST SPREAD

The Senior Lenders shall have a right to reset the Spread of the Applicable Interest Rate in respect of the Rupee Loan Facility on the Commercial Operations Date (Initial Interest Reset Date) and thereafter on expiry of every two years from the Initial Interest Reset Date (Subsequent Interest Reset Date(s)).

The Applicable Interest rate for the respective Senior Lender shall stand revised from the date of change in the BPLR at any time during the term of this Rupee Loan Facility. The Borrower shall pay such revised Applicable Interest Rate immediately on the following Interest Payment Date. The Lenders' Agent shall notify within ten (10) days, to the Borrower, the Senior Lenders and Account Bank of such resetting of the Spread and Applicable Interest Rate accordingly. The Senior Lenders shall within ten (10) days intimate the Lenders Agent and Borrower of any change/revision in its respective BPLR."

"SCHEDULE III

The Initial Interest Rate shall be 11.50% (floating) per annum, payable monthly, on the Interest Payment Date, which shall be payable on the last working day of each calendar month. The Initial Interest Rate shall be linked to the benchmark/reference rate of the respective Senior Lenders and in case of LIC it shall be linked to the benchmark/reference rate of the Lead Bank i.e. Axis Bank Limited.

- A. The Spread up to the Initial Interest Reset Date shall be determined as follows:**

Spread would mean the difference between Initial Interest Rate and BPLR of the respective Senior Lenders on the date of this Facility Agreement ("Spread"). The Spread as determined herein below would apply upto the Initial Interest Reset Date.

Table 22:

| S. No | Lender | Initial Interest Rate | BRPL as on effective date | Spread as on Effective Dale (incl. Term Premium, if any) |
|-------|-------------------------------------|---|---------------------------|--|
| 1 | Axis Bank | 11.50% (Floating) (per annum payable monthly) | 14.75% | (-)3.25% |
| 2 | Bank of India | | 12.00% | (-)0.50% |
| 3 | Corporation Bank | | 12.00% | (-)0.50% |
| 4 | Life Insurance Corporation of India | | Same as lead bank | Same as lead bank |
| 5 | Oriental Bank of Commerce | | 12.00% | (-)0.50% |
| 6 | Punjab National Bank | | 11.00% | 0.50% |
| 7 | State Bank of Patiala | | 12.25% | (-)0.75% |
| 8 | State Bank of Indore | | 12.75% | (-)1.25% |
| 9 | State Bank of Travancore | | 12.25% | (-)0.75% |
| 10 | State Bank of Hyderabad | | 12.25% | (-)0.75% |
| 11 | State Bank of Bikaner and Jaipur | | 12.25% | (-)0.75% |
| 12 | State Bank of Mysore | | 12.25% | (-)0.75% |
| 13 | United Bank of India | | 12.00% | (-)0.50% |
| 14 | UCO Bank | | 12.25% | (-)0.75% |
| 15 | Union Bank of India | | 11.75% | (-)0.25% |

- B. Based on the above, the Applicable Interest Rate in respect of each Lender shall be BPLR of the Lender plus 1 minus the Spread specified in the table above.
- C. The Reset Interest Rate shall be arrived at on the following basis:
- a. Each Lender shall have the option to review and revise the Spread firstly on the Commercial Operations Date ("Initial Interest Reset Date") and every 2 years thereafter ["Subsequent Interest Reset Date(s)"].

- b. *The Reset Interest Rate in respect of each Lender shall be the respective BPLR on the Initial Interest Reset Date or Subsequent Interest Reset Date, as the case may be, plus/minus the respective Spread (as may be reviewed and fixed).*
- D. *It is clarified that between any two consecutive Reset Dates, upon change of BPLR from time to time, the Initial Interest Rate or the Reset Interest Rate, as the case may be, will stand revised from the date of change of such BPLR.*
- E. *The Applicable Interest Rate or the Reset Interest Rate shall be payable with monthly rests.*
- F. *Interest shall accrue from day to day and shall be computed on the basis of a 365 days year and the actual number of days elapsed.*

*The complete copy of the Common Loan Agreement has already been submitted to the Hon'ble Commission and hence the same is not being provided again for the sake of brevity. It is respectfully submitted that the funding in Power Sector is governed by various factors viz. status of the entity i.e. Govt. / Public / Joint Venture / Private Limited, various macro and micro economic factors, risk exposure and allocation to individual sectors which is governed by RBI guidelines and credit policies of Govt. which vary from time to time. Besides, factors like construction risks, operation risk, regulatory risk, debtor profile etc. also have bearing on the same. **Subsequent to commissioning of a power project, the possibility of availing a competitive refinancing is considerably improved as the major construction risk is overcome. However, currently since the tariff has not been approved by the Commission, there is a perception of considerable regulatory risk. Given the fact that the petitioner has not been able to raise an invoice for the supply of energy to the Respondent Discoms, the banks are not open to refinancing at this stage. In view of the same, the petitioner would explore the options of refinancing with various banks and financial institutions after approval of final tariff, with a view to optimise the capacity charges and would share the refinancing benefits with the beneficiaries according to the provisions of the extant Tariff Regulations.** It is further reiterated that the movement in the SBI BPLR / Base Rate is influenced by macro-economic factors over which the petitioner has no control. (Emphasis Supplied)*

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119. It is observed that the petitioner has taken loan from 15 different lending agencies and the weighted average rate of loan has been worked out by considering the loan balances of all lending agencies. The Commission has provisionally considered the weighted average rate of interest @ 14.41 % for FY 2016-17. However, the petitioner is directed to make all possible efforts to bring down the weighted average rate of interest as per the terms and conditions under the Common Loan Agreement.
120. The petitioner is also directed to file the actual weighted average rate of interest in respect of each lending agency along with supporting documents while filing the petition for determination of final tariff of this generating unit.
121. The Commission observed that the loan amount filed by the petitioner in its original petition and the amended petition is for the total expenditure instead of actual expenditure as on CoD on cash basis duly certified by the CA. It is further observed that the loan amount incurred by the petitioner is less than normative loan (70%). Therefore, while determining the loan component of the project, the Commission has considered the normative debt-equity ratio 70:30 as per provisions under the Regulations, 2015.
122. The loan amount as on CoD of the generating unit is considered to the extent of the capital cost as on CoD considered by the Commission in this order.
123. Based on the above details submitted by petitioner, the interest on loan during FY 2016-17 is worked out with the following approach:
- i. Loan balance as on CoD (corresponding to capital cost admitted by the Commission in this order) is considered as opening loan balance.
 - ii. No loan addition is considered during the year in this order.
 - iii. Depreciation is worked out during FY 2016-17 (by applying the rate of depreciation as filed by the petitioner), is considered as repayment during FY 2016-17.
 - iv. Weighted average rate of interest as filed by the petitioner is provisionally considered in this order.
124. Based on the above, the interest on loan capital is worked out for FY 2016-17 in this

order as given below:

Table 23: Interest on Loan Allowed

| Sr. No. | Particular | Unit | FY2016-17 |
|---------|--------------------------------------|----------|----------------|
| 1 | Opening Loan | ₹ Crores | 2603.55 |
| 2 | Loan addition during the year | ₹ Crores | 0.00 |
| 3 | Repayment during the year considered | ₹ Crores | 171.02 |
| 4 | Closing Loan | ₹ Crores | 2432.52 |
| 5 | Average Loan | ₹ Crores | 2518.04 |
| 6 | Weighted average rate of interest | % | 14.41 |
| 7 | Annual Interest amount | ₹ Crores | 362.85 |

Depreciation:

Petitioner's Submission:

125. The petitioner broadly submitted the following:

For the purpose of Tariff, Depreciation has been proposed in the manner as prescribed in Clause 33 of the MPERC (Terms and Conditions for determination of Generation Tariff) Regulations, 2015, and calculated annually based on "Straight Line Method" at the rates specified in Appendix-II of the MPERC Tariff Regulations, 2015 for the assets of the generating unit.

Table 24: Depreciation filed in the petition

| Particulars | Unit | FY 2016-17 | FY 2017-18 | FY 2018-19 |
|--|-----------------|---------------|---------------|---------------|
| Opening Gross Block | ₹ Crores | 4698.66 | 4823.97 | 4971.76 |
| Gross Block addition during the year | ₹ Crores | 125.31 | 147.79 | 0.00 |
| Closing Gross Block | ₹ Crores | 4823.97 | 4971.76 | 4971.76 |
| Average Gross Block | ₹ Crores | 4761.31 | 4897.86 | 4971.76 |
| Wt. average rate of depreciation (Form 11 of Annexure – I, Part-II) | % | 5.04% | 5.05% | 5.05% |
| Annual Depreciation amount | ₹ Crores | 243.17 | 250.97 | 250.97 |
| Allowable Depreciation for the year | ₹ Crores | 243.17 | 250.97 | 250.97 |

Provisions of the Regulation:

126. Regulation 33 of MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015 provides that,

“33.1 Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof. In case of the tariff of all the units of a generating station for which a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial operation of the generating station taking into consideration the depreciation of individual units.

Provided that effective date of commercial operation shall be worked out by considering the actual date of commercial operation and installed capacity of all the units of the generating station for which single tariff needs to be determined.

33.2 The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission. In case of multiple units of a generating station, weighted average life for the generating station shall be applied. Depreciation shall be chargeable from the first year at the commercial operation.

33.3 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 development of the Plant.

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

Provided also that any depreciation disallowed on account of lower

availability of generating station or generating unit shall not be allowed to be recovered at a later stage during the useful life and the extended life.

Provided that salvage value for IT equipment and softwares shall be considered as NIL and 100 % value of the assets shall be considered depreciable.

33.4 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.

33.5 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 effective date of commercial operation of the station shall be spread over the balance Useful life of the assets.

33.6 In case of the existing Projects, the balance depreciable value as on 1.4.2016 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31.3.2016 from the gross depreciable value of the assets.

33.7 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%.

33.8 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."

33.9 The generating company shall submit the details of proposed capital expenditure during the fag end of the project (five years before the useful life)

along with justification and proposed life extension. The Commission based on prudence check of such submissions shall approve the depreciation on capital expenditure during the fag end of the project.....”

Commission’s Analysis:-

127. The petitioner claimed depreciation by considering opening GFA of ₹ 4698.66 Crores whereas the CA certificate filed by the petitioner indicating total actual capital expenditure of ₹ 4330 Crores as on CoD. Moreover, the petitioner also considered additional capitalization of ₹ 125.31 Crores during FY 2016-17.
128. In form TPS 11 of the petition, the petitioner worked out the weighted average rate of depreciation by applying the rate for different components of the capital cost in accordance with the Regulations, 2015.
129. The depreciation on the Gross Fixed Assets (considered as on CoD) is worked out in this order on the following basis:
- For the purpose of computation of depreciation, the opening Gross Fixed Assets is considered as the capital cost (as on CoD) considered in preceding paragraphs.
 - The additional capitalization is not considered during FY 2016-17.
 - The depreciation during the year has been computed by applying the weighted rate of depreciation as filed by the petitioner.
130. Based on above, the depreciation is worked out in this order as given below:-

Table 25: Depreciation allowed (₹ in Crores)

| Sr. No. | Particular | Unit | FY2016-17 |
|---------|--|----------|----------------|
| 1 | Opening Gross Block | ₹ Crores | 3719.35 |
| 2 | Addition during the year | ₹ Crores | 0.00 |
| 3 | Closing Gross Block | ₹ Crores | 3719.35 |
| 4 | Average Gross Block | ₹ Crores | 3719.35 |
| 5 | Wt. average rate of depreciation | % | 5.04 |
| 6 | Annual Depreciation amount | ₹ Crores | 187.46 |
| 7 | Cumulative depreciation proportionate to No. of days operational in the year | ₹ Crores | 171.02 |

131. The petitioner is directed to file a detailed year-wise Assets-Cum-Depreciation register with the final tariff petition for determination of final tariff of its generating unit.

Operation & Maintenance Expenses:

Petitioner's Submission:

132. The petitioner submitted that the Normative O&M Charges may please be considered as specified in Clause 35.8 of the MPERC Tariff Regulations, 2015 for new 600 MW thermal generating unit for FY 2016-17, i.e. ₹ 16.27 Lakhs/MW, totaling to ₹ 97.62 Crore; ₹ 17.30 Lakhs/MW for FY 2017-18 totaling to ₹ 103.80 Crores and ₹ 18.38 Lakhs/MW for FY 2018-19 totaling to ₹ 110.28 Crores.

Provisions in Regulation:

133. Regulation 35.1 of MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015 provides that,

“Operation and Maintenance Expenses for thermal and hydro power stations for the Tariff period shall be determined based on normative O&M expenses specified by the Commission in these Regulations. The normative operation and maintenance expenses for the thermal generating stations are specified separately for the thermal power stations commissioned on or before 31.03.2012 and the power stations commissioned on or after 01.04.2012. The normative operation and maintenance expenses are also specified separately for the existing and new projects.”

Table 26: O&M Norms for Thermal Units Commissioned on or after 01.04.2012
(₹ in lakh/MW)

| Units (MW) | FY 2016-17 | FY 2017-18 | FY 2018-19 |
|------------|------------|------------|------------|
| 600 | 16.27 | 17.30 | 18.38 |

Provided that water charges shall be allowed based on water consumption depending upon type of plant, type of cooling water system etc., subject to prudence check. The details regarding the same shall be furnished along with the petition.....”

Commission's Analysis:-

134. Based on the above Regulations, the operations and maintenance expenses allowed in this order for the petitioner's generating unit for FY 2016-17 is worked out as given below:-

Table 27: Operation & Maintenance Expenses Allowed

| Sr. No. | Particular | Unit | FY 2016-17 |
|---------|---------------------|----------|--------------|
| 1 | Installed Capacity | MW | 600 |
| 2 | Per MW O&M expenses | ₹ L/MW | 16.27 |
| 3 | Annual O&M expenses | ₹ Crores | 97.62 |

Interest on Working Capital:

Petitioner's submission:

135. The petitioner broadly submitted the following:

The petitioner worked out the working capital for coal based generating stations as per clause 34 of the MPERC Tariff Regulations, 2015. Further, the interest on working capital is worked out as per clause 34.3 of the MPERC Tariff Regulations, 2015 which provides that

“Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2016 or as on 1st April of the year during the tariff period 2016-17 to 2018-19 in which the generating station or a unit thereof, is declared under commercial operation, whichever is later.”

Since State Bank of India's base rate of interest is 9.30% as on 1st April of the relevant financial year, the normative rate of interest for Working Capital may please be approved as 12.80%. Considering above, 'Interest on Working Capital' is tabulated as under:

Table 28: Working Capital filed

| Particulars | Unit | FY 2016-17 | FY 2017-18 | FY 2018-19 |
|--|-----------------|---------------|---------------|---------------|
| Cost of coal for 2 months | ₹ Cr | 168.53 | 176.95 | 185.80 |
| Cost of fuel oil for two months | ₹ Cr | 1.47 | 1.54 | 1.62 |
| Maintenance Spares @20% of the O&M charges | ₹ Crores | 19.52 | 20.76 | 22.06 |
| Receivables for two months | ₹ Crores | 372.52 | 381.75 | 388.21 |
| O&M charges for one month | ₹ Cr | 8.14 | 8.65 | 9.19 |
| Total working capital | ₹ Crores | 570.18 | 589.65 | 606.88 |
| Applicable rate of interest (Normative) | % | 12.80 % | 12.80 % | 12.80 % |
| Interest on working capital | ₹ Crores | 72.98 | 75.48 | 77.68 |

Provisions in Regulation:

136. Regulation 34 of MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015 provides that,

34.1 *“The Working Capital shall cover:*

(1) *Coal- based thermal generating stations*

- (a) *Cost of coal towards stock, if applicable, for 15 Days for pit-head generating stations and 30 days for non-pit-head generating stations for generation corresponding to the normative annual plant availability factor or the maximum coal stock storage capacity whichever is lower;*
- (b) *Cost of coal for 30 days for generation corresponding to the normative annual plant availability factor;*
- (c) *Cost of secondary fuel oil for two months for generation corresponding to the normative annual plant availability factor, and in case of use of more than one secondary fuel oil, cost of fuel oil stock for the main secondary fuel oil.*
- (d) *Maintenance spares @ 20% of the Operation & maintenance expenses specified in Regulation 35 ;*

- (e) *Receivables equivalent to two months of capacity charges and energy charges for sale of electricity calculated on the Normative Annual Plant Availability Factor; and*
- (f) *Operation and Maintenance expenses for one month.*
- 34.2 *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 three months preceding the first month for which tariff is to be determined and no fuel price escalation shall be provided during the Tariff period.”*
- 34.3 *“Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.04.2016 or as on 1st April of the year during the tariff period 2016-17 to 2018-19 in which the generating station or a unit thereof, is declared under commercial operation, whichever is later.*
- 34.4 *Interest on working capital shall be payable on normative basis notwithstanding that the Generating Company has not taken loan for working capital from any outside agency.*

Commission’s Analysis:

137. With regard to cost of coal and oil considered in working capital, vide Commission’s letter dated 9th June, 2016, the petitioner was asked to justify the cost of coal and oil in light of the Regulations 34.1 (a) & (b) and 34.1(c) of the Regulations, 2015 respectively.
138. By affidavit dated 16th June, 2016, the petitioner submitted that the instant power plant is non-pit-head, maximum coal stock storage capacity is 2,35,000 MT which is more than the 30 days of storage capacity and in respect of secondary fuel oil, the cost of LDO has been considered. The petitioner also filed the detailed working for cost of coal and oil claimed by it for working capital purpose in this regard
139. The working capital for Thermal power stations is worked out by the Commission based on the aforesaid norms as given below :

(a) Cost of coal towards stock and cost of coal towards generation:

140. The petitioner has confirmed that the coal storage capacity of its coal yard is for more than one month. Accordingly, as per provision under Regulations, the Commission has considered cost of coal towards stock for 30 days for non-pit head generating stations for generation and cost of coal for 30 days for generation corresponding to the normative annual plant availability factor. Therefore, the cost of coal for 60 days has been considered for working capital purpose.
141. With the amended petition, the petitioner filed laboratory test report indicating weighted average GCV of coal on 'as received basis'. By affidavit dated 3rd August, 2016, the petitioner filed the weighted average rate of linkage coal during preceding three months. Thus, the cost of coal for 60 days is worked out by considering weighted average landed price of linkage coal and GCV on "as received basis" for the working capital purpose as given below:

Table 29: Cost of Coal for Working Capital

| Sr. No. | Particular | Unit | FY 2016-17 |
|----------------|--|-----------------|-------------------|
| 1 | Station Heat Rate | Kcal/kWh | 2338 |
| 2 | Gross Calorific Value | Kcal/kg | 3978 |
| 3 | Annual Coal Quantity | MT | 2640784 |
| 4 | Two months coal stock | MT | 434102 |
| 5 | Rate of Coal for working capital | ₹ /MT | 3437.92 |
| 6 | Amount of two months coal stock | ₹ Crores | 149.24 |

142. Regulation 34.2 of the tariff Regulations, 2015 provides that 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 the Gross Calorific Value of the fuel as per actual for the three months preceding the first month for which tariff is to be determined and no fuel price escalation shall be provided during the tariff period.

(b) Secondary Fuel Oil Cost

143. The petitioner filed the cost of secondary fuel oil based on the fuel oil procured during preceding three months (Feb. to April). The weighted average rate of secondary fuel oil is worked out by the petitioner accordingly.
144. Regulation 34.1 (c) of the Regulations, 2015 provides that, in case of use of more than one secondary fuel oil, cost of fuel oil shall be for the main secondary fuel oil. In the present case, the petitioner is using only one secondary fuel oil (LDO) due to some railway line constraints. Accordingly, the fuel oil component for working capital is worked out as given below:

Table 30: Cost of Secondary Fuel Oil for Working Capital

| Sr. No. | Particular | Unit | FY 2016-17 |
|---------|-----------------------------------|----------|-------------|
| 1 | Installed Capacity | MW | 600 |
| 2 | NAPAF | % | 85 |
| 3 | Two months stock of main fuel oil | KL | 372.30 |
| 4 | Rate of main secondary fuel oil | ₹/KL | 40046.65 |
| 5 | Cost of two months main fuel oil | ₹ Crores | 1.49 |

(c) Maintenance Spares

145. Maintenance spares for the working capital purpose is worked out as 20% of the normative annual O&M expenses allowed for the generating unit in accordance to the provision under Regulations.

Table 31: Maintenance Spares (₹ in Crores)

| Particular | Annual O&M Expenses | 20% of O&M Expenses |
|-----------------------------------|---------------------|---------------------|
| Maintenance Spares for FY 2016-17 | 97.62 | 19.52 |

(d) Receivables

146. Receivables for thermal power stations is worked out equivalent to two months' of Capacity (Fixed) charges and Energy Charges for sale of electricity calculated on the basis of Normative Annual Plant Availability Factor.

Table 32:Receivables for 2 Months (₹ in Crores)

| Sr. No. | Particular | Unit | FY 2016-17 |
|---------|---------------------------------|-----------------|---------------|
| 1 | Variable Charges – two months | ₹ Crores | 151.31 |
| 2 | Fixed Charges – two months | ₹ Crores | 146.99 |
| 3 | Receivables – two months | ₹ Crores | 298.30 |

(e) O&M Expenses

147. Normative Operation and Maintenance expenses of one month as determined in this order are considered for working capital as given below:

Table 33: O&M Expenses for One Month (₹ in Crore)

| Particular | Annual O&M Expenses | O&M Expenses for one Month |
|------------------------------------|---------------------|----------------------------|
| Operation and Maintenance Expenses | 97.62 | 8.14 |

148. The interest on working capital equal to Base Rate of SBI as on 1st April' 2016 (9.30%) + (3.50%) = 12.80% is considered in this order. Accordingly, the interest on working capital for FY 2016-17 is worked out as given below:

Table 34: Interest on Working Capital Allowed (₹ in Crores)

| Sr. No. | Particular | Unit | FY 2016-17 |
|---------|--|----------|---------------|
| 1 | Cost of coal for two months considering non pit head power station | ₹ Crores | 149.24 |
| 2 | Cost of fuel oil for two months | ₹ Crores | 1.49 |
| 3 | O&M Charges for one month | ₹ Crores | 8.14 |
| 4 | Maint. Spares 20% of the O&M charges | ₹ Crores | 19.52 |
| 5 | Receivables for two months | ₹ Crores | 298.30 |
| 6 | Total working capital | ₹ Crores | 476.69 |
| 7 | Applicable rate of interest | % | 12.80 |
| 8 | Interest on working capital | ₹ Crores | 61.02 |

Non-Tariff Income:

Provisions in Regulation:

149. Regulation 53 of the MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015 provides that

53.1 *“Any income being incidental to the business of the generating company derived from sources, including but not limited to the disposal of assets, income from investments, rents, income from sale of scrap other than the decapitalized /written off assets, income from advertisements, interest on advances to suppliers/contractors, income from sale of fly ash/rejected coal, and any other miscellaneous receipts other than income from sale of energy shall constitute the non tariff/other income*

53.2 *The amount of Non-Tariff /Other Income relating to the Generation Business as approved by the Commission shall be deducted from the Annual Fixed Cost in determining the Annual Fixed Charge of the Generation Company:*

Provided that the Generation Company shall submit full details of its forecast of Non-Tariff Income to the Commission in such form as may be stipulated by the Commission from time to time. Non tariff income shall also be Trued-up based on audited accounts.”

Commission’s Analysis:

150. In the instant petition, the Commission observed that the petitioner has not filed any projected non tariff income. The petitioner is directed to file the complete details of actual non tariff income in light of above Regulations based on Annual Audited Accounts alongwith the petition for determination of final tariff for its generating unit.

Normative Annual Plant Availability Factor

151. Normative Annual Plant Availability Factor (NAPAF) for the (1X600 MW) of the petitioner’s power plant as per MPERC (Terms and Conditions for determination of Generation tariff) Regulations, 2015 shall be considered for recovery of full capacity (fixed) charges. The NAPAF for the said power plant as per the Regulations, 2015 is 85%.

Summary of Annual Capacity (Fixed) Charges

152. The Annual Capacity (Fixed) Charges for 1x600 Mw (Phase I) generating unit in the subject petition provisionally determined in this order for FY 2016-17 are summarized below :

Table 35: Head Wise total Annual Capacity (Fixed) Charges Allowed

| Sr. No. | Cost Component | Unit | FY2016-17 |
|---------|--|----------|---------------|
| 1 | Return on equity | ₹ Crores | 172.95 |
| 2 | Interest charges on loan | ₹ Crores | 362.85 |
| 3 | Depreciation | ₹ Crores | 187.46 |
| 4 | Operation & Maintenance expenses | ₹ Crores | 97.62 |
| 6 | Interest on working capital | ₹ Crores | 61.02 |
| 7 | Annual capacity (fixed) charges | ₹ Crores | 881.89 |
| 8 | Less: Non-Tariff Income | ₹ Crores | 0.00 |
| 9 | Net Annual Fixed Charges (AFC) | ₹ Crores | 881.89 |
| 10 | No. of days in operation during the year | No. | 333.00 |
| 11 | AFC apportioned in actual days of operation | ₹ Crores | 804.57 |
| 12 | Annual capacity charges corresponding to 30% of Installed Capacity of the Unit | ₹ Crores | 241.37 |
| 13 | 95% of the above AFC allowed to be recovered by the petitioner | ₹ Crores | 229.30 |

153. The aforesaid Annual Capacity Charges have been computed based on norms specified under MPERC (Terms and Conditions for determination of generation tariff) Regulations, 2015. The above Annual Capacity (fixed) Charges are determined corresponding to the contracted capacity under PPA. The recovery of Annual Capacity (Fixed) charges shall be made by the petitioner in accordance with Regulation 36.2 to 36.4 of the Regulations, 2015.

Energy (Variable) Charges

Petitioner's submission:

154. In para 10 (i) of the amended petition, the petitioner worked out the Energy charges for the power generated from its phase-I, 1X600 MW Thermal Power Plant for the control period as following:

Table 36: Energy Charges Rate (₹ in kWh) filed in the petition

| <i>Description</i> | <i>Unit</i> | <i>FY 2016-17</i> | <i>FY 2017-18</i> | <i>FY 2018-19</i> |
|--|------------------|-----------------------|-----------------------|-----------------------|
| <i>Capacity</i> | <i>MW</i> | 600 | 600 | 600 |
| <i>Plant Load Factor</i> | <i>%</i> | 85% | 85% | 85% |
| <i>Gross Station Heat Rate</i> | <i>Kcal/kWh</i> | 2382 | 2382 | 2382 |
| <i>Auxiliary Energy Consumption</i> | <i>%</i> | 5.75% | 5.75% | 5.75% |
| <i>Energy Generation - Gross</i> | <i>MU</i> | 4479.84 | 4479.84 | 4479.84 |
| <i>Auxiliary Energy Consumption</i> | <i>MU</i> | 257.59 | 257.59 | 257.59 |
| <i>Ex-bus Energy Sent Out</i> | <i>MU</i> | 4222.25 | 4222.25 | 4222.25 |
| <i>Specific Oil Consumption</i> | <i>ml/kWh</i> | 0.50 | 0.50 | 0.50 |
| <i>Wt. Avg. GCV of Oil</i> | <i>KCal/Ltr.</i> | 9800 | 9800 | 9800 |
| <i>Price of Oil</i> | <i>₹/KL</i> | 39339 | 41306 | 43371 |
| <i>Wt. Avg. GCV of Coal</i> | <i>kCal/kg</i> | 3830 | 3830 | 3830 |
| <i>Price of Coal</i> | <i>₹/MT</i> | 3607 | 3787 | 3976 |
| <i>Heat Contribution from SFO</i> | <i>Kcal/kWh</i> | 4.90 | 4.90 | 4.90 |
| <i>Oil Consumption</i> | <i>KL</i> | 2240 | 2240 | 2240 |
| <i>Heat Contribution from Coal</i> | <i>Kcal/kWh</i> | 2378 | 2378 | 2378 |
| <i>Specific Coal Consumption</i> | <i>kg/kWh</i> | 0.6208 | 0.6208 | 0.6208 |
| <i>Normative Transit Loss</i> | <i>%</i> | 0.80% | 0.80% | 0.80% |
| <i>Coal Consumption</i> | <i>MMT</i> | 2.80 | 2.80 | 2.80 |
| <i>Total Cost of Oil</i> | <i>₹ Cr</i> | 8.81 | 9.25 | 9.71 |
| <i>Total Cost of Coal</i> | <i>₹ Cr</i> | 1011.17 | 1061.73 | 1114.81 |
| <i>Total Fuel Cost</i> | <i>₹ Cr</i> | 1019.98 | 1070.98 | 1124.53 |
| <i>Rate of Energy Charge from Oil ex-bus</i> | <i>Paise/kWh</i> | 2.09 | 2.19 | 2.30 |
| <i>Rate of Energy Charge from Coal at ex-bus</i> | <i>Paise/kWh</i> | 239.49 | 251.46 | 264.03 |
| <i>Rate of Energy Charge ex-bus per kWh</i> | <i>Paise/kWh</i> | 241.57 | 253.65 | 266.33 |

Provisions in Regulation:

155. With regard to Energy charges (variable charges) of thermal power stations, Regulation 28 of MPERC (Terms and Conditions for Determination of Tariff) Regulations, 2015 provides that,

Energy charges shall be derived on the basis of the Landed Fuel Cost (LFC) of a generating station (excluding hydro) and shall consist of the following cost:

- (a) Landed Fuel Cost of primary fuel; and
- (b) Cost of secondary fuel oil consumption

Provided that any refund of taxes and duties alongwith any amount received on account of penalties from fuel supplier shall have to be adjusted in fuel cost.

156. Regulation 36 of MPERC (Terms and Conditions for Determination of Tariff) Regulations, 2015 further provides as under;

36.5 "The energy charge shall cover primary and secondary fuel cost and shall be payable by every beneficiary for the total energy scheduled to be supplied to such beneficiary during the calendar month on ex-power plant basis, at the energy rate of the month (with fuel price adjustment). Total energy charges payable to the generating company for a month shall be:

(Energy charge rate in ₹/kWh) X {Scheduled energy (ex-bus) for a month in kWh.}

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

For coal based stations

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

Where,

AUX = Normative Auxiliary Energy Consumption in percentage.

CVPF = (a) Weighted Average Gross Calorific Value of coal as received, in kCal per kg, for coal based stations.

(b) In case of blending of fuel from different sources, the weighted average Gross calorific value of primary fuel shall be arrived in proportion to blending ratio.

CVSF = Calorific Value of secondary fuel, In kCal per ml.

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

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

LPPF = Weighted average Landed price of Primary Fuel, in Rupees per kg, per liter or per standard cubic meter, as applicable, during the month. (In case of blending of fuel from different from different sources, the weighted average landed price of primary fuel shall be arrived in proportion to blending ratio)

SFC = Specific Fuel Oil Consumption, in ml/kWh

LPSFi = Weighted Average Landed Price of Secondary Fuel in ₹./ml during the month

36.7 *The generating company shall provide to the beneficiaries of the generating station details of parameters of GCV and price of fuel i.e. domestic coal, imported coal, e-auction coal etc., as per the forms prescribed to these regulations.*

Provided that the details of blending ratio of the imported coal with domestic coal, proportion of e-auction coal and weighted average GCV of fuels as received shall be provided separately along with the bills of the respective month:

Provided further that copies of the bills and details of parameters of GCV and price of fuel i.e. domestic coal, imported coal, e-auction coal 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 three months-----“.

Commission’s Analysis:

157. The energy (variable) charges of thermal power station shall cover both primary and secondary fuel costs and shall be payable for the total energy scheduled to be supplied to beneficiary during the calendar month on ex-power plant basis.

158. In order to determine the energy charges of thermal power station, the operating parameters i.e, Gross Station Heat Rate, Auxiliary Energy Consumption, Specific Secondary Consumption, Gross Calorific Value and Landed Cost of Coal & secondary fuel oil need to be examined as per provisions under MPERC (Terms and Conditions for determination of

Generation Tariff) Regulations 2015.

Operating Parameters:

159. While determining the Energy Charges, the petitioner considered the following operating parameters,

Table 37: operating parameters filed

| Particular | Unit | Value |
|------------------------------|----------|-------|
| Auxiliary Energy Consumption | % | 5.75 |
| Specific Oil Consumption | ml/kWh | 0.50 |
| Transit Loss | % | 0.80 |
| Gross Station Heat Rate | Kcal/kWh | 2382 |

160. As per clause 39.3 (E) of the MPERC Tariff Regulations, 2015, Normative Auxiliary Energy Consumption for 500 MW and above units with natural draft cooling tower or without cooling tower is prescribed as 5.25%. The aforesaid Regulation further provides that for thermal generating stations with induced drafts Cooling Towers, the norm shall be further increased by 0.50%.
161. The petitioner submitted that the cooling towers at the Thermal Power Project are induced draft type which were preferred over natural draft type at the time of Project Implementation considering the climatic conditions of the region of District Seoni area and the advantages of IDCT over natural draft cooling towers in terms of construction period, cost and area requirement. However, the Cooling Towers installed in the power plant is of Induced Draft type, the petitioner considered normative auxiliary energy consumption as 5.75%.
162. In view of the above, the Commission has considered Normative Auxiliary Energy Consumption for the generating unit of the petitioner's power project as 5.75% (5.25% + 0.50%) in accordance to the Regulations, 2015.
163. With regard to Specific fuel oil consumption, the petitioner has considered 0.5 ml/kWh in accordance to Regulation 39.3 (D) of MPERC (Terms and Conditions for determination of Generation tariff) Regulations, 2015. The same Specific fuel oil consumption is considered in this order.

164. The petitioner's power plant is 'Non-Pit Head' generating station. Therefore, normative transit and handling losses of 0.80% of the quantity of coal dispatched by the coal Companies as per proviso of Regulation 36.8 of the MPERC Tariff Regulations, 2015 is considered in this order.

Gross Station Heat Rate:

165. The petitioner worked out the Gross Station Heat Rate as per provisions under MPERC (Terms and Conditions for determination of Generation tariff) Regulations, 2012. In para 10 (b) of the amended petition the petitioner submitted that the instant power plant had achieved "100% MCR load" on 22nd March 2016, which was during the control period of the MPERC Regulations 2012, the unit may therefore be considered commissioned on the above date as per the provisions of the PPA as well as the extant regulations. The petitioner also filed a copy of letter dated 30th March 2016 issued by the Central Electricity Authority confirming the commissioning (achieving full load) of the instant power plant. In view of the above, the petitioner prayed that the Station Heat Rate norms applicable for the control period when the unit was commissioned i.e., FY 2013-16 be made applicable. The petitioner filed the manufacturer's certificate towards the guaranteed parameters of the thermal generating unit.
166. Accordingly, the Gross Station Heat Rate worked out by the petitioner as per Regulation 35.2 B of the MPERC Tariff Regulations, 2012, is given below:

Design Heat Rate at 100% MCR with 0% make-up water shall be
 $1944/0.869 = 2237 \text{ KCal/Kg}$

Since Design Heat Rate of 2237KCal/Kg is less than the upper limit (2294Kcal/KG) prescribed in Clause 35.2 B of the MPERC Tariff Regulations, 2012, the same may be considered for tariff determination.

Therefore, Gross SHR would be $1.065 \times 2237 = 2382.4 \text{ KCal/Kg}$

167. With regard to Gross Station Heat Rate, Regulation 39.3 (C) of MPERC (Terms and Conditions for determination of Generation tariff) Regulations, 2015 provides that;

Gross Station Heat Rate:

- (a) Existing Coal based thermal generating stations having COD on or after 1.4.2012 till 31.03.2016, (other than those covered under clause 39.2) shall be the heat rate norms approved during FY 2012-13 to FY 2015-16.

New thermal generating stations achieving COD on or after 1.4.2016:

- (b) **Coal-based Thermal Generating Stations = 1.045 X Design Heat Rate (kCal/kWh) (Emphasis supplied)**

Where the Design Heat Rate of a Unit means the Unit heat rate guaranteed by the supplier at conditions of 100% MCR, zero percent make up, design coal and design cooling water temperature/back pressure:

Provided that the design heat rate shall not exceed the following maximum design Unit heat rates depending upon the pressure and temperature ratings of the Units:

Table 38: Max. Design Unit Heat Rate as per Regulation

| Pressure Rating (Kg/cm²) | 150 | 170 | 170 | 247 |
|--|-------------------|----------------|----------------|----------------|
| SHT/ RHT (0C) | 535/535 | 537/537 | 537/565 | 565/593 |
| Type of BFP | Electrical Driven | Turbine driven | Turbine driven | Turbine driven |
| Max Turbine Cycle Heat rate (kCal/kWh) | 1955 | 1950 | 1935 | 1850 |
| Minimum Boiler Efficiency | | | | |
| Sub-Bituminous Indian Coal | 0.86 | 0.86 | 0.86 | 0.86 |
| Bituminous Imported Coal | 0.89 | 0.89 | 0.89 | 0.89 |
| Max. Design Unit Heat Rate (kCal/kWh) | | | | |
| Sub-Bituminous Indian Coal | 2273 | 2267 | 2250 | 2151 |
| Bituminous Imported Coal | 2197 | 2191 | 2174 | 2078 |

Provided further that in case pressure and temperature parameters of a Unit are different from above ratings, the maximum design Unit heat rate of the nearest class shall be taken:

Provided also that where Unit heat rate has not been guaranteed but turbine cycle heat rate and boiler efficiency are guaranteed separately by the same supplier or different suppliers, the Unit design heat rate shall be arrived at by

using guaranteed turbine cycle heat rate and boiler efficiency:

Provided also that if one or more Units were declared under commercial operation prior to 1.4.2016, the heat rate norms for those Units as well as Units declared under commercial operation on or after 1.4.2016 shall be lower of the heat rate norms arrived at by above methodology.

Note: In respect of Units where the boiler feed pumps are electrically operated, the maximum design Unit heat rate shall be 40 kCal/kWh lower than the maximum design Unit heat rate specified above with turbine driven BFP.

168. In light of the aforesaid Regulations, the Commission noted that the heat rate norms for new thermal generating stations achieving COD on or after 1.4.2016 have to be determined in accordance to the aforesaid Regulation 39.3 (C) (b) of MPERC (Terms and Conditions for determination of Generation tariff Regulations, 2015).
169. The Commission observed that the date of commercial operation (CoD) of the thermal generating unit is 3rd May 2016 which falls under the new control period of FY 2016-17 to FY 2018-19 and governed by the MPERC (Terms and Conditions for determination of Generation tariff Regulations, 2015). Therefore, the contention of the petitioner for consideration of SHR in accordance to the Regulations, 2012 on the basis of the date of commissioning of its generating unit is not correct in terms of provisions under the Regulations, 2015.
170. The petitioner filed the manufacturer's certificate towards the guaranteed parameters of the thermal generating unit. The details of the Gross Turbine Heat Rate and Steam Generator Thermal Efficiency as per manufacturer's certificate are as follows:

Table 39: Guarantee Parameters

| Manufacturer's Performance Guarantee Parameters | |
|---|--------------|
| Gross Turbine Heat Rate at 100% TMCR with 0% make-up | 1944 kCal/Kg |
| Steam Generator Thermal Efficiency at 100% TMCR with 0% make-up | 86.90 % |

171. The Commission has considered the SHR of petitioner's thermal generating unit on the basis of the aforesaid guaranteed parameters in accordance to the provisions under the tariff Regulations, 2015 as given below:

Table 40: Gross Station Heat Rate

| S. No. | Station Heat Rate | Unit | Value |
|----------|---|-----------------|-----------------|
| A | Design Turbine Cycle Heat Rate | kCal/kWh | 1,944.00 |
| B | Design Boiler Efficiency | % | 86.90% |
| C | Design Heat Rate | kCal/kWh | 2,237.05 |
| D | Allowable Max Turbine Cycle Heat Rate | kCal/kWh | 1,950.00 |
| E | Min. Allowable Boiler Efficiency as per Reg. | % | 86.00% |
| F | Allowable Heat Rate | kCal/kWh | 2,267.44 |
| | Least of (C) and (F) | kCal/kWh | 2,237.05 |
| | Gross Station Heat Rate (1.045 x Design Heat Rate) | kCal/kWh | 2,337.72 |

172. The petitioner considered Normative Plant Load Factor of 85.00% in accordance to Regulation 39.3 (B) of MPERC (Terms and Conditions for determination of Generation tariff Regulations, 2015).
173. In view of the above, the norms for the operating parameters considered in this order are as given below:

Table 41: Operating Parameters

| S No | Station Heat Rate | Unit | Value |
|------|-------------------------------|----------|----------------|
| 1 | Auxiliary Energy Consumption | % | 5.75 |
| 2 | Specific Fuel Oil Consumption | MI/kWh | 0.50 |
| 3 | Gross Station Heat Rate | Kcal/kWh | 2337.72 |
| 4 | Plant Load Factor | % | 85.00 |
| 5 | Transit and Handling Loss | % | 0.80 |

Gross Calorific Value:

174. With regard to GCV of coal for Coal based Thermal Power Stations, Regulation 36.6 (a) of MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015 provides that weighted average gross calorific value of coal "as

received” in kCal per kg is considered for determination of energy charges. The aforesaid Regulation further provides that in case of blending of fuel from different sources, the weighted average GCV of primary fuel shall be arrived in proportion to blending ratio.

175. The petitioner submitted that weighted Average GCV of domestic coal of SECL (G11 – 4000 Kcal/Kg) and MCL (G12 –3700 Kcal/Kg) is taken as 3929 Kcal/Kg, whereas that of E-auction coal is 3140 Kcal/Kg. The weighted average GCV of coal as delivered worked out by the petitioner is 3830 Kcal/kg and same has been applied for determination of energy charges. The petitioner also filed the copy of the coal analysis report indicating date-wise GCV and other parameters of coal received from SECL during the month of March, April and May, 2016.
176. In response to query raised by the Commission, by affidavit dated 16th June, 2016, the petitioner confirmed that the GCV indicated in the coal analysis report is GCV on received basis as per Regulation 36.6 (A) of the tariff Regulations, 2015.
177. It is observed from the submission of the petitioner in Para 10 (C) of its amended petition that the total actual annual consumption of the Phase-I, 1X600 MW Unit would be around 28.03 LMT whereas, FSA coal covers about 24.50 LMT which would be sufficient to meet out the requirement of coal for generation of electricity upto the contracted capacity in the PPA.
178. In view of the above, the Commission has considered the weighted average GCV of of 3978 Kcal/kg for SECL coal in this order “as received basis” in accordance to the Regulations, 2015 as indicated in coal analysis report submitted by the as Annexure 28 of its Amended petition..

Landed Cost of Coal:

179. With regard to landed cost of coal, the petitioner has submitted the following:

“The main source of primary fuel, Coal, is from SECL and MCL of Coal India Ltd. According to LOAs and FSAs, the supply shall in the proportion of 76.4 % from SECL and 23.6 % from MCL. From SECL, the supply will be of G11 Grade

(from Korba/Raigarh) and from MCL, the supply of coal shall be of G12 Grade. The basic price of various grades of coal has last been notified by Coal India Ltd. on 27th May 2013. Thereon, various taxes, duty, levy, royalty and transportation cost shall be loaded to arrive at landed coal price as per provision of Clause 36.8 of the MPERC Tariff Regulations, 2015 -----.

Further, it may be clarified that the actual annual coal consumption of the Phase-I, 1x600 MW Unit would be around 28.03 Lakh MT, calculated, based on various norms prescribed by the Commission; whereas FSAs cover only about 24.50 Lakh MT, which would be sufficient to meet out, only up to 87% of the total consumption. Balance 13% coal shall be arranged by the petitioner outside FSA through E-auction.

180. With regard to coal transportation arrangement from Mine to power station, the petitioner in para 6.2 of the amended petition submitted the following:

- “JPL would be fed coal, comprising majorly the linkage coal from SECL and MCL for which FSAs have already been executed. The railway line envisaged to feed this coal to JPL is currently a narrow gauge line from Jabalpur up till Binaiki station and distance is 66 Km (Binaiki is an intermediate station between Jabalpur – Nainpur section), which is being converted to Broad gauge by Indian Railways.
- South East Central Railway (SECR) has got clearance from Forest department for Jabalpur – Nainpur section. L-Section and alignment plan has already been frozen for this section. SECR had planned to block this section in December 2011 for initiating the broad gauge conversion work; however it could not happen due to insufficient funds with Railways. In concurrence to the same JPL has applied for the in-principle approval on 28th July 2010 and received the respective approval on 10th August 2010. Subsequently, DPR was submitted on 8th July 2011 and approved on 16th August 2012 as Railways got comfort on the execution of Jabalpur – Gondia Main line gauge conversion. Later, ESP was applied on 12th October 2012, and approved on 4th March 2015, translating the net delay to 3 years just for clearances from the government.

- *SECR has indicated a budgeted requirement of approximately ₹ 265 crore for completion of balance work of Broad Gauge conversion between Jabalpur to Nainpur section, out of which ₹ 100 crore is sanctioned by the Central Govt. for the FY 14-15 and ₹ 165 crore for FY 15-16. It is to be noted that there was no budget allocation in the last 3 financial years before FY 14-15 by Railways which has led to major execution delays in this project. Railways has now confirmed that gauge conversion work on the entire section is in advanced stage of completion.*
- *As per the latest progress, about 90% of work has been completed between Jabalpur to Binaiki. 95% of bridges work has been completed. Railways is targeting to complete the entire work till Binaiki by December 2016.*
- *A dedicated railway line has been planned from Binaiki, which is the nearest take off point from the existing main railway line, to JPL. The total length of the line is 2.9 km including the inside plant coverage.*
- *Total Land Envisaged for the stretch between Binaiki to plant site is 23.39 acres, out of which 10.18 acres of private land is in possession. Sec-4 has been published for 9.31 acres of tribal land Lease deed has been signed for 3.9 acres of Government land. This effectively translates to complete front availability for work.*
- *ESP has been approved on 4th March 2015 and subsequently detailed engineering drawings have been stamped / acknowledged by GoMP and process for obtaining approval of IR is underway.*
- *The award of contracts has been completed recently. Completion of Bridge Construction and Earthwork filling is planned by October 2016, leading to track linking by December 2016. Signaling and Commissioning are planned to be completed by January 2017.*
- *Considering the progress from railways and our preparedness, the line is expected to be completed by January 2017 and thereafter, coal transportation through rail up to plant site would be started.*

- *As an intermediate arrangement, JPL has developed a unique mechanism for coal road transport and truck unloading by deploying a dedicated loop-in/loop-out system consisting of:*
 - *Railways Goods Shed Government railway siding at Garha which is 24 hr operational.*
 - *Identified Route - 122 km*
 - *4 no's 100 T weigh bridges for incoming trucks*
 - *3 no's 40 T weigh bridges for outgoing trucks*
 - *Dedicated parking areas both incoming and outgoing traffic*
 - *Trained staff and SOP's have been deployed.*
 - *All the respective statutory clearances have been secured*
 - *For the purpose of Start-up Fuel and running the plant till January 2017, the road transportation is being considered. The costing shall be on actuals."*

181. By affidavit dated 16th June' 2016, the petitioner submitted the cost of coal transportation is on the higher side as last mile railway connectivity for transportation of coal is still not available and the railway line from Binaiki railway station up to plant site is expected to be completed by **January 2017**, and thereafter, coal transportation through rail up to plant site would be started. As an intermediate arrangement, the petitioner has developed a unique mechanism for coal road transport and truck unloading by deploying a dedicated loop-in/loop-out system. For running the plant till January 2017, the road transportation is being considered.

182. By affidavit dated 4th August, 2016, the petitioner filed the details of procurement of Linkage coal during the month of March and April, 2016. The petitioner also worked out the weighted average landed price of linkage coal as ₹ **3437.93 / MT**. The aforesaid weighted average landed price of coal is inclusive of ₹ 753 / MT road transportation. As submitted by the petitioner, the charge of road transportation is applicable only till January, 2017; thereafter only the rail transportation shall be applicable. In view of the aforesaid and the reasons put forth by the petitioner for delay in completion of work regarding last mile railway connectivity for transportation of Coal, the weighted average landed price of coal is considered by including the cost of

road transport also up to January, 2017 in this order. The petitioner is directed to segregate and mention the actual expenditure incurred/ to be incurred towards “the intermediate arrangement on the mechanism for coal road transport and truck unloading by deploying a dedicated loop-in/loop-out system” in the final capital cost of its generating unit (in the subject petition) duly supported with the Annual Audited Accounts while filing the petition for determination of final tariff in the subject matter.

183. Regarding the landed cost of coal, Regulation 36.8 of MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015 provides as follows:

“The landed cost of fuel for the month shall include price of fuel corresponding to the grade and quality of fuel inclusive of royalty, taxes and duties as applicable, transportation cost by rail / road or any other means, and, for the purpose of computation of energy charge, and in case of coal shall be arrived at after considering normative transit and handling losses as percentage of the quantity of coal dispatched by the coal supply company during the month as given below:

Pithead generating stations: 0.2%

Non-pithead generating stations: 0.8%

Provided that in case of pit head stations if coal is procured from sources other than the pit head mines which is transported to the station through rail, transit loss of 0.8% shall be applicable:

Provided further that in case of imported coal, the transit and handling losses shall be 0.2%

184. Regulation 36.8 of Regulations, 2015 provides that the landed cost of coal shall be arrived at by considering normative transit and handling losses as percentage of the quantity of coal dispatched by the coal supply company during the month. On perusal of the details filed by the petitioner, the Commission observed that while determining the weighted average landed cost of coal, the petitioner has not considered the normative transit and handling losses. The petitioner also confirmed that it has not

considered transit and handling loss in landed cost of coal. Therefore, the transit and handling losses are considered in determination of Energy charges rate in this order.

185. By affidavit dated 4th August, 2016, the petitioner worked out the weighted average landed price of coal are as follows:

Table 42: Wt. average Landed price of Coal

| Period | Source | RR Qty. | Amount | Rly. Freight | Road Transport | Total | Entry Tax | Landed Cost |
|--------------------------------|--------|---------|-----------|---------------|----------------|-----------|-----------|-------------|
| | | (MT) | (₹) | (₹) | (₹) | (₹) | (₹) | (₹) |
| 26.03.2016 to 30.04.2016 | SECL | 113557 | 172190325 | 1141122 90 | 85508511 | 371811126 | 18590556 | |
| Unit Rate | | | 1516 | 1005 | 753 | 3274 | 164 | 3437.92 |

Landed Cost of Secondary Fuel Oil:

186. With regard to cost of Secondary fuel oil, the petitioner in para 10 (g) of the amended petition submitted the following:

The plant will be using LDO as the secondary fuel till the railway line up to Binaiki for transporting HFO tankers is not available (expected in fourth quarter of FY 2016-17). Fuel Oil 380 (HFO) is not a regular product. It is normally used for bunkering and hence manufactured on order. The planning for manufacturing is required to be given a month in advance. Since pour point is high, it tends to solidify during transportation due to high lead time and needs to be transported in specially designed tankers with heating arrangement. Such tankers are not easily available in market.

The petitioner respectfully submits that it would be using LDO as the secondary fuel oil till the railway line upto Binaiki for transporting HFO tankers is available. Specific Oil consumption considered @ 0.50 ml/Kwh as specified in Clause 39.3 D of the MPERC Tariff Regulations, 2015 on the annual generation based on 'Normative Annual Plant Availability Factor (NAPAF)' of 85% as specified in Clause 39.3 A of the MPERC Tariff Regulations, 2015.

187. By affidavit dated 3rd August, 2016, in response to the Commissions queries, the petitioner submitted the details of the LDO procurements done during the three months preceding the date of the CoD are as given below:

Table 43: Wt. average cost of Oil

| Month | Financial Year | Quantity (KL) | Value (Rs) | Average Rate (Rs/KL) |
|---------------------------------------|----------------|----------------|------------------------|----------------------|
| Feb'16 | 2015-16 | 1,130.46 | 3,09,59,453.00 | 27,386.60 |
| Mar'16 | 2015-16 | 2,100.74 | 9,44,61,081.71 | 44,965.71 |
| April'16 | 2016-17 | 1,026.22 | 4,50,74,526.89 | 43,923.08 |
| Total (preceding three months) | | 4257.41 | 17,04,95,061.60 | 40,046.65 |

188. The petitioner further submitted that the Landed cost of LDO of Rs 39,339 as indicated at Page 110 of the Petition. Additional Forms captures the average landed price of the sample invoices of the LDO submitted along with the petition which were procured in the months of February, March & April 2016. The petitioner clarifies that this is not the average cost of the complete LDO procurement in such three months. The correct average cost of procurement of LDO for the preceding three months may kindly be considered as Rs 40,046.65 per KL.
189. In view of the above, the Commission observed that the petitioner worked out the weighted average rate of secondary fuel oil based on the oil purchased during preceding three months i.e. Feb. to April, 2016. The petitioner also filed the copies of bills/invoices in respect of secondary fuel purchased during the last three months for determination of energy charges
190. The landed price of secondary fuel oil as worked out by the petitioner of ₹ **40,046.65 /KL** is considered for determination of energy charges in this order.
191. Accordingly, the Energy Charges for FY 2016-17 are worked out in this order as given below:

Table 44: Computation of Energy Charges worked out

| Sr. | Particular | Unit | FY2016-17 |
|-----|------------|------|-----------|
|-----|------------|------|-----------|

| No. | | | |
|-----|--|---------------|--------------|
| 1 | Installed Capacity | MW | 600 |
| 2 | Normative Aannual Plant Aavailability Factor | % | 85 |
| 3 | Gross Generation at generator terminals | MU's | 4467.60 |
| 4 | Net Generation at ex-bus | MU's | 4210.71 |
| 5 | Gross Station Heat Rate | kCal/kWh | 2337.72 |
| 6 | Sp. Fuel Oil Consumption | ml/kWh | 0.50 |
| 7 | Aux. Energy Consumption | % | 5.75 |
| 8 | Transit and handling Loss | % | 0.80 |
| 9 | Weighted average GCV of Oil | kCal/ltr. | 10000 |
| 10 | Weighted average GCV of Coal | kCal/kg | 3978 |
| 11 | Weighted average price of Oil | ₹ /KL | 40046.65 |
| 12 | Weighted Average price of Coal | ₹/MT | 3437.92 |
| 13 | Heat Contributed from HFO | kCal/kWh | 5.00 |
| 14 | Heat Contributed from Coal | kCal/kWh | 2332.72 |
| 15 | Specific Coal Consumption | kg/kWh | 0.5864 |
| 16 | Sp. Coal consumption including transit loss | kg/kWh | 0.5911 |
| 17 | Rate of Energy Charge from Oil | ₹/kWh | 0.020 |
| 18 | Rate of Energy Charge from Coal | ₹/kWh | 2.032 |
| 19 | Total Rate of Energy Charge from Coal and Oil | ₹./kWh | 2.052 |
| 20 | Energy Charge rate at ex-bus | ₹/kWh | 2.177 |

192. 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 on “as received basis”. The recovery of energy charges shall be made in accordance with Regulation 36.6 to 36.8 of the Regulations, 2015.
193. The Commission would like to mention in this order that the approach for determination of Energy Charge Rate (ECR) in MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015 has been changed from GCV of coal on “as fired basis” to “as received basis” as specified by the Central Commission in CERC (Terms and Conditions of Tariff) Regulations, 2014 for determination of tariff of Generation Companies. In Writ Petition No. 1641 of 2014 Hon’ble High Court of Delhi vide its order dated 07.09.2015, directed the Central Commission to decide the issue i.e. at what stage the GCV of coal on “as received

basis” should be measured. Vide order dated 25th June’ 2016, in Petition No. 283/GT/2014 CERC decide the issue. The relevant portion of aforementioned CERC’s order is extracted as under:

“55. The only practicable alternative is to take samples from the wagons either manually or by installing Hydraulic Auger at the suitable places. GUVNL vide affidavit dated 30.11.2015 has submitted the video recording of the samples of coal being collected from the railway wagon at the generating stations of GSECL, namely at Ukai TPS and Wanakbori TPS. They have also filed the laboratory testing procedure of the samples taken from the wagons/ Coal Rakes at Wanakbori TPS. From the examination of the video recording, it is observed that samplings of coal were being collected from the railway wagons using Hydraulic Auger. The process of taking samples was found to be smooth, capable of taking representatives samples from any depth of the wagon, from different locations without taking too much of time and the process appears to be same and reliable. GSECL has been successfully using the Hydraulic Auger for collection of samples from the top of the wagons and NTPC and other generating companies can adopt and improvise the protocol for collection of samples from the wagons. As regards the threat to the safety of the personnel, the issue has been discussed in detail in para 41 of this order and the safeguards suggested in the said para should be adopted.”

“58. In view of the above discussion, the issues referred by the Hon’ble High Court of Delhi are decided as under:

- (a) there is no basis in the Indian Standards and other documents relied upon by NPTC etc. to support their claim that GCV of coal on as received basis should be measured by taking samples after crusher set up inside the generating station, in terms of Regulation 30(6) of the 2014 Tariff Regulations.
- (b) The samples for the purpose of measurement of coal on as received basis should be collected from the loaded wagons at the generating stations either manually or through the Hydraulic Auger in accordance with provisions of IS 436(Part 1/Section 1)-1964 before the coal is unloaded. While collecting the samples, the safety of personnel and equipment as discussed in this order should be ensured. After collection

of samples, the sample preparation and testing shall be carried out in the laboratory in accordance with the procedure prescribed in IS 436 (Part 1/ Section 1)-1964 which has been elaborated in the CPRI Report to PSERC.”

194. In view of above, the petitioner and Respondents are directed to ensure that the GCV of coal on “received basis” be considered in accordance with the above methodology decided by CERC. The petitioner and Respondents are also directed to ensure compliance with Regulation 36.7 to 36.10 of the Regulations, 2015, for appropriate billing and payment of Energy Charges.

Other Charges:

Petitioner’s Submission

195. In addition to above, the petitioner submitted the following for other charges:

- *The petitioner may please be allowed to recover E.D. and Cess on auxiliary power consumption and other taxes, if any, levied by the Statutory Authorities from the beneficiaries on pro-rata basis.*
- *The petitioner would be raising bills for recovery of incentive for which it is entitled to in terms of the MPERC Tariff Regulations, 2015. Accordingly, for the same the petitioner is not making any specific submission*
- *The petitioner may also be allowed to recover the fee paid by the petitioner to the Commission against this petition for determination of the tariff from the beneficiaries’ expenses on publication of public notice.*

Commission’s Analysis

196. The petitioner is allowed to recover the fees to be paid to MPERC and E.D. and Cess on auxiliary power consumption if any, as per Regulation 52 of (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015 on pro-rata basis subject to true up based on audited accounts.
197. The above tariff is provisionally determined for generating unit of Phase-1 and shall be effective from its CoD i.e. 3rd May, 2016 to 31st March, 2017 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 provisions under Regulation 7.10 of the MPERC (Terms and Conditions for determination of generation tariff) Regulations, 2015, on determination of the final tariff by the Commission after submission of the annual audited accounts and all other relevant details/documents and clarifications to the satisfaction of the Commission.

198. The petitioner is directed to file the final tariff petition at the earliest along with the Annual Audited Accounts and all other required details / documents ensuring compliance with the directives issued by the Commission in this order. The phase-wise/Unit-wise break-up of the figures in the audited accounts be also submitted by the petitioner with the final tariff petition in favor of its claims. All discrepancies and information gaps observed by the Commission in this order be eliminated while filing the petition for determination of final tariff in the subject matter.
199. With the above directions, this Petition No. 16 of 2016 is disposed of.

(Alok Gupta)
Member

(A. B. Bajpai)
Member

(Dr. Dev Raj Birdi)
Chairman

Date: 06th September' 2016
Place: Bhopal

Annexure I**Commission's observations and the Petitioner's response on the observations/queries raised by the Commission:****A. Infirm Power:**

With regard to the infirm power supplied to the grid, supplied during 23rd February, 2016 to 2nd May, 2016, the petitioner has filed Auditor's certificate certifying the fuel expenses on generation of infirm power. On scrutiny of the details of infirm power filed by the petitioner, the following discrepancies are observed;

- i. The rate of secondary fuel oil (LDO) used for generation of infirm power is ₹43989/KL and ₹43934 /KL for FY 2015-16 and FY 2016-17 respectively whereas, the wt. average rate of secondary fuel oil (LDO) for preceding three months used for claiming Energy Charges is ₹39339/KL. The petitioner has also filed a gist of invoices/bills of oil purchase during 23.02.2016 to 04.04.2016 indicating the weighted average rate of oil as ₹39339/KL.
- ii. Similarly, the rate of Coal used for generation of infirm power is ₹4694.58/MT and ₹4280.82 /MT for FY 2015-16 and FY 2016-17 respectively whereas, the wt. average rate of Coal for preceding three months used for claiming Energy Charges is ₹3607/MT.
- iii. On perusal of the details of coal used for generation of infirm power, it is observed that carpet coal of 7641 MT is considered for determining the weighted average rate of coal.
- iv. The petitioner has confirmed that the imported coal has been not used for generation of infirm power. The rate of linkage coal used for generation of infirm power during FY 2015-16 is indicated as ₹3388/MT. Moreover, the petitioner has provided the details of coal used for generation of infirm power during FY 2015-16. Such details for FY 2016-17 are not provided (P-29).
- v. The petitioner was asked to confirm if any coal quantity was allocated to it by the coal companies for commissioning activity of the unit. The response on this issue lacks clarity.

In view of the above observations, the petitioner is required to explain/ submit the following:

Issue:-

- a. The petitioner is required to explain with supporting documents the reasons for mentioning different rates of oil & coal for the same period.
- b. The petitioner is also required to explain the reasons for high rate of oil & coal considered for generation of infirm power.

Petitioner's Response:**Average cost of LDO**

The petitioner submits that the various equipment commissioning activities of the plant had started in August 2014 and initial consumption of LDO had started to achieve Boiler Light Up in September 2014. It was followed by Boiler Chemical Cleaning in May 2015 and Steam Blowing in June 2015. All these activities also need the boiler to be lighted up and therefore LDO was consumed during these commissioning activities. Major procurement of LDO to cater to these activities was done at different times during the whole of the FY 2015-16. The unit was synchronised on 23rd Feb 2016, achieved full Load on 21st March 2016 and was declared commercial on 3rd May 2016. Consumption of LDO towards generation of infirm power can therefore be accounted for the period subsequent to the date of first synchronisation i.e. 23rd February 2016.

The procurement and consumption of LDO are summarised as below:

| LDO Year Wise Details | | | | |
|--------------------------------|-----------------------|----------------------|------------------------|----------------------------|
| Month | Financial Year | Quantity (KL) | Value (₹) | Average Rate (₹/KL) |
| May'15 | 2015-16 | 295.00 | 1,60,95,167.16 | 54,559.84 |
| June'15 | 2015-16 | 945.53 | 5,11,77,118.30 | 54,125.14 |
| July'15 | 2015-16 | 749.61 | 3,88,63,303.21 | 51,844.19 |
| Aug'15 | 2015-16 | 604.36 | 2,75,75,670.26 | 45,627.86 |
| Feb'16 | 2015-16 | 280.46 | 97,46,707.99 | 34,752.53 |
| Mar'16 | 2015-16 | 2451 | 9,08,19,180.59 | 37,057.91 |
| Total 15-16 Procurement | | 5,325.70 | 23,42,77,147.52 | 43,989.89 |
| Consumption | | 5,122.41 | 22,53,34,266.27 | 43,989.89 |
| Closing Stock | | 203.29 | 89,42,881.25 | 43,989.89 |
| April'16 | 2016-17 | 1,026.22 | 4,50,74,526.89 | 43,923.08 |
| | | | | |
| Total 16-17 Procurement | | 1,026.22 | 4,50,74,526.89 | 43,923.08 |
| Consumption | | 1,158.85 | 5,09,13,066.45 | 43,934.13 |

As is evident from the above compilation of data, the total LDO requirement of 6281.26 KL during the whole of commissioning period was procured at different rates varying

from ₹ 27386.60 per KL to ₹ 53,238.63 per KL. The cumulative expenses on account of usage of LDO has accordingly been certified by the auditor as ₹ 27.62 Crores.

However, if the LDO procurements done only during the three months preceding the date of the CoD are compiled, then the data can be tabulated as below:

| Month | Financial Year | Quantity (KL) | Value (₹) | Average Rate (₹/KL) |
|--------------------------------|----------------|---------------|-----------------|---------------------|
| Feb'16 | 2015-16 | 1,130.46 | 3,09,59,453.00 | 27,386.60 |
| Mar'16 | 2015-16 | 2,100.74 | 9,44,61,081.71 | 44,965.71 |
| April'16 | 2016-17 | 1,026.22 | 4,50,74,526.89 | 43,923.08 |
| Total (preceding three months) | | 4257.41 | 17,04,95,061.60 | 40,046.65 |

The Landed cost of LDO of ₹ 39,339 as indicated at Page 110 of the Tariff Petition in Part – I : Additional Forms captures the average landed price of the sample invoices of the LDO submitted along with the petition which were procured in the months of February, March & April 2016. The petitioner clarifies that this is not the average cost of the complete LDO procurement in such three months. The correct average cost of procurement of LDO for the preceding three months may kindly be considered as ₹ 40,046.65 per KL.

Average cost of Coal

The Petitioner submits that the plant had received carpet coal during the months of June to August 2015, in preparation for receiving the normal coal to be fired into the boiler. The details of the various procurements are as follows:

| Particulars | Qty (MT) | Rate (₹/MT) | Amount (₹) |
|---|-------------|-------------|-----------------|
| <u>Coal Procured in FY 2015-16</u> | | | |
| Carpet Coal | 7,640.72 | 2267.43 | 1,73,24,821.95 |
| Market Coal | 91679.00 | 5070.00 | 46,48,12,530.00 |
| Linkage Coal | 1085 | 3388.00 | 36,75,980.00 |
| Total Procured in FY 15-16 | 1,00,404.72 | 4,838.55 | 48,58,13,331.95 |
| Total consumed in FY 15-16 | 59,707.00 | 4694.58 | 280301348.33 |
| Closing Stock at end of FY 15-16 | 40,696.87 | 5050.77 | 205550454.3 |
| <u>Coal Procured in FY 2016-17</u> | | | |
| Linkage Coal | 69541.45 | 3830.23 | 26,63,59,748.03 |
| Total consumed in FY 16-17 | 108637.72 | 4280.82 | 465058545.31 |

As outlined in the data tabulated above, the weighted average rate of procurement of coal in the FY 2015-16 is ₹ 4838.55 per MT. The cumulative coal quantity of 1,00,404.72 MT procured in FY 2015-16 is inclusive of the carpet coal. As per the records of stores, the weighted average rate of 7640.72 MT of carpet coal @ ₹ 2267.43 per MT and 52066.28 MT of Normal coal @ ₹ 5050.77 per MT (which is the weighted average rate of 91679 MT of Market coal @ ₹ 5070 per MT and 1085 MT of Linkage coal @ ₹ 3388 per MT) works out to be ₹ 4694.58 per MT. It is at this rate that the consumption of 59,707 MT of coal in the FY 2015-16 has been booked. The total expenses against coal consumption for FY 2015-16 has accordingly been indicated as ₹28.03 Crores.

Similarly, the closing stock of 40,696.87 MT @ 5050.77 MT as on 31st March 2016 and 69,541.45 MT of incoming coal @ ₹3830.23 per MT have been considered while calculating the weighted average rate of the total stock. Accordingly, consumption of 108637.72 MT of coal (till 02nd May 2016, the date of completion of the 72 hours Trial run) at a weighted average rate of ₹4280.82 per MT has been indicated. The total expenses against coal consumption for FY 2016-17 has accordingly been indicated as ₹46.51 Crores.

Additional clarification to Query 1 (b):

The petitioner submits that out of the 1.68 Lakh MT of coal used for commissioning till CoD, only about 0.69 Lakh MT of Linkage coal could be drawn and used. It is informed to the commission that the petitioner was sanctioned 2.0 Lakh MT of linkage coal for use during the commissioning activities out of the ACQ. However, the petitioner was left with no choice but to source the coal required for commissioning from the market since the required clearance from MoEF to CIL for transportation of Linkage coal by rail up to Garha Siding and further up to the Jhabua site by road got delayed despite their best efforts. Related correspondences with MoEF are attached at **Annexure – 1**. This necessitated usage of market coal procured at a comparatively higher rate prior to declaration of commercial operation and the resultant high rate of coal for generation of infirm power.

Additional clarification to Observation in 1(ii):

The petitioner humbly submits that furnishing of the coal cost as was incurred prior to declaration of Commercial operation as “Coal cost incurred for the preceding three months” (to be used by the Hon’ble Commission for calculating the Energy Charges)

would have projected a highly erroneous picture and would have resulted in a much escalated energy charge.

At the time of submission of the amended petition, for calculation of landed cost of coal, the petitioner had assumed sourcing as per the FSA quantities with SECL and MCL for coal requirement up to 87% of annual requirement and the balance 13% from e-auction. The landed price of coal of ₹ 3607 per MT was based on the above assumptions and was submitted to the Hon'ble commission in the Amended petition. The same is being reproduced below for ease of reference.

| Source | Annual Qty | % Mix | Blending as per FSA | | Landed Cost of Coal | |
|---------------------------------|----------------|-------------|---------------------|-------|---------------------|-------------|
| | MT | | Source | % Mix | ₹/Ton | |
| Linkage as per FSA | 1872000 | 87% | Domestic | 100% | 3422 | 3468 |
| | 578000 | | | | 3617 | |
| | 0 | | Imported / ECL | - | | |
| E-auction coal | 353328 | 13% | | | 4572 | 4572 |
| Annual Reqmnt. for 16-17 | 2803328 | 100% | | | | 3607 |

The basis of calculation of the Landed cost for each sources viz. the Linkage coals from SECL and MCL as well as the e-auction coal was also submitted along with the above amended petition. The broad break-up is being reproduced below:

| Sl. | Description | Linkage – SECL (₹/MT) | Linkage – MCL (₹/MT) | e-Auction (₹/MT) | Remarks |
|-----|--|-----------------------|----------------------|------------------|---|
| 01 | Basic Price | 700 | 660 | 1126.5 | As per CIL price revision dated 27 th May 2013 |
| 02 | Coal Price Payable to the Supplier | 1480.46 | 1492.93 | 2149.71 | After Including royalty, various taxes and duties |
| 03 | Railway Freight | 1019.19 | 1192.64 | 1665.54 | Assumed as per distances up to Garha from various mines of SECL / MCL |
| 04 | Sampling & Road Transportation (From Garha siding to Project site) | 759 | 759 | 756.75 | |

| Sl. | Description | Linkage – SECL (₹/MT) | Linkage – MCL (₹/MT) | e-Auction (₹/MT) | Remarks |
|-----|---|-----------------------------|----------------------------|--------------------------------------|---------|
| 05 | Entry Tax @ 5% | 162.93 | 172.22 | Included in Coal Price (Sl.02) above | |
| | Total Landed Cost (Sl.02+03+04+05) | 3421.58 | 3616.79 | 4572.00 | |

Issue:

- c. The petitioner is required to justify the reasons for consideration of carpet coal in this regard.

Petitioner's Response:

As clarified in Response to Observation No. 1(i) & (ii) and Explanation to Query 1 (a) & (b), the weighted average rate of procurement of coal in the FY 2015-16 is ₹4838.55 per MT. The cumulative coal quantity of 1, 00,404.72 MT procured in FY 2015-16 is inclusive of the carpet coal. As per the records of stores, the weighted average rate of 7640.72 MT of carpet coal @ ₹2267.43 per MT and 52066.28 MT of Normal coal @ ₹5050.77 per MT (which is the weighted average rate of 91679 MT of Market coal @ ₹5070 per MT and 1085 MT of Linkage coal @ ₹3388 per MT) works out to be ₹4694.58 per MT. It is at this rate that the consumption of 59,707 MT of coal in the FY 2015-16 has been booked. The total expenses against coal consumption for FY 2015-16 has accordingly been indicated as ₹28.03 Crores. While it may be assumed that the actual coal consumed in FY 15-16 might be that has been consumed might be 59,707 MT of normal coal @ ₹5050.77 per MT (at a total cost of ₹30.15 Crores against the booked value of ₹28.03 Crores), the petitioner had to consider the weighted average value as per the store stock records.

Issue:

- d. Supporting documents regarding rate of linkage coal used for generation of infirm power during FY 2015-16.
- e. The petitioner is required to provide the detailed calculation to work out the wt. average rate of coal used during FY 2016-17 for generation of infirm power.

Petitioner's Response:

The petitioner submits below the details of procurements of all Linkage coal till 30th April 2016.

| Loading Date | Source | RR Qty (MT) | Coal Value (₹) | Rly Freight (₹) | Hndlng / Transpt (₹) | Total Value (₹) | Unit Price (₹/MT) | Price (incl. 5% Entry Tax) (₹/MT) |
|--------------|--------|-------------|----------------|-----------------|----------------------|-----------------|-------------------|-----------------------------------|
| 26-Mar-16 | SECL | 3834.46 | 10399198 | 2803895 | 2887348 | 16090441 | 4196.27 | 4406.09 |
| 28-Mar-16 | SECL | 3712.15 | 5495635 | 4233399 | 2795249 | 12524283 | 3373.86 | 3542.56 |
| 31-Mar-16 | SECL | 3635.13 | 5381618 | 3782772 | 2737253 | 11901643 | 3274.06 | 3437.77 |
| 03-Apr-16 | SECL | 3782.20 | 5411442 | 3945015 | 2847997 | 12204454 | 3226.81 | 3388.15 |
| 09-Apr-16 | SECL | 3899.90 | 5773694 | 3904492 | 2936625 | 12614811 | 3234.65 | 3396.38 |
| 10-Apr-16 | SECL | 3965.10 | 5870138 | 3963863 | 2985720 | 12819721 | 3233.14 | 3394.80 |
| 11-Apr-16 | SECL | 4026.43 | 5745278 | 4102416 | 3031902 | 12879596 | 3198.76 | 3358.70 |
| 12-Apr-16 | SECL | 4008.60 | 5934742 | 3992345 | 3018476 | 12945563 | 3229.45 | 3390.92 |
| 13-Apr-16 | SECL | 3914.40 | 5794956 | 3954474 | 2947543 | 12696973 | 3243.66 | 3405.84 |
| 14-Apr-16 | SECL | 3952.30 | 5648865 | 3959454 | 2976082 | 12584401 | 3184.07 | 3343.27 |
| 15-Apr-16 | SECL | 3944.50 | 5839885 | 3958274 | 2970209 | 12768368 | 3237.01 | 3398.86 |
| 16-Apr-16 | SECL | 3819.30 | 5436982 | 3919323 | 2875933 | 12232238 | 3202.74 | 3362.88 |
| 19-Apr-16 | SECL | 3955.90 | 5645562 | 3972967 | 2978793 | 12597322 | 3184.44 | 3343.66 |
| 21-Apr-16 | SECL | 3893.80 | 5764704 | 3942326 | 2932031 | 12639061 | 3245.95 | 3408.24 |
| 22-Apr-16 | SECL | 4011.40 | 5938561 | 4068406 | 3020584 | 13027551 | 3247.63 | 3410.01 |
| 23-Apr-16 | SECL | 3874.32 | 5735652 | 3928003 | 2917363 | 12581018 | 3247.28 | 3409.65 |
| 24-Apr-16 | SECL | 3846.80 | 5695122 | 3934413 | 2896640 | 12526175 | 3256.26 | 3419.07 |
| 25-Apr-16 | SECL | 3954.70 | 5854904 | 4036205 | 2977889 | 12868998 | 3254.10 | 3416.81 |
| 26-Apr-16 | SECL | 3975.80 | 5886101 | 3971703 | 2993777 | 12851581 | 3232.45 | 3394.07 |
| 28-Apr-16 | SECL | 3934.40 | 5824565 | 3954861 | 2962603 | 12742029 | 3238.62 | 3400.55 |
| 29-Apr-16 | SECL | 3957.30 | 5858509 | 3966501 | 2979847 | 12804857 | 3235.76 | 3397.54 |

| | | | | | | | | |
|--------------------------|--------------|---------|----------|---------------|--------------|---------------|---------|---------|
| 30-Apr-16 | SECL | 3944.65 | 5656411 | 3935788 | 2970321 | 12562520 | 3184.70 | 3343.93 |
| | Total | 113557 | 17219032 | 1141122 90 | 8550851 1 | 37181112 6 | | |
| Unit Rates (₹/MT) | | | 1516 | 1005 | 753 | 3274 | | 3437.93 |

All the corresponding SECL bills, corresponding Railway Receipts (RRs), LDO invoices and LDO shipping Bills are enclosed herewith and marked as **Annexure-02**.

The petitioner submits that no linkage coal has been received till date from MCL and no e-auction procurement has been made till 31st May 2016.

The petitioner further submits that there were delays in getting the invoices from SECL during the initial phases of procurement. While GRN (Goods Receipt Note as prepared by Central Stores) for 1085 MT of linkage coal was prepared (based on the weigh bridge records of the trucks carrying coal from Garha siding to project site), its value was booked based on the first invoice received from SECL, which incidentally happened to be the invoice with loading date 03rd April 2016. The landed cost of the coal procured through this invoice was ₹ 3388 per MT, as has been indicated in the petition.

The detailed calculation for calculation of weighted average rate of coal used during FY 2016-17 for generation of infirm power is as follows:

| | Qty (MT) | Rate (₹ / MT) | Amount (₹) |
|---|-------------|---------------|-----------------|
| Total Procured in FY 15-16 | 1,00,404.72 | 4,838.55 | 48,58,13,331.95 |
| Total consumed in FY 15-16 | 59,707.00 | 4694.58 | 280301348.33 |
| Closing Stock at end of FY 15-16 | 40,696.87 | 5050.77 | 205550454.3 |
| <u>Coal Procured in FY 2016-17 (up to 02nd May 2016) – As per Stock records</u> | | | |
| Linkage Coal | 69541.45 | 3830.23 | 26,63,59,748.03 |
| Total consumed in FY 16-17 | 108637.72 | 4280.82 | 465058545.31 |

Issue:

- f. This needs to be clarified whether any coal quantity was allocated to the petitioner by the coal companies for commissioning activity of the unit.

Petitioner's Response:

It is respectfully submitted that the petitioner was sanctioned 2.0 Lakh MT of linkage coal for use during the commissioning activities out of the ACQ. However, the required

clearance from MoEF to CIL for transportation of Linkage coal by rail up to Garha Siding and further up to the Jhabua site by road got delayed despite close follow-ups and the same was obtained only in the second week of March 2016.

B. Interest During Construction:

Issue:

- (i) **As per PPA the scheduled CoD of the unit was 31st March, 2013. The petitioner was asked to provide the details of IDC and financing charges till Scheduled CoD. The petitioner has provided such details till 31st March, 2015 only, which is the revised CoD as agreed to, by the procurer on certain conditions. The petitioner is required to inform the IDC and financing charges till 31st March, 2013 also.**

Petitioner's Response:

As regards Query 2 (i), it is respectfully pointed out that Clause 4.1.6 of the PPA provides:

"The Parties may mutually agree to revise the Scheduled CoD for Commissioning of any Unit or the Power Station (hereinafter referred to as Revised Scheduled Commercial Operation Date or Revised Scheduled COD) and such Revised Scheduled COD shall thereafter be the Scheduled COD."

It is respectfully submitted that as per the PPAs signed with the Respondents herein and subsequent approval from the Respondent No. 1, the Scheduled COD of Phase-I, Unit-1 of the Petitioner's Project was 31st March 2015 ("SCOD"). The approval of SCOD of 31st March 2015 was granted by the Respondent No. 1 vide its letter no. 05-01/1484 dated 10th November, 2014. The copy of such approval has already been furnished to the Hon'ble Commission. In view of the above stipulation of the PPA, it is humbly submitted that the SCOD is to be considered as 31st March 2015 and hence the Petitioner has provided the details of the IDC as on 31st March 2015 and as on actual COD.

Issue:

- (ii) **The extension of scheduled CoD till March' 2015 for Phase-I (600 MW) of Jhabua Power was conditionally considered by MPPMCL subject to furnishing of some undertaking by M/s. Jhabua Power Ltd. Therefore, the petitioner is required to**

confirm with supporting document and due concurrence of MPPMCL whether the condition has been fulfilled or not?

Petitioner's Response:

As regards Query 2 (ii), the Petitioner submits that the letter from MPPMCL dated 10th November 2014 allowing extension of CoD till 31st March 2015 stated that "...your request for extension of scheduled CoD for Jhabua Power Limited – Phase – I (600MW) till March 2015 has been considered and accepted subject to furnishing of undertaking by M/s Jhabua Power Limited that transmission charges and / or any other incidental charges, if any, levied by CTU with effect from April 1st, 2014 to the actual CoD, shall be borne by Jhabua Power Limited."

*It is respectfully submitted that the aforementioned condition has already been stipulated in the PPA with the respondents and hence there was no occasion on the Petitioner's part to submit any new undertaking in this regard. Besides, the Respondent No.01 i.e. MPPMCL vide its letters dated 19th June 2015 (No. 05-01/1236) and 16th September 2015 (No. 05-01/1670) has made it amply clear that the Scheduled CoD for the project stood revised to 31st March 2015 and has also indicated that any transmission charges, if levied by CTU, shall be payable by Jhabua Power. Copy of both the above referenced letters are attached as **Annexure – 03**.*

C. Overhead and establishment expenses:

Issue:

- (i) The petitioner was asked to file the details of overhead and establishment expenses as on scheduled CoD and as on actual CoD of the unit separately. The petitioner has not filed such details. The details of overhead and establishment expenses need to be filed in this regard.**

Petitioner's Response:

As regards Query 3 (i), it is respectfully pointed out that the details of overhead and establishment expenses as on scheduled CoD i.e. 31st March 2015 (may refer to reply to Query 2(i)) and as on actual CoD has been furnished in Form TPS 13D filed by the Petitioner along with Amended Petition.

Issue:

- (ii) Break-up of IEDC filed in form TPS-13D indicated that employee benefit expenses of ₹134.64 Crores. The petitioner is required to provide the details of these expenses with supporting documents.

Petitioner's Response:

As regards Query 3 (ii), the break-up of the employee benefit expenses of ₹134.64 crore as on the date of CoD i.e. 02nd May 2016, is as provided below:
(₹ Crores)

| Particulars | As on scheduled COD i.e. 31.3.2015 | As on actual COD i.e. 2.5.2016 |
|---|---|---|
| Payroll (Employees, Consultant & Contractual staff) | 96.37 | 127.64 |
| Employee training & recruitment | 4.30 | 4.37 |
| Staff Welfare | 2.43 | 2.64 |
| Total Employee Benefit Expenses | 103.10 | 134.65 |

The CA certificate vouching for the veracity of the incurred employee benefit expenses is enclosed herewith and marked as '**Annexure-04**'.

Issue:

- (iii) The petitioner has filed the establishment expenses of ₹261.96 Crores for Unit No. 1 of the project. The following details in this regard be submitted:
(f) Detailed break-up of establishment expenses with all cost components.

Petitioner's Response:

As regards Query 3 (iii) (a), the detailed break-up of the establishment expenses with all the cost components is provided below:

| S No | Particulars | As on scheduled COD i.e. 31.3.2015 | As on actual COD i.e. 2.5.2016 |
|-----------------|---|---|---|
| | Payroll (Employees, consultant & contractual staff) | 96.37 | 127.64 |
| | Employee training & recruitment | 4.30 | 4.37 |
| | Staff Welfare | 2.43 | 2.64 |
| 1 | Total Employee Benefit Expenses | 103.10 | 134.65 |
| 2 | Finance Costs | Included in IDC & FC | Included in IDC & FC |
| 3 | Water Charges | Not Part of Establishment expenses. Included under head | |

| S No | Particulars | As on scheduled COD i.e. 31.3.2015 | As on actual COD i.e. 2.5.2016 |
|----------|--|--|--------------------------------|
| | | "Construction Water" – Pl. refer head 2.3.3 of TPS-5B. | |
| 4 | Communication Expenses | Incl. in admin Expenses. | Incl. in admin Expenses. |
| 5 | Start-up Power Charges | 0.0 | 4.21 |
| | IT | 8.29 | 10.90 |
| | Security & Safety | 9.96 | 14.64 |
| | Environment & Horticulture | 3.23 | 3.47 |
| | Canteen Expenses | 2.57 | 3.49 |
| | Other Assets (IT & Admin related) | 16.94 | 18.18 |
| | Rent | 11.33 | 13.12 |
| | Misc. Travelling expenses | 6.02 | 6.97 |
| | Other Admin. Expenses (Repairs & Maintenance including manpower/ communication expenses / hiring equipment / Misc. project related expenses) | 29.90 | 36.57 |
| 6 | Total Other Office and Administrative /IT & Misc. Expenses | 88.23 | 107.34 |
| 7 | Others (Please Specify Details) | | |
| 8 | Other Pre-Operating Expenses | 21.23 | 21.23 |
| 9 | Other Pre-Operating Expenses-Project consultancy | 16.65 | 16.65 |
| | Total Overhead and Establishment Expenses | 229.21 | 284.08 |

The CA certificate in this regard is enclosed herewith and marked as 'Annexure-04'.

Issue:

- (g) **Overhead & establishment expenses approved under initial investment approval vis-à-vis all revisions of the capital cost.**

Petitioner's Response:

As regards Query 3 (iii) (b), it is respectfully submitted that the various investment approvals in terms of the capital cost did not specify the break-up of the overhead and establishment expenses. This can be observed from the investment approvals submitted to the Commission along with the Amended Petition.

Issue:

- (h) **The detailed reasons for increase (if any) in Overhead & establishment expenses from initial investment approval to actual expenses as on CoD of the unit.**

Petitioner's Response:

As regards Query 3 (iii) (c), it is respectfully submitted that the overhead and establishment expenses as per original estimates were to the tune of ₹136.80 crore. The Petitioner submits that the overhead and establishment expenses were underestimated at the time of financial closure. It is respectfully submitted that the Petitioner has endeavoured to optimise the project cost by placing contracts for various BOP works on best competitive rates instead of placing an Order for entire BOP on EPC basis. This typically requires a slightly higher Project execution and monitoring team. Further, the estimated employee cost includes the required ramp-up of O&M team to ensure adequate training and readiness for start-up activities, synchronisation and stabilisation prior to COD.

The overhead associated with establishment expenses include Employee Recruitment and Training expenses, Administrative expenses like building rentals, repair and maintenance expenses, office guest house maintenance and rent, horticulture expenses, vehicle running and maintenance expenses, printing and stationery expenses, books and periodicals, drinking water facilities and miscellaneous consumables.

Issue:

- (i) **Details of overhead & establishment expenses as on scheduled CoD and as on actual CoD of the unit separately.**

Petitioner's Response:

As regards Query 3 (iii) (d), it is respectfully pointed out that the details of overhead and establishment expenses as on scheduled CoD and as on actual CoD has been furnished in Form TPS 13D filed by the Petitioner along with Amended Petition.

Issue:

- (j) **Detailed reasons for increase (if any) in Overhead & establishment expenses from schedule CoD to actual CoD of the unit.**

Petitioner's Response:

As regards Query 3 (iii) (e), it is respectfully submitted the overhead and establishment expenses at the fag-end of the project have increased as the Petitioner had ramped up

its O&M team to ensure adequate training and readiness for start-up activities, synchronisation and stabilisation prior to COD.

D. Common Expenses:

The petitioner had provided a detailed break-up of various capital cost components of the project in Form-5B of Petition No. 53 of 2015 indicating apportionment of all such cost among Phase I and Phase II also. It is observed that the petitioner has changed its approach while filling Form 5B submitted with the Petition No. 16 of 2016. The apportionment of the capital cost component among Phase I and Phase II is not provided in Form 5B filed with the amended petition. It is further observed by the Commission that the basic reason for disposing of Petition No. 53 of 2015 and filing Petition No. 16 of 2016 was only the delay in achieving CoD of the generating unit, which has no linkage with the change in approach for filling up Form 5B in amended petition. Therefore, the petitioner is required to clarify the following:

Issue:

- (i) The reason for changing the approach for apportionment of capital cost component among Phase I and Phase II**

Petitioner's Response:

As regards Query 4 (i), the Petitioner respectfully submits that through all their submissions - in earlier Petition No. 53 of 2015, Original Petition No. 16 of 2016 as well as the instant Amended Petition No. 16 of 2016 – have maintained that it had originally envisaged the said Power Project to have a capacity of 1260 MW – to be executed in two phases - Phase-I having an Unit of 600 MW and Phase-II having an Unit of 660 MW. The Petitioner while filing Petition No. 53 of 2015 had reckoned some of the costs as common costs and inadvertently allocated them between Phase – I (1X600MW) & II (1X660MW). However, the Petition No. 53 of 2015 was dismissed in limine by the Hon'ble Commission. The date of commercial operation ("CoD") of the Phase-I unit got delayed due to reasons already informed and detailed in the Amended Petition and the Petitioner was directed by the Hon'ble Commission to approach for tariff determination with a fresh petition as and when the unit achieved CoD.

All the common facilities have been designed with clear-cut philosophy of execution in two phases – first phase consisting of one 600 MW unit and the second phase consisting of one 660 MW unit. This was unavoidable since the financial closure of only

Phase-I had been achieved and the funds available had to be used in the most optimum manner possible. The Petitioner humbly submits that the inadvertent error of treating some costs as common costs was detected by it subsequent to the filing of Petition No. 53 of 2015. It is respectfully submitted that the petitioner would have filed an amendment to rectify the inadvertent error had it not been summarily dismissed by the Hon'ble Commission.

Issue:

- (ii) Reasons for allocation of R & R expenses completely to Phase-I only.**

Petitioner's Response:

As regards Query 4 (ii), it is respectfully submitted that the R&R expenses have been incurred pursuant to the stipulations of the Environmental Clearance dated 17.2.2010 granted by the MoEF in respect of Phase-I (1x660 MW) of the Project. It is specifically pointed out that the R&R expenses have been incurred in compliance with the provisions of Para 4 (iii), (iv), (xxv), (xxvi) and (xxvii) of the Environmental Clearance. It is clarified that the Environmental Clearance has been accorded currently only in respect of Phase-I and owing to same, the R&R expenses have been incurred only in respect of the Phase-I of the Project. A copy of the Environmental Clearance dated 17.2.2010 granted by the MoEF is enclosed herewith and marked as 'Annexure-05'.

Issue:

- (iii) With regard to the apportionment of the cost of transmission line, reasons for allocation of the cost of the conductor only to Phase-II.**
- (iv) Some of the expenses like Ash handling expenses, Establishment expenses, ETP Expenses, IDC etc. apportioned in Form-5B but such common facilities have not been indicated in aforesaid para 5.7.3 of the petition.**
- (v) The cost of coal handling and ash handling plant has been apportioned between Phase I&II whereas, this cost pertains to Phase-I exclusively as per remarks mentioned in Form 5B.**
- (vi) Out of the total cost of the Chimney (₹47.05 Crores), only ₹3 Crores is allocated to Phase-II of the project.**
- (vii) The cost of Administrative Building has not been allocated to Phase-II of the project.**
- (viii) Cost of allocation of External Water supply system has not been apportioned as per MW capacity of the units.**

Petitioner's Response:

- f) As regards Query 4 (iii) to (viii), it is respectfully submitted that no facilities specific to Phase-II has been constructed at this stage.

With respect of the transmission line, it is respectfully submitted that the major part of the costs of a high capacity transmission line is incurred towards Towers & Tower Accessories and Conductors and Conductor Accessories. The switchyard of the Petitioner is connected to the Jabalpur New Pooling Station (NPS) through a 65.2 Km long 400 KV, Double Circuit Transmission line. The following technical consideration were available to the petitioner while designing the system:

Case – I: Evacuation capability of 600 MW only (without considering the execution issues of Phase – II)

| | | |
|------------------------------------|------------|---|
| Type of conductor | ACSR-Moose | |
| Design Temp (°) | 75°C | Max. allowed temperature for ACSR Conductors = 85°C |
| No. of conductor (Nos.) | 2 | |
| Current Carrying Capacity (at 75°) | 604 | |
| Power Factor | 0.8 | |
| Total capacity of line (MW) | 669 | $MW=(CCC*2)*1.732*400*PF/1000$ |
| Weight (Kg/Km) | 2004 | Requires comparatively heavier Tower Structure |

Case – II: Evacuation capability of 1260 MW (Considering uninterrupted operations of Phase – I during execution of Phase – II)

| | | |
|------------------------------------|------------|--|
| Type of conductor | AL59-Moose | |
| Design Temp (Degree) | 85°C | Max. allowed temperature for AL-59 Conductors = 95°C |
| No. of conductor (Nos.) | 2 | |
| Current Carrying Capacity (at 85°) | 1098 | |
| Power Factor | 0.8 | |
| Total capacity of line (MW) | 1217 | $MW=(CCC*2)*1.732*400*PF/1000$ |
| Weight (Kg/Km) | 1640 | Requires comparatively lighter Tower Structure |

It is evident from the above calculations that the Petitioner could enhance the capacity of the transmission lines to 1217 MW from 669 MW by following Case – II above and opting for the AL-59 moose conductors over ACSR moose conductors. Keeping in view

the per km weight of the conductors, it is clear that the towers as constructed for supporting the present AL-59 moose conductors would, in any case, have been required had the petitioner opted to choose ACSR moose conductors for catering to the requirements of Phase-I only. Therefore, no extra cost has been incurred towards tower structures and accessories in view of the selection of AL-59 Moose conductor. The Petitioner further submits that it has considered a typical sample involving 35 Kms of 400 KV, Double Circuit transmission line (closest resemblance to that of the petitioner's case) from the CERC order dated 27th April 2010 on "Benchmarking Capital Cost of 400/765 KV Transmission Line". A copy of the same is enclosed herewith and marked as **Annexure-06**. This sample involved construction of 124 nos. of towers. Extrapolation of the above data for the subject length of 65 Kms, would entail a total of 230 Nos. of Towers. The Petitioner has constructed 203 Nos. of Towers which is within the acceptable limits. The petitioner submits that the net overall savings expected to accrue by avoiding the RoW issues, Erection of separate towers and Laying of separate conductors in the future (during execution of Phase – II) far outweighs the incremental cost that was incurred by using AL-59 moose conductors over ACSR moose conductors.

Further, with respect to the Ash Handling Plant expenses, it is respectfully submitted that the Ash Handling Plant was designed for installation in two separate phases: Phase – I of 600 MW and Phase – II of 660 MW. Accordingly the plant and equipment to be procured were distinctly divided between Phase – I & Phase – II. Copy of the approved Design Basis Report ("DBR") clearly enumerating the above philosophy is being submitted for the ready reference of the Hon'ble commission. Relevant extracts of the same is enclosed herewith and marked as **Annexure-07**. As bifurcated in Annexure – III : Equipment Parameters (Page 26 of 43) of the DBR, additional equipment designated as required for Phase – II has neither been procured nor installed. The Bill of Quantity of the LoA on M/s McNally Bharat is also attached which is in line with the DBR. The relevant extracts of the Bill of Quantity of the LoA on M/s McNally Bharat is enclosed herewith and marked as **Annexure-08**.

Further, with respect to the Coal Handling Plant, it is submitted that it was also designed for installation in two separate phases: Phase – I of 600 MW and Phase – II of 660 MW. Accordingly the plant and equipment to be procured were distinctly divided between Phase – I & Phase – II. Relevant extracts of the same is enclosed herewith and marked as **Annexure-09**. As bifurcated in Page 4 of the DBR, equipment

designated as required for Phase – II has neither been procured nor installed. The Bill of Quantity of the LoA (Relevant extract attached) on M/s FL Smidth is also attached which is in line with the DBR. The relevant extracts of the Bill of Quantity of the LoA on M/s FL Smidth is enclosed herewith and marked as 'Annexure-10'.

Further, with respect to the Water Treatment Plant as well as Effluent Treatment Plant, it is respectfully submitted that it was also designed for installation in two separate phases: Phase – I of 600 MW and Phase – II of 660 MW. Accordingly the plant and equipment to be procured were distinctly divided between Phase – I & Phase – II. Relevant extracts of the same is enclosed herewith and marked as Annexure-11. As bifurcated in Annexure – I : Specified Design data Sheet (Page 26 of 43) of the DBR, additional equipment designated as required for Phase – II has neither been procured nor installed. The Petitioner submits that no equipment / installation required solely for Phase-II has been procured. Major equipment like Clariflocculator, one no. of RO-DM stream and one no. DM storage are envisaged as additional equipment for Phase – II and shall be required to be added during execution of the same. Similarly, all additional civil works as required for Phase – II have also not been executed and accordingly, no cost has been incurred in this regard. The Bill of Quantity of the LoA (Relevant extract attached) on M/s Thermax is also attached which is in line with the DBR. The relevant extracts of the Bill of Quantity of the LoA on M/s Thermax is enclosed herewith and marked as Annexure-12.

Similarly, with respect to the External Water Supply system, it is respectfully submitted that the same was also designed for installation in two separate phases: Phase-I of 600 MW and Phase-II of 660 MW. Accordingly the plant and equipment to be procured were distinctly divided between Phase-I & Phase-II. The intake well and the piping are the only portions which are common to Phase – II but they had to be included along with Phase – I execution, keeping in view the following:

- i. The design and infrastructure of the Intake well is such that it cannot be augmented in the future to either increase the water intake capacity or to make space for accommodating an additional pump. Therefore, the intake well had to be constructed to its full capacity at this stage itself.
- ii. The petitioner submits that the decision to lay a common pipe was the most optimum, techno-economical decision keeping in view the factors like marginal increment in pipe diameter (15%) to accommodate the Phase – II requirement, no increase in

design or number of pedestals required, avoiding the contentious RoW issues during execution of Phase – II and the fact that approximately 3 kms. of final length of the piping remains submerged under Bargi dam water during 8 months of the year,

The petitioner further clarifies that the total head is majorly driven by four factors - Elevation difference, Length of pipe, Fittings and Diameter of pipe. Elevation difference, Length of pipe and Number of fittings are independent of flow and are the main contributors to head loss. The following calculations indicating three scenarios –

- Design and install single piping to accommodate only Phase-I, using a pipe half the diameter as used presently.

| Description | UOM | Case 1 (600MW) with 0.5D) |
|---|---------|------------------------------|
| Difference In Elevation | | 124.23 |
| Discharge (Q) | QuM/Sec | 0.936 |
| Length (M) | M | 11200 |
| Dindise Dia (D) | M | 0.55 |
| Friction Coefficient (f) | | 0.045 |
| Area of Pipe (A) | Sqm | 0.2374625 |
| Friction Loss (Hf)= $fLQ^2/2gDA^5$ | | 725.6554643 |
| Velocity Head Loss ($H=Q^2/2gA^5$) | M | 0.791885923 |
| Head Loss due to fittings ($HL=0.3048K^2Q^2/2gA^5$) | | 0.241366829 |
| Total Head | M | 850.9187171 |
| Pump Selection (Shutoff head at 140% of required head) | M | 1191.286204 |

This is an impracticable design and therefore cannot be considered.

- Design and install single piping to accommodate only Phase-I, using a pipe 0.85 of the diameter as used presently.

| Description | UOM | Case 2 (600MW) with 0.85D) |
|--------------------------------------|---------|-------------------------------|
| Difference In Elevation | | 124.23 |
| Discharge (Q) | QuM/Sec | 0.936 |
| Length (M) | M | 11200 |
| Dindise Dia (D) | M | 0.925 |
| Friction Coefficient (f) | | 0.045 |
| Area of Pipe (A) | Sqm | 0.671665625 |
| Friction Loss (Hf)= $fLQ^2/2gDA^5$ | | 53.93060021 |
| Velocity Head Loss ($H=Q^2/2gA^5$) | M | 0.098979772 |
| Head Loss due to fittings | | 0.030169035 |

| | | |
|--|---|-------------|
| $(HL=0.3048K*Q*Q/2gA*A)$ | | |
| Total Head | M | 178.289749 |
| Pump Selection (Shutoff head at 140% of required head) | M | 249.6056486 |

This is practicable and could have been followed.

- *Design and install a common piping to accommodate both phases and avoid all the execution issues as detailed above.*

| Description | UOM | CASE 3 (600MW + 660MW) |
|---|---------|---------------------------|
| Difference In Elevation | | 124.23 |
| Discharge (Q) | QuM/Sec | 1.44 |
| Length (M) | M | 11200 |
| Dindise Dia (D) | M | 1.1 |
| Friction Coefficient (f) | | 0.045 |
| Area of Pipe (A) | Sqm | 0.94985 |
| Friction Loss (Hf)= $fLQ*Q/2gdA*A$ | | 53.67274144 |
| Velocity Head Loss ($H=Q*Q/2gA*A$) | M | 0.117142888 |
| Head Loss due to fittings ($HL=0.3048K*Q*Q/2gA*A$) | | 0.035705152 |
| Total Head | M | 178.0555895 |
| Pump Selection (Shutoff head at 140% of required head) | M | 249.2778253 |

The above design calculations have been adopted and the system has been implemented while taking all other equipment for Phase – I only.

It is evident from the above calculations that marginal increment in diameter of pipe from 925mm to 1100mm have given benefit equal to an additional unit Hence, no significant cost in respect of Phase-II has been loaded on to Phase-I.

With respect to the Bi-Flue Chimney, it is respectfully submitted that a separate flue, specifically required for Phase – II had to be installed while executing the Phase – I since installation of the same at a later stage during operation of the Phase – I unit would have been very difficult and unsafe.

With respect to the allocation of overheads, IDC and IEDC, it is respectfully submitted that the same is attributable only in respect of Phase-I as currently Phase-II is in conceptual stages and no costs towards Phase-II has been incurred. It is respectfully submitted that the reference to Petition No. 53 of 2015 which was dismissed in limine

by the Hon'ble Commission may not be considered owing to the submissions made by the Petitioner in reply to Query to 4 (i).

Issue:

- (ix) The petitioner has filed an amount of ₹44.36 Crores towards the cost of approach road and drainage. On perusal of the LOA for construction of Road awarded to M/s. Shreeji Infrastructures India Pvt. Ltd., it is observed that the contract has been awarded for the construction of permanent road for 1x600 MW + 1x660 MW Units. Whereas, the petitioner has allocated the complete cost of road to Phase-I of the project only. The petitioner is required to file the reasons for allocation of the cost of road to Phase-I only instead of apportionment between Phase I&II.

Petitioner's Response:

As regards Query 4 (vii) and (ix), it is respectfully submitted that the construction of approach roads is critical for operation of Phase I (1x600 MW Unit). It is consequential that the Petitioner is planning to construct another unit in Phase-II, which currently is at the conceptual stage only, and facilities such as approach roads and administrative building would be shared by the subsequent unit also.

With respect to the Administrative Building, it is submitted that it is not part of the present project cost and has been made part of the additional capitalisation.

E. Mega Power Status

Issue:

In its last reply, the petitioner has informed that it has not been conferred Mega Power Status as the financial closure of Phase II could not be achieved. The petitioner is required to confirm the following in this regard:

- (i) Whether it has applied for Mega Power Status?
- (ii) Whether it will be entitled for granting Mega Power Status in case of Phase II of the Power Plant is commissioned in future.

Petitioner's Response:

As regards Query 5 (i), it is respectfully submitted that the Petitioner has not applied for Mega Power status.

As regards Query 5 (ii), it is respectfully submitted that whether or not the Petitioner Power Project would be granted Mega Power Status in future upon commissioning of Phase II would be dependent on the guidelines prevailing at that point in time. However, as per the current framework of the Mega Power Policy, the Petitioner is not entitled to any benefits under the said policy.

Issue:

- F. In Annexure 29 filed with the amended petition (regarding the list of works deferred for execution under the original scope of work), the cost of each work be also submitted in the table at Page No. 204 of the amended petition.**

Petitioner's Response:

As regards Query 6, it is respectfully submitted that the Petitioner has updated the submissions in Annexure 29 by providing the cost of each work against the list of works deferred for execution under the original scope of work. The updated Annexure-29 is enclosed herewith and marked as **Annexure-13**.

It is submitted that the project cost of ₹ 4698.66 Crores, as mentioned in Form 5B of the tariff petition, is inclusive of the above amount. These are the amounts payable to the respective vendors after conductance of the PG test. The above project cost is based on the various Purchase / Service orders issued to vendors. Since the item rates mentioned in these orders are inclusive of PG test amount, billing is done by vendors on gross amount. Cost in the books is accounted on gross billing done by vendors. Depending on our terms of payment, the PG Test amount (which is not yet due to the vendor) and proportionate advance amount (which is already paid) are deducted from the RA bill payable amount before making the payment. Hence, the payments which are not due, does not form part of payment. And therefore, the same is parked as part of undischarged liability.

G. Initial Spares

The initial spares are claimed up to the ceiling norms prescribed in the MPERC Tariff Regulations. The petitioner is required to explain the following with respect to the provisions under MPERC (Terms and Conditions for determination of Generation Tariff) Regulations' 2015.

Issue:-

- (e) **The details of the initial spares ordered to different suppliers.**

Petitioner's Response:

*As regards Query 7 (a), the extracts of the purchase order placed on various suppliers towards initial spares is enclosed herewith and marked as **Annexure-14**.*

Issue:-

- (f) **On perusal of the contract awarded to BHEL for supply of BTG package, it is mentioned in para 3.1 of the contract that “the above prices include supply of commissioning spares and supply of common items for Unit 1 and Unit 2. In view of the aforesaid observation, the petitioner is required to inform such common items and their cost in this regard.**

Petitioner's Response:

*As regards Query 7 (b), it is respectfully submitted that the Hon'ble Commission may kindly refer to Para A) Scope of supply of Volume – II: Technical Write-up of BHEL Proposal. (Copy of the same is enclosed herewith and marked as **Annexure-15**.*

A look at the scope of the supply as detailed by BHEL clearly indicates that all the systems supplied are purely and solely for Phase-I: 1X600MW. It clearly states that the supply includes one set of Boiler & Auxiliaries, One set of Steam Turbine & Generator and Auxiliaries, Other unit specific equipment like Boiler Feed Pumps, Condensate Extraction Pumps, LP / HP Heaters, HP/LP Dosing Systems, Cooling Systems, Electrical systems and Control & Instrumentations.

*Besides, review of the **Para B) Terminal points** indicates that none of the common systems like CW System, DM water generation and Storage system, Compressed Air System (Instrument and Service Air), Ash Handling System, Coal Handling System, and Fuel Oil Unloading System are not part of the supply scope of BHEL.*

***Para C) Exclusions** further clarifies that none of the common systems are part of the scope of supply of the main plant supplier BHEL. Therefore, the cost of the Main Plant package does not include any common item which will be part of Phase-II.*

***It is further pointed out that Para D) Owner's obligations / Facilities to be provided by Owner** stipulates that “Owner will allow the contractor to take back any*

surplus material, **Unused Commissioning Spares**, Temporary structures, Scrap, Packing Material.” It is a common practice that the package vendors (both Main Plant as well as BoP suppliers) bring a set of commissioning spares which may be required during the period of commissioning to deal with occasional equipment failures. While presence of adequate commissioning spares at all times with the respective vendors are ensured by the owner to ensure that equipment failures are effectively and quickly dealt with, any saving in commissioning spares due to less failures or requirement of extra spares due to unfortunate, increased failures, is to the vendor’s account. The left out commissioning spares are the property of the respective vendor and cannot be considered by the owner as spares which can be used as part of initial spares.

Issue:-

- (g) **The details of the initial spares supplied by the equipment manufacturer of all the packages and those were part of the main order be also submitted by the petitioner.**

Petitioner’s Response:

As regards Query 7 (c), it is respectfully submitted that the Petitioner has incurred ₹9.01 crore towards initial spares as on CoD. Out of the total of ₹9.01 crore, initial spares of value ₹6.01 crore are part of the Original Package as per Form-16 of Tariff Filing Forms. Remaining ₹3.01 crore (₹2.72 crore for BTG Package + ₹0.29 crore for CHP Package) are ordered separately and not part of the Original Package and the same is also indicated in Form-16. The extracts of the purchase order placed on various suppliers towards initial spares has already been provided in reply to Query 7 (i).

Issue:-

- (h) **The actual amount of initial spares claimed by the petitioner be indicated separately in the capital expenditure incurred as on CoD duly certified by the CA.**

Petitioner’s Response:

As regards Query 7 (d), it is respectfully submitted that the Petitioner has incurred ₹9.01 crore towards initial spares as on CoD. The CA certificate vouching for the veracity of the same is enclosed herewith and marked as **Annexure-16**.

H. Interest Rate

Issue:-

With regard to the weighted average rate of interest claimed in the petition, the petitioner has submitted that it is actually paying interest on Rupees Term Loans (RTL) based on the prevailing State Bank of India benchmark prime lending rate/ Base Rate alongwith margin and other terms and conditions as per Commercial Loan Agreement. The petitioner has also submitted the table indicating SBI Base Rate which is 9.30% as on 05.10.2015.

In view of the aforesaid, the petitioner is required to inform the details and the basis of margin as well as the terms and conditions on account of which the weighted average rate is as high as 14.41%.

Petitioner's Response:

As regards Query 8, it is respectfully submitted that the interest is being paid to the commercial banks as per the Common Loan Agreement signed with the consortium of Banks. The relevant clauses for chargeability of the interest and spread have been provided in Para 2.6 (i), 2.7 and Schedule III of the Common Loan Agreement which have been reproduced below for the kind reference of the Hon'ble Commission.

"2.6 (i) Interest

The Borrower shall pay on the dates set out in Schedule III ("Interest Payment Dates") to each of the Senior Lenders interest at the Applicable Interest Rate (s) on the principal amounts of their respective Rupee Loan Facility outstanding from time to time, and on all monies accruing due under this Facility Agreement and not paid on due dates. The payment of interest shall commence on the first Interest Payment Date falling immediately after the date of Initial Disbursement."

"2.7 RESET OF INTEREST SPREAD

The Senior Lenders shall have a right to reset the Spread of the Applicable Interest Rate in respect of the Rupee Loan Facility on the Commercial Operations Date (Initial Interest Reset Date) and thereafter on expiry of every two years from the Initial Interest Reset Date (Subsequent Interest Reset Date(s)).

The Applicable Interest rate for the respective Senior Lender shall stand revised from the date of change in the BPLR at any time during the term of this Rupee Loan Facility.

The Borrower shall pay such revised Applicable Interest Rate immediately on the following Interest Payment Date. The Lenders' Agent shall notify within ten (10) days, to the Borrower, the Senior Lenders and Account Bank of such resetting of the Spread and Applicable Interest Rate accordingly. The Senior Lenders shall within ten (10) days intimate the Lenders Agent and Borrower of any change/revision in its respective BPLR."

"SCHEDULE III

The Initial Interest Rate shall be 11.50% (floating) per annum, payable monthly, on the Interest Payment Date, which shall be payable on the last working day of each calendar month. The Initial Interest Rate shall be linked to the benchmark/reference rate of the respective Senior Lenders and in case of LIC it shall be linked to the benchmark/reference rate of the Lead Bank i.e. Axis Bank Limited.

G. The Spread up to the Initial Interest Reset Date shall be determined as follows: Spread would mean the difference between Initial Interest Rate and BPLR of the respective Senior Lenders on the date of this Facility Agreement ("Spread"). The Spread as determined herein below would apply upto the Initial Interest Reset Date.

| S No | Senior Lender | Initial Interest Rate | BRPL as on effective date | Spread as on Effective Dale (incl. Term Premium, if any) |
|------|-------------------------------------|---|---------------------------|--|
| 1 | Axis Bank | 11.50% (Floating) (per annum payable monthly) | 14.75% | (-)3.25% |
| 2 | Bank of India | | 12.00% | (-)0.50% |
| 3 | Corporation Bank | | 12.00% | (-)0.50% |
| 4 | Life Insurance Corporation of India | | Same as lead bank | Same as lead bank |
| 5 | Oriental Bank of Commerce | | 12.00% | (-)0.50% |
| 6 | Punjab National Bank | | 11.00% | 0.50% |
| 7 | State Bank of Patiala | | 12.25% | (-)0.75% |
| 8 | State Bank of Indore | | 12.75% | (-)1.25% |
| 9 | State Bank of Travancore | | 12.25% | (-)0.75% |
| 10 | State Bank of Hyderabad | | 12.25% | (-)0.75% |
| 11 | State Bank of Bikaner and Jaipur | | 12.25% | (-)0.75% |
| 12 | State Bank of Mysore | | 12.25% | (-)0.75% |
| 13 | United Bank of India | | 12.00% | (-)0.50% |

| S No | Senior Lender | Initial Interest Rate | BRPL as on effective date | Spread as on Effective Dale (incl. Term Premium, if any) |
|------|---------------------|-----------------------|---------------------------|--|
| 14 | UCO Bank | | 12.25% | (-)0.75% |
| 15 | Union Bank of India | | 11.75% | (-)0.25% |

- H. Based on the above, the Applicable Interest Rate in respect of each Lender shall be BPLR of the Lender plus / minus the Spread specified in the table above.
- I. The Reset Interest Rate shall be arrived at on the following basis:
- c. Each Lender shall have the option to review and revise the Spread firstly on the Commercial Operations Date ("Initial Interest Reset Date") and every 2 years thereafter ["Subsequent Interest Reset Date(s)"].
 - d. The Reset Interest Rate in respect of each Lender shall be the respective BPLR on the Initial Interest Reset Dale or Subsequent Interest Reset Dale, as the case may be, plus/minus the respective Spread (as may be reviewed and fixed).
- J. It is clarified that between any two consecutive Reset Dates, upon change of BPLR from time to time, the Initial Interest Rate or the Reset Interest Rate, as the case may be, will stand revised from the date of change of such BPLR.
- K. The Applicable Interest Rate or the Reset Interest Rate shall be payable with monthly rests.
- L. Interest shall accrue from day to day and shall be computed on the basis of a 365 days year and the actual number of days elapsed.

The complete copy of the Common Loan Agreement has already been submitted to the Hon'ble Commission and hence the same is not being provided again for the sake of brevity. It is respectfully submitted that the funding in Power Sector is governed by various factors viz. status of the entity i.e. Govt. / Public / Joint Venture / Private Limited, various macro and micro economic factors, risk exposure and allocation to individual sectors which is governed by RBI guidelines and credit policies of Govt. which vary from time to time. Besides, factors like construction risks, operation risk, regulatory risk, debtor profile etc. also have bearing on the same. Subsequent to commissioning of a power project, the possibility of availing a competitive refinancing is considerably improved as the major construction risk is overcome. However, currently since the tariff has not been approved by the Hon'ble Commission, there is a perception of considerable regulatory risk. Given the fact that the Petitioner has not been able to raise an invoice for the supply of energy to

the Respondent Discoms, the banks are not open to refinancing at this stage. In view of the same, the Petitioner would explore the options of refinancing with various banks and financial institutions after approval of final tariff, with a view to optimise the capacity charges and would share the refinancing benefits with the beneficiaries according to the provisions of the extant Tariff Regulations. It is further reiterated that the movement in the SBI BPLR / Base Rate is influenced by macro-economic factors over which the Petitioner has no control.

Annexure 2**Respondent's (MPPMCL) comments on the petition and petitioner's reply on all such comments**

Respondent No. 1 (MPPMCL) offered its comments/ objections on the petition and it has also submitted its response on the reply filed by the petitioner on the comments of MPPMCL. The gist of the comments offered by MPPMCL and reply of the petitioner on all such comments are as given below:

1. Comments by Respondent No. 1 (MPPMCL):

It is most respectfully submitted that the instant Petition cannot be heard or admitted by the Hon'ble Commission as the Petitioner has filed this revised Petition for "Determination of Tariff of the Unit I x 600 MW Coal Based Power Project at Barela – Gorakhpur, District Seoni, Madhya Pradesh, for the period commencing from anticipated date of Commercial Operation till end of Control Period of the Regulation 2012, i.e. 31.03.2016".

In this regard it is submitted that the COD of 1st Unit was achieved only on 3rd May, 2016, when MPERC (Terms and Conditions for determination of Generation Tariff) Regulations, 2015 (RG-26 (III) of 2015) had already come in force. It is humbly submitted that in this scenario, when COD of 1st Unit itself could not take place upto 31.03.2016, how tariff for that period can be determined by this Hon. Commission. R-1 strongly objects for this request of the Petitioner and prays that this instant Petition may be summarily rejected on this ground.

It is humbly submitted that the reply filed by R-1 on 14.01.2016 for Petition No. 53 of 2015 may also be considered at the time of determination of Tariff in this Amended Tariff petition No. 16 of 2016.

Petitioner's response:

The facts in issue and the questions of law mentioned in para 2 are not admitted. It is pointed out that the Petitioner has filed an Amended Petition wherein it has filed the revised tariff forms applicable for the control period FY 2016-17 to 2018-19 as per MPERC Tariff Regulations, 2015 and has also amended its Petition keeping in view that the tariff is to be determined from the actual COD w.e.f 3rd May 2016.

2. Comments by Respondent No. 1 (MPPMCL):

That, it is most respectfully submitted that without prejudice to the submissions made by R-1 with regard to the maintainability of the petition, even on merits, the petition

suffers from various infirmities and R-1 vehemently and strongly opposes the prayers as sought by the petitioner as the petition is devoid of any merits.

A bare perusal of the petition highlights the fact that the petitioner has inflated various costs of the project and has also filed this petition based on various vague and unreasonable assumption and presumptions and the answering respondent herein vehemently opposes the same. R-1 herein seeks to highlight the various inconsistencies, vagueness in the petition and is submitting a para-wise reply to the various contentions and averments raised by the petitioner. Nothing stated herein shall be deemed to have been admitted unless expressly stated by R-1.

Petitioner's response:

The facts in issue and the questions of law mentioned in para 2 are not admitted. Each and every allegation are wrong and are specifically denied.

3. Comments by Respondent No. 1 (MPPMCL):

R-1 respectfully submits that the reasons given by the Petitioner for delay in COD of 1st Unit are not, in any way, attributable to R-1. The detailed study of the reasons given will bring to fore gross mismanagement of resources and manpower by the Petitioner. A minor delay of few days may generally be the norm of this industry, but in this case, a delay of more than two years from the scheduled date is inexplicable.

It is, therefore, humbly submitted that the end consumers of the State should not bear the cost of inefficiencies of the Petitioner. The IDC, as submitted in Form TPS-13 and 13 A, and IEDC, as submitted on Page 105 of Revised Tariff petition, may not be considered from SCOD, i.e., 31.03.2013, for the purpose of determination of Tariff.

Petitioner's response:

It is pointed out that as per the PPAs signed with the Respondents herein and subsequent approval from the Respondent No. 1, the Scheduled COD of Unit-1 of the Petitioner's Project was 31st March 2015 ("SCOD"). The approval of SCOD of 31st March 2015 was granted by the Respondent No. 1 vide its letter no. 05-01/1484 dated 10th November, 2014. The Project implementation was hampered owing to the delay in availability of start-up power, raw water intake system and other uncontrollable reasons and delays in obtaining clearances. The reasons for delay have been explained in detail in the Amended Petition and in the affidavit dated 16th June 2016

filed before the Hon'ble Commission on 17th June 2016 and the same are not repeated here for the sake of brevity.

4. Comments by Respondent No. 1 (MPPMCL):

Cost of common facilities are to be apportioned in both Units as per **Regulation-8 of MPERC (T&C of Determination of Tariff) Regulations 2015**. Therefore, while determining Provisional Tariff, cost of Common Facilities should be apportioned accordingly. The relevant part of the Regulation is quoted below:

“8. Methodology for Determination of Tariff and Trueing up :

.....

8.3. For the purpose of Tariff, the capital cost of the Project shall be segregated into stages and by distinct Units forming part of the Project. Where the Stage-wise, Unit-wise break-up of the capital cost of the Project is not available and in case of on-going Projects, the common facilities shall be apportioned on the basis of the capacity of the Units.

.....”

It is submitted that the petitioner has stated in earlier Petition that since the second unit is also proposed there are several common facilities as also expenses which presently pertain to Unit No.1 and will be shared by Unit No.2. The petitioner has barely said that the expenditure between the two units has been done as per the logic outlined at respective places of this petition. It is submitted that the above averments and contentions is highly misleading and an attempt to offload the cost of Unit 2 on Unit 1. The petitioner has failed to provide any specific that what would be the actual cost which would be shared and which are the various units which are common between Unit 1 and Unit 2 and also has failed to explain as to why should answering respondent bear expenses of these common facilities when the answering respondent is not getting any power from Unit No.2. This is the foremost and most vehement opposition of R-1 to the petition filed by the petitioner. It is prayed that such lop sided allocation of costs may not be allowed.

Petitioner’s response:

As regards Para 7, it is respectfully submitted that Phase-II is currently in the conceptual stage only, still awaiting the fuel linkage and no financial closure could be

achieved. In view of the same, the entire capital cost has been attributed to Phase-I, 1x600 MW only and as such there is no common expenditure at this stage. It is respectfully submitted that the provision of common facilities is done mainly for optimum utilisation of resources benefit of which is ultimately passed on to the consumers.

5. **Comments by Respondent No. 1 (MPPMCL):**

It is submitted that as of 2008, the project cost of Unit 1 was Rs.2,800 Crores. In Petition no. 53 of 2015, the Project cost was inflated to Rs. 4274.25 Crores. However, as of today, the petitioner has said that the project cost is about Rs.4698.66 Crores as on COD. It is most respectfully submitted that the petitioner has failed to explain as to why should R-1 bear the inflated project cost of about Rs.1,900 Crores. It is submitted that R-1 vehemently opposes the unrealistic project cost of Rs.4698.66 Crores for Unit 1 as submitted by the petitioner. It is further submitted that this objection is valid as a bare perusal of para 5.9 to 5.11 of the petition. It is most respectfully submitted that this is not based on any rationality and R-1 seeks to question as to why it is being asked to pay for this huge cost of Unit 1, where the cost has been increased by about Rs.1,900 Crores, and also as to why should R-1 pay for the facilities of Unit No.2. It is, therefore, most respectfully submitted that the entire attempt of the petitioner in filing this tariff petition is to seek approval from this Hon'ble Commission of extremely high and inflated cost of Unit 1 on the one hand and on the second hand, to offload the cost of Unit No.2 also on R-1. The answering respondent most vehemently opposes the instant petition and the prayers. In view of such a large increase in Cost, the Petitioner may please be directed to provide Item Wise justification for increase in Cost, clearly showing the calculations reflecting increase, if any, in quantum work of various heads due to design change, showing increase, if any, per unit rates, increase due to time overrun, etc., so that effective prudence check can be carried out by the Hon'ble Commission.

That, in Para 5.8, the estimated **Capital Cost of Phase-1** has been indicated as **Rs.4698.66 Crores**. This translates to **Rs. 7.83 Cr Per MW**, which appears to be abnormally high even for a greenfield project when compared with CERC Benchmark Hard Cost of **Rs. 4.54 Cr Per MW** prescribed for a **2 x 600 MW** Greenfield Project vide **CERC Order No. L-1/103/CERC/2012 Dtd. 04-06-2012**. The Petitioner may kindly be directed to give a breakup/ tabulation of Hard Cost and other Costs incurred/ estimated to be incurred for carrying out prudence check. It would be pertinent to

mention here that the trend of price of steel and cement in India has been downward since past five years. The Petitioner, therefore, needs to explain the reason for such large increase in Capital cost.

Petitioner's response:

The facts in issue and the questions of law mentioned in para 8 & 9 are not admitted. Each and every allegation are wrong and are specifically denied. It is pointed out that the Petitioner has explained in detail the reasons for the increase in the capital cost in the Amended Petition.

The Petitioner respectfully submits that the Bench Mark Capital Cost for 1x600 MW Thermal Power Project (based on 2011 indices as Base) is Rs. 4.87 crore per MW, as per the CERC Order No. L1/103/CERC/2012, dated 4th June 2012 providing the Benchmark Capital Cost (Hard Cost) for thermal power stations. Further, the Hon'ble CERC has provided a clarification on Benchmark Capital Cost, for thermal power stations with Coal as Fuel vide its aforementioned order, under Issue No. 6, para No. 11.2 and the relevant extracts of the same have been reproduced below for ready reference:-

“However, to calculate the likely cost of similar package for another project, the fixed Component needs to be linked to escalation in WPI for the intervening period, which may be provided...”

In view of the above, the indicated capital cost (hard cost) per MW of Rs. 4.87 crore for 1x600 MW Thermal Power Project based on 2011 Index as base, needs to be escalated based on WPI Index and brought forward to May 2016. The table hereunder shows that the Bench Mark capital cost of Rs. 4.87 crore / MW translates, into a project cost (hard cost) of Rs. 2,922 crore as on December, 2011, which after applying the escalation factor based on WPI Index, works out to Rs. 3,332.53 Crore translating into Rs. 5.55 crore / MW. WPI Index of May 2016 is 179.4 as published by the Central Government.

| Parameter | Identifier | Value |
|---------------------------|------------|--------|
| The WPI index at Dec-2011 | A | 157.3 |
| The WPI index at May-2016 | B | 179.4* |

| | | |
|--|-------------------------------|----------------------------|
| Inflation factor | $C = (B/A-1)\%$ | 14.05% |
| Benchmark Cost Based on Dec-2011 | D | Rs. 4.54 Crore/MW |
| Benchmark capital cost for 1x600 MW | $E = D * 1 * 600$ MW | Rs. 2,922 Crore |
| Escalation allowed up to May 2016 | $F = E * (100\% + C)$ | Rs. 3,332.53 Crore |
| CERC Benchmark capital (hard) cost as at May 2016 | $G = F/600$ | Rs. 5.55 Crs/MW |

*Note: Provisional figures

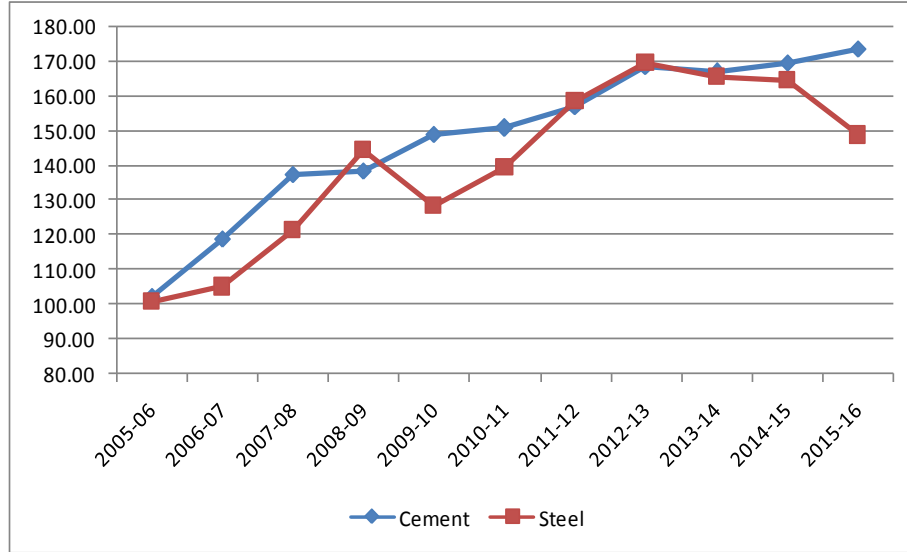
Source: CERC, Office of the Economic Adviser

The hard cost for the Petitioner's 1x600 MW Thermal Power Project, in terms of CERC Order dated 4th June 2016 for Bench Mark capital cost, works out as under by removing expenses / estimates on account of IDC and financing charges, Railway Siding, Township Expenses and Pre-commissioning expenses which were not considered by CERC while Bench Marking the capital cost (Hard Cost) of thermal power projects. The table herein below shows that the total estimated project completion cost of Rs 4971.76 crore translates into hard cost of Rs. 3076.61 crore which in turns works out to Rs. 5.13 crore / MW.

| Benchmarking for JPL's Phase-I, 1x600 MW | Value in Rs Crore |
|--|--------------------------|
| Project cost | 4971.76 |
| Less: | |
| IDC and Finance Charges | 1434.76 |
| Railway siding expenses | 49.39 |
| Township expenses | 35.00 |
| Pre-Commissioning | 376.00 |
| Total capital cost for Benchmarking purposes | 3076.61 |
| Cost per MW | Rs. 5.13 Crs/MW |
| CERC Benchmark capital (hard) cost as at May 2016 | Rs. 5.55 Crs/MW |

In view of the above the estimated completion cost of the Petitioner's project is well within the Bench Mark capital cost indicated by CERC for 1x600 MW Thermal Project.

Further, the contention of the Respondent No. 1 that the cement and steel prices have come down in the last 5 years in the country is erroneous. The graph below depicts that the cement and steel prices were at its highest levels during the project implementation period.



6. Comments by Respondent No. 1 (MPPMCL):

A comparative statement showing the per MW cost of plants of similar capacity, which have been commissioned recently, is given below :

| Name of Plant | Capacity | Organization | Year of commissioning | Cost per MW |
|-------------------------------|-----------------------------|------------------------|-----------------------|----------------|
| Sipat STPS | 3 X 660 MW | NTPC | 2012 | 4.483 Cr |
| Udupi TPS | 2 X 600 MW | Udupi Power Corp. Ltd. | 2012 | 4.615 Cr |
| Singaji STPS | 2 X 600 MW | MP Genco | 2014 | 5.614 Cr |
| Jhabua Power (Claimed) | 1 X 600 + 1 x 660 MW | JPL | 2016 | 7.83 Cr |

Therefore, it can be seen that the per MW cost, claimed now by the Petitioner, is on very high side and not in line with other plants of similar capacity. It is humbly requested that the capital cost of Jhabua Power Ltd. may be approved on the basis of Sipat STPS.

Petitioner's response:

The Petitioner respectfully submits that the Respondent No. 1 has selectively depicted the plants which do not fall in the same project implementation timeline as that of the Petitioner. In the table below, the Petitioner has depicted the capital cost of power plants which have been commissioned in roundabout the same time as that of the instant power plant.

| Particulars | Rating | Installed Capacity | Sector | Capital Cost | Per MW Capital Cost |
|--------------|----------|--------------------|---------|--------------|---------------------|
| | MW | MW | Sector | Rs Crore | Rs Crore/MW |
| Barh STPS | 2x660 MW | 1320 | Central | 8879.96 | 6.73 |
| MB Power | 2x600 MW | 1200 | IPP | 9002.92 | 7.50 |
| Jhabua Power | 1x600 MW | 600 | IPP | 4698.66 | 7.83 |
| Lalitpur TPP | 3x660 MW | 1980 | IPP | 16005.00 | 8.08 |
| Meja TPP | 2x660 MW | 1320 | Joint | 10820.00 | 8.20 |
| Nigrie TPP | 2x660 MW | 1320 | IPP | 12622.92 | 9.56 |

7. Comments by Respondent No. 1 (MPPMCL):

That, there is an increase in Establishment Charges due to increases in various heads, the details of which have not been provided. Increase in following heads may be partly attributable to time overrun, therefore the details of increase beyond benchmark completion period may be asked and that part deserves to be disallowed :

- a. Salary and manpower expenses
- b. Administrative/ Miscellaneous Charges

Petitioner's response:

It is respectfully submitted that the Petitioner has endeavoured to optimise the project cost by placing contracts for various BOP works on best competitive rates instead of placing an Order for entire BOP on EPC basis. This typically requires a slightly higher Project execution and monitoring team. Further, the estimated employee cost includes the required ramp-up of O&M team to ensure adequate training and readiness for start-up activities, synchronisation and stabilisation prior to COD.

The overhead associated with establishment expenses include Employee Recruitment and Training expenses, Administrative expenses like building rentals, repair and maintenance expenses, office guest house maintenance and rent, horticulture expenses, vehicle running and maintenance expenses, printing and stationery expenses, books and periodicals, drinking water facilities and miscellaneous consumables. The area around the project site being extremely under-developed and site itself being very tough to approach resulted in incurring far more expenses towards employee engagement.

8. Comments by Respondent No. 1 (MPPMCL):

Para 6.1 and 6.2 the same pertains to the petitioner averments regarding sourcing of Coal which is the primary fuel for the Power Plant. First of all, the petitioner has not provided any substantiation or details as to how it has come to the conclusion that the Annual Coal Consumption would be around 28.03 Lakh Metric Tons. The petitioner has only made a vague assertion that it is as per the norms prescribed by the Hon'ble Commission. Therefore, this calculation should be called by this Hon'ble Commission at the first instance.

The FSA covers 24.50 Lakh Metric Tons which is sufficient for 30% share of R-1 on Normative basis.

With respect to para 6.2 in which the petitioner has given its explanation regarding transportation arrangement of Coal from the Mines to the Power Station:

It is submitted that the same is extremely vague, ambiguous and not based on realistic terms. The para 6.2.1 to 6.2.5 of the petition which deals with transportation arrangement of Coal from Mines to Power Station is nothing but an unrealistic figment of imagination of the petitioner where everything is fluid with lots of 'if' and 'but'. It is submitted that the cost of Coal transportation, as envisaged by the petitioner, shall be extremely high. It is also submitted that the petitioner expect that the construction of railway line will be completed by December, 2016. It is not clear on what basis the petitioner is making these assumptions and presumptions. Further, the alternative model of transportation given in para 6.2.5.6 for coal road transportation and truck unloading by deploying a dedicated loop-in/loop-out system as imagined by the petitioner is nothing but a completely unrealistic, untenable and unworkable system of

transportation of coal required for 600 M.W. Power Plant. It is submitted that this imaginary system, as envisaged by the petitioner, would lead to very high cost of transportation of coal and R-1 vehemently opposes this high costing of transportation and it would be improper and incorrect that the same is burdened on R-1 or pass on to the consumers of R-1.

Petitioner's response:

The facts in issue and the questions of law mentioned in para 13 & 14 are not admitted. Each and every allegation are wrong and are specifically denied. It is respectfully submitted that the annual coal requirement has been calculated as provided below:

$$\text{Annual Coal Requirement (MT)} = ((\text{Heat Contribution from Coal} / \text{Weighted average GCV of Coal}) \times (1 + \text{Normative Transit Loss})) \times \text{Gross Generation} \times 1000$$

With respect to the coal transportation arrangement, detailed explanation has been provided in the Amended Petition and the same is not being repeated here for the sake of brevity.

9. Comments by Respondent No. 1 (MPPMCL):

Further, with respect to para 7 of the petition, which pertains to Power evacuation & Start up Power Arrangement, the same has been apportioned on R-1, the answering respondent again questions the high cost of high capacity conductors being burdened on the answering respondent. R-1 submits that the high capacity conductors would be sufficient for both the phases, i.e., Unit 1 and Unit 2 and the petitioner is seeking to offload the cost of Unit 2 on Unit 1 and thereby offload on the answering respondent and the same is vehemently and strongly opposed by R-1. It is requested that only pro rata share of 50% of the prudent expenditure may be considered.

Petitioner's response:

The Petitioner humbly submits that while the decision not to immediately undertake execution of Phase II had emanated due to reasons completely driven by the demand situation in the sector which was beyond the control of the Petitioner, a few expenses had to be incurred by the Petitioner to cater to some requirements of the second phase during construction of phase-I. The same was in line with the prudent industry practice since development of such facilities at a future date would have become

economically prohibitive and could have even caused long disruption in operation of the first Phase-I. Decision to use suitably sized conductors for transmission lines to connect to Pooling Station catering to both the units was one such example. Otherwise separate towers as well as conductors would have been required for Phase - II, not to speak of the related ROW issues which would have automatically come up during its execution.

10. Comments by Respondent No. 1 (MPPMCL):

That, in Para 9 (b), the Interest charges are indicated as Rs. 462.81 Crores, 440.98 Cr and 412.27 Crores Also, the Rate of Interest is shown as 14.41 % PA which is very high for a Thermal Power Project, when the prevailing rate is between 12 to 12.5 % for some time, and, therefore, prudence check is required.

Petitioner's response:

It is respectfully submitted that the funding in Power Sector is governed by various factors viz. status of the entity i.e. Govt / Public / Joint Venture / Private Limited, various macro and micro economic factors, risk exposure and allocation to individual sectors which is governed by RBI guidelines and credit policies of Govt. which vary from time to time.

It is respectfully submitted that the Petitioner has actually been paying interest on Rupee Term Loans (hereinafter "RTL") based on the prevailing State Bank of India's Benchmark Prime Lending Rate (hereinafter "SBI BPLR") / Base Rate + margin and other terms and conditions as per the Common Loan Agreement. The movement in the SBI BPLR / Base Rate is influenced by macro-economic factors over which the Petitioner has no control.

11. Comments by Respondent No. 1 (MPPMCL):

That, the Regulation 2015 provide that the Generating Company is required to make all possible efforts for "re-finance" of loan. The relevant portion of the Regulation is reproduced below :

".....

32. Interest on Loan Capital

32.1

.....

32.7. 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 refinancing 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.

.....”

It is humbly requested that the Petitioner may kindly be directed to give details of efforts made in this regard.

Petitioner’s response:

It is respectfully submitted that as of now, there are no plans of re-financing the debt. The Petitioner submits that its Project is being financed by a consortium of bankers and financial institutions (FIs) with Axis Bank being the Lead Banker and other key banks/FIs such as PFC, REC, State Bank of India, Bank of India, etc. These are the leading banks/FIs of the country and offer one of the best rates available in the market.

12. Comments by Respondent No. 1 (MPPMCL):

That, without prejudice to the above with respect to para 9 and 10 of the petition, i.e., Component wise Annual Charges and Variable Charges, as submitted by the petitioner, it is most respectfully submitted that all charges in annual charges or the variable charges should be taken from the date of C.O.D. (Commercial Operation Date).

Petitioner’s response:

It is respectfully submitted that the petitioner has claimed the annual capacity charges from the date of actual COD i.e., w.e.f 3rd May 2016.

13. Comments by Respondent No. 1 (MPPMCL):

Further, with respect to para 10, which deals with determination of energy charges, it is most respectfully submitted that the petitioner has given its own details of the boiler efficiency. It is most respectfully submitted that the petitioner may also provide for the Pressure Rating in Kg/cm², SHT/RHT in °C and details of boiler efficiency with boiler efficiency curve, as detailed by the Manufacturer. Further, the Gross Turbine Heat

Rate, as mentioned in the petition, is also on higher side at 1944 K.Cal./kWh. It is submitted that the same should be about 1935 K. Cal./kWh.

That, in Para 10. (b) **Gross Station Heat Rate (GHR)** is indicated as **2382.4 Kcal/Kg**. It has been calculated by taking Gross Turbine Heat rate as 1944 kCal/kWh in place of 1935 Kcal/kWh as provided in the Regulation.

Calculation for GHR

Guaranteed Turbine Cycle Heat Rate (Economical) : 1935
Kcal/KWh

From Page 35

Boiler Efficiency : 86.9%

$$\begin{aligned}\text{Unit Heat Rate} &= (\text{Turbine Heat Rate})/(\text{Boiler Efficiency}) \\ &= 1935/ 0.869 \text{ Kcal/KWh} \\ &= 2226.69 \text{ Kcal/KWh}\end{aligned}$$

As per Regulation 39.3 (C) of MPERC (T&C of Determination of Tariff) Regulations 2015

$$\begin{aligned}\text{Gross Station Heat Rate} &= 1.045 \times \text{Design Heat Rate} \\ &= 2326.89 \text{ KCal/KWh}\end{aligned}$$

(This is lower by 2.33 % when compared to GHR of 2382.4 KCal/KWh considered by the Petitioner)

Therefore, Gross Station Heat Rate should be considered @ 2326.89 KCal/KWh and not 2382.4 KCal/KWh.

14. Comments by Respondent No. 1 (MPPMCL):

It is respectfully submitted that the details towards pressure rating, boiler efficiency have been provided in Tariff Form TPS - 2 filed along with the Amended Petition. Further, the Petitioner respectfully submits that the manufacturer's certificate towards the guaranteed parameters has been provided as per Annexure-16 to the original petition. The heat balance diagrams has been provided as per Annexure 17 to the original petition.

As regards the issue of computation of normative Station Heat Rate ("SHR"), it is respectfully submitted that the Petitioner has provided the reasons for considering the SHR as per the provisions under the MPERC Tariff Regulations, 2012 in Para 10 (b) of the Amended Petitioner. The relevant extracts of the Amended Petition are reproduced below:

*"Clause 39.3 (C) (a) of the MPERC Tariff Regulations, 2015 specifies that for existing coal based thermal generating stations having COD before 31.3.2016, the station heat rate norms as prescribed in Madhya Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Generation Tariff) (Revision-II) Regulations, 2012 ("**MPERC Tariff Regulations, 2012**") shall be applicable:*

"(a) Existing Coal based thermal generating stations having COD on or after 1.4.2012 till 31.03.2016, (other than those covered under clause 39.2) shall be the heat rate norms approved during FY 2012-13 to FY 2015-16."

It is reiterated that keeping in view the fact that the instant power plant had achieved "100% MCR load" on 22nd March 2016, which was during the control period of the MPERC Regulations 2012, the unit may therefore be considered commissioned on the above date as per the provisions of the PPA as well as the extant regulations. Copy of Letter dated 30th March 2016 issued by the Central Electricity Authority ("CEA") confirming the commissioning (achieving full load) of the instant power plant are attached hereto and marked as Annexure-30. In view of the same, the Petitioner prays that the Station Heat Rate norms applicable for the control period when the unit was commissioned i.e., FY 2013-16 be made applicable.

Clause 35.2 B of the MPERC Tariff Regulations, 2012 specifies that:

"Gross Station Heat Rate for Coal-based and lignite-fired Thermal Generating Stations = 1.065 X Design Heat Rate (kCal/kWh)

Where the Design Heat Rate of a Unit means the Unit heat rate guaranteed by the supplier at conditions of 100% MCR, zero percent make up, design coal and design cooling water temperature/back pressure:"

| Manufacturer's Performance Guarantee Parameters | |
|---|--------------|
| Gross Turbine Heat Rate at 100% TMCR with 0% make-up | 1944 kCal/Kg |
| Steam Generator Thermal Efficiency at 100% TMCR with 0% make-up | 86.9% |

The Petitioner respectfully submits that the manufacturer's certificate towards the guaranteed parameters is annexed herewith and marked as Annexure-16.

- Design Heat Rate at 100% MCR with 0% make-up water shall be $1944/0.869 = 2237 \text{ KCal/Kg}$

Since Design Heat Rate of 2237KCal/Kg is less than the upper limit (2294Kcal/KG) prescribed in Clause 35.2 B of the MPERC Tariff Regulations, 2012, the same may be considered for tariff determination.

Therefore, Gross SHR would be $1.065 * 2237 = 2382.4 \text{ KCal/Kg}$

For the perusal of the Hon'ble Commission, the Petitioner hereby submits the heat balance diagrams and the same have been annexed hereto and marked as Annexure-17."

15. **Comments by Respondent No. 1 (MPPMCL):**

With respect to para 10 (c), i.e., the cost of Domestic Linkage Coal, it is most respectfully submitted that R-1 is not liable to pay any "levy" which may be imposed on the petitioner for purchase and transportation of Coal. Further, as mentioned hereinabove, the entire system of transportation of coal from the Mines to the Power Plant is extremely imaginary and not based on realistic situation. Further, R-1 strongly opposes the transportation of coal by roads and it is most respectfully submits that only the transportation of coal by the Rail shall be pass through to the consumers and not cost of transportation by roads.

Petitioner's response:

It is respectfully submitted that construction of railway network was to be done by the Railways and any delay on this account was beyond the reasonable control of the Petitioner. As per the framework of the MPERC Tariff Regulations, 2015, the Petitioner is to be allowed the landed cost of coal.

16. Comments by Respondent No. 1 (MPPMCL):

That, on Page 55, the “Target Availability of the Plant from 2015-16 to 2018-19” is taken as 85 %. The FSA coal is more than sufficient to meet this target, and hence, purchase of coal from open market / e-auction may not be allowed without prior permission of R-1.

Petitioner’s response:

It is hereby pointed out that in Para 10 (c) of the Amended Petition, the Petitioner had stated the following:

".....

Further, as per the provisions of the FSA, the take/supply or pay commitments is pegged at 80% of Annual Contracted Quantity, thereby, even if CIL supplied entire take or pay quantity, there will be shortfall in required coal to meet Normative Availability obligation under PPAs. Further, in case of failure to meet supply commitment, no penalty is payable by CIL for initial three (3) contract years; and thereafter a meager penalty of 0.01% is applicable. In the past years, the coal supply position of Coal India and its subsidiaries had been very poor and power plants in the country had witnessed poor FSA materialization. However, in the recent months, the supply position has improved. In view of the same, the Petitioner has considered 100% FSA materialization. However, in case the FSA materialization is not 100%, the Petitioner would be compelled to purchase either high grade coal under FSA or coal from other sources (Imported/E-auction). Suitable regulatory intervention in such a scenario may be required.

Further, it may be clarified that the actual annual coal consumption of the Phase-I, 1x600 MW Unit would be around 28.03 Lakh MT, calculated, based on various norms prescribed by the Hon’ble Commission; whereas FSAs cover only about 24.50 Lakh MT, which would be sufficient to meet out, only up to 87% of the total consumption. Balance 13% coal shall be arranged by the Petitioner outside FSA through E-auction. The computation of the annual coal requirement has been provided as an Additional Form to the Tariff Forms being filed by the Petitioner.

Balance Coal Requirement that is arising due to GCV Variance (between Linkage Normative GCV and actual GCV) will be met through E-Auction Coal."

17. Comments by Respondent No. 1 (MPPMCL):

Further, it is most respectfully submitted that petitioner is seeking to procure G4 grade of coal from ECL Coalmines. It is submitted that the same is not required and should be disallowed. As R-1 is strongly opposing the transportation of coal by road, it is most respectfully submitted that petitioner should rework the transportation of coal only through Rail and provide a new table of the charges to be incurred for transportation of coal by Rail as the current table is not acceptable and strongly opposed. Further, on Page 112 of present Petition, "Busy season surcharge" are shown @ 15%. These are not applicable during all the months of the year. Also, charges have been shown against sampling charges, Inland handling charges and inland road freight. There is no basis for the same and therefore, the same are strongly opposed by R-1 and may be disallowed.

Petitioner's response:

It is respectfully submitted that Busy Season Surcharge is levied for 9 months of a year. All other charges towards procurement of coal are being claimed as per the framework of the MPERC Tariff Regulations, 2015.

18. Comments by Respondent No. 1 (MPPMCL):

Further, with respect to para 10 (e) and (f) which pertains to Rate of coal and Gross Calorific Value or GCV of Primary Fuel (Coal), it is most respectfully submitted that the petitioner submitted the price of G11 Coal from SECL and the price of G12 Coal from MCL. R-1 is at failure to understand as to why the lower grade e-auction coal is being considered here to compute the Gross Calorific Value, when sufficient supply of FSA coal has been provided. Besides, as given on Page 40, the transport cost of e-auction coal is taken as approx. Rs. 2094.66/MT from Chhal mines of SECL, which is extremely high. The transportation cost, whether for linkage coal or e-auction coal, depend upon the distance of mine to plant. The Petitioner needs to explain how he has calculated transportation cost of ₹ 928.08/MT from SECL mines in case of Linkage coal (PI refer to Page 38). This clearly shows that misleading efforts are being made to show low Variable cost of energy from the Plant. It is, therefore, submitted that the petitioner needs to explain this position as the current explanation is unsatisfactory and strongly opposed by the answering respondent.

Petitioner's response:

It is respectfully submitted that the difference between the bid price of E-auction coal and landed cost of coal is on account of the statutory charges and taxes, railway freight up to Garha, loading and un-loading at Garha and truck transportation cost from the Garha to plant site. It is respectfully submitted that the Petitioner has submitted the detailed break-up of the cost items of E-auction coal in the excel sheet named 'E-Auction Garha' along with the Tariff Forms filed along with the Amended Petition.

19. Comments by Respondent No. 1 (MPPMCL):

Further, the petitioner, in Page 98 has included the cost of Secondary Fuel Oil in calculation of IWC. It is submitted that the cost of Secondary Fuel Oil should not be included in calculation of IWC as it goes against Madhya Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Generation Tariff) Regulation, 2015 and is strongly opposed.

Petitioner's response:

It is respectfully submitted that the cost of secondary fuel oil has been considered for working capital purposes in line with Clause 34 (1) (c) of the MPERC Tariff Regulations, 2015.

20. Comments by Respondent No. 1 (MPPMCL):

Further, the petitioner has sought to recover the cost of petition from R-1. In this regard, it is most respectfully submitted that presently, only the fee for determination of Provisional Tariff may be allowed to be reimbursed.

Petitioner's response:

It is respectfully submitted that the Petitioner has prayed for recovery of application fee, publication expenses and other statutory charges as per the provisions of Clause 52 of the MPERC Tariff Regulations, 2015.

21. Comments by Respondent No. 1 (MPPMCL):

It is most respectfully submitted that the entire petition wherein the petitioner is seeking approval of tariff for its 1x600 M.W. Power Plant demonstrate that the petitioner has given extremely inflated and exaggerated figure and seeking to pass on

the cost of even its Unit 2 on to its Unit 1 is also burdening the consumers with extremely expensive power. In this view of the matter, R-1 may not be interested to purchase such expensive power from the petitioner and if the petitioner seeks to sell its power then cost of the same should be reasonable and prudent in accordance with applicable laws.

That R-1 humbly prays for application of prudence check on IDC, IWC, IEDC and O&M expenses.

That R-1 humbly prays for application of prudence check on breakup of all cost components amongst Unit-1 & Unit-2 indicating individual cost components and common facilities separately.

Petitioner's response:

The facts in issue and the questions of law mentioned in instant paras are not admitted. Each and every allegation are wrong and are specifically denied.

22. Comments by Respondent No. 1 (MPPMCL):

It is submitted that on further scrutiny of forms submitted by the Petitioner, discrepancies have come to notice of Respondent No. 1 (R-1), which are being brought to the knowledge of Hon. Commission.

With respect to "Form –1(II) : Statement showing Return on Equity" on Page 53 of the Petition, it is submitted that the Petitioner has shown Tax Rate (Corporate Tax) as 34.61% without giving any details. The Petitioner may kindly be directed to give the basis through which this figure is submitted.

Petitioner's response:

The facts in issue and the questions of law are not admitted. Each and every allegation are wrong and are specifically denied. It is pointed out that the Petitioner in its replies dated 21st June 2016 and 20th July 2016 have responded to each and every averment made by the Respondent No. 1 in its counter affidavits dated 17th June 2016 and 8th July 2016.

23. Comments by Respondent No. 1 (MPPMCL):

With respect to “Form –1(II) : Statement showing Return on Equity” on Page 53 of the Petition, it is submitted that the Petitioner has shown Tax Rate (Corporate Tax) as 34.61% without giving any details. The Petitioner may kindly be directed to give the basis through which this figure is submitted.

In the same form on Page 53, the Petitioner has, therefore, claimed Rate of Return on Equity as 23.70% because of such high Tax Rate (Corporate Tax). It is humbly submitted that this Project is a new project. Hence, Alternate Minimum Tax shall be applicable in this case. The present rate of applicable Alternate Minimum Tax is 18.5%. Therefore, the Rate of Return on Equity shall be calculated as

$$\frac{\text{Rate of Return on Equity}}{(1 - \text{Alt. Min. Tax in \%})}$$

$$\text{i.e., } \frac{23.70}{(1 - 0.185)} = 28.51\%$$

The Petitioner has claimed a very high rate of 23.70% for Rate of Return on Equity without any basis and proper justification. Hon. Commission is, therefore, requested to consider Alternate Minimum Tax for grossing up of RoE.

Petitioner’s response:

The Petitioner respectfully submits that it has claimed the applicable normal corporate tax rate for grossing up of return on Equity as prescribed by Regulation 31 of the MPERC Tariff Regulations, 2015. Further, the Regulations provide for adjustment with respect to variation in tax rate applicable to the Generating Company at the time of triuing up. The said clause of the Regulations is reproduced below:

“31.1 The base rate of return on equity as allowed by the Commission under Regulation 30 shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in the respective financial year in line with the provisions of the relevant Finance Acts by the concerned generating company. The actual income tax on other income stream including deferred tax i.e., income of non generation business shall not be considered for the calculation of “effective tax rate”.

The petitioner respectfully submits that it is a Special Purpose Vehicle (SPV)

Company and it had incurred a marginal loss in FY 2014-15 and hence, no income tax was payable by it in such year. The financial statements for FY 2015-16 would be available by September 2016. However, subsequent to commercial operation of the unit(s) in FY 2016-17, the Petitioner would earn Return on Equity and as such would have to pay income tax at the normal tax rates. In view of the above, the Petitioner urges that it ought to be allowed corporate tax rate for grossing up of return on equity.

As regards the basis for computing the corporate tax rate as 34.61%, the same has been computed based on the following:

- i. Basic Corporate Tax Rate of 30%
- ii. Surcharge of 12% on the corporate tax rate
- iii. Education Cess of 2% on the above (i) and (ii) above
- iv. Secondary and Higher Education Cess on (i) and (ii) above.

It is also pointed out that the Respondent has erroneously stated the Minimum Alternate Tax rate to be 18.50% as it has not considered the applicable surcharge (12%), education cess (2%) and secondary and higher education cess (1%) which are compulsorily and statutorily payable along with the minimum alternate tax rate.

24. **Comments by Respondent No. 1 (MPPMCL):**

With respect to expenditure on common facilities for Unit-1 and Unit-2 of the Project, the Petitioner, in the Rejoinder dated 20.07.2016, has submitted that,

*“..... It is respectfully submitted that the provision of common facilities is done mainly for optimum utilization of resources, **benefit of which is ultimately passed on to the consumers.**” [Emphasis supplied]*

Here, it is humbly submitted that the PPA has been signed for supply of 30% power on Regulated tariff **only from first Unit having capacity of 600 MW**. Another PPA, only for supply of 5% power on variable charge, has been signed to supply power to consumers of the State from both 1st and 2nd Unit. So, a question arises,

- How the benefit can be passed to consumers of the State if they are not getting 30% power on Regulated Tariff from 2nd Unit?

It is submitted that this issues needs to be closely examined by this Hon'ble Commission while determining the tariff for Unit-1 and in particular keeping regulation 8 of the Tariff Regulations, 2015 in mind.

Petitioner's response:

The Petitioner respectfully submits that the PPA referred to by the Respondent in respect of supply of 30% power on Regulated tariff from Phase-I has been signed pursuant to the Memorandum of Understanding and Implementation Agreement entered into with various developers including the Petitioner. It is humbly

It is humbly stated that the Government of Madhya Pradesh during the Xth and XIth Five Year Plans, being desirous of facilitating private sector participation and investments in power generation projects in the State of Madhya Pradesh, had signed Memorandum of Understanding and Implementation Agreements with various developers for development of generation projects and in consideration thereof was entitled to a certain share of power generated from such projects. Pursuant to the signing of the Implementation Agreement, the Government of Madhya Pradesh through its Energy Department provided / facilitated expeditious grant of permissions, approvals, no objection certificates, recommendations, etc., in respect of coal linkage, water linkage, various other clearances, infrastructure development, etc.

It was in terms of these Memorandum of Understanding and Implementation Agreement and in lieu of such facilitations and approvals and as per the extant policy of the State Government that the Petitioner offered the first right to the Government of Madhya Pradesh or its nominated agency to purchase 30% power at regulated tariff. This offer was made from Phase-I, 1x600 MW unit as the Petitioner Company decided to implement Phase-I in the first stage. This offer was accepted by the Government of Madhya Pradesh resulting into the said regulated tariff PPA.

The obligations of the Petitioner and the rights of the Government of Madhya Pradesh in terms of the Implementation Agreement and Memorandum of Understanding are still valid for Phase-II as the same would be developed in terms of the same Memorandum of Understanding and Implementation Agreement.

In this regard, it is pointed out that Clause 12 of the Memorandum of Understanding dated 27th January 2007 provided right of first refusal to purchase power to the Government of Madhya Pradesh. The relevant extracts are reproduced below:

"The Government or their nominated agency do no guarantee purchase of power from the Company. However, the Government or its nominated agency shall have the first

right to purchase power up to 30 (thirty) percent of the aggregate capacity of the generating unit(s) for a period of 20 (twenty) years at the rate to be approved by the appropriate Electricity Regulatory Commission."

In view of the above, the submissions of the Respondent are without basis and ought to be rejected.