MADHYA PRADESH ELECTRICITY REGULATORY COMMISSION

5th Floor, "Metro Plaza", Bittan Market, Bhopal - 462 016

Petition No. 31 of 2018 and IA No. 7 of 2018

PRESENT:

Dr. Dev Raj Birdi, Chairman

Mukul Dhariwal, Member

IN THE MATTER OF:

In the matter of petition for determination of Provisional Generation Tariff of Unit No. 3 & 4 (2X660MW) of Shree Singaji Thermal Power Project (SSTPP) Stage II, Distt. Khandwa, under Section 62 of the Electricity Act, 2003.

AND IN THE MATTER OF:

M.P. Power Generating Company Ltd., Jabalpur — **Petitioner**

V/s

1. **M.P. Power Management Company Ltd., Jabalpur**
2. **M.P. Power Transmission Company Ltd., Jabalpur**

Respondents

ORDER

(Passed on this day of 7th March' 2019)

1. M.P. Power Generating Company Ltd., Jabalpur (hereinafter called " MPPGCL or the petitioner") filed the subject petition on 5th July' 2018 for determination of provisional generation tariff of Unit No. 3 & 4 of 2x660 MW Shri Singaji Thermal Power Project (SSTPP) Stage-II, Distt. Khandwa. The subject petition is filed under Section 62 of the Electricity Act, 2003 and based on MPERC (Terms and Conditions for determination of Generation tariff) Regulations, 2015. (hereinafter called "the Regulations, 2015").

2. The petitioner's Power Plant under the subject petition comprises of two generating units of 660 MW each. The Unit No.3 of the petitioner's power plant has been declared under commercial operation (CoD) on 18th November' 2018 whereas Unit No. 4 is yet to achieve its CoD.

3. Subsequently, the petitioner has filed an Interlocutory Application (IA) No. 7 of 2018 in the aforesaid Petition No. 31 of 2018. In the IA, the petitioner prayed the Commission to pass an Ad-interim Order permitting MPPGCL to provisionally raise bills for recovery of Annual Fixed Charges and Energy Charges as per MPERC (Terms and Conditions for determination of Generation Tariff) Regulations, 2015, for the power supplied from 660 MW Unit No. 3 of SSTPP Stage-II.

4. The petitioner executed long term Power Purchase Agreement (PPA) on 5th January' 2011 with *M.P. Power Trading Co. Ltd., (now M.P. Power Management Co. Ltd.* hereinafter called "MPPMCL" or "Respondent No. 1") for supply of power of 90% of the installed capacity of the Project for a period of 25 years at tariff determined by the Madhya Pradesh Electricity Regulatory Commission (hereinafter called "the Commission" or "MPERC"). Second amendment to this PPA *was signed on 26.09.2012 for incorporating enhancement of the power to be purchased 100% of the installed capacity with the Respondent No. 1.*

5. In the subject petition, the petitioner broadly submitted the following:
   (i) *To bridge the gap between the demand and supply, Govt. of M.P. decided to install 2x660 MW (Supercritical) Shree Singaji Thermal Power Project Stage-II (Load Based Power Station) near village Dongalia in Khandwa district and accorded administrative approval vide letter No. 192/01/2011/13 dated 07.01.2011.*
   (ii) *Initially the Project Cost was tentatively estimated at Rs. 6500.00 Crores (without detailed break-up) which was based on estimated cost of Rs. 6750 Crores for SSTPP-I. The Order dated 20.10.2010 was awarded to*

M/s Ramky Enviro Engineers Ltd, Hyderabad for preparation of Detailed Project Report. The estimate of Rs. 6500.00 Crores was approved by the BoD MPPGCL in the 57th Meeting vide resolution passed on 14.12.2011 & the plant was proposed to be built-up through International Competitive Bidding (ICB) process. In the 4th Meeting of "Business Committee of MPPGCL" held on 31.08.2013 at Bhopal, it was decided that the offer of L&T EPC Power, Vadodara being L1 bidder, be accepted only after receipt of Environmental Clearance for implementation of project from MoEF and then only advances be paid.

(iii) *Ministry of Power, Govt. of India, granted Mega Power Project Status to the "Shree Singaji Thermal Power Project" Stage-II with installed capacity of 2x660 MW vide Certificate No. 6/3/2006-S.Th. dated 05.07.2012.*

(iv) *Funding for the Project Cost estimate is being done through PFC Loan and GoMP Equity in 80:20 ratio, as approved by GoMP, vide Energy Department letter No. 192/01/2011/13 dated 07.01.2011 for the Project Cost amounting to Rs. 6500 Crores. Accordingly, the Loan amount considered for funding of project works out to Rs. 5200 Crores and Equity amount as Rs. 1300 Crores.*

(v) *PFC had initially sanctioned a loan (No. 20701004) amounting to Rs. 4862.17 Crores, vide sanction letter dated 29.09.2011, for setting up of the instant project considering the Project Cost Estimate of Rs. 6077.72 Crores at their own. The loan amount sanctioned by M/s. PFC works out to 74.80% of the project cost estimate of Rs. 6500.00 Crores. Subsequently, MPPGCL vide letter dated 25.10.2011 has informed to M/s PFC that to meet out balance fund requirement of Rs. 338 Crores, request shall be put up to them in due course.*

(vi) *The tendering activities for award of EPC Contract (through ICB route) for installation of this Project were initiated in July 2012 and the proposal for award of Contract for this purpose was put up for approval of the BoD of MPPGCL in Aug.'13. The Board of Directors of MPPGCL in its 70th meeting held on 31.08.2013 while according approval for placement of EPC contract on M/s L&T, resolved that the Letter of Award be issued only after receipt of the Environmental Clearance(EC) for the project by MOEF & CC. However, the EC could only be granted in Aug. 2014 and immediately thereafter, five LoAs were issued on M/s L&T, Vadodara on 04.09.2014 with the condition to commission the first unit (U#3) in 43 and second unit (U#4) in 47 months from the effective date of contract. The initial advance to the EPC contractor could only be released on 31.12.2014, which became the Effective Date of this* *contract. Accordingly, the Scheduled Commissioning date for Unit No.3 was targeted as 43 months i.e. upto 31.07.2018 and Unit No. 4 as 47 months i.e. upto 30.11.2018.*

(vii) *As such, the Date of Investment Approval be considered as Aug. 2014 i.e. the date of Environmental Clearance without which no activity for the Project could be taken up.*

(viii) *However, while revising the project cost in Sep. 2017, the Board of Directors of MPPGCL in its 90th meeting held on 27.09.2017 has accorded Revised Investment Approval for the Revised Project Cost Estimate of Rs. 7738 Crores with Debt : Equity ratio of 80:20 along with scheduled commissioning of U#3 in 43 months (July'18) and U#4 in 47 months (Nov. 2018) from the Effective Date of Contract.*

(ix) *The Commission may kindly appreciate that the 2x660MW Units of SSTPP Stage-II, Khandwa are one of the fastest project to be completed in time in India. None of the plants of Public Sector has been commissioned in duration of 43 months from Zero Date. Accordingly, MPPGCL is entitled to avail the additional return in Equity of 0.5% as per proviso 30 read with Appendix-I of the Regulations, 2015.*

(x) *The MoEF & CC vide its Notification dated 07.12.2015 has amended the Environment (Protection) Rules-1986; called as Environment (Protection) Amendment Rules, 2015. The existing Norms for consumptive Water & particulate matter have been revised and new emission norms for SO_2, NOx and Hg have been introduced. Accordingly SSTPP Stage-II project requires compliance of the norms as applicable for the TPPs to be installed from 01.01.2017.*

(xi) *Accordingly, the proposal for revision of the Project cost estimate [(mainly on account of installation of FGD equipments {Rs. 642 Crores}, applicability of Water Charges during construction {Rs. 70 Crores}, Accommodate impact of Taxes & Duties including Goods & Service Tax [GST] {Rs. 181.89 Crores} and PV&ERV {Rs. 312.29 Crores} total amounting to Rs. 1238.17 Crores] was discussed in the 90th Meeting of BoD of MPPGCL held at Bhopal on 27.09.2017 and the BoD has resolved / approved the proposal of Revised Project Cost as Rs. 7738 Crores (including IDC).*

(xii) *However, apart from the above revised project cost, certain new expenditure in our SSTPP-II Project on account of "contingent requirement of augmentation of Rail infrastructure subsequently necessitated based on practical difficulties in catering uninterrupted and effective coal transportation upto the Power Station amounting to Rs. 48.62 Crores" and "alternative approach Cement Roads (in segments)* *to the Power Station and maintenance/inspection road for rail line total amounting to Rs. 19.06 Crores" are also envisaged based on tentative estimation. Hon'ble Prime Minister of India visited SSTPP Complex, Khandwa on 05.03.2015 to lay the foundation Stone of 2x660 MW Shree Singaji Thermal Power Project Stage-2. All such contingent works are envisaged to be financed through the Contingency and/or savings in other heads of the estimate. However if additional funds over & above the approved cost of Rs.7738 Crores are required, the Project Cost shall be revised accordingly at an appropriate stage.*

(xiii) *As regards justification of the aforesaid Project Cost of Rs. 7738 Crores, it is to state that the cost of this project is comparatively much less than any other project of similar rating and capacity presently under installation /recently installed in the country. As per the "Monthly Report on Broad Status of TPPs" in the country published by CEA in Feb. 2018, such Projects having two units of 660 MW under installation/recently installed are namely, NTPC Khargone (costing Rs. 11148.86 Crores), NTPC Tanda (costing Rs. 9188.98 Crores), Suratgarh SCTPP of RRVUNL (costing Rs. 7920 Crores), Jawaharpur STPP of UPRVUNL (costing Rs. 10556.27 Crores), Lanco Vidarbha (costing Rs. 10433 Crores) etc. as against our SSTPP Stage-II Khandwa (costing Rs. 7738 Crores).*

(xiv) *Since the subject Units No. 3 & 4 of SSTPP Stage-II are being installed to meet the growing demand of power in the State of M.P., the Petitioner has offered sale of power to be generated from two units (2x660MW) of the project (90% of Installed Capacity) through Respondent No.1 for onward sale to the Discoms of M.P. on the rates to be determined by the Commission.*

(xv) *First Amendment Agreement to the aforesaid PPA was signed on 26.09.2012 for incorporating the change in name of Respondent No.1 from M.P. Power Trading Company Ltd. (TRADECO) to M.P. Power Management Co. Ltd. (MPPMCL)*. *The first addendum to the above PPA dated 04.01.2011 has been signed on 04.03.2014.*

(xvi) *A Power Purchase Agreement to this effect has been signed between the Petitioner and Respondent No.1 on 04.01.2011. The PPA further states that in case MPPGCL is not able to tieup / sale the balance 10% power to any other bulk consumer, the same shall be offered to Tradeco (now MPPMCL) on the terms and conditions of this PPA. MPPGCL has approached MPPMCL to amend PPA for sale of power from 90% to 100%. The matter is under discussion stage.*

(xvii) *The instant petition is filed under Section 62 of Electricity Act, 2003, which provides determination of provisional tariff by the Appropriate*

Commission for supply of electricity by the generating company. Accordingly, MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015, {RG-26 (III) of 2015} for the control period FY17 to FY19, notified on 1.1.2016 comes into force shall be applicable for determination of tariff.

(xviii) *The petitioner has filed the petition for determination of provisional generation tariff for 2x660 MW Units No. 3 & 4, Shree Singaji Thermal Power project (SSTPP) Stage-II, for the period w.e.f. SCoDs of Unit No.3 & 4 upto 31.03.2019 in accordance with above mentioned Regulations.*

(xix) *The Unit No.3 of SSTPP Stage-II was synchronized on **27.04.2018** at 18:29 Hours and expected to be put on Commercial Operation w.e.f. 31.07.2018. The Unit No. 4 is expected to be put on Commercial Operation w.e.f. 30.11.2018.*

(xx) *The Other Expenses in respect of Shree Singaji Thermal Power Project Stage-II, Units No. 3 & 4, for the period FY 2018-19 are based on actual MPERC fees paid. However for Water Charges, Cost of Chemical & Lub., Rent, Rate & Taxes, GST on Repair & Maintenance have been projected after evaluating on prorata MW basis on actual values of SSTPP Stage-I for as per Audited Books of Accounts for FY 2016-17 and then using escalation factor @ 6.3% to arrive the projected figure for FY 2018-19.*

(xxi) *For working out Return on Equity (RoE), the Base Rate of 16.0% as detailed at para 15 above, has been considered by MPPGCL as per MPERC Regulations 2015. Further, due to any change in Government policy or otherwise, if any, liability of tax and duties arises in last Year of the control period; the same shall be charged extra.*

6. With the above contention, the petitioner claimed the following Annual Capacity (fixed) Charges and Energy (variable) Charges for FY 2018-19 for Unit No. 3&4 of its project:

Table 1: Annual Capacity Charges and Energy Charges claimed by the petitioner

S.N.	Particulars	Unit	Unit No. 3	
1	No. of days in operation	No.	Full Year	244
2	Return on Equity	Rs. Cr.	97.29	65.04
3	Depreciation	Rs. Cr.	162.79	108.83
4	Intt. on Loan Capital	Rs. Cr.	239.72	160.25
5	O&M Expenses	Rs. Cr.	121.31	81.09
6	Intt. on Working Capital	Rs. Cr.	61.79	41.3
7	Annual Fixed Charges	Rs. Cr.	682.9	456.51
8	Less Non Tariff Income	Rs. Cr.	0.00	0.00
9	**Net Fixed Charges**	**Rs. Cr.**	**682.9**	**456.51**
10	**Energy Charge Rate (ECR)**	**Rs./kWh**	**2.310**	

S.N.	Particulars	Unit	Unit No. 4	
1	No. of days in operation	No.	Full Year	122
2	Return on Equity	Rs. Cr.	91.22	30.49
3	Depreciation	Rs. Cr.	158.69	53.04
4	Intt. on Loan Capital	Rs. Cr.	226.27	75.63
5	O&M Expenses	Rs. Cr.	121.31	40.55
6	Intt. on Working Capital	Rs. Cr.	61.3	20.49
7	Annual Fixed Charges	Rs. Cr.	658.78	220.2
8	Less Non Tariff Income	Rs. Cr.	0	0
9	**Net Fixed Charges**	**Rs. Cr.**	**658.78**	**220.2**
10	**Energy Charge Rate (ECR)**	**Rs./kWh**	**2.310**	

7. Apart from above, Other charges as detailed in para 24 of the petition for number of days in operation is tabulated hereunder: **(Amount in Rs. Crore)**

Sl. No.	SSTPP Stage-1	FY-19	FY-19
		Unit No. 3	**Unit No. 4**
	Days of operation	**244**	**122**
1	MPERC Fees	0.132	0.132
2	Water Charges	6.732	3.804
3	Cost of Chemical & Lub.	0.772	0.436
4	Rent, Rate & Taxes	0.059	0.033
5	GST on Rep. & Maint.	0.099	0.056
	Total	**7.794**	**4.461**

8. With the aforesaid submissions the petitioner has prayed the following in the subject petition:

(a) *Approve the provisional Generation tariff of 2x660 MW, Shree Singaji Thermal Power Project (SSTPP) Stage-II, Units No. 3 & 4, from their respective dates of Commercial Operation till 31.03.2019 at a Project Cost of Rs. 7738 Crores.*

(b) *Approve the provisional Energy Charge Rate (ECR) as detailed in para 27, provisional Annual Fixed Charge as detailed in para 28.*

(c) *Permit additional recovery on account of Rent, Rates and Taxes payable to Government, MPERC Fee, Cost of Chemicals & Consumables, Water Charges, Publication Expenses, etc as detailed in para 29, levied by various authorities on the Petition in accordance with law, on actual basis, over and above the fixed and variable charges.*

(d) *Permit recovery of expenses understated/ not considered in this petition at a later stage, if required.*

(e) *Condone any inadvertent omissions/ errors/ short comings and permit the applicant to add/ change/ modify/ alter this filing and make further submissions as may be required at later stages.*

Procedural History:

9. On preliminary scrutiny of the subject petition before fixing the date of motion hearing, it was observed by the Commission that several necessary documents which are required for initial scrutiny of the subject petition were not filed with the petition. Vide letter dated 17th July' 2018, the petitioner was asked to file all such documents at the earliest. Vide letter dated 10th August' 2018, the petitioner filed all such documents with the Commission.

10. Motion hearing in the matter was held on 9th October' 2018. Vide order dated 10th October' 2018, the petition was admitted and the petitioner was directed to serve copies of the petition on all Respondents in this matter. The Respondents were also asked to file their response if any, on the subject petition by 15th November' 2018.

11. The information gaps/ discrepancies as observed in the subject petition were communicated to the petitioner vide Commission's letter dated 2nd November' 2018 seeking its response by 24th November' 2018.

12. On 17th November' 2018, the petitioner informed the Commission that the copy of the subject petition has been served to all respondents in the matter on 16th October' 2018.

13. Vide its letter dated 19th November' 2018, the petitioner informed that the 660 MW Unit No 3 of Shri Singaji Thermal Power Project Stage-II has achieved CoD on 18th November' 2018 at 00:00 Hours. However, in reply to the information gaps/ additional details and documents as sought by the Commission, the petitioner had sought one months' time extension to file the same.

14. During the course of hearing held on 12th December' 2018, it was observed by the Commission that the respondents had not filed their response on the subject petition. During the course of same hearing, the petitioner was allowed to file its response on the information gaps communicated to it by the Commission by 24th December' 2018. The Respondents were also directed to file their response on the subject petition at the earliest but not later than 24th December' 2018.

15. Meanwhile, IA No. 7 of 2018 in the same petition was heard on 12th December' 2018 when it was observed by the Commission that the information/ documents sought from MPPGCL in main petition are necessary to examine before granting ad-interim order as sought in aforesaid IA.

16. Subsequently, the petitioner vide letter dated 24th December' 2018 filed its partial reply to the information gaps/ additional information/ details and documents

sought by the Commission. The petitioner had not filed its reply to all issues seeking four weeks' time extension to submit the balance information and documents:

17. During the course of next hearing held on 8th January' 2019, it was observed that the petitioner had sought one months' time extension for filing the balance information. Considering the request, petitioner was allowed to file the balance information at the earliest but not later than 24th January' 2019.

18. Vide letter No. 07-12/CS-MPPGCL/No SSTPP PH-2/Pt. 31 of 2018/115 dated 24th January' 2019, the petitioner filed the balance information as sought by the Commission, however, the respondents have not preferred to file any response on the petition till date.

Capital Cost :

Petitioner's submission:

19. Regarding the capital cost of the project, the petitioner broadly submitted the following:

(i) *"GoMP has accorded administrative approval for installations of SSTPP Stage-II vide letter dtd. 07.01.2011 at an estimated cost of Rs 6500 Crores involving a loan of Rs 5200 Crores (80%) from Financial Institutes & Equity participation of Rs 1300 Crores (20%) from State Government.*

(ii) *Requirement of Revision in the project Cost: The chronology of events highlighting requirement of revision in the Project Cost Estimate is as under:*

a) *In the request submitted to the Energy Deptt. in Sept. 2010 for according administrative approval to SSTPP Phase II, the total Project Cost of Rs 6500 Crores was estimated based on the cost of Rs 6750 Crores for SSTPP phase I without the detailed break –up.*

b) *The minutes of meeting of the Project Screening Committee (PSC) held at Bhopal on 30.10.2010 were forwarded by Energy Deptt. on 27.11.2010 and subsequently the Administrative approval was accorded in Jan 2011.*

c) *The DPR was finalized in March 2012 wherein two cost estimates, one with Mega Power Project Benefits (Rs 6499.93 Crores) and the other without Mega Project Benefits (Rs 7162.21 Crores), were indicated. Subsequently, Mega Power Project Status has been granted to the project on 5th July 2012. Accordingly, exemption of Customs Duty & Excise Duty was available to the project and as such Project cost with Mega Project Benefits only, was considered.*

d) *Subsequently tendering through ICB route for EPC contract was processed & the Price Bids were opened on 05.08.2013. However, the ordering was held-up for want of Environmental Clearance, which could be granted in Aug. 2014 only. Thereafter, five LoAs were issued on M/s L&T, Vadodara on 04.09.2014 and subsequently initial advance was also released to L&T on 31.12.2014, which became the Effective Date of this Contract with scheduled commissioning of Unit No. 3 in 43 months (July'18) and Unit No. 4 in 47 months (Nov. 2018). Thus, the ordering for the EPC contract got delayed with respect to the schedule envisaged earlier and therefore, the revision in the approved project cost of Rs 6500 Crores becomes essential to take into account the price variations for time gaps.*

e) *The EPC contract awarded to M/s L&T, through ICB route, involves some of payments in foreign currencies (USD, JPY & Euro), as such, the revision in the cost on account of Exchange Rate Variation is also required.*

f) *The MOEF &CC, GOI, in December' 2015 issued notification enforcing New environmental norms for Thermal Power Plants, therefore, presently* *additional requirement of installation of Flue Gas Desulphurization (FGD) Plant is envisaged for the project, which calls for updating of project cost considering already approved administratively cost towards FGD (Rs 642 Crores).*

(iii) Revision in the Project Cost Estimate : As per the requirement of revision in the Project Cost estimate indicated at para ii above, various components of the project cost have been revised on various counts and accordingly the revised estimate cost has been worked out as ***Rs 7738 Crores as against earlier Administratively Approved cost of Rs 6500 Crores."***

Provision under Regulation:

20. Regarding capital cost of the project, Regulation 15 of MPERC (Terms and Conditions for determination of Generation tariff) Regulations, 2015 provides that,

"15.1 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.

15.2 Capital cost for a Project shall include

(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 than30% of the funds deployed ------,

(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;

15.3 The Capital cost of an existing project shall include the following:

(a) the capital cost admitted by the Commission prior to 1.4.2016 duly trued up by excluding liability, if any, as on 1.4.2016;

(b) additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with Regulation 20; and

(c) expenditure on account of renovation and modernization as admitted by the Commission in accordance with Regulations 21-----."

Commission's Analysis:

21. The petitioner submitted that the capital cost of the Project (Unit No. 3&4) was initially estimated to Rs. 6500 Crore approved by the BoD on 14th December' 2011 has now been revised to Rs 7738 Crore and same has been approved by the BoD on 27th September' 2017.

22. In form TPS 5B filed with the petition, it is mentioned that the total projected expenditure of the project as on SCoD of Unit No. 3 i.e. 31st July' 2018 is Rs. 5764.58 Crore out of which Rs. 3090.37 Crore pertains to Unit No. 3 and Rs. 2674.21 Crore pertains to Unit No. 4. It is further mentioned that the total projected expenditure as on SCoD of Unit No. 4 i.e. 30th November' 2018 is Rs. 6517.28 Crore out of which Rs. 3380.02 Crore and Rs. 3137.26 Cores pertains to Unit No. 3 and 4 respectively.

(i) Investment Approval:

23. Regulation 4.1 (zd) of MPERC (Terms and Conditions for determination of Generation tariff) Regulations, 2015 provides the following:

> *"**Investment Approval** means approval by the Board of the generating company or any other competent authority conveying administrative sanction for the project including funding of the project and the timeline for the implementation of the project:*
>
> *Provided that the date of Investment Approval shall reckon from the date of the resolution/minutes of the Board/approval by competent authority.*

24. Vide letter dated 7th January' 2011, Government of Madhya Pradesh has accorded administrative approval for installation of SSTPP Stage-II at an estimated cost of Rs. 6500 Crore with the funding (80 : 20) of Rs. 5200 Crore loan from financial institutions and Rs. 1300 Crore equity from State Government.

25. On 18th March 2011, the petitioner applied for sanction of loan of Rs 5198 Crores @ 80% of total the project cost. However, M/s PFC while according approval to the loan, considered the project cost as Rs 6077.72 Crores and thus sanctioned a loan of Rs 4862.17 Crores, being 80% of Rs 6077.72 Crores.

26. Regarding the investment approval of the project, the petitioner submitted the following:

> *"The Board of Directors of MPPGCL in its 70th meeting held on 31.08.2013 while according approval for placement of EPC contract on M/s L&T, which was finalized after tendering through ICB route, also resolved that the Letter of Award be issued only after receipt of the Environmental Clearance (EC) for the*

project by MOEF & CC. The EC could only be granted in Aug. 2014 and immediately thereafter, five LoAs were issued on M/s L&T, Vadodara on 04.09.2014 with the condition to commission the first unit (U#3) in 43 and second unit (U#4) in 47 months from the effective date of contract. The initial advance to the EPC contractor could only be released on 31.12.2014, which became the Effective Date of this contract.

As such, the Date of Investment Approval be considered as Aug. 2014 i.e. the date of Environmental Clearance without which no activity for the Project be taken up.*"*

27. The petitioner has not filed the break-up of estimated project cost of Rs. 6500 Crore initially approved by GoMP and BoD of the petitioner company. However, the break-up of revised capital cost as approved by BOD of the company on 27th September' 2017 for Unit No. 3&4 and filed by the petitioner in form 5B of the petition is as under:

Table 2: Revised Capital cost as approved by BOD of the company (Rs. in Crore)

Sr. No.	Break Down	Approved Cost
1	Land & Site Development	210.00
2	Plant & Equipment along with Spares including PV and T&D	4291.38
3	Civil Supplies & works including PV and T&D	834.54
4	Erection, Testing & Commissioning Expenses including Freight charges, PV and T&D	543.97
5	Installation of FGD including coating of Chimney flue cans & associated works	642.00
6	Overheads	182.00
7	Project Management Consultancy, Project Monitoring Consultancy & TPI (including service tax and other claims)	20.00
8	Contingency	23.70
9	Capital cost excluding IDC & FC	6747.59
10	IDC, FC, FERV	990.58
11	**Capital cost including IDC, FC, FERV**	**7738.17**

(ii) Capital expenditure certified by Auditor:

28. Vide letter dated 2nd November' 2018, the petitioner was asked to file the CA certificate certifying actual cash expenditure and funding pattern as on CoD of each unit.

29. Vide letter dated 24th January' 2019, the petitioner filed a copy of CA certificate certifying actual cash expenditure of both the units (Unit No. 3&4) up to CoD of Unit No. 3 based on the actual payment made towards execution of supplies of plant & equipment and execution of works towards erection, testing &

commissioning and the associated civil works of the project and the expenses becoming due for which either the bills are under process or being issued, have got verified and certified by the CA firm. In the Auditor's certificate following is mentioned:

- *As per the enclosed Form TPS-5B, the cost on provisional basis has been taken till CoD of Unit 4 and till March 2019 based on the signed copies of various officers in-charge of the packages/ contracts furnished before us and due care has been taken on the balance work remaining and total cost of contract. Other expenditure for example, startup fuel coal consumption/ cost for generation of infirm power, till CoD of Unit-3, have also been certified as provided by MPPGCL, as per requirements of honorable MPERC.*
- *We would like to bring into notice that as per the policies of the company the treatment of liquidated damages is taken into books of accounts at the end of contract or on the completion of the project, hence the same is yet to be quantified and accounted for in the books and henceforth the certification is qualified with respect to LD treatment.*
- *The foreign currency transactions have been converted into INR on the equivalent date on which the highest payment of the particular package/ invoices was done, the impact of foreign currency fluctuation is not ascertained by the company henceforth the same is subject to assessment.*
- *Wherever unit wise breakup of expenditures was not available with the company the same has been apportioned in the ratio of 52.5% : 42.5% for Unit No. 3 and 4 respectively based on the calculations/ working provided to us by the company*
- *Further, as per the norms framed by MCA, read with Companies Act 2013, MPPGCL is required to maintain books of accounts as per IND-AS and the capitalized cost of this project as per IND AS and as per this certificate will vary as per the new norms therefore the user of this document is required to please note the same.*

30. On further perusal of the CA certificate filed by the petitioner, the Commission observed the following:

Approved capital cost of the project	Rs. 7738.00 Cr.
Total expenditure up to CoD of Unit No. 3	Rs. 6338.97 Cr.
Expenditure pertains to Unit No. 3	Rs. 3388.83 Cr.
Expenditure pertains to Unit No. 4	Rs. 2950.15 Cr.
Total projected expenditure up to 31st March' 2019	Rs. 6715.81 Cr.

31. Break-up of total cash expenditure for the Unit No. 3 as on its CoD, certified by the Auditor is summarized as given below:-

Table 3: Cash expenditure for Unit No. 3 as on its CoD certified by the Auditor:

Sr. No.	Particular	Unit	Amount
1	Cost of Land and site development	Rs. Cr.	50.24
2	Supply of total plant and equipment along with spares including PV and Taxes & Duties	Rs. Cr.	2109.44
3	Construction and pre-commissioning expenses including PV and Taxes & Duties	Rs. Cr.	245.87
4	Civil Supplies including PV and Taxes & Duties	Rs. Cr.	94.09
5	Civil Works	Rs. Cr.	259.31
6	Installation of FGD including coating of Chimney	Rs. Cr.	4.69
7	Overheads	Rs. Cr.	93.86
8	Project management consultancy / project monitoring consultancy including service tax and other claims	Rs. Cr.	7.51
9	Contingency	Rs. Cr.	0.00
Capital cost excluding IDC and finance charges		**Rs. Cr.**	**2865.01**
10	IDC and financing charges	Rs. Cr.	416.50
11	Expenditure during trial operation	Rs. Cr.	175.18
12	Less: revenue from sale of infirm power	Rs. Cr.	67.86
Total Capital Cost		Rs. Cr.	**3388.83**

**Net-off the revenue from sale of infirm power.*

32. The subject petition is for determination of provisional tariff based on the cash expenditure as on CoD of the Unit No. 3 certified by the Chartered Accountant. Therefore, the Commission has considered the subject petition based on the cash expenditure certified in aforesaid CA certificate.

(iii) SCOD and CoD:

33. With regard to Scheduled date of Commercial Operation, Regulation 4.1 (zs) of MPERC (Terms and Conditions for determination of Generation tariff) Regulations, 2015 provides as under;

> *"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;"*

34. Further, Regulation 4.1 (zv) of the aforesaid Regulations stated the Start date or Zero date as given below:

> *"Start Date or Zero Date means the date indicated in the Investment Approval for commencement of implementation of the project and where no date has been indicated, the date of investment approval shall be deemed to be Start Date or Zero Date;"*

35. The petitioner in para 2.1 of the petition submitted that vide letter dated 7th January' 2011, the Government of Madhya Pradesh accorded the administrative approval for the project at estimated project cost of Rs. 6500 Crore with funding of 80% loan and 20% equity infusion. The project cost Rs. 6500 Crore was approved by the BoD of the petitioner company in the 57th meeting of its BoD and conveyed vide resolution passed on 14th December' 2011.

36. On scrutiny of the subject petition, it was observed that the petitioner neither filed the copy of the administrative approval accorded by GoMP nor filed the copy of resolution of BoD of the petitioner company for investment approval of the project. Vide letter dated 17th July' 2018, the petitioner was asked to file the copy of investment approval of the project indicating Scheduled Commercial Operation date of the project.

37. Vide letter dated 10th August' 2018, the petitioner submitted the following:

"*In the 4th Meeting of "Business Committee of MPPGCL" held on 31.08.2013 at Bhopal, it was decided that the offer of L&T EPC Power, Vadodara being L1 bidder, be accepted only after receipt of Environmental Clearance for implementation of project from MoEF and then only advances be paid. The copy of Minutes of the 4th Meeting of Business Committee of MPPGCL is annexed as Annexure-2A.*

The Board of Directors of MPPGCL in its 70th meeting held on 31.08.2013 accorded approval for placement of EPC contract on M/s L&T, resolved that the Letter of Award be issued only after receipt of the Environmental Clearance for the project by MOEF & CC (Annexure-2B).

However, the Environmental Clearance by Ministry of Environment, Forests and Climate Change, GoI could only be granted in 27.08.2014 (Annexure-2C) and immediately thereafter, five LoAs were issued on M/s L&T, Vadodara on 04.09.2014 with the condition to commission the first unit (U#3) in 43 and second unit (U#4) in 47 months from the effective date of contract.

Initial advance to the EPC contractor could only be released on 31.12.2014, which became the Effective Date of initiation / Zero Date of the EPC contract. Accordingly, the Scheduled Commissioning date for Unit No.3 was targeted as 43 months i.e. upto 31.07.2018 and Unit No. 4 as 47 months i.e. upto 30.11.2018.

However, while revising the project cost, the Board of Directors of MPPGCL in its 90th meeting held on 27.09.2017 has accorded Revised Investment Approval for the Revised Project Cost Estimate of Rs. 7738 Crores."

38. In the aforesaid submission, the petitioner mentioned that the initial advance to the EPC contractor could only be released on 31.12.2014, which became the Effective Date of initiation/ Zero Date of the EPC contract. The petitioner further submitted that the Scheduled Commissioning date for Unit No.3 was targeted as 43 months i.e. upto 31.07.2018 and Unit No. 4 as 47 months i.e. upto 30.11.2018.

39. In view of the above, the Commission observed that the Government of Madhya Pradesh accorded the administrative approval for the project on 7th January' 2011. In the aforesaid approval, there is no mention about scheduled CoD and date of completion of the project. The Commission also observed that the SCoD is also not mentioned in the PPA executed between the petitioner and M.P. Power Trading Company Ltd (now MPPMCL).

40. Further, Regulation 4.1 (zy) of MPERC (Terms and Conditions for determination of Generation Tariff) Regulations, 2015 provides that the Start Date or Zero Date shall be the date indicated in the Investment Approval for commencement of implementation of the project and where no date has been indicated, the date of investment approval shall be deemed to be Start Date or Zero Date. Appendix I of the aforesaid Regulations, 2015 regarding timeline for completion of project also provides that the completion time schedule shall be reckoned from the date of investment approval by the Board of the generating company.

41. In view of the above, the Commission has not conceded that the contention of petitioner considering 31.12.2014 as zero date and thus there is a delay in achieving the CoD of the Unit No. 3 of the project in light of the timeline for completion of the project in terms of MPERC Tariff Regulations. As, the Unit No. 4 is yet to achieve its CoD, therefore, the Commission shall deal with the issue of SCoD and time overrun of the project after CoD of the project, while determining the tariff of the project. The petitioner is directed to file all relevant details and documents while filing the petition for determination of tariff of the project.

(iv) Cost Overrun:

42. Capital cost of the project initially approved by the Government of Madhya Pradesh in the investment approval dated 7th November' 2011 was Rs. 6500 Crore. The project cost Rs. 6500 Crore was approved by the BoD of the petitioner company in the 57th meeting of the BoD and conveyed vide resolution passed on 14th December' 2011.

43. Further, The Detailed Project Report was finalized in March 2012 wherein cost estimates with Mega Power Project Benefits was estimated to Rs 6499.93 Crores. Subsequently, Ministry of power, Government of India granted Mega Power

Project Status to the project on 5th July 2012. Accordingly, exemption of Customs Duty & Excise Duty was available to the project.

44. With regard to revision of project cost, the petitioner submitted that as per the requirement of revision in the Project Cost estimate, various components of the project cost have been revised on various counts and accordingly the revised estimate cost has been worked out is Rs 7738 Crores as against earlier Administratively approved cost of Rs 6500 Crores. The Board of Directors of the petitioner company in its 90th meeting held on 27th September' 2017 accorded revised investment approval for the revised project cost estimate of Rs. 7738 Crore with debt : equity ratio of 80 : 20.

45. In para 2.3 and 2,4 of the petition, the petitioner submitted the various reasons for revision of estimated project cost as given below:

(i) As per the requirement of revision in the Project Cost estimate indicated at para 2.2, various components of the project cost have been revised on various counts and accordingly the revised estimate cost has been worked out as Rs 7738 Crores as against earlier Administratively Approved cost of Rs 6500 Crores.
While computing the revised estimates of various components, the present day trends in respect of Price variation and ERV have been taken into account considering that there shall not be any abnormal change in the trend. The Summary of the major Heads considered in revision are indicated here under:

Impact of various components w.r.t. the enhanced portion of Revised Project Cost

Particular	***Amount in Rs Cr***	***% (of total additional cost)***	***Remarks/Basis of estimation***
FGD	*642.00*	*51.85%*	*Statutory requirement due to enforcement of new emission norms/ Administratively approved cost.*
Price Variation	*287.82*	*23.25%*	*As per the terms of the EPC contract, PV is payable without any ceiling. Considering actual expenditure upto Jun'17 and for balance amount assessment is based on the actual indices up to March'17 and projected for the balance period.*
GST on base value & PV	*219.31*	*17.71%*	*Effect of GST on the balance unexecuted works duly considering the taxes payable prior to GST regime and non-availability of deemed export benefit.*
General Civil Works(GCW)	*82.00*	*6.62%*	*The additional commitment is being met out from the existing contingency provision.*
Water Cess	*70.00*	*5.65%*	*Additional commitment (not considered earlier) and payable to WRD, GoMP.*
BOCW	*3.58*	*0.29%*	*Considered @1% of total Civil & Erection cost*

Exchange Rate Variation (ERV)	*24.47*	*1.98%*	*As per the terms of the contract, payment quoted in FC are payable in the respective currencies. Assessed based on actual payment up to June'17 and projected for balance period on balance amt.*
Start-up Fuel	*12.00*	*0.97%*	*Earlier provision of Rs 60 Cr increased Lump sum by Rs 12 Cr considering 20% increase in prices of Diesel and Furnace Oil.*
Entry Tax	*-41.00*	*-3.31%*	*Earlier estimated but now seems not applicable*
Contingency Provisions	*-62.00*	*-5.01%*	*From Original provision of Rs 85 Cr, Rs 82 Cr diverted to GCW and Rs 20 Cr added towards FGD,CSR & Misc. works, hence net decrease is Rs 62 Crores.*
Grand Total	***1238.17***	***100%***	

(ii) *It is also to highlight here that while preparing the above revised estimates, the liabilities against some of the components mentioned in para 2.3 of the petition have not been considered.*

(iii) *The total enhancement to the Project Cost Estimate has worked out as Rs 1238 Crores and accordingly the Project Cost has been to Rs 7738 Crores. The major components effecting project cost are:*

- *Installation of FGD (51.85% impact),*
- *Price variation (23.25% impact),*
- *GST(17.71% impact) and*
- *Cess on Consumptive Water (5.65% impact)*

which are beyond the control of the MPPGCL. Whereas increased provision towards GCW packages is being met out by diverting/ re-appropriation from/of the Contingency provision earlier made.

46. In view of the above, the Commission has observed that the initial and revised investment approvals were accorded for project as a whole whereas, only Unit No. 3 has achieved CoD and Unit No. 4 is yet to be achieve its CoD, therefore the issue of cost overrun shall be dealt with after CoD of Unit No. 4. The petitioner is directed to file detailed reasons with all relevant supporting documents along with the petition for determination of tariff of the project in this regard.

(v) IDC and IEDC:

47. Regulation 17.1 and 17.2 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 phasing of funds."

48. Further, regarding Incidental expenditure during construction (IEDC), Regulation 17.3 to 17.5 of MPERC (Terms and Conditions for determination of Generation tariff) Regulations, 2015 provides as under;

17.3 "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.

17.4 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.

17.5 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."

49. On scrutiny of the subject petition and other details & documents filed by the

petitioner, the Commission has observed that the petitioner has not filed the break-up of project cost of Rs. 6500 Crore approved by the BoD in its initial investment approval. However, the petitioner has filed the break-up of revised project cost of Rs. 7738 Crore in form 5B filed with the petition. The IDC and IEDC amount of the project as per the revised project cost approved by BoD is Rs. 990.58 Crore and Rs. 182 Crore, respectively.

50. Further, in the Auditor certificate dated 22nd January' 2019, certifying the actual capital expenditure of Unit No. 3 till its CoD, the IDC and financing charges of Unit No. 3 is Rs. 416.49 Crore whereas, the amount of IEDC (overheads) is indicated as Rs. 93.86 Crore. The amount of IDC and IEDC of Unit No. 4 as on CoD of Unit No. 3 is Rs. 376.53 Crore and Rs. 67.82 Crore respectively. Vide letter dated 24th January' 2019, the petitioner filed a unit-wise statement indicating year-wise actual IDC and finance charges up to tentative CoD of Unit No. 4.

51. From the above, the Commission has observed that the Unit No. 4 is yet to be achieve its CoD and the figures filed by the petitioner with regard to IDC and IEDC are provisional /estimated and subject to change after achieving CoD of Unit No. 4. Therefore, the petitioner is directed to file all necessary details alongwith unit-wise break-up of IDC and IEDC as on scheduled CoD and actual CoD of Unit No. 3&4 indicating actual phasing of expenditure alongwith the petition for determination of tariff of the project. Therefore, the Commission has provisionally considered IDC and IEDC as certified by the statutory auditor for Unit No. 3 in the subject petition.

(vi) Infirm power:

52. Regulation 24 of MPERC (Terms and Conditions for determination of Generation tariff) Regulations, 2015 provides that,

> *"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."*

Commission's Analysis:

53. Unit No. 3 of the Power Project was first time synchronized with the grid on 27th April' 2018. Vide letter dated 19th November' 2018, the petitioner informed that the Unit No. 3 of Shri Singaji Thermal Power Project Stage-II has achieved CoD on

18th November' 2018 at 00.00 hrs. The petitioner filed a copy of minutes of meeting dated 17th November' 2018 between MPPGCL, MPPMCL, M/s L&T and M/s NTPC in this regard.

54. On scrutiny of the subject petition, it was found that the petitioner had not filed the CA certificate regarding fuel expenditure for generation of infirm power till CoD of the Unit No. 3. The petitioner had also not filed the statements issued by State Load Despatch Centre regarding details of infirm power supplied to the grid and revenue earned from sale of power.

55. Vide letter dated 2nd November' 2018, the petitioner was asked to file the following details:

a. Complete details along with CA certificate regarding fuel expenditure for generation of infirm power till CoD of the Unit No. 3 and 4 indicating the quantity, rate and amount for consumption of oil and coal separately for generation of infirm power along with supporting documents regarding rate of the coal and oil.

b. The statements issued by the concerned Load Dispatch Centre regarding details of infirm power supplied to the grid and revenue earned from sale of power. The aforesaid statement need to be certified by the OIC in this matter.

c. The detailed break-up of the quantity, rate and cost of coal utilized from different sources for generation of infirm power.

d. Whether the revenue earned from sale of infirm power has been reduced from the capital cost as on CoD of each unit claimed in the subject petition.

56. Vide letter dated 24th January' 2019, the petitioner submitted the following:

a. The details of fuel expenditure for generation of Infirm Power till CoD of Unit No. 3; indicating the Quantity, Rate & Amount for consumption of Coal and Secondary Oil, separately for generation of Infirm Power; duly certified by CA firm are annexed herewith as Annexure-3 and Annexure-4 respectively for kind reference of Hon'ble Commission.

b. The Infirm Power Generation and its corresponding Energy injected in to the grid along with amount is detailed below:-

Unit No.3 SSTPP, Khandwa		
Month	***Infirm Energy in MU***	***Amount (Receivable) Rs. Crores.***
August' 2018	*70.672*	*6.75*
September' 2018	*56.894*	*5.76*
October' 2018	*261.86*	*44.32*
(upto 17/11/2018)	*60.202*	*11.03*
Total	***449.628***	***67.86***

Further, it is to mention that the copies of MP SLDC statements indicating Infirm power generated/supplied to the grid and Revenue earned from sale of power upto 31.10.2018 has already been submitted before the Commission vide letter No. 1701 dated 24.12.2018 as Annexure-9.

The Infirm Power details of Unit No. 3 for the balance period i.e. 01.11.2018 to 17.11.2018 (till CoD) has been extracted from DSM Accounts prepared and issued by MP SLDC and certified by CA firm is annexed as Annexure-5 for kind reference of Hon'ble Commission.

c. *As desired by Hon'ble Commission the detailed break-up of quantity, rate & cost of coal utilized from different sources for generation of infirm power are annexed as Annexure-3.*

d. *In the context MPPGCL wish to submit that presently, the CoD of Unit No. 3 has only been achieved and therefore the revenue earned from sale of Infirm Power during trial run of this Unit has been reduced from the capital cost of this Unit as on its CoD, as shown under revised Format TPS 5B. However, details in respect of Unit No.4 shall be provided after its CoD, which is envisaged in Feb. 2019.*

57. On perusal of the aforesaid details and documents, the Commission observed that the petitioner filed a copy of the Auditor's certificate dated 22nd January' 2019, certifying the start-up fuel expenditure of Rs. 175.18 Crores (Rs. 123.83 Cr. Coal + Rs. 51.35 Cr. Fuel Oil) for generation of infirm power from Unit No. 3. The Auditor has also certified that the revenue realized from sale of infirm power is Rs. 67.857 Crores. Therefore, net start-up fuel expenses/pre-commissioning expenses for generation of infirm power after accounting for the revenue from sale of infirm power as on COD of the Unit No. 3 is mentioned as Rs. 107.326 Crores.

58. The petitioner filed the statement for month-wise details for consumption of secondary fuel oil for generation of infirm power from Unit No. 3 of the project certified by the Auditor. The details of the expenses on secondary fuel oil (LDO + HFO) are summarized as given below:

LDO for Unit No. 3:			
Month	**LDO Consumption in KL**	**Issue Rate in Rs./KL**	**Total amount in Rs. Cr.**
August, 2018	285	50066.75	1.4269
Sept., 2018	350	50066.75	1.7523
Oct. 2018	163	57416.35	0.9359
Nov. 2018	292	58865.78	1.7189
Total	**1090**		**5.8340**
HFO for Unit No. 3:			
August, 2018	4500.00	40673.91	18.3033
Sept., 2018	4300.00	42421.28	18.2412

Oct. 2018	1000.00	47350.11	4.7350
Nov. 2018	880.00	48181.20	4.2399
Total	**10680**		**45.5194**
Total cost of Oil			**51.35**

59. On perusal of the Auditor's certificate filed vide letter dated 24th January' 2019 (Annexure-4), it is observed that the petitioner has incurred Rs. 27.80 Cr. in respect of start-up fuel including secondary fuel oil consumed during the start-up/trial run period from February' 2018 to July' 2018. However, while certifying the total cash expenditure as on CoD of Unit No. 3, the Auditor has appropriately incorporated these expenses (at S. No. 7.4) under the head Start-up fuel including secondary fuel oil.

60. Vide letter dated 24th December' 2018, the petitioner filed the month-wise statement (August, September and October) issued by SLDC certifying the infirm power injected into grid from Unit No. 3 from August' 2018 till CoD of the Unit No. 3. Further, vide letter dated 24th January' 2019, the petitioner filed the SLDC statement for the month of November' 2018. The details of net infirm power supply and net revenue realized as per the SLDC's month-wise statements have been summarized as below:

Table 4: Infirm power details:

Month	Infirm power injected into grid (kWh)	Revenue from sale of infirm power (Rs.)
August, 2018	7,06,72,060	6,74,92,324
September' 2018	5,68,,93,510	5,76,01,588
October' 2018	26,18,60,306	44,31,75,242
November' 2018	6,02,02,080	11,03,02,853
Total	**68,73,58,846**	**67,85,72,007**
		Rs. 67.857 Cr.

61. On further scrutiny of the Auditor's certificate filed vide letter dated 24th January' 2019 (Annexure-5), it is observed that the petitioner has incurred Rs. 8.40 Cr. in respect of start-up power consumed during the project execution period from February' 2018 to July' 2018. However, while certifying the total cash expenditure as on CoD of Unit No. 3, the Auditor has appropriately incorporated these expenses (in S. No. 7.3) under the head preliminary and pre-operative expenses including start-up power.

62. Based on the above, the details of start-up fuel expenses as per the Auditor's certificate dated 22nd January' 2019 are summarized as given below:

Table 5: Details of start-up fuel expenditure:

Month	Fuel Oil	Quantity Consumed	Wt. average Landed price (Rs./KL or MT)	Cost in Rs. Crores
Up to CoD of Unit No. 3 i.e. 17th Nov. 2018	Coal (MT)	314918.90	3932.54	123.84
	LDO (KL)	1090	53522.99	5.83
	HFO (KL)	10680	42621.13	45.51
Total cost of start-up fuel				**175.18**
Less – revenue from sale of infirm power				**67.857**
Net cost of start-up fuel (net off revenue from infirm power)				**107.326**

63. In view of the above, the Commission has provisionally considered the start-up fuel expenses of **Rs. 107.326 Crores** (net off revenue from sale of infirm power) in this order.

(vii) Capital Cost as on CoD of Unit No. 3 provisionally considered in this order:

64. The break-up of total cash expenditure for Unit No. 3 as on its COD duly certified by the Chartered Accountant and provisionally considered by the Commission in this order is summarized as given below:-

Table 6: Capital Cost as on CoD provisionally considered: (Rs. Crore)

Sr. No.	Particular	Unit	Amount
1	Cost of Land and site development	Rs. Cr.	50.24
2	Supply of total plant and equipment along with spares including PV and Taxes & Duties	Rs. Cr.	2109.44
3	Construction and pre-commissioning expenses including PV and Taxes & Duties	Rs. Cr.	245.87
4	Civil Supplies including PV and Taxes & Duties	Rs. Cr.	94.09
5	Civil Works	Rs. Cr.	259.31
6	Installation of FGD including coating of Chimney	Rs. Cr.	4.69
7	Overheads	Rs. Cr.	93.86
8	Project management consultancy / project monitoring consultancy including service tax and other claims	Rs. Cr.	7.51
9	Contingency	Rs. Cr.	0.00
Capital cost excluding IDC and finance charges		**Rs. Cr.**	**2865.01**
10	IDC and financing charges	Rs. Cr.	416.50
11	Expenditure during trial operation	Rs. Cr.	175.18
12	Less: revenue from sale of infirm power	Rs. Cr.	67.86
Total Capital Cost		Rs. Cr.	**3388.83**

**Net-off the revenue from sale of infirm power.*

Debt – Equity Ratio:

Petitioner's Submission:

65. Regarding the funding of the project, the petitioner submitted the following:

- "Funding of the project is being done through PFC Loan No. 20701004 and GoMP Equity in 80:20 ratio, as approved by GoMP, vide Energy Department letter No. 192/01/2011/13 dated 07.01.2011 for the Project Cost amounting to Rs. 6500 Crores. Accordingly, the Loan amount considered for funding of project works out to Rs. 5200 Crores and Equity amount as Rs. 1300 Crores.

- PFC had initially sanctioned a loan (No. 20701004) amounting to Rs. 4862.17 Crores, vide sanction letter dated 29.09.2011, for setting up of the instant project considering the Project Cost Estimate of Rs. 6077.72 Crores. However, the loan amount sanctioned by M/s. PFC was only 74.80% of the project cost estimate of Rs. 6500.00 Crores. Subsequently, MPPGCL vide letter dated 25.10.2011 has informed to M/s PFC that to meet out balance fund requirement of Rs. 338 Crores, request shall be put up to them in due course.

- Accordingly, the proposal for revision of the Project cost estimate mainly on account of installation of FGD equipments {Rs. 642 Crores}, applicability of Water Charges during construction {Rs. 70 Crores}, Accommodate impact of Goods & Service Tax [GST] { Rs. 181.89 Crores} and PV & ERV {Rs. 312.29 Crores} total amounting to Rs. 1238.17 Crores was discussed in the 90th Meeting of BoD of MPPGCL held at Bhopal on 27.09.2017 and the BoD has resolved / approved the proposal of Revised Project Cost as Rs. 7738 Crores.

- Apart from the above revised project cost, new expenditure on account of "contingent requirement of augmentation of Rail infrastructure subsequently necessitated based on practical difficulties in catering uninterrupted and effective coal transportation upto the Power Station amounting to Rs. 48.62 Crores" and "alternative approach Cement Roads (in segments) to the Power Station and maintenance/inspection road for rail line total amounting to Rs. 19.06 Crores" are also envisaged based on tentative estimation. All such contingent works are envisaged to be financed through the Contingency and/or savings in other heads of the estimate. However if additional funds over & above the approved cost of Rs.7738 Crores are required, the Project Cost shall be revised accordingly at an appropriate stage.

- Initially the tied up Equity with GoMP for SSTPP PH-2 was Rs. 1300 Crores. However, with the revision of project cost detailed above, GoMP shall have to infuse an Equity amounting to Rs. 1547.60 Crores in the project. Similarly, the PFC Loan shall be required to be enhanced to Rs. 6190.40 Crores (80% of revised project cost).

Provisions under Regulation:

66. With regard to funding of the project, Regulation 25 of MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015 provides that,

25.1 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.

***Explanation**.-The premium, if any, raised by the generating company while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, only if such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station.*

25.2 The generating company shall submit the resolution of the Board of the company regarding infusion of fund from internal resources in support of the utilization made or proposed to be made to meet the capital expenditure of the generating station.

25.3 In case of the generating station declared under commercial operation prior to 1.4.2016, debt- equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2016 shall be considered.

25.4 In case of the generating station declared under commercial operation prior to 1.4.2016, but where debt: equity ratio has not been determined by the Commission for determination of tariff for the period ending 31.3.2016, the Commission shall approve the debt: equity ratio based on actual information provided by the generating company.-------"

67. The petitioner submitted that the Government of Madhya Pradesh accorded the investment approval of the project cost of Rs. 6500 Crore with the funding (debt : equity) in the Ratio of 80 : 20. BoD of the petitioner company vide resolution dated 14.12.2011 also approved the same funding as approved by GoMP.

68. Further, as per the Auditor's certificate dated 22nd November' 2018, the actual capital expenditure of the project as on CoD of Unit No. 3 is Rs. 6338.97 Crores. Further, in the draw down schedule filed by the petitioner it is indicated that the total fund incurred as on CoD of Unit No. 3 is Rs. 5483.87 Crore at the debt : equity ratio of 81 : 19. The same debt / equity ratio actually incurred by the petitioner as on CoD of Unit No. 3 is considered for funding of actual cash expenditure.

69. As already mentioned in preceding part of this order, the subject petition is filed for determination of provisional tariff based on the actual expenditure certified by the CA/Auditor. Therefore, the funding of expenditure pertaining to Unit No. 3 of the project has been provisionally considered at the same debt – equity ratio (81/ 19) as that of the total actual capital expenditure funded as on COD of Unit No. 3 duly certified by the Auditor.

70. Based on the above, the funding of the actual capital expenditure duly certified by the Auditor and debt : equity ratio as on COD of Unit No. 3 of Petitioner's power project is considered in this order as given below:

Table 7: Funding as on COD of Unit No. 3:

Sr. No.	**Particular**	**Amount in Rs. Crores**
1	Gross Fixed Assets	3388.83
2	Opening Loan	2751.73
3	Opening Equity	637.10
4	Normative Equity	637.10
5	Debt : equity	81 : 19

Annual Capacity (fixed) Charges:

71. 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;

a. **Return on Equity:**

Petitioner's submission:

72. The petitioner claimed return on equity by considering the base rate of return plus 0.5% additional return in respect of project completed within time limit. The return on equity is worked out by the petitioner as given below:

Table 8: Return on equity claimed by the petitioner: (Rs. Crores)

Particulars		FY 2018-19		
		Unit No. 3	Unit No. 4	Total
		w.e.f. CoD on 31.07.2018 to 31.03.2019	w.e.f CoD on 30.11.2018 to 31.03.2019	
1	Normative Equity - Opening (as on CoD)	554.51	541.6	1096.1
2	Add: Drawl(s) during the Year	107.1	57	164.1
3	Normative Equity – Closing	**661.61**	**598.6**	**1260.2**
4	Average Normative Equity	608.06	570.1	1178.15
5	Rate of RoE %	16.00%	16.00%	16.00%
6	Return on Equity for the year	**97.29**	**91.22**	**188.5**
7	Days in operation	244	122	
8	**Return on Equity for the period of operation during the Year**	**65.04**	**30.49**	**95.53**

73. *The petitioner submitted that the MAT rate has been considered at base rate of 18.50%, surcharge of 12% and 3% on account of education cess and secondary higher education cess respectively in accordance with the Finance Act for Assessment Year FY 2016-17 and has been assumed the same for balance control period.*

Provision under Regulations:

74. With regard to Return on Equity, Regulation 30 and 31 of MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015 provides that,

"30.1 Return on equity shall be computed in rupee terms, on the equity base capital 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 the shall be grossed up with the effective tax rate for the Year respective financial years. 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:

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

Where t is the applicable 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 generation business forFY2016-17 is Rs 1000 crore.

(b) Estimated Advance Tax for the year on above is Rs 240 crore.

(c) Effective Tax Rate for the year 2016-17 = Rs 240 Crore/Rs 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:

75. While determining the return on equity, the opening equity of Rs. 637.19 Crores as on CoD of Unit No. 3 based on the actual cash expenditure certificate by the Auditor (with respect to total actual capital expenditure) is considered in this order. The equity amount actually incurred is less than the 30% of the capital cost considered in this order. Therefore, the actual equity of Rs. 637.19 Crores is considered as normative equity for return on equity.

76. The petitioner has claimed the Rate of return by considering the base rate of return plus 0.5% additional return in respect of project completed within time limit. Regarding timeline for completion of projects, Appendix-I of MPERC (Terms and Conditions for determination of Generation Tariff) Regulations, 2015, stated the following:

"The completion time schedule shall be reckoned from the date of investment approval by the Board (of the generating company), up to the Date of Commercial Operation of the Units or Block of units."

Timeline for Unit size 660/800 MW

(a) 52 months for Green Field Projects. Subsequent Units at an interval of 6 months each.

(b) 50 months for Extension Projects. Subsequent Units at an interval of 6 months each.

77. The aforesaid provision under Regulation provides that the completion time schedule shall be reckoned from the date of investment approval by the Board of the generating company. Further, Regulation 4.1 (zv) of the aforesaid Regulations provides that the *"Start Date or Zero Date means the date indicated in the Investment Approval for commencement of implementation of the project and where no date has been indicated, the date of investment approval shall be deemed to be Start Date or Zero Date"*

78. The petitioner informed that the Government of Madhya Pradesh accorded administrative approval for installation of SSTPP PH-II on 07th January' 2011 at an estimated cost of Rs. 6500 Cr.. In para 10 of the petition, the petitioner has also informed that the estimate of Rs. 6500 Crore was approved by the BoD of MPPGCL on 14th December' 2011 in its 57th meeting.

79. The petitioner submitted that the Board of Directors of MPPGCL in its 70th meeting held on 31.08.2013 while according approval for placement of EPC contract on M/s L&T, which was finalized after tendering through ICB route, also resolved that the Letter of Award be issued only after receipt of the Environmental Clearance for the project by MOEF & CC. The petitioner further submitted that the Environmental Clearance could only be granted in Aug. 2014 and immediately thereafter, five LoAs were issued on M/s L&T, Vadodara on 04.09.2014 with the condition to commission the first unit (U#3) in 43 and second unit (U#4) in 47 months from the effective date of contract. The initial advance to the EPC contractor could only be released on 31.12.2014, which became the Effective Date of this contract.

80. As mentioned in para 41 of this order, the Commission has not conceded the contention of petitioner considering additional equity in respect of early completion of unit and thus there is a delay in achieving the CoD of the Unit No. 3 of the project in light of the timeline for completion of the project in terms of MPERC Tariff Regulations. As, the Unit No. 4 is yet to achieve its CoD, therefore, the Commission shall deal with the eligibility of additional equity in respect of early completion of the unit, while determining the tariff of the project. The petitioner is directed to file all relevant details and documents while filing the petition for determination of tariff of the project.

81. In view of the above, the Commission has considered the base rate of return on equity 15.50% in this order. Accordingly, the Return on Equity for Unit No. 3 is provisionally determined as given below:

Table 9: Return on equity determined in this order:d

Sr. No.	Particular	Unit	From CoD to 31.03.2019
1	Opening Normative Equity	Rs. Cr.	637.10
2	Equity addition	Rs. Cr.	0.00
3	Equity addition during the year	Rs. Cr.	637.10
4	Average Normative Equity	Rs. Cr.	637.10
5	Base rate of Return on Equity	%	15.50%
6	Tax rate considered (MAT)	%	0.00
7	Applicable rate of return on equity	%	15.50%
8	**Annual Return on equity**	**Rs. Cr.**	**98.75**

b. Interest and finance Charges:

Petitioner's submission:

82. The petitioner submitted that the weighted average rate of interest of 10.50% based on the special interest rate offered for the sanctioned loans by M/s PFC. Same interest rate has been considered for computation of Interest and Finance Charges for the unit.

83. *The Unit wise Interest on loan capital for the period SCoD to 31.03.2019 has been worked out as under:-*

Table 10: Interest and finance charges claimed by the petitioner: (Rs. Crores)

Particulars		***FY 2018-19***		
		(Unit No. 3)	***(Unit No. 4)***	***Total***
1	*Normative loan – Opening (as on CoD)*	*2154.47*	*2139.28*	*4293.75*
2	*Add: Drawl(s) during the Year*	*420*	*190*	*610*
3	*Less: Repayment (s) of Normative Loans during the year(depreciation)*	*162.79*	*158.69*	*321.49*
4	*Net Normative loan – Closing*	*2411.67*	*2170.59*	*4582.26*
5	*Average Normative Loan*	*2283.07*	*2154.93*	*4438*
6	*Weighted Avg. Rate of Interest on Actual Loans*	***10.50%***	***10.50%***	***10.50%***
7	*Interest on Normative Loan for the year*	***239.72***	***226.27***	***465.99***
8	*Days in operation*	***244***	***122***	
9	*Interest on Normative Loan, for the period of operation during the Year*	***160.25***	***75.63***	***235.88***

Provision under Regulations:

84. With regard to Interest on loan capital, 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 annual 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.

85. The loan amount of Rs. 2751.73 Crores for Unit No. 3 (actually incurred as on CoD is worked out based on the Auditor's certificate), is considered as opening loan balance for Unit No. 3 as on its COD. The aforesaid opening loan amount considered in this order is 81 % of the opening GFA as on CoD considered in this order.

86. With regard to the Weighted average rate of interest on loan, the petitioner has mentioned that the weighted average rate of interest is worked out based on the special interest rate @ 10.50 % offered for the sanctioned Loans by M/s PFC vide letter dated 6th April' 2018. The petitioner filed detailed working for computation of the weighted average rate of interest in formats filed with the petition.

87. Accordingly, the weighted average rate of interest on loan @ 10.50 % as filed by the petitioner is provisionally considered for FY2018-19 in this order. The repayment equivalent to depreciation for the period after COD is considered as per the provision under Tariff Regulations, 2015. Based on the above, the interest and finance charges on loan is determined as given below:

Table 11: Interest and finance charges determined by the Commission: (Rs, Crores)

Sr. No.	Particular	Unit	From CoD to 31.03.2019
1	Opening Loan	Rs. Cr.	2751.73
2	Loan addition during the year	Rs. Cr.	0.00
3	Repayment during the year considered	Rs. Cr.	61.58
4	Closing Loan	Rs. Cr.	2690.15
5	Average Loan	Rs. Cr.	2720.94
6	Weighted average rate of interest	%	10.50
7	**Annual Interest on Loan**	**Rs. Cr.**	**285.70**

c. Depreciation:

Petitioner's Submission:

88. The petitioner submitted that the weighted average rate of depreciation @ 4.95% has been calculated based on the gross block as on the COD of the units and as on 31.03.2019, and on the rate of depreciation for different capital cost components as per Appendix 2 of MPERC Tariff Regulations 2015.

89. *Based on the weighted average rate of depreciation as calculated above, the annual depreciation amount for the control period for Unit No. 3 &4 is computed as follows:-*

Table 12: Annual depreciation claimed by the petitioner: (Rs. Crores)

Particulars		FY 2018-19		
		(Unit No. 3)	(Unit No. 4)	Total
1	Opening Gross Block (as on CoD)	3090.37	3137.26	6227.63
2	Asset Additions (Projected)	396.74	137.37	534.11
3	Deletions/Adjustment	0.00	0.00	0.00
4	Closing Gross Block	3487.11	3274.63	6761.74
5	Average Gross Block	**3288.74**	**3205.94**	**6494.68**
6	Wt. Avg. Rate of depreciation.	4.95%	4.95%	4.95%
7	**Amount of Depreciation for the year**	**162.79**	**158.69**	**321.49**
8	Days in operation	244	122	00
9	**Depreciation for days in operation**	**108.83**	**53.04**	**161.87**

Provision's under Regulations:

90. 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 creation of the site:

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

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 extended life.

Provided also 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 Date of Commercial operation 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 31.3.2013 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.

33.10 In case of de-capitalization of assets in respect of generating station or unit thereof, the cumulative depreciation shall be adjusted by taking into account the depreciation recovered in tariff by the de-capitalized asset during its useful services."

Commission's Analysis:

91. The opening Gross Fixed Assets of **Rs. 3388.83 Crores** as on CoD of Unit No. 3 (as per the Auditor's certificate based on actual expenditure) is provisionally considered in this order as opening GFA as on CoD of Unit No. 3. The petitioner has also claimed additional capitalization during FY 2018-19. However, this provisional tariff order is based on the actual expenditure as on CoD of Unit No. 3 certified by the Auditor. Therefore, no additional capitalization is considered up to 31st March, 2019 under Unit No. 3 in this order. The petitioner is at liberty to file additional capitalization with Annual Audited Accounts for FY 2018-19 and other supporting details and documents while filing the petition for determination of final tariff of the project.

92. For the purpose of depreciation, the petitioner apportioned the soft cost of the project in the ratio of hard cost components of the project. The weighted average rate of depreciation @ 4.95 % is worked out by the petitioner in TPS Form 11 based on the rate of depreciation for different capital cost components as per Regulations, 2015 and the detailed break-up of cost components filed in the petition.

93. The Commission has provisionally determined depreciation on gross fixed assets considering the weighted average rate of depreciation worked out by the petitioner. The petitioner is directed to file asset-cum-depreciation register for both the unit with the petition for determination of final tariff of the project.

94. Based on the above, the depreciation is worked as given below:

Table 13: Depreciation determined in this order:

Sr. No.	Particular	Unit	From CoD to 31.03.2019
1	Opening Gross Block	Rs. Cr.	3388.83
2	Asset addition during the year	Rs. Cr.	0.00
3	Closing Gross Block	Rs. Cr.	3388.83
4	Average GFA	Rs. Cr.	3388.83
5	Weighted average rate of depreciation	%	4.95
6	**Depreciation amount**	**Rs. Cr.**	**167.75**
7	No. of operational days	No.	134
8	Cumulative depreciation	Rs. Cr.	**61.58**

d. Operation & Maintenance Expenses:

Petitioner's Submission:

95. *The O&M expenses are considered by the petitioner as per norms for the control period specified in Regulation 35.8 of MPERC Tariff Regulations 2015. Based on the above, the O&M expense on annual basis is filed by the petitioner is as given below:-*

Table 14: O&M Expenses claimed by the petitioner:

Particulars		FY 2018-19	
		(Unit No. 3)	(Unit No. 4)
1	O&M Norms (Rs. Lakhs/MW)	18.38	18.38
2	Installed Capacity (MW)	660	660
3	**O&M Charges (Rs. Crores)**	**121.31**	**121.31**

Provision's under Regulations:

96. Regulation 35.7 of MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015 provides that,

"The Operation and Maintenance expenses admissible to existing thermal power stations commissioned prior to 01.04.2012 comprise of employee cost, Repair & Maintenance (R&M) cost and Administrative and General (A&G) cost. These norms exclude Pension and Terminal Benefits, EL encashment, Incentive, arrears to be paid to employees, taxes payable to the Government, and fees payable to MPERC. The generating company shall claim the rate, rent & taxes payable to the Government, cost of chemicals and consumables, fees to be paid to MPERC, EL encashment and any arrears paid to employees separately as actuals. The claim of pension and Terminal Benefits shall be dealt as per Regulation 35.4 of these Regulations."

Table 15: *O&M Norms for Generating Units Commissioned on or after 01.04.2012*

Units (MW)	*FY 2016-17*	*FY 2017-18*	*FY 2018-19*
	(Rs. in lakh/MW)	*(Rs. in lakh/MW)*	*(Rs. in lakh/MW)*
45	*32.07*	*34.09*	*36.24*
200/210/250	*27.00*	*28.70*	*30.51*
300/330/350	*22.54*	*23.96*	*25.47*
500	*18.08*	*19.22*	*20.43*
600	*16.27*	*17.30*	*18.38*

97. Operation & Maintenance expenses are considered as per norms specified in Regulation 35.7 and 35.8 of MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015. The annual norms for O&M expenses for 600 MW and above unit (commissioned on or after 01.04.2012) as per regulations, 2015 for FY 2018-19 is Rs. 18.38 Lakhs/MW. Based on the above, the annual operation and maintenance expenses are determined as given below:

Table 16: Operation & Maintenance expenses determined:

Sr. No.	Particular	Unit	From CoD to 31.03.2019
1	Installed Capacity	MW	660
2	Per MW O&M expenses	Rs. L/MW	18.38
3	Total O&M expenses	Rs. Cr.	**121.31**

e. Interest on Working Capital:

Petitioner's submission:

98. The petitioner broadly submitted the following:

"*Interest on working capital for FY 2018-19 has been determined on the Working Capital elements determined in pursuance with the norms as approved by Hon'ble Commission in proviso 34 of MPERC (Terms and Conditions for determination of Generation Tariff) Regulations, 2015 {RG-26 (III) of 2015},*

As specified in proviso 34.3 of MPERC (Terms and Conditions for determination of Generation Tariff) Regulations, 2015 {RG-26 (III) of 2015}, rate of interest on working capital shall be on normative basis and considered as the bank rate as on 1st of April of that financial Year 2018-19 in which the generating station or unit thereof, is declared under commercial operation.

The Base Rate of SBI effective from 01.04.2018 is 8.70%. The same has been considered to remain effective as on SCoD of Unit No. 3 & 4 respectively. Accordingly, the interest rate for FY 2018-19 has been considered as 12.2% (8.70% + 03.50%).

Based on above norms, actual fuel cost {Coal & Oil (F.O.)} and the rate of interest considered, Year wise working capital and interest on working capital works out as under:"

Table 17: *Interest on working capital claimed by the petitioner: (Rs. Crores)*

Particular		***Unit No. 3***	***Unit No. 4***	***Total***
Coal cost for generation for two month	*60 days*	*177.59*	*177.59*	*355.17*
Oil Cost	*2 months*	*1.43*	*1.43*	*2.86*
Maintenance Spare	*20% of O&M*	*24.26*	*24.26*	*48.52*
Receivable	*2 months*	*293.06*	*289.04*	*582.11*
O&M expense	*1 month*	*10.11*	*10.11*	*20.22*
Total Working Capital		***506.45***	***502.43***	***1008.88***
Rate of Interest	*(8.7+3.5)%*	*12.20%*	*12.20%*	*12.20%*
Interest on Working Capital		***61.79***	***61.3***	***123.08***

Provisions under Regulations:

99. 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 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.

100. With regard to the cost of secondary fuel oil considered for the working capital purpose, the cost of only main secondary fuel oil (FO) is taken into account as per aforesaid provision under Regulations, 2015. The rate of Rs. 34942/ KL for HFO is worked out by the petitioner in the petition. Clause 34.2 of the Regulations, 2015 provides that no fuel price escalation shall be provided during the tariff period. Therefore, the same rate of HFO as worked out above is considered for working capital purpose.

101. The cost of two months' main oil stock at normative availability is worked out as given below:

Table 18: Two months cost of main sec. fuel oil considered in this order:

Sr. No.	Particular	Unit	FY 2018-19
1	Installed Capacity	MW	660
2	NAPAF	%	85.00
3	Two months stock of main fuel oil	KL	409.53
4	Rate of main secondary fuel oil	Rs./KL	34942
5	**Cost of two months main fuel oil**	**Rs. Cr.**	**1.43**

102. Cost of coal for 60 days stock for working capital purpose, is worked out based on the norms specified under MPERC (Terms and Conditions for determination of Generation tariff) Regulations, 2015. The landed cost of coal and weighted average GCV of the coal is provisionally considered as claimed by the petitioner in the petition. The coal stock is worked out for working capital on the basis of price and GCV of coal for three preceding months as filed by the petitioner. The cost of coal for 60 days' stock is worked out as given below:

Table 19: Cost of coal for 60 days stock considered in this order:

Sr. No.	Particular	Unit	FY 2018-19
1	Station Heat Rate	Kcal/kWh	2138.41
2	Gross Calorific Value	Kcal/kg	3786
3	Annual Coal Quantity	MT	2769244
4	Two months coal stock	MT	455218
5	Rate of Coal for working capital	Rs./MT	3848
6	**Amount of 60 days coal stock**	**Rs. Cr.**	**175.17**

103. Maintenance spares for working capital is worked out @ 20% of the Operation & maintenance expenses specified in Regulation as given below:

Table 20: Maintenance Spares considered in this order:

Sr. No.	Particular	Unit	FY 2018-19
1	Annual O&M expenses	Rs. Cr.	121.31
2	**20% of the Annual O&M Expenses**	**Rs. Cr.**	**24.26**

104. Receivables for working capital have been worked out on the basis of the fixed and energy charges for two months on normative plant availability factor as given below:

Table 21: Two months receivables considered in this order:

Sr. No.	Particular	Unit	FY 2018-19
1	Variable Charges – two months	Rs. Cr.	179.26
2	Fixed Charges – two months	Rs. Cr.	122.68
3	**Receivables – two months**	**Rs. Cr.**	**301.94**

105. Operation and Maintenance expenses for one month is worked out as given below:

Table 22: One month O&M expenses considered in this order:

Sr. No.	Particular	Unit	FY 2018-19
1	Annual O&M expenses	Rs. Cr.	121.31
2	**O&M Expenses for one month**	**Rs. Cr.**	**10.11**

106. With regard to the rate of interest on working capital, Regulation 34.3 of MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015 provides that the rate of interest on working capital shall be on normative basis and shall be considered at 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.

107. The rate of interest on working capital for FY 2018-19 has been taken equal to the State Bank of India's Base Rate as on 1st April of that financial Year plus 3.50%. Base Rate of SBI effective from 01/04/2018, is 8.70 %. The same has been considered to remain effective as on COD of Unit No. 3. The interest on working capital equal to Base Rate of SBI as on 1st April' 2016 (8.70% + 3.50%) i.e. 12.20% is considered in this order.

108. Based on the above, the interest on working capital is provisionally determined in this order as given below:

Table 23: Interest on working capital determined in this order:

Sr. No.	Particular	Unit	From CoD to 31.03.2019
1	Cost of coal for 60 days months	Rs Crore	175.17
2	Cost of fuel oil for two months	Rs. Crore	1.43
3	O&M Charges for one month	Rs. Crore	10.11
4	Maint. Spares 20% of the O&M charges	Rs. Crore	24.26
5	Receviables for two months	Rs. Crore	301.94
6	Total working capital	Rs. Crore	512.91
7	Applicable rate of interest	%	12.20
8	Interest on working capital	Rs. Crore	**62.58**

<u>Summary of Annual Capacity (fixed) Charges</u>:

109. As per MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015, Normative Annual Plant Availability Factor for recovery of annual capacity charges is 85%. The Annual Capacity (fixed) charges for FY 2018-19 have been pro-rated for 134 days. Considering the above, the annual capacity (fixed) charges for Unit No. 3 of SSTPP PH-II, which are provisionally determined in this order.

110. Regarding the recovery of Annual Capacity (fixed) charges, proviso (i) of the Regulation 7.10 of MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015, provides as under:

"The Commission may grant tariff up to 90% of the annual fixed cost of the project determined by the Commission after prudence check subject to adjustment as per Regulation 8.15 of these Regulations after the final tariff order is issued."

111. Accordingly, the Annual Capacity (fixed) charges summarized as given below:

Table 24: Annual Capacity (fixed) charges of Unit No. 3:

Sr. No.	Particular	Unit	From CoD to 31.03.2019
1	Return on equity	Rs Cr.	98.75
2	Interest charges on loan	Rs. Cr.	285.70
3	Depreciation	Rs. Cr.	167.75
4	Operation & Maintenance expenses	Rs. Cr.	121.31
5	Interest on working capital	Rs. Cr.	62.58
6	**Annual capacity (fixed) charges**	Rs. Cr.	**736.08**
7	Less: Non Tariff Income	Rs. Cr.	0.00
8	**Net AFC Recoverable**	Rs. Cr.	**736.08**
9	No. of days in Operation	No.	134
10	**AFC apportioned to No. of days**	**Rs. Cr.**	**270.23**
11	**90% of the AFC determined above**	**Rs. Cr.**	**243.21**

112. The above-mentioned Annual Capacity (fixed) charges as provisionally allowed in this order are on normative plant availability factor (NAPAF) 85% for the thermal generating unit. The recovery of Annual Capacity (Fixed) charges shall be made by the petitioner in accordance with Regulations 36.2 of MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015.

Energy (Variable) Charges:

Provisions in Regulation:

113. For determining the Energy (variable) charges of thermal power stations, Regulation 36 of the MPERC (Terms and Conditions for determination of tariff) Regulation, 2015 provides as under,

"36.5 The energy charge shall cover primary and secondary fuel cost and shall be payable by every 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 Rs./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:

(i) For coal based stations

ECR = {(GHR – SFC x CVSF) x LPPF/CVPF+SFC xLPSFi} x100/ (100 – AUX)}

Where,

AUX = Normative Auxiliary Energy Consumption in percentage.

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

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 Rs./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 a copy 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 three months ------.

Commission's analysis:

114. The base rate of energy charges shall cover cost of primary and secondary fuel determined based on the Landed cost of fuel, Gross calorific value and other operating parameters like Gross Station Heat Rate, specific secondary fuel oil consumption, auxiliary energy consumption prescribed under MPERC (Terms and Conditions for determination of Generation tariff) Regulations, 2015.

(i) **Gross Station Heat Rate:**

115. The petitioner has claimed the Gross Station Heat Rate for SSTPP PH-II, Unit No. 3&4 as 2138.412 Kcal/kWh in accordance to MPERC (Terms and Conditions for determination of Generation Tariff) Regulations, 2012. Vide letter dated 17th July' 2018, the petitioner was asked file the supplier/manufacturers' certificates for guaranteed operating parameters.

116. In response to the queries raised by the Commission, vide letter dated 10th August' 2018, the petitioner submitted the documents of assurance of guaranteed technical performance parameters given by the manufacturer.

117. Regarding the Gross Station Heat Rate of thermal generating units, Regulation 39.3 (C) of MPERC (Terms and Conditions for determination of Generation tariff) Regulations, 2015, provides as under:

"(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)

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 25: Maximum design Unit heat rates as per norms

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."

118. The petitioner has filed the subject petition based on MPERC (Terms and Conditions for determination of generation tariff) Regulations' 2015. The Unit No. 3 of petitioner's power plant achieved COD on 19th November' 2018, Therefore, the Gross Station Heat Rate of Unit No. 3 of Shri Singaji Thermal Power Project is considered in accordance with MPERC (Terms and conditions for determination of Generation tariff) Regulations, 2015 as given below:

Table 26: Gross Station Heat Rate considered by the Commission

Technical Parameters		**Value**	**Unit**
A.	Design Turbine Cycle Heat Rate	1811	kCal/kW
B.	Design Boiler Efficiency	88.50	%
C.	Design Heat Rate	2046.32	kCal/kW
D.	Multiplying factor as per Regulations	1.045	
E.	**Gross Station Heat Rate considered**	**2138.41**	**Kcal/kW**

(ii) **Auxiliary Energy Consumption:**

119. While determining the Energy Charges, the petitioner considered Auxiliary Energy Consumption 5.25% in accordance to MPERC (Terms and conditions for determination of Generation tariff) Regulations, 2015.

120. Regulation 39.3 (E) prescribed the norms for Auxiliary Energy Consumption for thermal generating unit(s)/ stations commissioned on or after 01.04.2012 as given below:

Table 27: Norms for Auxiliary Energy Consumption:

Sr. No.	***Power Station***	***With Natural Draft Cooling Tower or without Cooling Tower***
(1)	*200/300 MW series*	*8.50%*
(2)	*500 MW & above*	
	Steam driven boiler feed pumps	*5.25%*
	Electrically driven boiler feed pumps	*7.75%*
(3)	*45 MW Series*	*10%*

Provided further that for thermal generating stations with induced drafts cooling towers, the norms shall be further increased by 0.5%.

Provided also that Additional Auxiliary Energy Consumption as follows may be allowed for plants with Dry Cooling Systems ------".

121. The Auxiliary Energy consumption of 5.25% is considered for the subject unit of steam driven feed pump and natural draught cooling tower in accordance with the aforesaid Regulation of MPERC (Terms and conditions for determination of Generation Tariff) Regulations, 2015.

(iii) **Specific Secondary fuel oil Consumption:**

122. The petitioner in the subject petition considered the Specific Secondary fuel oil Consumption of 0.50 ml/kWh in accordance to Regulation 39.3 (D) of MPERC (Terms and conditions for determination of Generation Tariff) Regulations, 2015. The Commission has considered the same Specific Secondary fuel oil Consumption of 0.50 ml/kWh in this order.

(iv) **Transit and Handling losses:**

123. Regarding the normative transit and handling loss, Regulation 36.8 of MPERC (Terms and conditions for determination of Generation Tariff) Regulations, 2015, provides as under:

"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%."

124. The petitioner claimed energy charges by considered the normative transit and handling losses 0.80 % in accordance to aforesaid Regulation 36.8 of MPERC (Terms and conditions for determination of Generation Tariff) Regulations, 2015. The Commission observed that the petitioner's power project is Non pit-head and therefore, the transit and handling losses of 0.80 % as considered by the petitioner is considered in this order.

125. On perusal of the details/ information submitted by the petitioner for working out the landed cost of coal, it is observed that the landed cost of the coal is claimed by the petitioner by considering the normative transit and handling losses. Therefore, the transit and handling loss are not considered separately in determination of energy charges

126. The parameters like Gross Station Heat Rate, Aux. Energy Consumption, Sp. Secondary Fuel oil consumption and transit and handling losses considered for determining the energy charges for Unit No. 3 in this order are summarized as given below:

Table 28: Norms for Operating Parameters considered in this order:

Sr. No.	Parameter	Considered in this order
1	Gross Station Heat Rate	2138.41
2	Aux. Energy Consumption	5.25 %
3	Sp. Secondary Fuel oil consumption	0.50 ml/kWh
4	Transit and handling losses	0.80

(v) **Landed cost of Coal:**

127. The petitioner submitted that the landed cost of coal for tariff determination is based on actual weighted average cost of coal for the three preceding months i.e. for the month of February' 2018, March' 2018 and April' 2018. The details for calculating the weighted average landed cost of coal has been elaborated by the petitioner in form TPS 15 filed with the petition.

128. Based on the above, the landed price of coal during February' 2018 to April' 2018 and weighted average rate of coal worked out by the petitioner are as given below:

Month	Particular	Quantity MT	Rate Rs./MT
	Domestic	427439	3841
	Imported	00	00
Feb'18	**Total**	**427439**	**3841**
	Domestic	407738	3880
	Imported	00	00
Mar'18	**Total**	**407738**	**3880**
	Domestic	417745	3824
	Imported	00	00
Apr'18	**Total**	**417745**	**3824**
Wt. Avg. Rate			**3848**

129. With regard to the landed price of coal, clause 36.8 of MPERC (Terms and Conditions for determination of Generation tariff) Regulations, 2015 provides as under;

> *"The landed cost of coal shall include price of coal corresponding to the grade and quality of coal 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 Charges, 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.-------"*

130. On scrutiny of the subject petition, it was observed that the petitioner has not filed the documents in support of the landed cost of coal filed in the petition. Vide letter

dated 17th July' 2018, the petitioner was asked to file the supporting documents in this regard.

131. In response, vide letter dated 10th August' 2018, the petitioner filed the supporting documents indicating the quantity of coal supplied by coal company, total amount charged by the coal company, transportation charges, and landed cost of coal etc.

132. On perusal of the aforesaid details filed by the petitioner, the Commission has observed that while calculating the landed cost of coal, the petitioner considered the normative transit and handling losses. Therefore, while determining the energy charges in this order, the transit and handling losses are not again considered separately.

133. Further, Regulation 36.6 provides that for determination of energy charge rate, weighted average landed price of primary fuel, in Rupees per kg, during the month shall be considered. In case of blending of fuel from different sources, the weighted average landed price of primary fuel shall be arrived in proportion to blending ratio.

134. Accordingly, the Commission has provisionally considered the weighted average landed cost of coal as **Rs. 3848 /MT** as filed by the petitioner in this order.

(vi) **Gross Calorific Value:**

135. With regard to the Gross Calorific Value of Coal, the petitioner mentioned that the Gross Calorific Value of Coal on "As received basis" is calculated on the basis of actual weighted average GCV of coal for preceding three months i.e. February' 2018, March' 2018 and April' 2018.

136. Regulation 36.6 (a) of MPERC (Terms and Conditions for determination of Generation tariff) Regulations, 2015 provides as under;

(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****.*

137. Regarding the GCV of coal, the Commission observed that the petitioner has not file the supporting documents like laboratory test report. Vide letter dated 17th July' 2018, the petitioner was required to file the documents in support of GCV of coal as received basis.

138. Vide letter dated 10th August' 2018, the petitioner filed a copy of month-wise coal analysis report indicating the date-wise GCV of coal as received basis and weighted average GCV of coal for the month.

139. Based on the aforesaid details filed by the petitioner, the weighted average GCV of coal as considered in this order are given below:

Table 29: Weighted average GCV of Coal (As received basis):

Month	Particular	Quantity	GCV
		MT	kCal/kg
February' 2018	Domestic	427439	3779
	Imported	00	00
	Total	**427439**	**3779**
March' 2018	Domestic	407738	3773
	Imported	00	00
	Total	**407738**	**3773**
April' 2018	Domestic	417745	3806
	Imported	00	00
	Total	**417745**	**3806**
Wt. Avg. GCV			**3786**

140. Accordingly, the Commission has considered the weighted average GCV of coal as **3786 Kcal/kg** in this order.

(vii) **Landed cost of Secondary Fuel oil:**

141. Regarding the landed price of secondary fuel oil, the petitioner submitted that the landed cost of the Secondary fuel are based on weighted average cost of the preceding three months' Heavy Furnace Oil (HFO) and Light Diesel Oil (LDO) is considered and in absence of these, the last procurement price before the start of tariff period is considered.

142. The petitioner further submitted that the landed cost of secondary fuel oil has been worked out on the basis of oil purchased during the February' 2018 and March' 2018. The details of the weighted average landed cost of secondary fuel oil worked out by the petitioner are as follows:

MONTH	FURNACE OIL			L.D.O			SECONDARY OIL		
	Qty. (KL)	RATE Rs./ KL	Amount Rs. Lakhs	Qty. (KL)	RATE Rs./ KL	Amount Rs. Lakhs	Qty. (KL)	RATE Rs./ KL	Amount Rs. Lakhs
Jan. 2018	-	-	-	-	-	-	-	-	-
Feb. 2018	1818.25	35032	636.97	1199.3	47847	573.82	3017.55	40125	1210.8
Mar. 2018	1230.11	34808	428.17	1516.07	46078	698.58	2746.18	41030	1126.75
Entry Tax			**Incl**			**Incl**			**Incl**
TOTAL	**3048.36**	**34942**	**1065.14**	**2715.37**	**46859**	**1272.41**	**5763.73**	**40556**	**2337.55**

143. Vide letter dated 17th July' 2018, the petitioner was asked to file the documents in support of the landed cost of oil filed in the petition. In response to the Commission's queries, vide letter dated 10th August' 2018, the petitioner filed the month-wise statement of oil purchase and consumption of oil during the month.

144. Based on the above, the petitioner worked out the weighted average landed cost of secondary fuel oil including freight charges and entry tax as given below:

Wt. average cost of HFO (Rs./KL)	**Wt. average cost of LDO (Rs./KL)**	**Wt. average cost of Sec. fuel oil (Rs./KL)**
34942	46859	40556

145. The Commission has considered same weighted average cost of Sec. fuel oil of **Rs. 40556/KL** as filed by the petitioner.

146. The petitioner filed GCV of secondary fuel oil 10.000 Kcal/Ltr. The Commission has considered same GCV of oil as claimed by the petitioner.

147. Based on the above, the Energy Charges ex-bus for Unit No. 3 of the Shri Singaji Thermal Power Project PH-II are provisionally determined as given below:

Table 30: Energy (variable) Charges of SSTPP Unit No. 3:

Sr. No.	**Particular**	**Unit**	**From CoD to 31.03.2019**
1	Capacity	MW	660
2	Normative Annual Plant Availability Factor	%	85.00
3	Gross Station Heat Rate	kCal/kWh	2138.41
4	Sp. Fuel Oil Consumption	ml/kWh	0.50
5	Aux. Energy Consumption	%	5.25
6	Transit Loss	%	0.80
7	Weighted average GCV of Oil	kCal/ltr.	10,000
8	Weighted average GCV of Coal	kCal/kg	3786
9	Weighted Average price of Coal	Rs./MT	3848
10	Weighted Average price of Oil	Rs. / KL	40556
11	Heat Contributed from HFO	kCal/kWh	5.00
12	Heat Contributed from Coal	kCal/kWh	2133.41
13	Specific Coal Consumption	kg/kWh	0.5635
14	Rate of Energy Charges from Oil	Paise/kWh	0.020
15	Rate of Energy Charge from Coal	Paise/kWh	2.168
16	Total Energy Charges	Paise/kWh	2.188
17	**Rate of Energy Charge from Coal at ex bus**	**Rs./kWh**	**2.310**

148. 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 received basis during the month. The recovery of energy charges shall be made in accordance with Regulations 36.6 to 36.8 of the Regulations, 2015.

Other Charges:

149. The petitioner has prayed for recovery of other charges like Rent, Rates and Taxes payable to Government, MPERC Fee, Cost of Chemicals & Consumables, Water Charges, Publication Expenses etc. levied by various authorities in accordance with law, on actual basis, over and above the fixed charges and energy charges.

150. Regarding the Application fee, publication expenses, water charges and other statutory charges, Regulation 52 of MPERC (Terms and Conditions for determination of generation tariff) Regulations, 2015, provides as under:

"The following fees, charges and expenses shall be reimbursed directly by the beneficiary in the manner specified herein:

1. The application filing fee and the expenses incurred on publication of notices in the application for approval of tariff, may in the discretion of the Commission, be allowed to be recovered by the generating company directly from the beneficiaries :

2. The Commission may, for the reasons to be recorded in writing and after hearing the affected parties, allow reimbursement of any fee or expenses, as may be considered necessary.

3. SLDC Charges and Transmission Charges as determined by the Commission shall be considered as expenses, if payable by the generating stations.

4. RLDC/NLDC charges as determined by the Central Commission shall also be considered as expenses, if payable by the generating station.

5. Electricity duty, cess and water charges if payable by the Generating Company for generation of electricity from the power stations to the State Government, shall be allowed by the Commission separately and shall be trued-up on actuals."

151. The petitioner is allowed to recover fee towards filing of subject tariff petition directly from the beneficiaries, as per aforesaid Regulations, 2015. In addition to

the above, the petitioner is also entitled to recover water charges if payable by the Generating Company for generation of electricity from the power stations to the State Government, from the beneficiaries separately.

152. Regarding the recovery of Rent, Rates and Taxes payable to Government and Cost of Chemicals & Consumables, Regulation 35.7 of MPERC (Terms and Conditions for determination of Generation Tariff) Regulations, 2015 provides that "the generating company shall claim the rate, rent and taxes payable to the Government and cost of chemicals and consumables as actual". The petitioner is required to file the supporting documents to beneficiary for aforesaid expenses.

153. The above tariff is provisionally determined for Unit No.3 of petitioner's power plant and shall be effective from its CoD to 31st March, 2019. The provisional tariff so determined in this order shall be subject to adjustment as per the provisions under 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.

154. The petitioner is directed to file the petition for determination of provisional tariff of Unit No. 4 after its CoD and final tariff petition at the earliest along with the Annual Audited Accounts and all other required details / documents. The Unit-wise break-up of the figures in the audited accounts be also submitted by the petitioner with the final tariff petition in favor of its claims. All discrepancies and information gaps observed by the Commission in this order be eliminated while filing the final tariff petition.

With the above directions, the subject petition and IA No. 07 / 2018 is disposed of.

(Mukul Dhariwal)	**(Dr. Dev Raj Birdi)**
Member	**Chairman**

Date : 7th March' 2019
Place : Bhopal