MADHYA PRADESH ELECTRICITY REGULATORY COMMISSION

5th Floor, "Metro Plaza", Bittan Market, Bhopal - 462016

Petition No. 25 of 2020

PRESENT:

S.P.S Parihar, Chairman

Mukul Dhariwal, Member

Shashi Bhushan Pathak, Member

IN THE MATTER OF:

Determination of the Final Generation Tariff for Unit No. 3 & 4 of 2x660 MW, Shri Singaji Thermal Power project (SSTPP) Stage II, from CoD of Unit No. 3&4 to 31st March' 2019 under Madhya Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015.

AND IN THE MATTER OF:

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

Vs.

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

} **Respondents**

ORDER

(Passed on this day of 18th May' 2021)

1. Madhya Pradesh Power Generating Company Ltd. (hereinafter referred to as "the petitioner" or "MPPGCL") filed the subject petition on 24th February' 2020 for determination of final generation tariff for Unit No. 3 & 4 of 2x660 MW, Shri Singaji Thermal Power Project (hereinafter referred to as "SSTPP" or "project") Stage-II, from CoD of the Units to 31st March' 2019.

2. The subject petition has been filed under Section 62 of the Electricity Act, 2003 and it is based on MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015 (hereinafter referred to as "the Regulations, 2015"). The aforesaid Regulations are based on the Multi-year tariff principles prescribing norms of operation for the control period of FY 2016-17 to FY 2018-19.

3. Dates of Commercial Operation (CoD) of Unit No. 3 and 4 of 2x660MW SSTPP Stage II, are as given below:-

Table 1: Dates of Commercial Operation

Sr. No.	Unit No.	Dates of Commercial Operation
1	Unit No. 3	18th November' 2018
2	Unit No. 4	27th March' 2019

Background of the petition:

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 to incorporate supply of power from 90% to 100% of the installed capacity to the Respondent No. 1.

5. On 05th July' 2018, the petitioner filed petition No. 31 of 2018 for approval of provisional tariff of Units No. 3 and 4 of SSTPP stage-II. Vide order dated 07th March' 2019, the Commission determined the provisional tariff of Unit No. 3 from

its CoD i.e. 18th November' 2018 to 31st March' 2019 based on the actual capital expenditure as on CoD certified by the Auditor. The provisional tariff for Unit No. 4 was not determined by the Commission as Unit No. 4 was not commissioned by that time. In the aforesaid order, the Commission provisionally allowed recovery of Annual Fixed Charges of Unit No. 3 to the extent of 90% of the AFC determined in the aforesaid order.

6. Subsequently, the petitioner also filed an Interlocutory Application (IA) No. 1 of 2019 in the aforesaid Petition No. 31 of 2018 seeking permission to raise bills on provisional basis for the power to be generated and supplied to MPPMCL from 660 MW Unit No. 4 of its (2x660 MW) Shri Singaji Thermal Power Project Stage-II, Distt. Khandwa with effect from its COD. The petitioner requested to raise bills for recovery of Annual Fixed Charges and Energy Charges on the basis of the tariff provisionally determined by the Commission for Unit No. 3 of the same power project as per MPERC (Terms and Conditions for determination of Generation Tariff) Regulations, 2015.

7. Vide Commission's order dated 18th June' 2019 in IA No. 1 in Petition No. 31/2018, the petitioner was allowed to raise bills on provisional basis to the Respondent No.1 for Unit No. 4 on the basis of the tariff provisionally determined for Unit No. 3 from CoD of Unit No. 4 subject to retrospective adjustment in accordance with the provisions under Regulations, 2015. The petitioner was directed to file petition for determination of final tariff of the project along with all details and documents with the Commission.

8. After finalizing the Annual Audited Accounts, the petitioner filed the subject petition for determination of final generation tariff for Unit No 3 and Unit No 4 of the project.

9. The petitioner broadly submitted the following:

(i) *The petitioner is wholly owned company of Government of M.P engaged in generation of electricity in the State of Madhya Pradesh. It is a successor entity of erstwhile Madhya Pradesh State Electricity Board (MPSEB).*

(ii) *The Company has been incorporated as part of implementation of the power sector reform in M.P. initiated by the Government of MP. The Company has taken over the generation activities of MPSEB. The company, while operating* *and maintaining its existing Units, is also constructing new power plants for increase in generating capacity in the State of Madhya Pradesh. The Company is registered under Companies Act 1956 and was incorporated on 22.11.2001.*

(iii) *MPPMCL and the three DISCOMS of MP have entered into a management and corporate functions agreement on 05.06.2012, whereby the three DISCOMS have engaged MPPMCL to represent them in all the proceedings relating to power procurement and tariff petitions filed or to be defended before CERC, MPERC and other regulatory authorities, Appellate Tribunals, High Courts, Supreme Court and CEA etc. Therefore, the three DISCOMS have not separately been made as respondents.*

(iv) *The petitioner is having various power stations/projects in the State of Madhya Pradesh. Shree Singaji Thermal Power Project (SSTPP) is one such coal based power project of the petitioner located near village Dongalia in Khandwa District of Madhya Pradesh. The site is situated at a distance of 45 Kms from the district headquarters Khandwa and the nearest railway station is Bir, at a distance of around 5 Km.*

(v) *In view of remoteness of the Malwa region comprising the districts of Indore, Ratlam, Ujjain and Dewas (located near the western fringe of the State) from the major power generating stations (which are located in the eastern side), great difficulty was faced in supplying bulk power to this flourishing region showing substantial growth in demand of electrical energy for domestic, industrial, agriculture and commercial consumption. 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.*

(vi) *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 its 57th Meeting, vide resolution passed on 14.12.2011 and 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 M/s 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.*

(vii) *Ministry of Power, Govt. of India, granted Mega Power Project Status to "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.*

(viii) *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.*

(ix) *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 informed M/s PFC that to meet out balance fund requirement of Rs. 338 Crores, request shall be put up to them in due course.*

(x) *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 BoD 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 (LoA) 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. The initial advance to the*

EPC contractor could only be released on 31.12.2014, which became the Effective Date of this contract.

The Board of Directors of MPPGCL in its 90th meeting held on 27.09.2017 accorded Revised Investment Approval for the Revised Project Cost Estimate of Rs. 7738 Crores with Debt : Equity ratio of 80:20.

(xi) *Commission may kindly be 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 commissioned its 1st Unit in duration of 47 months and 2nd Unit in duration of 51 months from Zero Date. Accordingly, MPPGCL is entitled to avail the additional Return on Equity (RoE) of 0.5% as per proviso 30 read with Appendix-I of the Regulations, 2015.*

(xii) *The MoEF & CC vide its Notification dated 07.12.2015 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.*

(xiii) *Accordingly, the proposal for revision of the Project cost estimate [mainly on account of installation of FGD equipments of Rs.642 Crore, applicability of Water Charges during construction of Rs. 70 Crores, aaccommodate impact of Taxes & Duties including Goods & Service Tax [GST] of Rs. 181.89 Crores and PV ERV {Rs. 312.29 Crores} etc. 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).*

(xiv) *The GoMP has accorded in-principle approval to the Project Cost vide letter No.F-5-15/2017/13 dated 14.03.2019. Recently, the Project screening committee of GoMP in its meeting dated 30.01.2020 has decided to accord administrative approval to the revised project cost of 2x660MW SSTPP Stage-2, Khandwa as Rs. 7738 Crores. The aforesaid decision has been conveyed by Energy Department, GoMP vide letter No.F 5-15/2017/13 dated 11.02.2020.*

(xv) *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" were envisaged in June 2018 based on tentative estimation, which also includes expenditure towards Construction of two additional spur lines at Bir Station complete with OHE and S&T works. In addition to this, "Construction works of Limited Height Subway (ROB/RUB) in lieu of six nos. Railways crossing amounting to Rs. 19.92 Crores have been entrusted to WCR Bhopal as deposit work in Oct. 2019". 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.*

(xvi) *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).*

(xvii) *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 these two units (2x660MW) of the project through Respondent No.1 (M.P. Power Trading Co. Ltd., now M.P. Power Management Co. Ltd.) for onward sale to the Discoms of M.P. on the rates to be determined by the Hon'ble Commission.*

(xviii) *Earlier, the Power Purchase Agreement (PPA) dated 04.01.2011 of 2 X 660 MW Units of SSTPP, Stage- II, Dongalia, Distt. Khandwa was tied up for 90 % of the Installed Capacity with MPPMCL. MPPGCL has entered into 2nd amendment on 21.02.2019 to Power Purchase Agreement dated 04.01.2011 of 2 X 660 MW Units of SSTPP, Stage- II, Dongalia, Distt. Khandwa, towards enhancement to power purchase for 100% of the Installed Capacity (1320MW).*

(xix) *The 660 MW Unit No.3 of SSTPP Stage-II, Khandwa was put under Commercial Operation w.e.f. 18.11.2018 00:00 Hrs. Similarly, the 660 MW Unit No.4 of SSTPP Stage-II was put under Commercial Operation w.e.f. 27.03.2019.*

(xx) *The instant petition is filed under Section 62 of Electricity Act, 2003, which provides determination of Final 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 01.01.2016 comes into force, shall be applicable for determination of tariff.*

(xxi) *The proviso of 39.3 MPERC Regulations 2015 provides that in case of shortage of coal at new power Stations Commissioned after 01.04.2012, the NAPAF for recovery of fixed charges shall be 83%. In this regard, it is to mention that since 01.04.2017, MPPGCL is facing sustained coal shortage at this Thermal Power Station also.*

In the matter, MPPGCL had filed the petition No. 20 of 2018 before the Commission for consideration of same. The Commission vide Order dated 09.08.2018 has stated that as under:-

> *In Para 21 of the subject petition and also in the prayer, MPPGCL has requested to relax the NAPAF norms by 2% on account of shortage of coal for those thermal power stations also which were commissioned after 01.04.2012 whereas, Regulation 39.3(A) of MPERC (Terms and Conditions for determination of Generation Tariff) Regulations, 2015 has already provided the same.*

The matter was further clarified by the Commission vide letter No. MPERC/D(T)/2019/1301 dated 16.09.2019.

Considering above, MPPGCL, in the instant petition has considered NAPAF for recovery of fixed charges at 83%.

(xxii) *The Other Expenses in respect of Shree Singaji Thermal Power Project (SSTPP) Stage-II, Units No. 3 & 4, for the period FY 2018-19 are detailed in subsequent Chapter "Other Charges". Which consist of actual MPERC fees paid and Water Charges as captured in Annual Statement of Accounts of MPPGCL for FY 2018-19. The Non- Tariff Income at SSTPP Stage-II, Khandwa for FY 2018-19 i.e. from CoD of Unit No. 3 & 4 till 31.03.2019 has been worked out as Rs. 0.04 Cores detailed in subsequent Chapter "Non-Tariff Income".*

(xxiii) *For working out Return on Equity (RoE), the Base Rate of 16.0% (15.5% + 0.5%), as detailed at para 15 above, has been considered by MPPGCL as per MPERC Regulations 2015.*

10. With the above submissions, the petitioner in the subject petition claimed the following Annual Capacity (fixed) Charges and Energy Charges for Unit No. 3&4 of SSTPP Stage II, from CoD of Unit No. 3 &4 to 31st March' 2019:

Table 2: Annual Capacity Charges claimed for Unit No. 3 & 4 SSTPP Stage II

Sr No	Particulars	Unit	Unit No 3	
1	No. of days in Operation	No	Full Year	134
2	Return on Equity	Rs Crore	89.46	32.84
3	Depreciation	Rs Crore	186.86	68.60
4	Interest on Loan capital	Rs Crore	281.31	103.28
5	O&M Expenses	Rs Crore	121.31	44.53
6	Interest on Working capital	Rs Crore	69.46	25.50
7	Annual Fixed Charges	Rs Crore	748.39	274.75
8	Less Non-Tariff Income	Rs Crore	0.04	0.04
9	Net Fixed Charges	Rs Crore	748.35	274.71
10	**Energy Charge Rate (ECR)**	**Rs./Kwh**	**2.655**	

Sr No	Particulars	Unit	Unit No 4	
1	No. of days in Operation	No	Full Year	04
2	Return on Equity	Rs Crore	75.85	0.83
3	Depreciation	Rs Crore	157.28	1.72
4	Interest on Loan capital	Rs Crore	244.57	2.68
5	O&M Expenses	Rs Crore	121.31	1.33
6	Interest on Working capital	Rs Crore	67.66	0.74
7	Annual Fixed Charges	Rs Crore	666.66	7.31
8	Less Non-Tariff Income	Rs Crore	0.001	0.001
9	Net Fixed Charges	Rs Crore	666.66	7.31
10	**Energy Charge Rate (ECR)**	**Rs./Kwh**	**2.655**	

11. In addition to above, the petitioner also filed the following “other charges” for Unit No. 3 & 4 of SSTPP Stage II, from their respective CODs to 31st March’ 2019:

Table 3: Other Charges claimed for Unit No. 3 & 4 of SSTPP Stage II (Rs. in Crore)

Sr No	SSTPP Stage-2	FY-19	FY-19
		Unit No.3	Unit No.4
1	MPERC Fees	0.137	0.137
2	Water Charges	3.598	0.107
	Total	**3.735**	**0.244**

12. With the above submissions, the petitioner prayed the following in the subject petition:

(a) *Approve the Final 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 Energy Charge Rate (ECR) as detailed in para 27, Annual Fixed Charge as detailed in para 28 and the Other Charges as detailed in para 29.*

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

13. The Commission has examined the subject petition in accordance with the provisions under Madhya Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015 and the additional details/documents filed by the petitioner. The subject petition has also been examined in light of the comments offered by the stakeholder in this matter.

Procedural History:

14. The subject petition has been filed by the petitioner on 24th February' 2020 for determination of final generation tariff of SSTPP Stage II, Unit No. 3 & 4 from the period of COD to 31st March' 2019 on the basis of Annual Audited Accounts. The petitioner also filed an interlocutory application seeking condonation of delay in filing the subject petition.

15. Motion hearing in the subject petition along with IA was held on 2nd June' 2020 wherein the representative of the petitioner stated the reasons for delay in filing the subject petition as mentioned in the IA. Considering the reasons stated by the petitioner, the delay in filing the subject petition was condoned and the IA No. 9 of 2020 was disposed of.

16. Vide order dated 3rd June' 2020, the subject petition was admitted and the petitioner was directed to serve copies of the petition on all the Respondents. The Respondents in the subject matter were also directed to file their response on the petition by 6th July' 2020. The petitioner was asked to file its rejoinder by 20th July' 2020.

17. Vide letter dated 11th June' 2020, the petitioner informed that copy of the subject petition has been served to all the respondents on 10th June' 2020.

18. Vide Commission's letter dated 12th June' 2020, the information gaps and requirement of additional details/documents in the subject matter were communicated to the petitioner seeking its reply by 10th July' 2020

19. Vide letter dated 10th July' 2020 (through E-mail), the petitioner had sought three weeks' time extension for filing the reply and additional details/documents due to effect of COVID-19 pandemic. Considering the reasons, vide Commission's letter dated 23rd July' 2020, the petitioner was directed to file its response at the earliest but not later than 31st July' 2020.

20. No comment from any of the Respondents was received by the Commission in the subject matter.

21. Vide letter dated 31st July' 2020 (received on 07th August' 2020), the petitioner had filed partial response on some of the issues and the petitioner had sought some more time for filing the balance information/details.

22. Vide letter dated 26th September' 2020, the petitioner was asked to file its balance information along with supporting documents at the earliest but not later than 16th October' 2020. Vide letter dated 15th October' 2020, the petitioner filed the balance information.

23. The public notices inviting comments/suggestions from the stakeholders was published on 07th November' 2020, in the following Hindi & English newspapers.

    a. Deshbandhu, Jabalpur (Hindi)
    b. Raj Express, Gwalior (Hindi)
    c. Business Standard, Bhopal (Hindi)
    d. Swadesh, Indore (Hindi)
    e. Pioneer, Bhopal (English)

24. Comments from only one stakeholder were received on 27th November' 2020 in the subject matter. By affidavit dated 25th January' 2021, the petitioner filed its response on the comments offered by the stakeholders. The response of the petitioner on the comments/objections filed by the stakeholders along with observations is mentioned in **Annexure I** annexed with this order.

25. The public hearing in the subject petition was held on 8th December' 2020 through video conferencing wherein the representatives of the petitioner, Respondent No. 1 and stakeholder were appeared.

Commission's Analysis:

A. Capital Cost as on CoD:

Petitioner's Submission:

26. With regard to capital cost of the project, the petitioner broadly submitted the following:

i. *GoMP had accorded administrative approval for installations of SSTPP Stage-II vide letter dated 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. Thereafter, MPPGCL on 18.03.2011 applied for grant of loan of Rs 5198 Crores @ 80% of total the project cost. However, M/s PFC while according approval to the loan in Sept.'2011, 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.*

ii. *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. It is also to be highlighted that the PSC, while approving the project (as referred in the MoM dtd. 30.10.2010) had remarked that final estimation of project cost shall be made after preparation of Detailed Project Report and after issuing various orders for execution of this project.*

c) *The Detailed Project Report (DPR) was finalized in Mar'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 05.07.2012. 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 (Zero Date) of this Contract with scheduled commissioning of U#3 in 43 months and U#4 in 47 months. 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 was also required.*

f) *The MOEF &CC, GOI, in December' 2015 issued notification enforcing New environmental norms for Thermal Power Plants, therefore,*

g) *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).*

h) *The Goods and Services Tax (GST) introduced in India w.e.f. 01.07.2017 this replaced the multiple taxes levied by the Central and State Governments. Therefore, the impact of GST on the balance unexecuted works of the project was required to be considered. Further, The deemed export benefits {i.e. exemption of Special Additional Duty, Counter Veiling Duty (CVD) & Excise Duty (ED)} so far available under "The Mega Project Policy" are now not available in the GST regime and accordingly additional commitment on this account are required to be estimated and considered.*

i) *Some of the components considered in the earlier technical sanction were required to be updated based on the changed scenario and accordingly estimated revision have been done while updating the cost.*

Provision under Regulations:

27. With regard to the capital cost, Regulation 15 of MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015 provides as under:

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 new Project shall include the following:

(a) the expenditure incurred or projected to be incurred up to the date of commercial operation of the project;

(b) Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed ------,

(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;

Commission' Analysis:

28. The petitioner has filed the following capital expenditure for Unit No. 3 and 4 of the project as on their respective CoDs:

Rs. Crore

Particulars	Unit-3	Unit-4
Capital Cost (Excluding IDC & Overheads)	2958.02	2491.46
Add. Interest during construction	427.05	424.72
Add. Overheads	209.11	169.10
Total Capital Cost as on CoD	**3594.17**	**3085.28**

29. The petitioner submitted the total capital expenditure incurred for SSTPP Unit No. 3 as on its CoD i.e., (18th November' 2018) is Rs 3594.17 Crore and total capital expenditure incurred for Unit No 4 as on its COD i.e., (28th March' 2019) is Rs 3085.28 Crore. The petitioner further submitted that the total capital expenditure incurred for SSTPP Unit No 3&4 as on 31st March' 2019 is Rs 6806.06 Crore. In para 3.11 of the petition, the petitioner also submitted that out of the total capital expenditure incurred as on 31.03.2019, capital expenditure of Rs. 6683.85 Cr. is capitalized in Annual Audited Accounts for FY 2018-19 and balance expenditure of Rs. 122.21 Cr. is under CWIP. The break-up of actual capital expenditure incurred are as given below:

Table 4: Actual Capital Expenditure incurred for Unit No. 3 & 4 of SSTPP Stage II, (Rs. in Crore)

Sr. No.	Particular	Amount
1	**Approved revised capital cost of the project**	**7738.17**
2	Total expenditure up to CoD of Unit No. 3	6386.03
i	Expenditure pertains to Unit No. 3	3594.17
ii	Expenditure pertains to Unit No. 4	2791.86
3	Total expenditure up to CoD of Unit No. 4	6798.79
i	Expenditure pertains to Unit No. 3	3713.50
ii	Expenditure pertains to Unit No. 4	3085.28
4	**Total projected expenditure up to 31st March' 2019**	**6806.06**

30. In para 17 of the petition, the petitioner submitted that as regards justification of the revised Project Cost of Rs. 7738 Crores, 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. The petitioner further submitted that as per the "Monthly Report on Broad Status of TPPs" in the country published by CEA in February' 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 the SSTPP Stage-II Khandwa (costing Rs. 7738 Crores).

31. The petitioner has mentioned that the Ministry of Power, Government of India vide certificate dated 05.07.2012 granted Mega Power Project Status to SSTPP, Stage-II. In view of the above, vide letter dated 12th June' 2020. the petitioner was asked to file the following:

    i. A copy of the certificate of Mega Power Status issued by the Ministry of Power.
    ii. Details of Mega Power Benefits towards Customs Duty and Excise Duty availed by the petitioner for the project.
    iii. Whether the initial project cost estimate and revised project cost estimate is including the Mega Power benefits or excluding the same. Supporting documents were also sought in this regard.

32. By affidavit dated 15th October' 2020, the petitioner has filed the copy of the certificate of Mega Power Status issued by the Ministry of Power. With regard benefits towards Customs Duty and Excise Duty availed by the petitioner for the project, the petitioner submitted the following:

"The Mega Power benefits towards Customs Duty and Excise Duty have been availed in the pre GST regime; however, the Deemed Export benefits have not been continued in the post GST regime i.e. after 30.06.2017. The only benefit of basic Customs Duty is continuing in the post GST regime, as the benefits have been availed by the EPC contractor, the same were not claimed and shown in the invoices and therefore the required detailed information is not available.

It has further been informed by the EPC Contractor that the invoice wise a record was not contractually required for such benefits and therefore same is not available. However, the EPC contractor has provided a broad estimate of Mega Power Project benefits towards Customs and Excise Duty as under:-

a) Customs Duty (BCD, CVD, SAD) benefit availed in respect of supplies under First Contract (for supplies of finished imported components directly to site) - Rs 64 Cr Approx.

b) Excise Duty benefit estimated in respect of supplies under Second Contract (for supplies of various indigenous components directly to site) - Rs. 470 Cr Approx.

The initial project cost estimate of Rs 6500 Crores for SSTPP Stage-II was made in 2010 based on project cost estimate of Rs 6750 Crores for SSTPP Stage-I considering the benefits of Mega Power Project. Subsequently, the DPR was finalized in March 2012 wherein two project cost estimates, one with Mega Power Project benefits amounting to Rs 6500 Crores & the other without Mega Power Project benefits amounting to Rs 7162 Crores were estimated. The Mega Power Project Status was granted to the project on 05.07.2012 by the Govt. of India.

Accordingly, exemption of Customs Duty & Excise Duty was available to the project. As regards supporting documents, the copy of cost estimate as given in the DPR is annexed herewith as Annexure-4B. This is also to highlight here that the Deemed Exports Benefits under Mega Power Project benefits are not available in the post GST regime as explained above.

33. On perusal of the aforesaid details of the capital expenditure filed by the petitioner, it was observed that the capital expenditure incurred in the project needs to be examined in light of the capitalization in Annual Audited Accounts, Investment Approval, CA certificate for actual capital expenditure, reasons for revision of project cost, Cost overrun, time overrun for completion of the project and provisions under MPERC (Terms and Conditions for determination of Generation Tariff) Regulations, 2015.

Capitalization of Capital expenditure:

34. The petitioner submitted that out of the total capital expenditure incurred, the expenditure capitalized as per the Annual Audited Accounts for SSTPP Unit No. 3 & 4 on different dates i.e. as on CoD of Unit No. 3 (18th November’ 2018), as on CoD of Unit No. 4 or the Station CoD (27th March’ 2019) and as on 31st March’ 2019 are Rs. 3472.93 Crore (for Unit 3), Rs. 2975.82 Crore (for Unit 4), and Rs. 6683.86 Crore (for Unit 3&4) respectively. Unit wise break-up of capital expenditure incurred and capital expenditure capitalized in Annual Audited Accounts for FY 2018-19 as filed by the petitioner are given below: -

Table 5: Capital Expenditure Incurred and Capitalized (Rs. in Crore)

Particular	Capital Expenditure Incurred	Capital Expenditure Capitalized
Total expenditure up to CoD of Unit No. 3	**6386.03**	**3472.93**
Expenditure pertains to Unit No. 3	3594.17	3472.93
Expenditure pertains to Unit No. 4	2791.86	0.00
Total expenditure up to CoD of Unit No. 4	**6798.79**	**6448.76**
Expenditure pertains to Unit No. 3	3713.50	3472.93
Expenditure pertains to Unit No. 4	3085.28	2975.82
Total expenditure up to 31st March' 2019	**6806.06**	**6683.86**

35. The Commission observed that the subject petition is based on the capital expenditure capitalized in Annual Audited Accounts of FY 2018-19. It was further observed that the Annual Audited Accounts for FY 2018-19 filed by the petitioner is for generating company as a whole and it is difficult to identify the assets capitalized pertaining to SSTPP Stage-II. Therefore, vide letter dated 12th June' 2020, the petitioner was asked to file the power station/house-wise break-up of all schedules of the Annual Audited Accounts duly certified by Statutory Auditor.

36. By affidavit dated 15th October' 2020, the petitioner filed the power station-wise break-up of the assets capitalized in Annual Audited Accounts as given below:

Gross Block details as per Audited Books of Accounts of FY 2018-19: *Rs. Crores*

Stations		Opening GFA as on 1.4.2018	Asset transfer from TPS	Asset Addition	Asset transferred to TPS	Asset Decomm./ write off/ adjustments	Closing GFA as on 31.3.2019
1	ATPS PH-3	1,235.17	-	11.93	-	-0.01	1,247.09
2	STPS PH-2&3	975.89	-	16.00	-	-4.71	987.18
3	STPS PH-4	3,294.81	-	32.07	-0.20	-0.05	3,326.63
4	SGTPS PH-1&2	2,227.19	1.09	9.80	-	-2.91	2,235.17
5	SGTPS PH-3	2,154.31	0.24	34.28	-	-1.32	2,187.50
6	SSTPP PH-1	7,648.36	-	59.76	-	-	7,708.12
7	**SSTPP PH-2**	**-**	**-**	**6,683.86**	**-**	**-**	**6,683.86**
	Total Thermal	**17,535.72**	**1.33**	**6,847.70**	**-0.20**	**-9.01**	**24,375.55**

8	Gandhi Sagar	11.05	-	0.20	-	-0.02	11.23
13	R.P. Sagar	18.86	-	-	-	-	18.86
14	J Sagar	16.56	-	-	-	-	16.56
15	Pench	103.45	-	0.06	-	-	103.50
16	Rajghat	89.52	-	22.82	-	-0.01	112.33
17	Bargi	88.92	-	0.05	-	-	88.97
18	Bansagar ,2&3	1,177.81	-	3.36	-	-0.67	1,180.50
19	Bansagar PH-4	117.09	-	-	-	-	117.09
20	Birsinghpur	52.40	-	0.01	-	-	52.41
21	Madhikheda	218.02	-	0.02	-	-0.003	218.04
22	**Total Hydro**	**1,893.68**	**-**	**26.52**	**-**	**-0.70**	**1,919.50**
23	HQ	5.02	-	0.26	-	-0.16	5.12
Total		**19,434.43**	**1.33**	**6,874.48**	**-0.20**	**-9.87**	**26,300.17**
Assets Not in use		12.93		13.21		-6.85	19.29
Before INDAS Adjustment		**19,447.37**	**1.33**	**6,887.69**	**-0.20**	**-16.72**	**26,319.46**
INDAS Adjustments		1.5		-1.5		-	**0.00**
As per Balance Sheet Note-2 at page No. 19.		**19,448.90**	**6887.49**		**-16.92**		**26,319.46**

37. In view of the above, it is observed that the petitioner has capitalized Rs. 6,683.86 Crore as on 31.03.2019 towards SSTPP PH-II in the Annual Audited Accounts for FY 2018-19.

38. On further perusal of aforesaid details filed by the petitioner, it was observed that the petitioner has not filed the capitalization booklet and the component-wise detailed break-up of the expenditure capitalized in Annual Audited Accounts. Therefore, vide Commission's letter dated 12th June' 2020, the petitioner was asked to file the aforesaid details of SSTPP Stage II, Unit No. 3 & 4.

39. By affidavit dated 15th October' 2020, the petitioner submitted the following break-up of capitalization of assets in Annual Audited Accounts on different dates.

Table 6: Capital Expenditure Capitalized for SSTPP Unit No. 3 & 4 as on different dates

(Rs in Crore)

Particular	Capital Expenditure Capitalized						
	As on CoD of Unit 3		As on CoD of Unit 4		As on 28th March' 19	Addition	As on 31st March' 19
	Unit 3	Unit 4	Unit 3	Unit 4	Unit No. 3&4	Unit No. 3&4	Unit No. 3&4
Land & Site Development Civil Supply and Work Contract	375.13	0.00	375.13	327.73	702.86	55.48	758.34
Plant & Equipment along with ETC and Spares including PV and T&D Erection, Testing & Commissioning Expenses including Freight charges, PV and T&D on above	2475.57	0.00	2475.57	2067.33	4542.90	131.73	4674.63
Installation of FGD including coating of Chimney flue cans & associated works	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Project Management Consultancy, Project Monitoring Consultancy	7.46	0.00	7.46	8.02	15.48	0.59	16.08
Overheads (Including Start up Fuel)	202.08	0.00	202.08	163.10	365.18	30.52	395.69
Contingency	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest during Construction (IDC) and Finance Charges	412.70	0.00	412.70	409.64	822.34	16.78	839.12
Total	**3472.93**	**0.00**	**3472.93**	**2975.82**	**6448.76**	**235.10**	**6683.86**

40. In view of the above, it is observed that the aforesaid amount of assets capitalized by the petitioner at different dates are in line of the figures recorded in Annual Audited Accounts and Asset-cum-depreciation register for FY 2018-19 filed by the petitioner.

41. On further perusal of the capital cost filed by the petitioner, it was observed by the Commission that while processing the petition for determination of provisional tariff (P-31/2018), the petitioner had filed CA certificate certifying the actual cash expenditure of Rs. 3388.83 Crores for Unit No. 3 till its CoD. However, in the

subject petition, the petitioner has filed capital expenditure of Rs. 3472.93 Crores capitalized for Unit No. 3 as on its CoD. Vide Commission's letter dated 12th June' 2020, the petitioner was asked to explain the reasons for difference in actual capital expenditure for Unit No. 3 as on CoD whereas both figures are certified by the CA.

42. In response to the above, by affidavit dated 15th October' 2019, the petitioner submitted that after filing of tariff petition (P-31/2018) for determination of Provisional Tariff, the certified expenditures of Rs 3388.83 Crores for Unit No. 3 till its CoD were worked out tentatively based on the information available till date and the same were furnished to the Commission as an additional information. Subsequently, during the process of capitalization of assets as a part of Annual Audited Accounts for FY 2018-19, the additional expenditure on certain heads and accounts were identified, which lead to enhancement in the total expenditure.

43. The petitioner further submitted that as per the TPS Form 5B filed with the subject petition, the total expenditures as on CoD of Unit No.3 is worked out to Rs 3594.17 Crores, out of which, capitalization has been done for the expenditures incurred on various facilities 'Put To Use' till its CoD. With this, the value of assets capitalized is worked out to Rs 3472.93 Crores duly including the apportionment towards the Hard Cost and Soft Cost.

44. The break-up of the expenditures as filed during provisional tariff petition vis-a-vis as filed during subject final tariff petition along with the difference amount filed by the petitioner as given below:-

S. No.	Description	As filed during Provisional Tariff Petition	As filed during Final Tariff Petition	Difference
1	*2*	*3*	*4*	*5=(4-3)*
1	**Land & Site Development**			
	Preliminary Investigation & Site development and enabling works	0.11	0.1	-0.01
	GCW (incl. T&D) Town Ship & Colony, Non-plant building etc.	50.13	51.74	1.61
	Sub Total	**50.24**	**51.84**	**1.6**
2	**Offshore Supply (1st) Contract**			
	Offshore Main Supply (Basic + Ocean Freight & Marine Insurance)	158.07	158.85	0.78

	Offshore Supply of Spares (Basic + Ocean Freight & Marine Insurance)	32.56	64.99	32.43
	Total Taxes & Duties	14.06	18.89	4.83
	Exchange Rate variation	0	1.8	1.8
	Embedded Derivative	0	3.61	3.61
	Sub Total	**204.69**	**248.13**	**43.45**
3	**Onshore Supply (2nd) Contract**			
	Onshore Main Supply (Basic)	1673.61	1679.96	6.35
	Onshore Supply of Spares (Basic)	74.18	148.21	74.02
	Price Variation (Basic)	71.46	71.04	-0.42
	Total Taxes & Duties	85.51	99.13	13.62
	Exchange Rate variation	0	0.73	0.73
	Embedded Derivative	0	16.86	16.86
	Sub Total	**1904.76**	**2015.92**	**111.16**
4	**Erection Services (3rd) Contract**			
	ET&C of Plant & Equipment (Basic)	186.41	190.71	4.3
	Inland Freight	7.44	7.19	-0.25
	Type Test Charges for Onshore Plant & Equipment	0	0	0
	Price Variation (Basic)	17.6	26.79	9.19
	Total Taxes & Duties	34.42	39.83	5.41
	Sub Total	**245.87**	**264.52**	**18.65**
5	**Civil Supplies (4th) Contract**			0
	Supply of Structural Steel & Cement (Basic)	83.75	95.71	11.96
	Price Variation (Basic)	1.2	1.82	0.62
	Total Taxes & Duties	9.14	10.45	1.3
	Sub Total	**94.09**	**107.98**	**13.89**
6	**Civil Works (5th) Contract**			
	Civil Works (Basic)	214.7	217.64	2.94
	Price Variation (Basic)	21.56	17.38	-4.18
	Total Taxes & Duties	23.06	22.71	-0.35
	Sub Total	**259.31**	**257.72**	**-1.59**
7	Installation of FGD including coating of Chimney flue cans & associated works	**4.69**	**4.44**	**-0.24**
8	**Total Overheads**			
	Establishment & admin. and other works, Audit & Accounts	21.67	27.26	5.59
	Consumptive Water Cess	35	37.19	2.19
	Preliminary and pre-operative expenses including Start-up power	9.39	0	-9.39
	Start-up Fuel including Secondary Fuel	27.8		-27.8
	(+) Coal	123.83	124.93	1.1

	(+) Secondary Fuel	51.35	79.18	27.83
	(-) Infirm Power	-67.86	-59.45	8.4
	Sub Total	**201.19**	**209.11**	**7.92**
9	Project Management Consultancy, Project Monitoring Consultancy & TPI	7.51	7.46	-0.05
10	Contingency	0	0	0
11	Total of IDC & FC	416.5	427.05	10.55
Grand Total		**3388.83**	**3594.17**	**205.34**

45. The petitioner has also filed the break-up of total cash expenditure for the Unit No. 3&4 as on their respective CoD, as given below:

Table 7: Capital Expenditure for unit No 3&4 as on respective CoD (Rs in Crore)

Particular	Unit No 3	Unit 4
	As on CoD of Unit 3	**As on CoD of Unit No 4**
Land & Site Development	51.84	58.86
Civil Supply and Work Contract	365.70	331.09
Plant & Equipment along with Spares including PV and T&D	2264.05	1858.46
Erection, Testing & Commissioning Expenses including Freight charges, PV and T&D on above	264.52	230.59
Installation of FGD including coating of Chimney flue cans & associated works	4.44	4.44
Project Mgmt. Consultancy, Project Monitoring Consultancy	7.46	8.02
Overheads (Including Start up Fuel)	209.11	169.10
Contingency	0.00	0.00
Interest during Construction and Finance Charges	427.05	424.72
Total	**3594.17**	**3085.28**

46. In view of the above details and documents and the Asset-cum-Depreciation register for SSTPP PH-II filed by the petitioner, it is observed that the capital expenditure of Rs.3594.17 Crore and Rs. 3085.28 Crore have been actually incurred in Unit No. 3 and Unit No. 4 as on their respective CODs. Therefore, the total capital expenditure incurred as on project COD (i.e. 28.03.2019) is **Rs. 6679.45 Crore**. However, as submitted by the petitioner, the total expenditure incurred as on 31^{st} March' 2019 is **Rs. 6806.06 Crore**.

47. As indicated in table No. 5 of this order, out of the total expenditure of Rs. 6806.06 Crore incurred as on 31^{st} March' 2019, the petitioner has capitalized Rs. 6683.86

Crore in Annual Audited Accounts for FY 2018-19. Out of this, the total capitalized, expenditure towards Unit No.3 is Rs. 3472.93 Crore Rs. 2975.82 Crore capitalized towards Unit No. 4 as on their respective CODs. The balance expenditure of Rs. 235.11 Crore was capitalized during the period of 28.03.2019 to 31.03.2019 under additional capitalization of the project.

B. Investment Approval:

48. 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.

49. Regarding the investment approval of the project, in para 2.5 of the subject petition, the petitioner has submitted the following:

*"The GoMP had accorded administrative approval for installation of SSTPP Stage-II at an estimated cost of Rs 6500 Crores with Debt: Equity ratio of 80:20 in January' 2011. 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 (**LoA) 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. The major portion of initial advance to the EPC contractor could only be released on 31.12.2014, which became the Effective Date (Zero Date) of this contract.*

Subsequently, Board of Directors of MPPGCL in its 90th meeting held on 27.09.2017 had accorded Revised Investment Approval for the Revised Project Cost Estimate of Rs. 7738 Crores with Debt : Equity ratio of 80:20. The GoMP has accorded in-principle approval to the Project Cost vide letter No.F-5-

15/2017/13 dated 14.03.2019. Recently, the Project Screening Committee of GoMP in its meeting dated 30.01.2020 has decided to accord administrative approval to the revised project cost of 2x660MW SSTPP Stage-2, Khandwa as Rs. 7738 Crores. The aforesaid decision has been conveyed by Energy Department, GoMP vide letter No. F 5-15/2017/13 dated 11.02.2020."

On perusal of the above submission, it is observed that vide letter dated 7th January' 2011, Government of Madhya Pradesh 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. By affidavit dated 15th October' 2020, the petitioner filed a tentative breakup of project cost approved in investment approval as given below:-

<table>
<tr><th colspan="4">Major Items</th><th>Rs. Cr.</th></tr>
<tr><td>1</td><td colspan="3">Land & Site Development etc.</td><td>5.00</td></tr>
<tr><td rowspan="8">2</td><td rowspan="8">Hard Cost</td><td rowspan="3">Quarters</td><td>Quarters</td><td>123.00</td></tr>
<tr><td>Contingency items</td><td>85.70</td></tr>
<tr><td>Subtotal</td><td>208.70</td></tr>
<tr><td colspan="2">Civil Works</td><td>710.65</td></tr>
<tr><td colspan="2">Supply of Plant</td><td>3870.38</td></tr>
<tr><td colspan="2">Erection Testing & Commissioning</td><td>385.35</td></tr>
<tr><td colspan="2">Transportation</td><td>15.00</td></tr>
<tr><td colspan="2">Sub total</td><td>5190.08</td></tr>
<tr><td rowspan="4">3</td><td rowspan="4">Taxes</td><td colspan="2">Civil Works</td><td>36.30</td></tr>
<tr><td colspan="2">Supply of Plant</td><td>107.97</td></tr>
<tr><td colspan="2">Erection Testing & Commissioning</td><td>50.08</td></tr>
<tr><td colspan="2">Sub total</td><td>194.35</td></tr>
<tr><td rowspan="3">4</td><td rowspan="3">Soft Cost</td><td colspan="2">Overheads</td><td>120.00</td></tr>
<tr><td colspan="2">IDC</td><td>990.58</td></tr>
<tr><td colspan="2">Sub total</td><td>1110.58</td></tr>
<tr><td>5</td><td colspan="3">Total Cost (Excluding FGD)</td><td>6500.00</td></tr>
</table>

50. Subsequently, 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 (LoA) be issued only after receipt of the Environmental Clearance for the project by MOEF & CC".

51. The Board of Directors of MPPGCL in its 90th meeting held on 27.09.2017 accorded Revised Investment Approval for the Revised Project Cost estimate of Rs. 7738 Crores with Debt : Equity ratio of 80:20. 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 8: Revised Capital cost as approved by BOD of the company (Rs.in Crore)

Sr. No	Particular	Revised 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 etc.	642.00
6	Overheads	182.00
7	Project Management Consultancy, Project Monitoring Consultancy	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**

52. In view of the above, it is observed that the project cost for SSTPP PH-II of Rs. 6500 Crore as per investment approval was revised to Rs. 7738.17 Crore and same has been approved by the Board of Directors of the petitioner company. In para 2.2 and 2.3 of the petition, the petitioner has submitted the various reasons and justifications for revision of project cost.

C. SCOD and COD:

53. 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;"*

54. 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. 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.

55. Further, with regard to start date or zero date of the project, Regulation 4.1 (zv)of the generation tariff Regulations, 2015 provides as under:

> *'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;'*

56. In order to ascertain the scheduled date of commercial operation, vide Commission's letter dated 12th June' 2020, the petitioner was asked to submit the SCOD of the project if any, recorded in "Investment Approval" as defined at Regulation 4.1 (zd) of Generation Tariff Regulations, 2015. The petitioner was also asked to file a copy of the Investment Approval (administrative approval/sanction) of the project indicating estimated project cost including funding of the project and timeline for the implementation of the project. The petitioner was further asked to inform the Zero Date of the project in light of the above Regulation.

57. In response to above issues related to SCoD and Zero Date, vide affidavit dated 15th October' 2020, the petitioner submitted the following:

> *The Start date or Zero date of the project is governed as per the definition indicated at Regulation 4.1 (zv) of the generation tariff Regulations, 2015 reproduced hereunder:*
>
> > *'Start Date or Zero Date means the date indicated in the Investment Approval for commencement of implementationof the project and where no date has been indicated, the date of investment approval shall be deemed to be Start Dateor Zero Date;'*
>
> *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-1A.

The Zero date of Contract has clearly been specified in the approved Précis Note put before "Business Committee of MPPGCL" held on 31.08.2013 and is annexed here with as Annexure-1B. The same is reproduced below: -

> ***"6/IX. Zero date shall be the date of issue of Letter of Acceptance. However, payment of advance is to be made within 60 days of Letter of Acceptance, Bank Guarantee, Contract signing etc, if payment is delayed due to Owner's fault beyond 60 days of letter of Acceptance, the Zero date will be extended suitably."***

Accordingly, the Board of Directors (BoD) 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-1C).

However, the Environmental Clearance by Ministry of Environment, Forests and Climate Change, GoI could only be granted in 27.08.2014 (Annexure-1D) 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 (Unit 3) in 43 and second unit (Unit 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 (SCoD) 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.

As per the definition of lawinsider.com the commencement of implementation of the project means the date on physical construction, installation of equipment or materials or other works at an offset project site began; or the date on which a management activity or protocol is first utilized for an offset project. Accordingly, the Zero Date as specified above i.e. 31.12.2014 is the date on which the advance was released to the EPC contractor for commencement of implementation of the project.

58. In view of the above submission filed by the petitioner, the Commission observed the following:

i. 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.

ii. In the 4th Meeting of (BOD) "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 and then only advances be paid.

iii. The petitioner submitted that the Zero date of Contract has been specified in the approved Prices Note put up before "Business Committee of MPPGCL" held on 31.08.2013 that "Zero date shall be the date of issue of Letter of Acceptance. However, payment of advance is to be made within 60 days of Letter of Acceptance, Bank Guarantee, Contract signing etc,."

iv. The Environmental Clearance by Ministry of Environment, Forests and Climate Change, GoI granted on 27.08.2014 and thereafter, five LoAs were issued by the petitioner to M/s L&T, Vadodara on 04.09.2014 with the condition to commission the first unit (Unit 3) in 43 months and second unit (Unit 4) in 47 months from the effective date of contract.

v. As per the submission of the petitioner, the Initial advance to the EPC contractor released on 31.12.2014, which considered the Effective Date of initiation / Zero Date of the EPC contract. As per precis note put up before Business Committee of MPPGCL, the Zero date shall be the date of issue of Letter of Acceptance and LoA was issued on 04.09.2014**.** The petitioner submitted that the Scheduled Commissioning date (SCoD) 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.

59. In view of the above, it is observed that there were no mention about scheduled COD and timeline for completion of the project in the administrative approval of this project accorded by the Government of Madhya Pradesh on 7th January' 2011. It is further observed that the SCOD is also not mentioned in the PPA executed between the petitioner and M.P. Power Trading Company Ltd (now MPPMCL).

60. Further, the Board of Directors (BoD) of MPPGCL in its 70th meeting held on 31.08.2013 accorded approval for placement of EPC contract on M/s L&T and resolved that the **Letter of Award be issued only after receipt of the Environmental Clearance for the project by MOEF & CC**. However, the Environmental Clearance by Ministry of Environment, Forests and Climate Change, GoI was granted on 27.08.2014 and LoAs were issued to M/s L&T, Vadodara thereafter on 04.09.2014 with the condition to commission the first unit (Unit No. 3) in 43 months and second unit (Unit No. 4) in 47 months from the effective date of contract.

61. In view of the above, it is noted that the Board of Directors of the petitioner company accorded investment approval of the project with the condition that the Letter of Award be issued only after receipt of the Environmental Clearance for the project by MOEF & CC. Since the LOA was issued after the environment clearance therefore, the Commission has considered the date of LOA i.e., 4th September' 2014 as 'start date' of the project and the scheduled commissioning of Unit No. 3 is 43 months and Unit No. 4 is 47 months from start date. Accordingly, the SCoD is worked out as 03rd April 2018 and 03rd August' 2018 for Unit No. 3 and 4 respectively in this order.

62. The petitioner has contended 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 Commission has observed that the delay in initial advance to EPC after issuance of LOA is on the part of the petitioner and such delay is not considered by the Commission for arriving at SCOD in this order.

D. Time Over-run

63. In the subject petition, the petitioner has mentioned that in accordance with the contract awarded to M/s L&T, the COD of Unit No. 3 & 4 were to be achieved within 43rd and 47th months from the effective date of contract (31/12/2014) respectively. Further, in format TPS-2 of the petition, it is mentioned that the scheduled CODs as per the investment approval of Unit No. 3 and 4 were July 2018 and November 2018, respectively. However, the actual Commercial Operation Dates of Unit No. 3 and 4 are 18.11.2018 and 28.03.2019, respectively. In light of above, there is substantial delay in achieving CoD of Unit No.3 and 4.

64. As regards delay in the commissioning of Unit-3 & 4, vide Commission's letter dated 12th June' 2020, the petitioner was asked to file the following details:

    (i) Detailed reasons for delay in achieving CoD of both generating Units.

    (ii) Whether the delay in CoD was attributable to the delay in completion of works by the contractors/agencies?

    (iii) If yes, whether any Liquidated Damages/penalty have been recovered or to be recovered from contractors/agencies?

    (iv) The provisions under the contract for deduction of penalty/LD on account of delay in completion of works were sought.

    (v) The costs overrun on account of delay in CoD of the units was sought for each component of the capital cost

65. In response to the above, by affidavit dated 15th October' 2020, the petitioner submitted the following:

    i. *"The major reasons for delay in achieving CoD of both the units are attributable to the following*

    a) ***Revision in the Emission Norms as notified by the MoEF & CC***

    MoEF & CC vide their notification dated 07.12.2015 directed that all the TPPs to be commissioned on or after 01.01.2017 need to limit the emission level of SO_2 (Sulphur Di-Oxide) within 100 mg/Nm^3 and to limit other pollutants also in the specified limits. Copy of this Notificationalong with subsequent revision is enclosed for kind reference please.

    Considering the aforesaid norms, the SSTPP Stage-2 was meeting out all the requirements of MoEF & CC except for norms for emission of SO_2 and NOx,. To achieve the emission norms of SO_2 within specified limit of100 mg/Nm^3, a Wet Flue Gas Desulphurization (FGD) system was envisaged to be installed in both the units of this project. However, with the installation of Wet FGD, the Flue Cans of existing chimney were required to be applied with anti-corrosive coating to handle the corrosiveeffect of Wet Flue Gases. M/s L&T were therefore, advised to hold the erection works of the Flue cans and carry out coating works in flue cans pieces at ground level *position so as to avoid major shutdown in future, thus to avoid loss of fixed charges. However, as this coating work was to be done for the first time in the country, expert consultancy from a reputed Govt. Institute namely, Indian Institute of Chemical Technology (IICD, Hyderabad was obtained and samples of the coating material from all prospective bidders had been got tested in their Lab for technical acceptability as per Project's requirements.*

Finally, M/s L&T were advised to place order on M/s Kirloskar Corrocoats for the Flue Can Lining works and accordingly, MPPGCL also issued the change order on M/s L&T. With this it is to state that a period of about 6 months elapsed in the entire process of finalizing the Wet Stack Design, which resulted in delay in availability of chimney for synchronization/ regular operation of the units.

Although, MPPGCL has taken action proactively for coating of internal surface of chimney flue cans but it has delayed the commissioning of project. The period of delay on this account is still under final assessment.

b) ***Advent of GST, Regime*** *- Implementation of new tax regime from 01.07.2017 and lack of established process and clarity on various issues badly impacted the supply of material to the project. Lack of clarity on legal position is evident from the hosts of circulars/ notifications issued by the Government during the period subsequent to 01.07.2017, which had restricted commencement of various supplies and invoicing. The EPC Contract placed on M/s L&T had to be aligned in accordance with the GST laws, which took a time of more than 5 months and till then their invoices were not processed. This resulted in squeezing of cash flows and thereby restricted and hampered the release of payment to their suppliers/ sub-contractors, which in turn caused reduction in the rate of progress of work and finally impacted the overall project schedule.*

c) ***Other reasons*** *- Apart from the above, there are other reasons as well which have hindered the work progress and M/s L&T have submitted their detailed proposal for time extension, which is presently under review. This proposal is yet to be finalized and therefore effect of delay for such reasons may not be quantified at present.*

ii. *No, the delay in CoD was not attributable to the delay in completion of works by the EPC contractor/ agencies. However, the proposal for time extension due to delay is yet to be got approved by the competent authority.*

iii. *No liquidity damages (LD)/ Penalty have been or are to be recovered from Contractors/ Agencies for the works till CoD of Units. However, subsequent delays in achieving completion of some of the facilities of Balance of Plant (BoP); not affecting smooth and reliable operation of the Units; are under review as per terms of the EPC contract.*

iv. *The Provision under the contract for deduction of penalty/LD on account of delay in completion of works is as under:*

Liquidated Damages for Delay

a) *The time schedule stipulated in the contract shall be deemed to be the essence of the contract. In case the Contractor fails to adhere to the time specified then liquidated damages (LD) will be levied by the Owner.*

b) *The Contractor shall achieve the Completion of Facilities as per project Schedule. LD for delay will be levied Unit wise. LD shall be levied only when the scheduled date of Completion of Facilities of the respective unit is not achieved due to reasons solely attributable to the Contractor.*

c) *The Owner shall levy LD at the rate of 0.50% per week of delay, orpart thereof, of the Contract Price (sum of all five split Contract Price components of the single EPC contract) of each unit. The Contract Priceof the 1st Unit, for the purpose of LD, shall be taken as 60% of the totalContract Price and that of the 2nd Unit shall be taken as 40 % of total Contract Price. The LD ceiling for each unit shall be 10% of theContract Price of each unit.*

d) *If the reason for the delay is solely attributable to the Owner, adequateTime extension shall be given to the Contractor by the extent of delay attributable to the Owner and LD for delay shall not be levied.*

e) If the decision regarding the reasons for the delay is required to be analyzed and the same can only be determined after completion of the work or if the issue is likely to enter into dispute or requires in-depth study to fix the responsibility for the delay, then extension of time will be given to the Contractor subject to levy of LD if considered necessary.

However, as a precaution, the amount equivalent to the maximum LD to be levied would be withheld from the running bills at the stage where the balance payment may not be able to cover the LD and otherobligations as per the provisions of the Contract.

However, an amount up to 90% of the withheld amount can be released to the Contractor against suitable Bank Guarantee for 100% of the withheld amount, if so requested by the Contractor, In such case as soon as the work is completed, all efforts will be taken by the Owner to settle the LD issue preferably within 6 (six) months from the completion of work

v. *There is no cost overrun on account of delay in CoD in respect of the Base Prices given under the EPC contract; however, there may be some liability on account of Price Variation (PV) which may arise on issuance of final extension for the completion period*.

66. In view of the above submissions of the petitioner and taking into account the time taken in the execution of 2x660 MW Units (the generating station), the Commission has observed the following:

i. In order to achieve the emission norms of SO_2 within specified limit of100 mg/Nm^3, a Wet Flue Gas Desulphurization (FGD) system was envisaged to be installed in both the units of this project.

ii. The petitioner itself advised the contactor to hold the erection works of the Flue cans and carry out coating works in flue cans pieces at ground level position so as to avoid major shutdown in future, thus to avoid loss of fixed charges.

iii. The petitioner mentioned that it has taken action proactively for coating of internal surface of chimney flue cans but it has delayed the commissioning of project. **The period of delay on this account is still under final assessment.**

iv. The petitioner submitted that the implementation of new Tax regime from 01.07.2017 and lack of established process and clarity on various issues badly impacted the supply of material to the project.

v. M/s L&T have submitted their detailed proposal for time extension, which is presently under review by MPPGCL. The petitioner submitted that this **proposal is yet to be finalized and therefore effect of delay for such reasons may not be quantified at present.**

67. As per the petitioner submission the delay in CoD was not attributable to the delay in completion of works by the EPC contractor/ agencies. However, the proposal for time extension due to delay is yet to be got approved by the competent authority of the petitioner company. .

68. With regard to controllable and uncontrollable factor, Regulation 18 of the MPERC (Terms and Conditions for determination of Generation Tariff) Regulations, 2015 provides that:

18 *The following shall be considered as controllable and uncontrollable factors leading to cost escalation impacting Contract Prices, IDC and IEDC of the project :*

18.1 The "controllable factors" shall include but shall not be limited to the following:

a) Variations in capital expenditure on account of time and/or cost over-runs on account of land acquisition issues;

b) Efficiency in the implementation of the project not involving approved change in scope of such project, change in statutory levies or force majeure events; and

*c**)** Delay in execution of the project on account of contractor, supplier or agency of the generating company.*

18.2 The "uncontrollable factors" shall include but shall not be limited to the following:

i. Force Majeure events.; and

ii. Change in law.

Provided that no additional impact of time overrun or cost over-run shall be allowed on account of non-commissioning of the generating station or associated transmission system by SCOD, as the same should be recovered through implementation Agreement between the generating company and the transmission licensee:

Provided further that if the generating station is not commissioned on the SCOD of the associated transmission system, the generating company shall bear the IDC and IEDC or transmission charges if the transmission system is declared under commercial operation in accordance with second proviso of Regulation 4.1 (m) of these Regulations till the generating station is commissioned. Such IDC and IEDC or transmission charges if any, paid by the generating company under aforesaid circumstances shall not be allowed in the capital cost of the generating station

Provided also that if the transmission system is not commissioned on SCOD of the generating station, the transmission licensee shall arrange the evacuation from the generating station at its own arrangement and cost till the associated transmission system is commissioned.

69. The Commission has observed that as submitted by the petitioner, the delay is not attributable to the EPC contactor/agency. However, a few reasons as stated by the petitioner for delay in achieving COD have been beyond the control of the petitioner.

70. Based on foregoing, the status of SCoD and time over run is worked out as under:

Unit	LOA to EPC Contractor	SCOD	Actual COD	Time overrun
Unit 3	04th September' 2014	03rd April' 2018	18th November' 2018	229 days
Unit 4	04th September' 2014	03rd August' 2018	28th March' 2019	237 days

71. With regard to recovery of liquidity damages (LD), the petitioner submitted that 'No liquidity damages (LD)/ Penalty have been or are to be recovered from

Contractors/ Agencies for the works till CoD of Units. However the petitioner stated that subsequent delays in achieving completion of some of the facilities of Balance of Plant (BoP), not affecting smooth and reliable operation of the Units, are under review as per terms of the EPC contract.'

72. In view of the aforesaid reply of petitioner on account of liquidated damages, the petitioner is directed to furnish the detailed information of actual LD/ penalty as and when deducted from contractor/ vendor. The aforesaid information be filed with the next petition for true up of SSTPP Stage-II, Unit No. 3 and 4.

E. Cost over-run

73. Capital cost of the project initially approved by the GOMP 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.

74. 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.

75. 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 estimated cost has been worked out is Rs 7738 Crores as against earlier 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.

76. In para 2.3 of the petition, the petitioner has submitted the detailed reasons for revision in the Project Cost Estimate as under:

a) *In the request submitted to the Energy Department in September 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 Jannuary' 2011.*

*It is also to be highlighted that the PSC, while approving the project (as referred in the MoM dtd. 30.10.2010) had remarked that **final estimation of project cost shall be made after preparation of Detailed Project Report and after issuing various orders for execution of this project.***

c) *The Detailed Project Report (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 05.07.2012. 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 (Zero Date) of this Contract with scheduled commissioning of **Unit No. 3 in 43 months and Unit No. 4 in 47 months**. 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 was 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).*

g) *The Goods and Services Tax (GST) introduced in India w.e.f. 01.07.2017 this replaced the multiple taxes levied by the Central and State Governments. Therefore, the impact of GST on the balance unexecuted works of the project was required to be considered. Further, The deemed export benefits {i.e. exemption of Special Additional Duty, Counter Veiling Duty (CVD) & Excise Duty (ED)} so far available under "The Mega Project Policy" are now not available in the GST regime and accordingly additional commitment on this account are required to be estimated and considered.*

h) *Some of the components considered in the earlier technical sanction were required to be updated based on the changed scenario and accordingly estimated revision have been done while updating the cost.*

i) *As per the requirement of revision in the Project Cost estimate indicated at para 2.2, various components of the project cost were revised on various counts and accordingly the revised estimate cost was worked out as Rs 7738 Crores as against earlier Administratively Approved cost of Rs. 6500 Crores.*

j) *While computing the revised estimates of various components, the then prevailing trends in respect of Price variation and ERV were taken into account considering that there would 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 Crs***	***% age (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.*

Impact of various components w.r.t. the enhanced portion of Revised Project Cost			
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 as statutory requirement.*
BOCW	*3.58*	*0.29%*	*Considered @1% of 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 amount.*
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. However, any minor liability becoming due till Jun.'2017 to be met out from other heads.*
Contingency Provisions	*-62.00*	*-5.01%*	*From Original provision of Rs 85 Crs, Rs 82 Crs diverted to GCW and Rs 20 Crs added towards FGD,CSR & Misc. works, hence net decrease is Rs 62 Crores.*
Grand Total	***1238.17***	***100%***	

k) *It is also to highlight here that while preparing the above revised estimates, the liabilities against following components have not been considered:*

(i) *The provisions towards Building and Other Construction Workers (BOCW), Welfare Cess on supply portion of Plant & Equipment, IDC and Overheads based on the legal opinions & recent judicial pronouncement in this regard. However, assessment of Cess is under way in the office of Labour Commissioner, GoMP, Indore.*

(ii) *The installation of De-NOx devices in compliance to revised Environmental Norms based on the feedback regarding non availability of proven technology for Indian coal.*

(iii) The existing provision towards Entry Tax, which has been deleted based on the legal opinions & recent judicial pronouncement in this regard and abolition of this tax in GST regime.

(iv) Any Contingent requirement due to change in the Technical Specifications/Scope subsequent to obtaining Administrative approval towards installation of FGD in Dec. 2016.

(v) Any expenditure on account of "contingent requirement", such as 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 expenditure towards Construction works of Limited Height Subway in lieu of six nos. Railway crossing amounting to Rs. 19.92 Crores. 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 cost of Rs.7738 Crores are required, the Project Cost shall be revised accordingly at an appropriate stage.

(vi) Difference of "Fuel Cost during Trial Operation of Units" and "the DSM charges for Infirm Power generated".

77. With regard to the reasons for revision/increase in project cost, the petitioner has submitted that the total enhancement to the Project Cost estimate is Rs 1238 Crores and accordingly the Project Cost has been revised to Rs 7738 Crores. The contribution of major components for revision in the project cost as filed by the petitioner is given below:

(i) Installation of FGD (51.85% impact),
(ii) Price Variation (23.25% impact),
(iii) GST (17.71% impact) and
(iv) Cess on Consumptive Water (5.65% impact)

78. With regard to revision of project cost, vide Commission's letter dated 12th June' 2020, the petitioner was asked to file the following:

i. A copy of the statement showing detailed break-up of initial estimated project cost of Rs. 6500 Crore as approved by its BoD and Government of Madhya Pradesh.

ii. A copy of the revised project cost and funding approved by the Board of the Company and Government of Madhya Pradesh be submitted. Further, the statement showing detailed break-up of capital cost components for the revised estimated project cost of Rs. 7738 Crore was sought.

iii. Component-wise detailed reasons/justification of the revision/increase in project cost with respect to initial estimated project cost was sought.

iv. In format TPS 5B, the petitioner has filed the detailed break-up of actual capital expenditure vis-à-vis the revised estimated capital expenditure of the project. The detailed breakup of actual capital expenditure vis-à-vis the original project cost (as per 'initial investment approval') of the project was also sought.

v. Variance in actual project cost from the original project cost along with the detailed reasons of variance was sought.

79. In response to the above, by affidavit dated 15th October' 2020, the petitioner submitted the following:

i. *While obtaining approval of the GoMP and BoD of MPPGCL in the year 2010 & 2011 for initial estimated Project Cost of Rs 6500 Cr, no detailed breakup was provided, This estimation was made based on the then Project cost of Rs 6750 Crores of SSTPP Stage-I, without any detailed break-up.*

ii. Regarding approval on Revised Project Cost and funding, copy of Resolution of BoD of MPPGCL for its 90th meeting held at Bhopal on 27.09.2017 is annexed herewith as Annexure-3A for kind reference please. In addition, a copy of Energy Deptt.'s letter No. F 5-1512017/13 Bhopal dated 14.03.2019 conveying GoMP's In-principle Approval for Revised Project Cost and funding of the Project is annexed herewith as Annexure-3B.

In the process of according the final approval of project cost by the GoMP, the proposal of MPPGCL for revision in the project cost from Rs 6500 Crores to Rs.7738 Crores has been discussed in the meeting of the Project Screening Committee of GoMP on 30.01.2020 wherein the committee has decided for revising the project cost. The Energy Department vide its letter dated 11.02.2020 has forwarded the minutes of this meeting; however, approval of GoMP is still awaited. The copy of MoM is annexed as Annexure-3C.

iii. *While requesting the Energy Department in Sept. 2010 for according administrative approval for installation of SSTPP Stage-II, the total project cost of Rs 6500 Crores was estimated based on the then cost of Rs 6750 Crores for SSTPP Stage-I without the detailed break-up. The proposal was first discussed in the meeting of Project Screening Committee on 30.10.2010 and thereafter administrative approval of GoMP was accorded in Jan. 2011.*

The Project Screening Committee while approving this cost in Oct. 2010 highlighted that final estimation of project cost shall be made after preparation of Detailed Project Report (DPR) and after issuing various orders for execution of this project.

The DPR was finalized in March 2012 duly considering Mega Power Project benefits thereby estimating the cost to Rs 6499.93 Crores (say Rs 6500 Crores). This cost estimate was envisaged with a base date of Jan 2011 and also considering commissioning of the first and second units in 38 & 42 months respectively.

Subsequently, tendering activities were taken up and concluded in Aug. 2013, however, ordering was held up for want of Environmental Clearance, which could be granted in Aug. 2014 only. Consequently, an EPC contract was awarded to M/s L&T in Sept. 2014 in the form of five Letter of Awards (LOAs).

The project activities were taken up formally w.e.f. 31.12.2014, which became the Effective Date of contract. As no break-up of Rs 6500 Cr was available at the time of seeking GoMP's approval in Sept. 2010, however, in order to enable proper booking of the expenditures, Technical Sanction to the Project Cost Estimate was essentially required and therefore the same was prepared in April 2015 considering suitable break-up given in the DPR, the EPC contract awarded on M/s L&T and other considerations such as, requirement of funds for the balance works limiting to the administratively sanctioned amount of Rs 6500 Crores.

This break up has been considered as a basis for working out the enhancement of cost for the different constituents. The component wise reason/justification of the revision in the project cost with respect to the aforesaid break-up of initial estimated project cost of Rs 6500 Crores detailed in table below:-

Rs. Crore

<table>
<tr><th colspan="4">Major Items</th><th>Original</th><th>Revised</th><th>Rise</th><th>Reasons</th></tr>
<tr><td>1</td><td colspan="3">Land & Site Development etc</td><td>5.00</td><td>5.00</td><td>0.00</td><td></td></tr>
<tr><td rowspan="8">2</td><td rowspan="8">Hard Cost</td><td rowspan="3">Quarters</td><td>Quarters</td><td>123.00</td><td>205.00</td><td>82.00</td><td rowspan="3">Change in cost estimate (Original 2011 at Level 2011), Adjusted against Colony Quarters</td></tr>
<tr><td>Contingency items</td><td>85.70</td><td>3.70</td><td>-82.00</td></tr>
<tr><td>Subtotal</td><td>208.70</td><td>208.70</td><td>0.00</td></tr>
<tr><td colspan="2">Civil Works</td><td>710.65</td><td>710.65</td><td>0.00</td><td rowspan="5"></td></tr>
<tr><td colspan="2">Supply of Plant</td><td>3870.38</td><td>3870.38</td><td>0.00</td></tr>
<tr><td colspan="2">Erection Testing & Commissioning</td><td>385.35</td><td>385.35</td><td>0.00</td></tr>
<tr><td colspan="2">Transportation</td><td>15.00</td><td>15.00</td><td>0.00</td></tr>
<tr><td colspan="2">Subtotal</td><td>5190.08</td><td>5190.08</td><td>0.00</td></tr>
<tr><td rowspan="5">3</td><td rowspan="5">Taxes</td><td colspan="2">Civil Works</td><td>36.30</td><td>67.06</td><td>30.76</td><td rowspan="3">On Account of GST & Tax on PV. Deemed Export benifit is also lost</td></tr>
<tr><td colspan="2">Supply of Plant</td><td>107.97</td><td>228.32</td><td>120.35</td></tr>
<tr><td colspan="2">Erection Testing & Commissioning</td><td>50.08</td><td>80.85</td><td>30.77</td></tr>
<tr><td colspan="2">Water Tax</td><td>0.00</td><td>70.00</td><td>70.00</td><td>Due to WRD notification</td></tr>
<tr><td colspan="2">Subtotal</td><td>194.35</td><td>446.23</td><td>251.89</td><td></td></tr>
<tr><td rowspan="4">4</td><td rowspan="4">PV</td><td colspan="2">Civil Works</td><td>0.00</td><td>56.84</td><td>56.84</td><td rowspan="4">No PV was included in original cost</td></tr>
<tr><td colspan="2">Supply of Plant</td><td>0.00</td><td>192.68</td><td>192.68</td></tr>
<tr><td colspan="2">Erection Testing & Commissioning</td><td>0.00</td><td>62.77</td><td>62.77</td></tr>
<tr><td colspan="2">Subtotal</td><td>0.00</td><td>312.29</td><td>312.29</td></tr>
<tr><td rowspan="3">5</td><td rowspan="3">Soft Cost</td><td colspan="2">Overheads</td><td>120.00</td><td>132.00</td><td>12.00</td><td>Fuel expenses due to prise inflation</td></tr>
<tr><td colspan="2">IDC</td><td>990.58</td><td>990.58</td><td>0.00</td><td rowspan="2"></td></tr>
<tr><td colspan="2">Subtotal</td><td>1110.58</td><td>1122.58</td><td>12.00</td></tr>
<tr><td>6</td><td colspan="3">Total Cost Excluding FGD</td><td>6500.00</td><td>7076.18</td><td>576.18</td><td></td></tr>
<tr><td>7</td><td colspan="3">FGD etc.</td><td>0.00</td><td>662.00</td><td>662.00</td><td>New Statutory Requirement</td></tr>
<tr><td>8</td><td colspan="3">Revised Cost Including FGD</td><td>6500.00</td><td>7738.18</td><td>1238.18</td><td></td></tr>
</table>

Whereas, detailed reasons for enhancement of the project cost has been elaborated in Chapter-2 of the said petition (Project Cost Estimate & Capital Expenditure).

iv. *The TPS 5-B has been prepared showing the component wise break-up of revised estimated project cost, this needs to be compared with the break-up of original estimate (Rs. 6500 Crores).*

v. *While requesting the Energy Department in Sept. 2010 for according administrative approval for installation of SSTPP Stage-II, the total project cost of Rs 6500 Crores was estimated based on the then cost of Rs 6750 Crores for SSTPP Stage-I without the detailed break-up. The proposal was first discussed in the meeting of Project Screening Committee on 30.10.2010 and thereafter administrative approval of GoMP was accorded in Jan. 2011.*

The Project Screening Committee while approving this cost in Oct. 2010 highlighted that final estimation of project cost shall be made after preparation of Detailed Project Report (DPR) and after issuing various orders for execution of this project.

The DPR was finalized in March 2012 duly considering Mega Power Project benefits thereby estimating the cost to Rs 6499.93 Crores (say Rs 6500 Crores). This cost estimate was envisaged with a base date of Jan 2011 and also considering commissioning of the first and second units in 38 & 42 months respectively.

Subsequently, tendering activities were taken up and concluded in Aug. 2013, however, ordering was held up for want of Environmental Clearance, which could be granted in Aug. 2014 only. Consequently, an EPC contract was awarded to M/s L&T in Sept. 2014 in the form of five Letter of Awards (LOAs).

The project activities were taken up formally w.e.f. 31.12.2014, which became the Effective Date of contract. As no break-up of Rs 6500 Cr was available at the time of seeking GoMP's approval in Sept. 2010, however, in order to enable proper booking of the expenditures, Technical Sanction to the Project Cost Estimate was essentially required and therefore the same was prepared in April 2015 considering suitable break-up given in the DPR, the EPC contract awarded on M/s L&T and other considerations such as, requirement of funds for the balance works limiting to the administratively sanctioned amount of Rs 6500 Cr.

80. On perusal of the above, the Commission has observed that the petitioner has explained various reasons for revision in the project cost. The petitioner has also

submitted the major components revision in project cost along with the reasons of revision. It is further observed that the revised project cost has been approved by the Board of Directors of the petitioner company. Therefore, the Commission has considered the capital cost of Rs. 7738 Crore for the project in this matter as approved by the Board of the petitioner's Company.

F. Interest during Construction (IDC):

81. Regarding the Interest During Construction (IDC) 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."

82. Regulation 17.1 of generation tariff Regulations, 2015 provides that the 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 the subject petition, the petitioner has mentioned that the total Interest during Construction and Financing Charges (IDC & FC) as per revised capital cost estimate are Rs. 990.58 Crore, however, the petitioner has claimed the actual IDC & FC of Rs. 851.77 Crores as on 31st March' 2019 and Rs. 138.81

Crore is the balance IDC and FC as on 31st March' 2019. Vide Commission's letter dated 12th June' 2020, the petitioner was asked to submit the following:

(i) The details of estimated IDC and FC of the project as per initial investment approval.

(ii) The actual IDC and FC for Unit No. 3 and Unit No. 4 as on Scheduled COD and as on actual COD of each unit.

(iii) The detailed reasons for increase in IDC and FC from initial estimated IDC and FC.

(iv) Reasons for increase in IDC and FC from schedule COD to actual COD in light of the Regulation 17.2 of the generation tariff Regulations, 2015.

(v) Detailed computation of IDC and FC along with basis of allocation of IDC among Unit No. 3 and Unit No. 4.

83. In response to the above, by affidavit dated 15th October' 2020, the petitioner submitted the following:

i. The detailed break-up of estimated cost of project was not prepared at the timeof initial investment approval. However, subsequently the DPR was finalized in March 2012 wherein two project cost estimates, one with Mega Power Project benefits amounting to Rs 6500 Crores & the other without Mega Power Project benefits amounting to Rs 7762 Crores were prepared. The Mega Power Project Status was granted to the project on 05.07.2012 by the Government of India.As such, the cost estimate with Mega Power Project benefits has only been considered subsequently. As per this cost estimate, the IDC and FC amounting to Rs 990.58 Crores was envisaged and the detailed calculation for the same is enclosed herewith.

ii. Actual IDC & FC for Units 3 & 4 as on actual CoD of each Unit is as under:
Unit No.3 - Rs 427.05 Crores
Unit No.4 - Rs 424.72 Crore

iii. While revising the project cost in Sept, 2017, the commitment towards IDC and FC was kept unchanged.

iv. As there was no enhancement in the IDC & FC, the instant query has no relevance.

v. *Kindly refer TPS Form 14 wherein the Unit wise /Quarter wise bifurcation of Interest During Construction (IDC) was submitted by MPPGCL. The same was considered in the TPS FORM-5B of Capital Expenditure. Further, the duly signedPFC sheet of calculation of IDC is annexed for kind referenceof Commission please*.

84. On perusal of above response, the Commission observed that the petitioner has not filed the information of IDC & FC as on Schedule COD and Actual COD. However, the same has been worked out in this orderon the basis of the details of IDC provided in Form TPS 14 filed with the petition.

85. On scrutiny of the reasons of delay filed by the petitioner, it is observed that most of the aforesaid reasons for delay in COD of generating units were controllable and attributable to either the petitioner or contractor / vendors. The petitioner submitted that the delay in commissioning of the project is still under final assessment at the petitioner end and M/s L&T have submitted their detailed proposal for time extension, which is presently under review by the petitioner and this proposal is yet to be finalized. Therefore, the effect of delay for such reasons may not be quantified by the petitioner.

86. In preceding para of this order, the Commission has worked out the time overrun of 229 days and 237 days in achieving CoD of the generating Unit No. 3 and 4 respectively.

87. Hon'ble APTEL vide Judgment in Appeal No. 72 of 2011 while allowing the impact of increase in costs due to delay in achieving CoD has categorically stated the following:

"7.4. The delay in execution of a generating project could occur due to following reason:

(i) due to factors entirely attributable to the generating company, e.g imprudence in selecting the contractors/suppliers and in executing contractual agreements including terms and conditions of the contracts, delay in award of contracts, delay in providing inputs like making land available to the contractors, delay in payments to contractors/ suppliers as per the terms of contract,

mismanagement of finances, slackness in project management like improper co-ordination between the various contractors, etc.

(ii) due to factors beyond the control of the generating company e.g. delay caused due to force majeure like natural calamity or any other reasons which clearly establish, beyond any doubt, that there has been no imprudence on the part of the generating company in executing the project.

(iii) situation not covered by (i) & (ii) above. In our opinion in the first case the entire cost due to time over run has to be borne by the generating company.

However, the Liquidated Damages (LDs) and insurance proceeds on account of delay, if any, received by the generating company could be retained by the generating company. In the second case the generating company could be given benefit of the additional cost incurred due to time over-run. However, the consumers should get full benefit of the LDs recovered from the contractors/suppliers of the generating company and the insurance proceeds, if any, to reduce the capital cost. In the third case the additional cost due to time overrun including the LDs and insurance proceeds could be shared between the generating company and the consumer. It would also be prudent to consider the delay with respect to some benchmarks rather than depending on the provisions of the contract between the generating company and its contractors/suppliers. If the time schedule is taken as per the terms of the contract, this may result in imprudent time schedule not in accordance with good industry practices."

88. Hon'ble APTEL in their Judgment with regards to sharing of impact on account of increase in cost due to mix of controllable and uncontrollable factors had decided the following:

"7.12. In view of above, we feel that this case falls under category (iii) described in Para 7.4. Accordingly, following the principles of prudence check laid down by us, the cost of time over run has to be shared equally between the generating company and the consumers. Admittedly, there is no enhancement in cost of the contract price of the equipment as no price variation escalation was permissible to BHEL beyond the schedule date of completion of the Project according to the terms of the agreement. The

impact of time over run beyond the contractual schedule is only on IDC and overhead costs. Accordingly, the same have to be shared between the generating company and the consumers. Excess IDC and overhead costs for time overrun from scheduled date of commissioning to actual date of commissioning has to be worked out on prorate basis with respect to total actual time taken in commissioning of the Unit. 50% of the excess IDC and overhead costs will have to be disallowed……....”

89. In view of the aforesaid observations, the Commission has allowed only 50% of the excess IDC & FC (claimed beyond schedule COD of units) in this order on account of delay in commissioning of the Project.

90. Accordingly, the details of IDC considered till COD of each unit in this order are as given below:

Table 9: Interest during Construction and Financing Charges (Rs. in Crore)

Particular	Unit No. 3	Unit No. 4	Total
Actual IDC and FC as on actual CoD filed	427.05	424.72	851.77
Actual IDC and FC as on Scheduled CoD worked out by the Commission	233.09	247.73	480.82
Increase in IDC and FC due to delay in commissioning	193.96	176.98	370.95
50% of the excess IDC and FC	96.98	88.49	185.47
Total IDC and FC allowed in this order	**330.07**	**336.23**	**666.30**

91. On perusal of the capitalization details filed by the petitioner, it is observed that the petitioner has not capitalized full amount of IDC & FC as on CoD of each unit and end of the financial year. Therefore, the capitalization of IDC & FC at different dates is considered proportionately as given below:

Table 10: Interest during Construction and Financing Charges Allowed (Rs. in Crore)

Unit	Particular	As on CoD of Unit No.3	As on CoD of Unit No.4
Unit No.3	Actual IDC & FC Capitalized as filed	412.70	412.70
	Amount Under CWIP filed	14.35	14.35
	Total IDC & FC Filed	427.05	427.05

	% of Filed IDC & FC Capitalized	97%	97%
	Total IDC & FC allowed	330.07	330.07
	Capitalized IDC & FC allowed	**318.97**	**318.97**
	IDC&FC Considered under CWIP	11.09	11.09
Unit No.4	Actual IDC & FC Capitalized as filed		409.64
	Amount Under CWIP filed		15.08
	Total IDC & FC Filed		424.72
	% of Filed IDC & FC Capitalized		96%
	Total IDC & FC allowed		336.23
	Capitalized IDC & FC allowed		**324.29**
	IDC&FC Considered under CWIP		11.94

G. Overheads Expenses

92. 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."

93. The petitioner filed the actual overheads (including fuel expenses for inform power) of Rs. 202.08 Crore and Rs. 163.10 Crore for Unit No. 3 & 4 capitalized till actual CoD of respective Unit. The total overhead expenses for both the Units as capitalized by the petitioner is Rs. 365.18 Crore. Vide Commission's letter dated 12th June' 2020, the petitioner was asked to file the actual overhead expenses for Unit No. 3 & 4 with detailed computation of overheads as on scheduled CoD and as on actual CoD of both the Units. In response, the petitioner has not filed the Overheads expenses as on SCOD of the units. Therefore, the Commission has considered the Overheads expenses (excluding fuel expenses for infirm power) as on SCOD and Actual COD in the ratio of IDC as on SCOD and Actual COD.

94. On perusal of the reasons for delay filed by the petitioner, it is observed that the increase in overhead expenses from the initially estimated amount to the actual overhead expenses (as on Station CoD) is mainly on account of delay in achieving the COD of the generating units. Further, the Commission has noted that partial reasons for delay in COD of generating units are controllable and attributable to either the petitioner or contractor/ vendors.

95. In line of the observations of the Commission on the issue of increase in IDC from the Scheduled COD to actual COD of the Units, the Commission has allowed 50% of overhead expenses incurred beyond scheduled COD on account of delay in completion of the project. Accordingly, the overhead expenses of Rs. 13.04 Crore and Rs. 16.52 Crore (total of Rs. 29.56 Crore) are deducted from the capital cost of both the Units as on their respective CODs.

96. The additions in respect of overhead expenses from station COD (i.e. 28.03.2019) to 31.03.2019 have been dealt in additional capitalization of this order. The detail of overheads (excluding infirm power) considered in this Order is under:

Table 11: Overheads Considered **(Rs. in Crore)**

Particular	Unit No. 3	Unit No. 4	Total
Total Overhead expenses capitalized as on actual COD (Including net fuel expenses for infirm power)	202.08	163.10	365.18
Actual Overheads capitalized as on actual CoD (Excluding net fuel expenses for infirm power)	57.42	79.30	136.72
Actual Overheads worked out as on Scheduled CoD	31.34	46.26	77.59
Increase in Overheads due to delay in commissioning	26.08	33.05	59.12
50% of the excess Overheads	13.04	16.52	29.56
Total Overheads	44.38	62.78	107.16

H. Infirm power:

97. Regarding Infirm power, Regulation 24 of MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015 provides as under:

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

Provided that any revenue earned by the generating company from supply of infirm power after accounting for the fuel expenses shall be applied in adjusting the capital cost accordingly."

98. On perusal of the details regarding start-up fuel expenditure during Pre-Commissioning activities, it is observed that the fuel expenditure for Unit No. 3 was Rs. 144.66 Crores and for Unit No. 4 was Rs. 83.81 Crores. However, the total start up fuel including secondary fuel oil as per the revised capital cost estimate was Rs. 72 Crore. It is further observed that the revenue generated from sale of infirm power from Unit No. 3 & 4 is not given in the petition. In view of the above, vide letter dated 12^{th} June' 2020, the petitioner was asked to file the following:

i. Reasons for higher start up fuel expenses for Unit No. 3 and 4 of the project then the revised capital cost estimate.

ii. Month-wise details of infirm power generated from the generating units and revenue earned from the sale of infirm power along with the statement of State Load Despatch Centre duly certified by the statutory Auditor and reconciled with Annual Audited Accounts.

iii. Whether the revenue earned from sale of infirm power has been accounted for in the capital cost of the project claimed in the petition. Supporting documents were sought in this regard.

iv. Actual fuel expenses for generation of infirm power indicating the unit-wise details like quantity, rate and amount of fuel expenses used for generation of infirm power duly certified by the statutory Auditor. The break-up of quantity and landed cost of FSA and Non-FSA coal was sought.

v. A copy of bill/invoice for purchase of coal and oil for generation of infirm power.

99. In response to the above, by affidavit dated 15th October' 2020, the petitioner submitted the following:

i. The provision of Rs 72 Cr in the revised project cost estimate of Rs 7738 Cr was made towards the requirement of fuel till synchronization of each unit and no provision was envisaged towards fuel expenditures during Trial Operation of the Units and the revenue towards sale of Infirm Power.

ii. The month wise details of Infirm Power generated from the Generating Units and revenue earned from the sale of Infirm Power along with the SLDC certified statements are annexed as Annexure-13A.

iii. Yes, the revenue earned from sale of Infirm power has been accounted for in the capital cost of the project claimed in the petition. The Net Revenue from Start Up Fuel is indicated at point 7.4 of TPS FORM-5b. The breakup of same is as given under:-

Expenditure during Trial Operation	***Unit No.3***	***Unit No.4***
(A) Coal Cost	*124.93*	*61.11*
(B) Secondary Fuel Cost	*79.18*	*44.87*
(C) Revenue from Infirm Power	*-59.45*	*-22.17*
Total (A+B-C)	***144.66***	***83.81***

iv & v The certified copy of Coal Model for SSTPP, Khandwa duly indicating the coal consumption, Rate and Amount towards generation of infirm power for Unit No. 3 and Unit No. 4 is annexed as Annexure-13B.

Similarly, the certified copy of Oil Statement (HFO + LDO) duly indicating the Sec. Oil consumption, Rate and Amount towards generation of infirm power for Unit No. 3 and Unit No. 4 is annexed as Annexure-13C.

The Bill/ Invoice of coal & oil used towards generation of Infirm Power of SSTPP Stage-2 Khandwa of MPPGCL is available at site. Being voluminous documents it is not safe and practical to call them at this point of time as COVID-19 Pandemic is spreading in the State of MP. Therefore, MPPGCL humbly request Hon'ble Commission to kindly consider the details submitted above towards Infirm Power.

100. The petitioner submitted the following details regarding infirm power generated prior to CoD of the generating units:

Sr No	Particulars	Unit	Unit No 3	Unit No 4	Total
1	Date of Synchronization	Month	August' 18	Dec' 18	
2	Date of Commercial Operation	Date	18.11.2018	28.03.2019	
3	Infirm Energy Generated	MUs	424.59	205.39	629.98
4	Oil Expenses for Infirm Power	Rs Cr	79.18	44.87	124.05
5	Coal Expenses for Infirm Power	Rs Cr	124.93	61.11	186.04
6	Total Fuel Expenditure	Rs Cr	204.11	105.98	310.09
7	Less Income from sale of Infirm Power	Rs Cr	(59.45)	(22.17)	(81.62)
8	**Net Fuel Cost Charged to Project Cost**	**Rs Cr**	**144.66**	**83.81**	**228.47**

101. On perusal of above details regarding fuel expenditure during Pre-Commissioning activities, it was observed that the fuel expenditure for Unit No. 3 & 4 was Rs. 204.11 Crore and Rs. 105.98 Crore as on CoD of respective Units. However, the revenue generated from sale of infirm power from Unit No. 3 & 4 is Rs. 59.45 Crore and Rs. 22.17 Crore, respectively. In view of the above, vide Commission's letter dated 12th June' 2020, the petitioner was asked to explain the reasons for such high expenditure on start up fuel.

102. By affidavit date 15th October' 2020, the petitioner submitted that the following:

"The provision of Rs 72 Crores in the revised project cost estimate of Rs 7738 Crores was made towards the requirement of fuel till synchronization of each unit and no provision was envisaged towards fuel expenditures during Trial Operation of the Units and the revenue towards sale of Infirm Power. The difference between 'the fuel expenditure during Trial Operation' and 'the DSM Charges' towards generation of Infirrn Power work out to Rs 144.65 Crores and Rs 83.81 Crores for Units 3 & 4 respectively, thus totaling to Rs 228.47 Crores as against the provision of Rs 72 Crores. As such, the expenditure towards Start up fuel gets enhanced by Rs 156.47 Crores as also indicated in the given table below" :-

Rs. Crores

S. No.	Start-up Fuel Charges	Unit 3	Unit 4
A	Coal Charges	124.93	61.11
B	Secondary Fuel Charges	79.18	44.87
C	Revenue generated from sale of Infirm Power	59.45	22.17
D	**Total Start-up Fuel Charges D=(A+B-C)**	**144.66**	**83.81**
E	**Total Start-up Fuel Charges for Unit 3 & 4**	**228.47**	
F	**Provision for Start-up Fuel in the Project Cost**	72.00	
G	**Excess Start-up Fuel charges incurred G=(E-F)**	**156.47**	

103. Based on the details filed by the petitioner, the cost of startup fuel considered in this order for Unit No. 3 & 4 on their respective CoD is as given below:

Unit No	Fuel	Unit	Quantity	Amount in Rs. Crore
3	HFO	KL	13970	57.51
	LDO	KL	4425	21.66
	Domestic Coal	MT	314919	124.93
		Sub Total		**204.10**
	Less: Revenue From Infirm Power			**59.45**
	Net Fuel Cost			**144.65**
4	HFO	KL	7719	33.92
	LDO	KL	1970	10.95
	Domestic Coal	MT	143479	61.11
		Sub Total		**105.98**

	Less: Revenue From Infirm Power			22.17
	Net Fuel Cost			**83.81**
3 & 4	HFO	KL	21689	91.43
	LDO	KL	6395	32.61
	Domestic Coal	MT	458398	186.04
		Total		**310.08**
	Less: Revenue From Infirm Power			**81.62**
	Net Fuel Cost			**228.46**

Common Facilities:

104. With regard to expenses on common facilities, Regulation 5.2 of the MPERC (Terms and Conditions for determination of Generation Tariff) Regulations, 2015 provides that:

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

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

105. With regard to common facilities between Unit No. 3 and 4, vide Commission's letter dated 12th June' 2020, the petitioner was asked to file the allocation/bifurcation of common capital expenditure incurred and capitalized on the common facilities between Unit No. 3 and Unit No. 4 as on CoD of both the units. The petitioner was also asked to file the statement for apportionment of Common facilities as per provisions under MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015. The petitioner was further asked to file the details of common assets/facilities between stage-I and stage-II of SSTPP Project. The petitioner was also asked to file the basis of cost allocation/bifurcation of common capital expenditure incurred and capitalized on the common facilities between stage-I and stage-II of SSTPP Project.

106. In response to the above, by affidavit dated 15th October' 2020, the petitioner submitted the following:

"As desired the allocation/bifurcation/apportionment of common capital expenditure incurred and capitalized on the common facilities between Unit 3 and Unit 4 as on CoD of both the Units as per clause 8.3 of MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015 is annexed as Annexure-7. A regard to Bifurcation of Common expenditure incurred and capitalized between Unit No. 3 & 4 as on CoD of these units, the same has been included in TPS FORM-5b.

In the project cost of Rs 7738 Crores for SSTPP Stage-II, there is no common facility. The expenses of common facility have already been booked in SSTPP Stage-I. Therefore, cost allocation / bifurcation etc. of common facilities between Stage-I and Stage-II of SSTPP Project does not arise for SSTPP Stage-II and has no relevance in this petition."

107. The petitioner submitted that in the project cost of Rs 7738 Crores for SSTPP Stage-II, there is no common facility. The petitioner further submitted that the expenses of common facility have already been booked in SSTPP Stage-I. Therefore, cost allocation / bifurcation etc. of common facilities between Stage-I and Stage-II of SSTPP Project does not arise for SSTPP Stage-II.

I. Capital Spares:

108. With regard to the capital spares, Regulation 19 of MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015 provides that the ceiling norms for capitalized initial spares for coal based thermal generating stations is 4.0% of the plant & machinery cost upto cut-off date.

109. On perusal of the petition, it was observed that in form TPS 16 of the petition, the petitioner filed the details regarding capital spares of Rs. 299.47 Crore received till March' 2019. Vide Commission's letter dated 12th June' 2020, the petitioner was asked to submit the following details regarding capital spares:

i. Whether the capital spares filed in the subject petition are capitalized in the Annual Audited Accounts for FY 2018-19.

ii. The capital spares claimed by the petitioner are not indicated in Form 5B of the petition. The petitioner was asked to confirm whether the capital spares are included in the capital cost claimed in Form 5B of the petition.

iii. Whether any capital spares have been supplied by any contractor/vendor as a part of contract.

iv. The petitioner was asked to justify its claim towards mandatory spares in light of the Regulation 19 of MPERC (Terms and Conditions for determination of Generation Tariff) Regulations, 2015.

110. In response to the above, by affidavit dated 15th October' 2020, the petitioner submitted response on the issues raised by the Commission as follows:

i. Kindly refer Annexure- 4 of the MPPGCL reply vide letter No. 07-12/CS-MPPGCL/MPERC/ SSTPP Stage-2/Pt. 25 of 2020/548 dated 31.07.2020 wherein MPPGCL has submitted Asset-Cum-Depreciation Register of SSTPP Stage-2 as per Audited Book of Accounts for FY 2018-19. It includes the value of Capital Spares capitalized at SSTPP Stage-II amounting to Rs. 293.86 Crores + Rs.5.60 Crores =Rs. 299.46 Crores.

ii. Kindly refer Serial No. 2.1.3, 2.1.4.2, 2.2.2. 2.2.4.2 of TPS Form-5b which reflects the Hard cost of Capital Spares procured for SSTPP Stage-II. The loading of Soft cost etc. is done consolidated basis the net amount equalizes to Rs. 299.46 Crores.

iii. It is to confirm that the Capital Spares is included in the capital cost claimed inTPS Form-5b.

iv. Yes, all the capital spares have been supplied by the EPC contractor as a part ofcontract.

v. The working for ceiling limit of Capital Spares as per MPERC Regulation 2015,Clause 19 (a) is as given under:-

S. No.	***Particulars***	***Amount in Rs. Crs.***
A	***Total Project Cost***	***7738.00***
	Portion of Project Cost not coming under 'Plant and MachineryCost'	
B	*Cost of Land & Site Development including General Civil Works*	*210.00*

C	*Cost of Contingency.*	*23.70*
D	***Sub-Total D=(B+C)***	***233.70***
E	***Plant and Machinery Cost E=(A-D)***	***7504.30***
F	***Allowable cost of Capital Spares @ 4% of the Plant & Machinery Cost F=4% of E***	***300.17***

111. On perusal of the above submission filed by the petitioner, it is observed that while worked out the ceiling limit of capital spares, the petitioner has considered the revised project cost of Rs. 7738 Crore however, the petitioner has capitalized these capital spares in Annual Audited Accounts and the ceiling limit was to be determined in respect of the capital cost capitalized in Annual Audited Accounts. The petitioner has also submitted the list of the initial spares in accordance to Asset-cum-Depreciation Register and considered in the Books of accounts. Further, the petitioner submitted that all initial spares are procured from the contractors of the project and inbuilt in components of the capital cost.

112. The petitioner has claimed the capital spares based on the the ceiling limit of capital spares worked out as under:

Calculation of 'Plant and Machinery Cost' and allowable cost of Capital Spares

S. No.	Particulars	Amount in Rs Crs.
A	Total revised Project Cost approved by the Board	7738
B	Cost of Land & Site Development including General Civil Works	210
C	Cost of Contingency.	23.7
D	Sub-Total E=(B+C)	233.7
E	Plant and Machinery Cost E=(A-D)	7504.3
F	Allowable cost of Capital Spares @4% of the Plant & Machinery Cost F=4% of E	300.17

113. It is observed that the aforesaid capital spares have been included in the Plant and Machinery cost of the project. The petitioner has filed the list of capital spares of Rs. 293.86 Crore capitalized as on project COD in Form TPS 11. The details of the capital spares capitalized and claimed on different dates are as given below:

Table 12: Capital Spares claimed (Rs in Crore)

Capital Spares capitalized as on COD of Unit No. 3	Capital Spares capitalized as on COD of Unit 4	Total capital spares capitalized as on 31.03.2019
293.86	293.86	299.46

114. Based on the above ceiling limit, the petitioner has claimed that initial spares of Rs. 293.87 Crore as on project CoD is within the ceiling limit in accordance to the Regulation 19 of the Regulations, 2015.

115. Regulation 19 of the Regulations, 2015 provides the ceiling norms for capitalized initial spares for coal based thermal generating stations is 4.0% of the plant & machinery cost upto cut-off date. Accordingly, the Commission has worked out the ceiling limit of capital spares corresponding to the plant and machinery cost in capital cost admitted in this order as under:

Table 13: Ceiling Limit of Capital Spares (Rs in Crore)

S. No.	Particulars	As on CoD of Unit No. 3 (For Unit No. 3)	As on CoD of Unit No.4 (For Unit No. 4)	As on Project CoD (For Unit 3&4)
A	Total Hard cost	2668.54	2501.72	5170.26
B	P&M Cost excluding IDC and Overhead expenses	2189.17	2075.36	4264.52
C	% of P&M of Total Project cost (B/A)	82.04%	82.96%	82.48%
D	Total IDC and Overhead Cost	508.01	470.87	978.88
E	Proportionate IDC and Overhead (C*D)	416.75	390.62	807.40
F	Total P&M Cost including IDC and Overhead cost (B+E)	2605.92	2465.98	5071.92
E	Allowable cost of Capital Spares @4% of the Plant & Machinery Cost F=4% of F	**104.24**	**98.64**	**202.88**

116. Based on the above ceiling norms, the Commission has considered the following initial spares as under:

Table 14: Initial Spares considered in this Order (Rs in Crore)

Sr No.	Particulars	Claimed	Approved
1	Initial Spares as on CoD of Unit 3 (18.11.2018)	293.86	104.24
2	Initial Spares as on CoD of Unit 4 (28.03.2018)	0.00	98.64
3	Initial Spares as on Project CoD (28.03.2019)	293.86	202.88

117. Based on above discussion, the summary of capital cost considered as on CoD of respective Units are as under:

i. Cost of Land & Site Development and Civil Work is considered as filed and capitalized in Annual Audited Accounts.

ii. Cost of Plant and Equipment is considered as filed and capitalized in the Annual Audited Accounts.

iii. Cost of Project Management Consultancy is considered as filed and capitalized in Annual Audited Accounts.

iv. Cost of start-up fuel is considered same as filed by the petitioner after deducting the revenue earned from sale of infirm power based on details and documents filed by the petitioner.

v. The petitioner has claimed capital spares of Rs. 293.86 Crore under Unit No. 3. The amount of capital spares of Rs. 104.24 Crore has been considered under Unit No. 3 to the extent of capital cost admitted as on COD of Unit No. 3 in accordance to the Regulations, 2015.

vi. The balance amount of capital spares of Rs. 98.64 Crore is considered under Unit No. 4 as on its COD to the extent of capital cost of Unit No. 4 admitted in this order. Therefore, out of the capital spares of Rs. 293.86 Crore claimed by the petitioner, capital spares of Rs. 202.88 till project COD (i.e. 28.03.2019) is considered in this order.

vii. IDC and overhead expenses have been considered as on SCOD and 50% of the IDC and overhead expenses from SCOD to actual COD of the units have been considered and same has been discussed in preceding paras of this order.

Table 15: Capital Cost Considered as on CoD of Unit No 3 and No 4 (Rs in Crore)

Particular	Claimed			Approved		
	As on CoD of Unit 3	As on CoD of Unit 4	As on Project CoD	As on CoD of Unit 3	As on CoD of Unit 4	As on Project CoD
Units	**Unit No 3**	**Unit No 4**	**Unit No 3&4**	**Unit No 3**	**Unit No 4**	**Unit No 3&4**
Land & Site Development and Civil Supply and Work Contract	375.13	327.73	702.86	375.13	327.73	702.86
Plant & Equipment	2181.71	2067.33	4249.04	2181.71	2067.33	4249.04
Installation of FGD	0.00	0.00	0.00	0.00	0.00	0.00
Project Management Consultancy	7.46	8.02	15.48	7.46	8.02	15.48
Initial Spares	293.86	-	293.86	104.24	98.64	202.88
Overheads (Inc. Start up Fuel)	202.08	163.10	365.18	189.04	146.58	335.62
Interest during Construction and Finance Charges	412.70	409.64	822.34	318.97	324.29	643.26
Total	**3472.93**	**2975.82**	**6448.76**	**3176.55**	**2972.59**	**6149.14**

Additional Capitalization:

Petitioner Submission:

118. In the subject petition, the petitioner filed the additional capitalization after CoD of Unit 4 (Project CoD) till 31.03.2019 as given below:

Table 16: Additional Capitalization Claimed **(Rs. in Crore)**

Particular	Additional Capitalization Claimed
Units	**Unit No 3 & 4**
Land & Site Development and Civil Supply and Work Contract	55.48
Plant & Equipment	126.13
Project Management Consultancy	0.59
Initial Spares	5.60
Overheads (Including Start up Fuel)	30.52
Interest during Construction and Finance Charges	16.78
Total	**235.10**

119. Regarding additional capitalization of the project, Regulation 20 of the MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015, provides as under:

"20.1 The capital expenditure in respect of the new project or an existing project incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:

(i) Un-discharged liabilities recognized to be payable at a future date;
(ii) Works deferred for execution;
(iii) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 19;
(iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law; and
(v) Change in law or compliance of any existing law:

Provided that the details of works asset wise/work wise included in the original scope of work along with estimates of expenditure, liabilities recognized to be payable at a future date and the works deferred for execution shall be submitted along with the application for determination of tariff."

Commission's Analysis

120. The petitioner has filed additional capitalization of Rs. 235.10 Crore during 28.03.2019 (project COD) to 31.03.2019. The Commission has examined the additional capitalization in terms of the provision under Regulations, 2015.

121. Vide Commission's letter dated 12th June' 2020, the petitioner was asked to submit the details of additional capitalization in terms of Regulation 20.1 of MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015. The petitioner was also asked to file a comprehensive reply to the following issues with all relevant supporting documents in favor of its claim for additional capitalization:

- Whether the addition of asset is on account of the reasons (i) to (v) in clause 20.1 of the Regulations, 2015.
- Whether the assets capitalized during the year are under original scope of work. Supporting documents were sought in this regard.
- The petitioner was also required to file the approved vis-à-vis actual funding for aforesaid works.
- Whether the assets under additional capitalization have been capitalized in Annual Audited Accounts.
- The petitioner was asked to file the information like Name of Asset/works with specifications, Amount of Assets Addition, Detailed Reasons of Assets Addition, Provision of Regulations under which Add. Cap. is filed along with Ref of supporting documents enclosed with this reply duly filled up in the table in respect of assets addition.

122. By affidavit dated 15th October' 2020, the petitioner submitted the following:

It is to submit that the Unit No.3 & Unit No.4 of SSTPP PH-2, Khandwa were put to commercial Operation during FY 2018-19. Thus, the total assets capitalized during the year as per Audited Books of Accounts are considered in the instant petition are claimed Clause -15 & Clause 20.1 of MPERC Regulations. The Account head wise & unit wise details of total assets capitalized during the year atSSTPP PH-2 Khandwa and considered in instant petition are as under :-

A/c Code	***Details***	***Unit -3***	***Unit -4***	***Total***
10.222	*Residential Colony For Staff*	*67.06*	*69.03*	*136.09*
10.310	*Cooling Water System*	*50.34*	*46.66*	*97.00*
10.311	*Cooling Towers*	*75.81*	*71.49*	*147.30*
10.321	*Reservoir, Forbay and Intake*	*54.37*	*47.26*	*101.63*
10.401	*Pucca Roads*	*0.79*	*0.99*	*1.78*
10.426	*Ash Bund For Thermal Power Station*	*53.67*	*0.00*	*53.67*
10.501	*Boiler Plant & Equipments*	*1340.93*	*1337.92*	*2678.85*
10.503	*Turbine-Generator-Steam Power Generation*	*559.06*	*533.93*	*1092.99*
10.507	*Ash Handling Plant*	*103.28*	*78.44*	*181.72*
10.509	*Auxiliaries In Steam Power Plant*	*191.70*	*187.32*	*379.02*
10.515	*Coal Handling Plant & Handling Equipments*	*392.96*	*279.57*	*672.53*
10.516	*Oil Tanks, Oil Handing Plant & Equipments*	*19.44*	*13.73*	*33.17*

10.520	*Instrumentation And Controls*	*33.67*	*17.84*	*51.51*
10.522	*Misc. Pumps*	*3.68*	*2.29*	*5.97*
10.523	*220Kv/400Kv Switch Yard*	*60.51*	*54.60*	*115.11*
10.524	*Water Treatment Plant*	*61.64*	*54.23*	*115.87*
10.525	*Effluent Treatment Plant/Sewage Treatment Plant*	*2.59*	*3.80*	*6.40*
10.526	*Flue Gas Stack For Thermal Power Station*	*55.97*	*50.79*	*106.76*
10.542	*Other Transformers Of Power House*	*67.20*	*80.63*	*147.83*
10.561	*Switchgears Including Cable Connections*	*77.90*	*39.03*	*116.92*
10.578	*A C & Ventilation System*	*3.60*	*2.51*	*6.10*
10.585	*D G Set For Emergency Power*	*6.75*	*5.00*	*11.75*
10.586	*Compressed Air System*	*8.02*	*4.38*	*12.40*
10.587	*Other Electrical Equipments For Bop*	*43.62*	*21.86*	*65.48*
10.589	*Other Lab & Testing Equipments*	*3.29*	*0.00*	*3.29*
10.599	*Oth. Misc. Equip. Includ. Fire Protection System*	*25.96*	*17.29*	*43.25*
11.300	*Capital Spares At Generating Stations*	*293.87*	*5.60*	*299.47*
Total		*3657.67*	*3026.19*	*6683.86*

The above assets capitalization is covered under the project cost In-principal approved by GoMP vide letter No. F 5-1512017/13 Bhopal dated 14.03.2019.

The unit wise details of funding based on actual drawls of loan & equity are already submitted by MPPGCL at Table No. 7.3.1 & Table 6.2.1 of the instant petition. It is requested to kindly refer the same.

The work order copies are already submitted by MPPCGL before Hon'ble Commission vide Annexure 7A to 7I of Letter No 1092 dated 10.08.2018 in the matter of determination of provisional tariff Petition of SSTPP PH-2Khandwa. Being voluminous document, it is requested to kindly refer the same".

123. On perusal of the details and documents filed by the petitioner, the Commission observed the following:

a. The petitioner filed additional capitalization of Rs. 235.10 Crore from CoD of Unit No. 4 to 31st March' 2019 (towards Unit No.3&4).
b. The petitioner confirmed that the works covered under additional capitalization are within the original scope of work and capitalized in Annual Audited Books of Accounts and recorded in Asset-cum-Depreciation register.

c. The additional capital expenditure incurred is within the Cut-off date of the project.

d. The petitioner filed Interest During Construction (IDC) and Finance charges of Rs. 16.78 Crore post CoD of Project. The IDC and financing charges post CoD of units is not considered under additional capitalization in light of the Regulation 17.1 of the Regulations, 2015.

e. Further, the petitioner has also claimed overheads of Rs. 30.52 Crore post CoD of Project. The Commission has not considered the overheads expenses (IEDC) post CoD of units as part of capital cost in light of the provisions under Regulation 17.3 of the Regulations, 2015.

f. The petitioner has claimed initial spares of Rs. 5.60 Crore under additional capitalization. The Commission has worked out the ceiling limit as on 31st March' 2019 as under:

S. No.	Particulars	As on 31.03.2019 (For Unit No. 3&4)
A	Total Hard cost	5357.33
B	P&M Cost excluding IDC and Overhead cost	4391.25
C	% of P&M of Total Project cost (B/A)	81.97%
D	Total IDC and Overhead Cost	978.88
E	Proportionate IDC and Overhead (C*D)	802.36
F	Total P&M Cost including IDC and Overhead cost (B+E)	5193.60
G	Allowable cost of Capital Spares @4% of the Plant & Machinery Cost G=4% of F	**207.74**

g. Based on the above ceiling limit, the Commission has considered the initial spares of Rs. 4.87 Crore against petitioner claim of Rs. 5.60 Crore in this Order as under:

Sr. No.	Particulars	Claimed	Approved
1	Initial Spares as on Project CoD (28.03.2019)	293.86	202.88
2	Initial Spares for Unit 3&4 (from 28.03.19 to 31.03.2019)	5.60	4.87
3	Initial Spares as on 31.03.2019	299.46	207.74

124. In view of the above, the Commission has considered the additional capitalization in different heads to the extent of cost admitted in this order and proportionately capitalized in the books of accounts for FY 2018-19 in accordance with the Regulation 20.1 of the Regulations, 2015. The details of additional capitalization considered in this order are as given below:

Table 17: Additional Capitalization considered in this Order (Rs in Crore)

Particular	Unit 3 & 4 28.03.2019 to 31.03.2019
Land & Site Development	55.48
Plant & Equipment	126.13
Project Management Consultancy	0.59
Initial Spares	4.87
Total	**187.07**

125. In view of the above, the summary of the capital cost and additional capitalization considered by the Commission in this order is as given below:

Table 18: Capital Cost and Additional Capitalization (Rs in Crore)

Particular	Unit No.3	Unit No.4	Unit 3&4	Unit 3&4
	As on CoD of Unit 3	As on CoD of Unit 4	28.03.2019 to 31.03.2019	As on 31.03.2019
Gross Fixed Assets	3176.55	2972.59	187.07	6336.21

Debt : Equity Ratio and Funding of project cost:

Petitioner Submission:

126. The petitioner filed the actual project funding as on CoD of Unit No. 3 (18th November' 2018), as on CoD of Unit No. 4 or the Station CoD (28th March' 2019), as on 31st March' 2019, as given blow:

Table 19: Debt and Equity* (Rs. in Crore)

Particulars	Unit No.	Debt	Equity	Total
As on COD of Unit No. 3	Unit No.3	2891.70	520.60	3412.31
	Unit No.4	2332.81	419.98	2752.79
As on COD of Unit No. 4	Unit No.3	3110.34	576.18	3686.52
	Unit No.4	2591.20	465.28	3056.49
As on 31st March' 2019	Unit No.3	3130.73	597.61	3728.34
	Unit No.4	2607.86	482.79	3090.64
As on 31st March' 2019	Unit No 3&4	5738.58	1080.40	6818.98

As per TPS Form 14

127. The actual ratio of loan and equity drawls as on the CoD of Unit No. 3 is 84.74 – 15.26 and as on CoD of Unit No. 4 is 84.78 –15.22.

Provision under Regulations:

128. Regarding Debt – Equity ratio and 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.

25.5 Any expenditure incurred or projected to be incurred on or after 1.4.2016 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause 25.1 of this Regulation."

Commission's Analysis:

129. The petitioner submitted that the approved funding of the project is being done through PFC Loan and GoMP Equity in 80:20 ratio. The petitioner further submitted that the actual ratio of loan and equity drawls as on the CoD of Unit No. 3 is (84.74 : 15.26) and as on CoD of Unit No. 4 is (84.78 : 15.22). The petitioner has further submitted that the actual debt : equity ratio for additional capitalization is considered is (84.16 : 15.84) as on 31st March' 2019.

130. The Commission has considered the same debt : equity ratio as considered by the petitioner based on the actual loan drawl and equity infused as on COD of the Unit No. 3 and 4 of the project. The Commission has also considered the same debt : equity ratio for additional capitalization as considered by the petitioner based on the actual loan drawl and equity infusion till 31.03.2019.

131. Based the above, the Commission has considered the following debt and equity amount to fund the capital cost as on CoD of each Unit and funding the additional capitalization considered in this Order.

Table 20: Debt and Equity Considered on Different Dates **(Rs. in Crore)**

Particulars	Unit No.	Equity	Debt	Total
As on COD of Unit No. 3	Unit No.3	484.64	2691.91	3176.55
As on COD of Unit No. 4	Unit No.4	452.51	2520.08	2972.59
Add. Cap. (From 28.03.2019 to 31.03.2019)	Unit No. 3&4	29.64	157.43	187.07

Annual Capacity (fixed) Charges:

132. The tariff for supply of electricity from a thermal generating station shall comprise two parts, namely, capacity charge (for recovery of annual fixed cost consisting of the components as specified in Regulation 27 of these Regulations) and energy charge (for recovery of primary and secondary fuel cost). The Annual Capacity (fixed) Charges consist of :

a) Return on Equity;
b) Interest on Loan Capital;;
c) Depreciation;
d) Operation and Maintenance Expenses;
e) Interest Charges on Working Capital

Return on Equity:

Petitioner's Submission

133. 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 in accordance with Proviso 30 of MPERC Regulations, 2015 {RG-26 (III) of 2015}. The amount of annual RoE claimed by the petitioner is as given below:

Table 21: Return on Equity Claimed

Particular	***Units***	***FY 2018-19***		
		18.11.2018 to 31.03.2019	***28.03.2019 to 31.03.2019***	***Total***
		Unit No. 3	***Unit No. 4***	
Opening Equity Normative as on COD	*Rs. Cr.*	*520.60*	*465.28*	*985.88*
Additions in Equity	*Rs. Cr.*	*77.01*	*17.50*	*94.51*
Closing Equity	*Rs. Cr.*	*597.61*	*482.78*	*1080.40*
Average Equity during the year	*Rs. Cr.*	*559.11*	*474.03*	*1033.14*
Rate of Return on Equity	*%*	*16.00%*	*16.00%*	
Annual Return on Equity	***Rs. Cr.***	***89.46***	***75.85***	*165.31*
No of Days of Operation		*134*	*4*	
Return of equity	*Rs. Cr.*	*32.84*	*0.83*	*33.67*

Provision in Regulations:

134. Regarding the Return on Equity, Regulation 30 of MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015, provides as under:

***30*. *Return on Equity*:**

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

30.2 Return on equity shall be computed at the base rate of 15.50% 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):

As and when any of the above requirements are found lacking in a generating 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

Commission's Analysis

135. While determining the return on equity, the equity amount as on CoD of Unit No. 3, as on project COD and as on 31.03.2019 is considered based on the actual capital expenditure capitalized and 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 is considered as normative equity for return on equity.

136. For the purpose of computation of Return on Equity, the Commission has considered following equity amount towards the capital cost as on CoD of each Unit and additional capitalization as considered in this order.

Table 22: Equity considered as on different dates **(Rs in Crore)**

Particular	Unit	Equity Amount
As on COD of Unit No. 3 (18.11.2018)	Unit No.3	484.64
Equity addition during 18.11.2018 to 28.03.2019	Unit No.3	0.00
As on COD of Unit No. 4 (28.03.2019)	Unit No.4	452.51
As on COD of Unit No. 4 (28.03.2019)	Unit No.3&4	937.15
Equity addition from 28.03.2019 to 31.03.2019	Unit No. 3&4	29.64
Equity amount as on (31.03.2019)	Unit No. 3&4	966.79

137. The petitioner has claimed additional equity (15.5% + 0.5% =16%) with the contention that 'on timely completion of project'. For additional return on equity, proviso (a) of Regulation 30.2 of the Regulations 2015 provides as under:

> *"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."*

Clause 1 of the Appendix-I regarding timeline for completion of projects 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."*

Further, the timeline specified in Appendix-I for 660 MW unit of extension projects is **50 months** and subsequent units at an interval of 6 months for each unit.

138. Vide letter dated 12th June' 2020, the petitioner was asked to justify its claim of additional Return on Equity in light of the provisions of the Regulations and investment approval dated 14.12.2011 of the project.

139. By affidavit dated 15th October' 2020, 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 Zero date of Contract has clearly been specified in the approved Précis Note put before "Business Committee of MPPGCL" held on 31.08.2013. The same is reproduced below:-

"6/IX. Zero date shall be the date of issue of Letter of Acceptance. However, payment of advance is to be made within 60 days of Letter of Acceptance, Bank Guarantee, Contract signing etc, if payment is delayed due to Owner's fault beyond 60 days of letter of Acceptance, the Zero date will be extended suitably."

Accordingly, 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 .

However, the Environmental Clearance by Ministry of Environment, Forests and Climate Change, GoI could only be granted in 27.08.2014 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.

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 (SCoD) 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.

As per the definition of lawinsider.com the commencement of implementation of the project means the date on physical construction, installation of equipment or materials or other works at an offset project site began; or the date on which a management activity or protocol is first utilized for an offset project. Accordingly, the Zero Date as specified above i.e. 31.12.2014 is the date on which the advance was released to the EPC contractor for commencement of implementation of the project.

Further regarding the requirement of specific mention about estimated project cost including funding of the project and timeline for the implementation of the project the same has clearly been mentioned in the approval accorded by the Board of Directors of MPPGCL in its 90th meeting held on 27.09.2017 while approving the Revised Project Cost Estimate of Rs. 7738 Crores as a part of Revised Investment Approval.

As per the Appendix-I "Time line for completion of Project" of Regulation, 2015, 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 Unit size 660/800 MW is 50 months for Extension Projects and Subsequent Units at an interval of 6 months each.

Unit No. 3 has started Commercial operation in 47 months and Unit No. 4 has started Commercial operation in 51 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. Hence the applicable Return on Equity is 16.0%.

140. The Commission has observed that the petitioner's project shall only be eligible for additional equity if the Units achieved CoD within the time schedule provided under appendix I of Tariff Regulations, 2015. The schedule time for work completion as specified in Appendix-I for 660 MW unit of extension projects is 50 months from the date of investment approval and subsequent units at an interval of 6 months for each unit. Further, Regulations provides that the completion time schedule shall be reckoned from the date of investment approval by the Board of the generating company.

141. With regard to investment approval date, the petitioner stated 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. The petitioner has also stated that the estimate of Rs. 6500 Crore was approved by the BoD of MPPGCL on 14th December' 2011 in its 57th meeting. However, in the instant petition, the petitioner has considered the date of initial advance to the L&T i.e. 31st December' 2014 as Zero date. Accordingly, petitioner has worked out scheduled work completion time of 28th February 2019 for Unit No. 3 and 30th August' 2019 for Unit No. 4. Further, the petitioner has submitted that the actual CoD of Unit No.

3 is 18th November' 2018 and Unit No. 4 is 28th March' 2019 within the scheduled time line provided under Annexure-I of the Regulations, 2015 and thus claimed the additional RoE.

142. In order In order to work out the schedule completion time as per Appendix I of the Regulations, 2015, the Commission has considered the investment approval date i.e. 14th December' 2011. Accordingly, the time period of 50 months is for completion of Unit No. 3 and 56 Months for subsequent Unit No. 4 which means the Unit No.3 should have achieved COD in February' 2016 and Unit No.4 should have achieved COD in August 2016 for claiming additional RoE.

143. In view of the above completion time as per appendix I of Tariff Regulations, the Commission has observed that the Unit No. 3 and 4 should have achieved CoD in the month of February' 2016 and August 2016whereas, the Unit No. 3 and unit No. 4 have actually achieved CoD in the month of November' 2018 and March 2019 respectively. Therefore, the petitioner's project is not eligible for additional RoE in terms of provisions under Regulations.

144. The Commission has determined the Return on Equity at the base rate of 15.50% without grossing up it by tax rate as MPPGCL has not paid any tax as per the Annual Audited Accounts.

145. Accordingly, the annual Return on Equity by applying the base rate of return is worked out worked out by the Commission as given below:

Table 23: Annual Return on Equity

Particular	Units	FY 2018-19	
		18.11.2018 to 27.03.2019	28.03.2019 to 31.03.2019
		Unit No. 3	Unit No. 3&4
Opening Equity	Rs. in Cr.	484.64	937.15
Additions in Equity	Rs. in Cr.	0.00	29.64
Closing Equity	Rs. in Cr.	484.64	966.79
Average Equity during the year	Rs. in Cr.	484.64	951.97
Rate of Return on Equity	%	15.50%	15.50%
Annual Return on Equity	**Rs. in Cr.**	**75.12**	**147.55**

Interest on Loan Capital:

Petitioner's Submission

146. The petitioner filed Interest on Loan for SSTPP Stage II, Unit No. 3&4 for FY 2018-19, considering the repayment for the period equal to depreciation in accordance to the Regulations, 2015, and applying weighted average rate of interest for the period.

147. The annual Interest on Loan claimed by the petitioner is as given below:-:

Table 24: Interest on Loan claimed

Particular	***Units***	***FY 2018-19***		***Total***
		18.11.2018 to 31.03.2019	***28.03.2019 to 31.03.2019***	
		Unit No. 3	***Unit No. 4***	
Opening Loan	*Rs. in Cr.*	*2464.65*	*2166.49*	*4631.14*
Additions in Loan	*Rs. in Cr.*	*239.02*	*16.65*	*255.67*
Repayment during the Year	*Rs. in Cr.*	*68.60*	*1.72*	*70.32*
Closing Loan	*Rs. in Cr.*	*2635.07*	*2181.41*	*4816.49*
Average Loan during the year	*Rs. in Cr.*	*2549.86*	*2173.95*	*4723.81*
Weighted average Rate of Interest	*%*	*11.03%*	*11.25%*	
Annual Interest on Loan	***Rs. in Cr.***	***281.31***	***244.57***	*525.88*
No. of Days of Operation		*134*	*4*	
Interest on Loan	*Rs. in Cr.*	*103.28*	*2.68*	*105.96*

Provision in Regulations:

148. Regarding the Interest on Loan, Regulation 32 of MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations 2015, provides as under:

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

32.4 Notwithstanding any moratorium period availed by the generating company, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year.

32.5 The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing 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 Madhya Pradesh Electricity Regulatory Commission (Conduct of Business) Regulations, 2004, as amended from time to time.

Provided that the beneficiaries shall not withhold any payment on account of the interest claimed by the generating company during the pendency of any dispute arising out of re-financing of loan"

Commission's Analysis

149. While determining the interest on loan, the loan amount as on CoD of Unit No. 3, as on project COD and as on 31.03.2019 is considered based on the actual capital expenditure capitalized and considered in this order. The loan amount is considered is in accordance to the Regulations and worked out in preceding paragraph of this order.

150. In Debt and Equity, the Commission has considered the funding of project in accordance with the ratio of Debt and Equity allocated. For the purpose of computation of interest on loan, the Commission has considered following loan (Debt) amount to fund the capital cost as on CoD of each Unit and also loan amount incurred additional capitalization as considered in this Order.

Table 25: Loan amount Considered on Different Dates (Rs in Crore)

Particular	Unit	Debt (Rs. Cr.)
Loan as on COD of Unit No. 3 (18.11.2018)	Unit No.3	2691.91
Loan addition from 18.11.2018 to 28.03.2019	Unit No.3	0.00
Loan as on COD of Unit No. 4 (28.03.2019)	Unit No. 4	2520.08
Loan addition during 28.03.2019 to 31.03.2019	Unit No. 3&4	157.43

151. In para 7.4 of the petition, the petitioner has worked out the weighted average rate of interest for Unit No. 3 as 11.03% and for Unit No. 4 as 11.25% based on the actual loan portfolio.

152. On perusal of the of the subject petition, it was observed the Commission that the weighted average rate of interest filed in the subject petition is higher than the rate of interest filed in provisional tariff petition (for the same period). Vide letter dated 12th June' 2020, the petitioner was asked to file the reasons for higher rate of interest be explained. The petitioner was also asked to file the detailed calculations for working out the weighted average rate of interest after CoD along with supporting documents.

153. By affidavit dated 15th October' 2020, the petitioner submitted the following:

It is to humbly submit that the provisional Tariff Petition was filed on 04.07.2018, wherein the Rate of Interest was considered as 10.50%. However, on actual, the Rate of Interest as charged by M/s PFC from Nov-2018 upto Feb-2019 was 11.00%. The Interest rate has been increased by Ms/ PFC to 11.25% in Mar-2019. Accordingly, the Weighted Average Rate of Interest for Unit No. 3 from the CoD upto 31.03.2019 (134 days of operation) was worked out as 11.03% and for Unit No.4 from the CoD upto 31.03.2019 (4 days of operation) was worked out as 11.25%. The same has been detailed on table 7.4.1 & 7.4.2 at page 70 of the instant petition. However as desired by the Hon'ble Commission, the calculation of Weighted Rate of Interest on Day wise-Month wise drawals has been annexed as Annexure-3.

154. The petitioner submitted that the Interest rate has been increased by PFC to 11.25% in March' 2019 therefore, the Weighted Average Rate of Interest for Unit No. 3 from the CoD upto 31.03.2019 (134 days of operation) was worked out as 11.03% and for Unit No.4 from the CoD upto 31.03.2019 (4 days of operation) was worked out as 11.25%. Considering the above, the Commission has considered the weighted average rate of interest as filed by the petitioner.

155. In accordance with the provisions of the Regulations, 2015, the Commission has considered the repayment equivalent to the depreciation allowed for the corresponding period. Accordingly, the interest on loan is determined as given below:

Table 26: Interest on Loan Considered

Particular	Units	FY 2018-19	
		18.11.2018 to 27.03.2019	28.03.2019 to 31.03.2019
		Unit No. 3	Unit No.3 & 4
Opening Loan	Rs. in Cr.	2691.91	5152.71
Additions in Loan	Rs. in Cr.	0.00	157.43
Repayment during the Year	Rs. in Cr.	59.28	3.58
Closing Loan	Rs. in Cr.	2632.63	5306.55
Average Loan during the year	Rs. in Cr.	2662.27	5229.63
Weighted average Rate of Interest	%	11.03%	11.25%
Annual Interest on Loan	**Rs. in Cr.**	**293.65**	**588.33**

Depreciation:

Petitioner's Submission

156. The depreciation amount claimed by the petitioner for SSTPP Stage II, Unit No.3&4 for FY 2018-19 is as given below:

Table 27: Depreciation claimed

Particular	Units	FY 2018-19		
		18.11.2018 to 31.03.2019	28.03.2019 to 31.03.2019	Total
		Unit No. 3	Unit No. 4	
Opening Gross Block	Rs. in Cr.	3472.93	2975.82	6448.75
Gross Block Addition	Rs. in Cr.	184.73	50.37	235.10
Deletion	Rs. in Cr.	0.00	0.00	0.00
Closing Gross Block	Rs. in Cr.	3657.66	3026.19	6683.85
Average Gross Block	Rs. in Cr.	3565.30	3001.01	6566.30
Weighted Average Rate of Depreciation	%	5.24%	5.24%	5.24%
Annual Depreciation Amount	**Rs. in Cr.**	**186.86**	**157.28**	344.14
No of Days of Operation		134	4	
Depreciation Amount	Rs. in Cr.	68.60	1.72	70.32

Provision in Regulations

157. Regarding the Depreciation, Regulation 33 of the MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015 provides as under:

"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.

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 station, the salvage value shall be as provided in the agreement signed by the developers with the State Government for development of the Plant:

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

Provided also that any depreciation disallowed on account of lower availability of the generating station or generating unit shall not be allowed to be recovered at a later stage during the useful life and the extended life.

Provided that the 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 the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.

33.5 Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-II to these Regulations for the assets of the generating station:

Provided that the remaining depreciable value as on 31st March of the year closing after a period of 12 years from the effective date of commercial operation of the station shall be spread over the balance useful life of the assets.

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

33.7 The rate of Depreciation shall be continued to be charged at the rate specified in Appendix-II till cumulative depreciation reaches 70%. Thereafter the remaining depreciable value shall be spread over the remaining life of the asset such that the maximum depreciation does not exceed 90%.

33.8 Depreciation shall be chargeable from the first Year of commercial operation. In case of commercial operation of the asset for part of the Year, depreciation shall be charged on pro rata basis.

33.9 The generating company shall submit the details of proposed capital expenditure during the fag end of the project (five years before the useful life) along with justification and proposed life extension. The Commission based on prudence check of such submissions shall approve the depreciation on capital expenditure during the fag end of the project.

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

158. For the purpose of depreciation, the Commission has considered the capital cost as on CoD of each unit and additional capitalization as on 31.03.2019 are as given below:

Table 28: Capital Cost as on CoD and Additional Capitalization (Rs in Crore)

Particular	Unit	Total
Capital cost as on COD of Unit No. 3 (18.11.2018)	Unit No.3	3176.55
Assets Additions from 18.11.2018 to 28.03.2019	Unit No.3	0.00
Capital cost as on COD of Unit No. 4 (28.03.2019)	Unit No.4	2972.59
Capital cost as on COD of Unit No. 4 (28.03.2019)	Unit No.3&4	6149.14
Assets Additions from 28.03.2019 to 31.03.2019	Unit No. 3&4	187.07
Total Capital Cost as on 31st March' 2019	Unit No. 3&4	6336.21

159. With regard to weighted average of depreciation, the petitioner submitted the effective rate of depreciation on annual basis as per audited books of accounts is 5.24% and same has been detailed in Form TPS-11 of the petition.

160. It was observed by the Commission that the petitioner had not filed Asset-cum-Depreciation register for SSTPP PH-II. Therefore, vide letter dated 12th June' 2019, the petitioner was asked to file the Asset-cum-Depreciation register duly reconciled with Annual Audited Accounts for FY 2018-19.

161. By affidavit dated 15th October' 2019, the petitioner has filed the Asset-Cum-Depreciation Register of SSTPP Stage-2 Khandwa from CoD upto 31.03.2019. The petitioner has also confirmed that there is no difference between the figures of Asset–Cum-Depreciation register of SSTPP Stage-2 and figures as per Annual Audited Statement of Account of MPPGCL for FY 2018-19.

162. Considering the above, the weighted average rate of depreciation has been considered the same as filed by the petitioner and worked out in Asset-cum-depreciation registers in this order.

163. Based on the above, the Commission has determined the following annual Depreciation in accordance with the Regulations, 2015:

Table 29: Annual Depreciation

Particular	Units	FY 2018-19	
		18.11.2018 to 27.03.2019	28.03.2019 to 31.03.2019
		Unit No. 3	Unit No. 3&4
Opening Gross Block	Rs. in Cr.	3176.55	6149.14
Assets Addition	Rs. in Cr.	0.00	187.07

Closing Gross Block	Rs. in Cr.	3176.55	6336.21
Average Gross Block	Rs. in Cr.	3176.55	6242.67
Weighted Average Rate of Depreciation	%	5.24%	5.24%
Annual Depreciation Amount	**Rs. in Cr.**	**166.45**	**327.12**
Dep. Corresponding to No. of days	Rs. In Cr.	59.28	3.58
Cumulative Depreciation	**Rs. in Cr.**	**59.28**	**62.86**

Operation and Maintenance Expenses:

Petitioner's Submission

164. The petitioner claimed the following Annual Operation and Maintenance expenses for SSTPP Stage II, Unit No.3 & 4 for FY 2018-19 are as given below:

Table 30: Operation & Maintenance Expenses claimed (Rs. in Crore)

			FY 2018-19	
Particular	**Capacity**	**Norms (Rs in Lakh Per MW)**	**18.11.2018 to 31.03.2019**	**28.03.2019 to 31.03.2019**
Units			**Unit No 3**	**Unit No 4**
O&M	660.00	18.38	121.31	121.31
No. Of Days			134	4
O&M			44.53	1.33

Provision in Regulations: -

165. Regarding the Operation and Maintenance expenses of thermal power stations, Regulation 35.8 of MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015, provides the *O&M Norms for the Thermal Generating Units commissioned on or after 01.04.2012*:

Table 31: Normative Operation and Maintenance Expenses

Units (MW)	**FY 2018-19**
45	36.24
200/210/250	30.51
300/330/350	25.47
500	20.43
600 and above	18.38

Commission's Analysis

166. Considering the above mentioned rates of O&M expenses/ norms prescribed in the Regulations, the O&M expenses for SSTPP Stage II, Units No. 3&4 for respective years are worked out as given below:

Table 32: O& M Expenses Considered

Particular	Units	FY 2018-19	
		Unit No 3	Unit No 3&4
Generating Unit Capacity	MW	660	1320
Per MW O&M Expenses Norms	Rs in Lakh/MW	18.38	18.38
Annual O&M expenses	**Rs in Crore**	**121.31**	**242.62**

Interest Charges on Working Capital:

Petitioner's Submission

167. The petitioner claimed the Interest on Working Capital for SSTPP Stage II, Unit No.3&4 for FY 2018-19 as given below:-

Table 33: Interest on Working Capital claimed

Particular	Units	FY 2018-19	FY 2018-19
		18.11.2018 to 31.03.2019	28.03.2019 to 31.03.2019
		Unit No. 3	Unit No. 4
Cost of Coal	Rs. Cr.	202.03	201.47
Cost of Main Secondary Fuel Oil	Rs. Cr.	1.67	1.68
O&M Expenses	Rs. Cr.	10.11	10.11
Maintenance Spares	Rs. Cr.	24.26	24.26.
Receivables	Rs. Cr.	331.26	317.07
Total Working Capital	Rs. Cr.	569.33	554.59
Rate of Interest	%	12.20%	12.20%
Interest on working Capital	**Rs. Cr.**	**69.46**	**67.66**

Provision in Regulations:

168. Regarding the Interest on Working Capital, Regulation 34 of the MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015 regarding working capital for coal based generating stations provides that:

34.1 The working capital shall cover:

(1) Coal-based thermal generating stations

(a) Cost of coal towards stock, if applicable, for 15 days for pit-head generating stations and 30 days for non-pit-head generating stations for generation corresponding to the normative annual plant availability factor or the maximum coal stock storage capacity whichever is lower;

(b) Cost of coal for 30 days for generation corresponding to the normative annual plant availability factor;

(c) Cost of secondary fuel oil for two months for generation corresponding to the normative annual plant availability factor, and in case of use of more than one secondary fuel oil, cost of fuel oil stock for the main secondary fuel oil;

(d) Maintenance spares @ 20% of operation and 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 1.4.2016 or as on 1st April of the year during the tariff period 2016-17 to 2018-19 in which the generating station or a unit thereof , is declared under commercial operation, whichever is later.

34.4 Interest on working capital shall be payable on normative basis notwithstanding that the generating company has not taken loan for working capital from any outside agency."

Commission's Analysis

(a) Cost of Coal for Working Capital

169. The petitioner's power station is a non-pit head station. Therefore, the cost of two months' coal stock for working capital purpose is worked out based on the norms prescribed under the Regulations, 2015. The weighted average rate of coal and GCV of coal for FY 2018-19 considered as per the details and documents filed by the petitioner. Accordingly, the 60 days cost of coal for working capital is worked out as under:

Table 34: Computation of 60 days cost of coal for working capital

Particular	**Units**	**FY 2018-19**	
		18.11.2018 to 27.03.2019	**28.03.2019 to 31.03.2019**
		Unit No. 3	**Unit No. 3&4**
Installed Capacity of the Unit	MW	660.00	1320.00
Gross Station Heat Rate	kCal/kWh	2175.28	2175.28
Gross Generation	MUs	4914.36	9828.72
Gross Calorific Value of Coal	kCal/Kg	3799.00	3637.80
Sp. Coal Consumption	kg/kWh	0.58	0.60
Annual Coal Consumption	MT	2830102	5911015.81
60 days Coal Stock	MT	465222	971673.83
Rate of Coal	Rs./MT	4297	4271
Coal Cost (60 days stock)	**Rs Cr.**	**199.90**	**415.05**

(b) Cost of Secondary fuel oil for Working Capital

170. Regarding the cost of secondary fuel oil for working capital, provision of the aforesaid Regulation 34.1 (c) provides that "in case of use of more than one secondary fuel oil, cost of fuel oil stock shall be provided for the main secondary fuel oil"..

171. Accordingly, the two month cost of fuel oil component (FO) for working capital is worked out based on the rate of oil and GCV of oil considered in this order as given below:

Table 35: Cost of Main Secondary Fuel Oil for 2 Months availability

Particular	Units	Unit No 3	Unit No 3&4
Installed Capacity of the Unit	MW	660.00	1320.00
NAPAF	%	85.00	85.00
Gross Generation	MUs	4914.36	9828.72
Normative Specific Oil Consumption	ml/kWh	0.50	0.50
Quantity of Sec Fuel Oil required	KL	2457.18	4914.36
Two months' stock of main fuel oil (HFO)	KL	409.53	819.06
Weighted Avg. Rate of main Fuel Oil (HFO)	Rs./KL	41319	41893
Oil Cost (Two Months Stock)	**Rs. Crores**	**1.69**	**3.43**

(c) O&M Expenses for Working Capital

172. O&M Expenses of one month for working capital purpose is worked out as given below:

Table 36: O&M expenses for one Month for Working Capital (Rs in Crore)

Particular	FY 2018-19	
	Unit No 3	**Unit No 3&4**
Annual O&M expenses	121.31	242.62
O&M Expenses for One Month	**10.11**	**20.22**

(d) Cost of Maintenance Spares for Working Capital

173. Maintenance spares for working capital are worked out as per norms i.e. 20% of Annual O&M Expenses prescribed under the Regulations as follows:

Table 37: Cost of Maintenance Spares for Working Capital (Rs in Crore)

Particular	FY 2018-19	
	Unit No 3	**Unit No 3&4**
Annual O&M expenses	121.31	242.62
Maintenance Spares: 20% of Annual O&M Expenses	**24.26**	**48.52**

(e) Receivables for Working Capital

Table 38: Receivables for Working Capital **(Rs in Crore)**

Particulars	FY 2018-19	
	18.11.2018 to 31.03.2019	28.03.2019 to 31.03.2019
	Unit No. 3	Unit No. 3&4
Variable Charges- two months	204.48	424.43
Fixed Charges- two months	120.83	241.04
Receivables- two months	**325.31**	**665.47**

174. 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 as under:

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

175. The State Bank of India Base rate applicable/ prevailing as on 01.04.2018 as 8.70% + 3.50% = 12.20%. Accordingly, the rate of interest for FY 2018-19 is considered as 12.20%

176. Based on the above, the interest on working capital for SSTPP Stage II, Unit No. 3&4 for FY 2018-19 is determined as given below:-

Table 39: Interest on Working Capital Considered

Sr. No.	Particular	Units	FY 2018-19	
			18.11.2018 to 27.03.2019	28.03.2019 to 31.03.2019
			Unit No. 3	Unit No. 3&4
1	Cost of Coal for 60 days	Rs. in Cr.	199.90	415.05
2	Cost of Main Fuel Oil for two months	Rs. in Cr.	1.69	3.43
3	O&M Expenses one month	Rs. in Cr.	10.11	20.22
4	Maintenance Spares 20% of O&M	Rs. in Cr.	24.26	48.52
5	Receivables for two months	Rs. in Cr.	325.31	665.47
6	Total Working Capital	Rs. in Cr.	561.28	1152.70
7	Rate of Interest	%	12.20	12.20
8	**Interest on working Capital**	**Rs. in Cr.**	**68.48**	**140.63**

Non-Tariff Income:

Petitioner's Submission

177. The petitioner claimed the Non-Tariff income pertaining to SSTPP Stage II, Unit No. 3&4 for FY 2018-19 as given below:

Table 40: Non Tariff Income filed **(Rs in Crore)**

Particular	FY 2018-19	
	18.11.2018 to 31.03.2019	28.03.2019 to 31.03.2019
	Unit No. 3	Unit No. 4
Non Tariff Income	0.04	0.001

Provision in Regulations:

178. Regarding the non-tariff income, Regulation 53 of MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015 provides as under:

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

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

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

Commission's Analysis

179. It is observed that income from other sources reflected in Audited Annual Accounts is for MPPGCL as whole. Therefore, vide Commission's letter dated 12th June' 2020 , the petitioner was asked to file the power station-wise detailed break-up of the various components of income from other sources during FY 2018-19 duly reconciled with the Annual Audited Accounts.

180. By affidavit dated 15th October' 2020, the petitioner submitted the power station-wise detailed break-up of the various components of income from other sources.

Based on the above information filed by the petitioner, the non tariff income for FY 2018-19 is considered as given below:

Table 41: Non Tariff Income Considered (Rs. in Crore)

Particular	FY 2018-19	
	18.11.2018 to 31.03.2019	28.03.2019 to 31.03.2019
	Unit No. 3	Unit No. 4
Non Tariff Income	0.04	0.001

Recovery of Annual Capacity (Fixed) Charges:

181. Normative Annual Plant Availability Factor for recovery of Annual Capacity (fixed) Charges is 85% as per MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations 2015. However, in the subject petition, the petitioner has claimed Normative Plant Availability Factor of 83% for recovery of Annual Fixed Charges considering the reduction in NAPAF due to shortage of Coal.

182. The proviso 39.3 of MPERC Regulations 2015 provides that in case of shortage of coal is experienced at new power stations commissioned after 01.04.2012, the NAPAF for recovery of fixed charges shall be 83%. In this regard, the petitioner submitted that MPPGCL is facing sustained coal shortage at this Thermal Power Station also.

183. Vide letter dated 12th June' 2020, the petitioner was asked to demonstrate the reduction of NAPAF due to coal shortage. The petitioner was also asked to justify that the coal shortage was not attributable to the generating company. The

petitioner was further asked to file the reasons for coal shortage and the efforts made by the petitioner to address the coal shortage be also informed.

184. By affidavit dated 15th October' 2020, the petitioner submitted the following:

"In the above matter MPPGCL wishes to submit that there has been coal shortage at SSTPP Khandwa also. In this regard various regular correspondences made by MPPGCL and Energy Department with Coal India and Ministry of Coal are annexed as Annexure-17A for kind reference of the Commission.

The reduction in PAF due to coal Shortage at SSTPP Stage-II is 5.71%. The working in this regard is given in the table below:

Particular	***Value***
Partial Loss due to Coal Shortage in MU	*124.86*
Forced Outage due to Coal Shortage in MU	*0.00*
Total Loss of Generation due to Coal Shortage in MU	***124.86***
Gross Generation on 100% availability	***2185.92***
Loss in PAF due to Coal Shortage in %	***5.71%***
Normative PAF in %	***85.00%***
Normative PAF in % (due to Coal Shortage)	***83.00%***
Actual PAF in %	***85.29%***

The month wise statement indicating quantity of Coal received against normative coal consumption indicating sustained shortage of coal, Loss of Generation in MU due to shortage of coal are annexed as Annexure-17B."

185. In view of the above, the Commission has observed that the actual PAF achieved by the units of SSTPP PH-II is 85.29% is more than the Normative PAF of 85%. Therefore, the Commission has considered the NAPAF for recovery of fixed charges as 85% in accordance to the provisions under the Regulations.

186. Considering the above, the following Annual Capacity (fixed) Charges for SSTPP Stage II, Unit No. 3 & 4 for FY 2018-19 are determined in this order:

Table 42: Annual Capacity Charges **(Rs. in Crore)**

Sr. No.	Particulars	FY 2018-19	
		18.11.2018 to 27.03.2019	28.03.2019 to 31.03.2019
		Unit No. 3	Unit No. 3&4
1	Return on Equity	75.12	147.56
2	Interest & Finance charges on loan	293.65	588.33
3	Depreciation	166.45	327.12
4	Operation & Maintenance expenses	121.31	242.62
5	Interest on working capital	68.48	140.63
6	**Annual Capacity (fixed) charges (Rs in Crore)**	**725.00**	**1446.25**
7	No. of Operational Days Applicable for the Period	130	4
8	Less: Non Tariff Income	0.04	0.001
9	**Net Capacity (fixed) Charges for applicable days**	**258.21**	**15.85**

187. The aforesaid Annual Capacity Charges have been computed based on norms specified under the Regulations, 2015. The recovery of Annual Capacity (Fixed) charges shall be made by the petitioner in accordance with Regulations 36.2 to 36.4 of the Regulations, 2015.

Energy (variable) Charges:

Petitioner's Submission:

188. With regard to energy charges, the petitioner submitted that the following:

i. For the control period FY 2016-17 to FY 2018-19, the energy (variable) charges cover fuel costs consisting following cost:-

- Landed Fuel Cost of primary Fuel (Coal); and
- Cost of Secondary Fuel Oil Consumption

and shall be payable for the total energy scheduled to be supplied to the beneficiary during the calendar month on ex-power plant basis, at the variable charge rates approved by the Commission.

ii. The landed Fuel cost of primary fuel and its GCV for tariff determination is based on actual weighted average cost of primary fuel for the months of Nov'18, Dec'18 Jan'19, Feb'19 and Mar'19. The details are elaborated in Form TPS-15 attached with the petition.

iii. The Secondary Fuel oil comprises of Furnace Oil (FO) and Light Diesel Oil (LDO). The landed cost of Secondary Fuel i.e Secondary Fuel Oil for tariff determination is based on actual for the months of Nov'18, Dec'18 Jan'19, Feb'19 and Mar'19 are detailed in para 11.4 of the petition

Provisions in Regulations:-

189. For determining the Energy Charges (variable charges) of thermal power stations, Regulation 28 of MPERC (Terms and Conditions for Determination of Generation Tariff) Regulation, 2015 provides that:

28. Energy Charges:

Energy charges shall be derived on the basis of the Landed Fuel Cost (LFC) of a generating station (excluding hydro) and shall consist of the following cost:
(a) Landed Fuel Cost of primary fuel; and
(b) Cost of secondary fuel oil consumption

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

190. Regulation 36.5, 36.6 and 36.7 of MPERC (Terms and Conditions for Determination of Generation Tariff) Regulation, 2015, further provides that:

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 =(a) 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 a three months."

Commission's Analysis:

191. The MPERC Tariff Regulations, 2015 provides that the energy (variable) charges shall cover both primary and secondary fuel costs and shall be payable during the calendar month for the scheduled energy to be supplied to beneficiary on ex-power plant basis.

192. In order to determine the energy charges of thermal power station, the operating parameters like Gross Station Heat Rate, Auxiliary Energy Consumption, Secondary Fuel oil consumption and Plant Availability Factor need to be considered as per provisions under Tariff Regulations, 2015

Operating Parameters

193. The base rate of energy charges shall be determined based on the parameters like Gross Station Heat Rate, Auxiliary Energy Consumption, Specific Oil Consumption, Gross calorific value of fuel and other operating parameters prescribed under MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015.

194. Regarding the Gross Station Heat Rate of new thermal generating units, achieving CoD on or after 01.04.2016, Regulation 39.3 (C) of MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015, provides as under:

Gross Station Heat Rate

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

New thermal generating stations achieving COD on or after 1.4.2016:

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

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 43: Maximum design Unit Heat Rate 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 of Heat rate (kCal/kWh)				
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*	*2177*	*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 and the norms as per the Regulation 35.

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

195. In the subject petition, the petitioner has claimed Station Heat Rate (SHR) of 2175.28 Kcal/kWh however, in the provisional tariff order dated 7th March' 2019 (petition No. 31 of 2018), the Commission has considered SHR of 2138.41 Kcal/kWh.

196. In view of the above, vide Commission's letter dated 12th June' 2020 the petitioner was asked to justify its claim of SHR in light of the guaranteed performance parameters of the generating units and Regulation 39.3 of the Regulations, 2015. The petitioner was also asked to file the Manufacturer/supplier certificate for guaranteed performance parameters of the generating units.

197. In response to above, vide affidavit dated 15th October' 2020, the petitioner submitted the following:

It is very true that MPPGCL has claimed Station Heat Rate (SHR) 2175.28 Kcal/kWh whereas, in the provisional tariff order the Commission has considered the SHR as 2138.41 Kcal/kWh. It may kindly be recalled that MPPGCL had brought up this issue before the Commission during framing of Draft Regulations for the control period FY 2019-20 to FY 2023-24 vide this office letter No. 07-12/ CS-MPPGCL/ MPERC/ Regulation FY20-24/662 dated 10.06.2019.

MPPGCL once again wish to bring before the Commission's kind notice that the Boilers supplied by M/s L&T for 2x660MW SSTPP Stage-II are of same design parameters, features and capacity of boiler supplied by M/s L&T to Mahagenco for Koradi Thermal Power Station for Unit No. 8, 9 & 10, where guaranteed boiler efficiency has been declared as 87%. In the matter the Maharashtra Electricity Regulation Commission vide its order dated 14.12.2017 in Case No. 59 of 2017 (at Table 6-35 at page 162) has also approved the Boiler efficiency as 87%. The copy of relevant pages of MERC aforesaid Order dated 14.12.2017 is annexed as Annexure-18A.

In the matter M/s L&T has also issued a certificate dated 11.02.2020 in respect of boilers supplied for 2x660MW SSTPP Stage-II, Khandwa that these boilers are similar having similar capacity and parameters, design features and layout, to those installed at Mahagencos 3x660 MW Unit No. 8,9 &10 of Koradi Thermal

Power Stations. The copy of certificate is annexed as Annexure-18B for kind reference of Hon'ble Commission please.

Accordingly, on applying Regulation 39.3 of the Regulations, 2015 for calculation of Station Heat Rate which works out as follows:

a. Turbine Heat Rate : 1811 kCal/kWh
b. Boiler efficiency : 87 %
c. Mf: 4.5%
d. Station Heat Rate : 1.045x1811/87%=2175.28
Therefore, the Station Heat Rate works out to be= ***2175.28 kCal/kWh***

198. On perusal of the above submission, the Commission observed that while calculating the Gross Station Heat Rate of the in the provisional tariff order, the boiler efficiency was provisionally considered 88.5 %. However, the petitioner has now submitted that the generation units are unable to achieve the boiler efficiency as considered in the provisional tariff order.

199. The petitioner further submitted that the M/s L&T has also issued a certificate dated 11.02.2020 in respect of boilers supplied for 2x660MW SSTPP Stage-II, Khandwa that these boilers are having similar capacity and parameters, design features and layout, to those installed at Mahagencos 3x660 MW Unit No. 8,9 &10 of Koradi Thermal Power Stations. The petitioner further submitted that however, Boilers supplied by M/s L&T for 2x660MW SSTPP Stage-II are of same design parameters, features and capacity of boiler supplied by M/s L&T to Mahagenco for Koradi Thermal Power Station for Unit No. 8, 9 & 10, where guaranteed boiler efficiency has been declared as 87%. Therefore, the petitioner has requested to consider the Gross Station Heat Rate as 2175.28 Kcal/Kwh for SSTPP Stage II, Unit No. 3&4 based on the boiler efficiency of 87% and other operating parameters guaranteed by the manufacturer in accordance with MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015.

200. The Commission has examined the issue of Gross Station Heat Rate in light of the provisions under Regulations, 2015 as follows:

i. In form TPS 2 of the petition, the petitioner submitted the design parameters of the generating units

- Main Steams Pressure at Turbine inlet - 247 kg/Cm2
- Main Steam Temperature at Turbine inlet - 565^0 C
- Reheat Steam Temperature at Turbine inlet - 593^0 C

ii. The Regulation 39.3 (C) (b) of the Regulations, 2015 specified the limit of the Maximum Turbine Cycle Heat Rate and Minimum boiler efficiency for units of above pressure and temperature are 1850 kCal/kWh and 86% respectively for Indian Coal. The aforesaid Regulations further specified the Max. Design Unit Heat Rate for Indian Coal is 2151 kCal/kWh for the units of above design parameters.

201. On perusal of the design parameters of the generating units and provisions under Regulations, it is observed that the boiler efficiency claimed by the petitioner is within the norms for minimum boiler efficiency specified under the Regulations. It is further observed that the turbine cycle heat rate claimed by the petitioner is 1811 kCal/kWh which is within the limit of Maximum Turbine Cycle Heat Rate of 1850 kCal/kWh specified in the Regulations.

202. In view of the above, the Commission has determined the Station Heat Rate as under:

Gross Station Heat Rate considered by the Commission

Technical Parameters		**Value**	**Unit**
A.	Design Turbine Cycle Heat Rate	1811	kCal/kWh
B.	Design Boiler Efficiency	87	%
C.	Design Heat Rate	2081.60	kCal/kWh
D.	Multiplying factor as per Regulations	1.045	
E.	**Gross Station Heat Rate considered**	**2175.28**	**Kcal/kWh**

Auxiliary Energy Consumption:

203. Regulation 39.3 (E) prescribed the norms for Auxiliary Energy Consumption for thermal generating unit(s) / stations as given below:

Table 44: Norms for Auxilliary Energy Consumption

200 / 300 MW series	*8.50%*
500 MW & above Steam driven boiler feed pumps	*5.25%*

500 MW & above Electrically driven boiler feed pumps	*7.75%*
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 ------"

204. As per the Provisions under aforesaid Tariff Regulations, 2015, normative Auxiliary Energy Consumption for 500MW and above units with natural draft cooling tower or without cooling tower is prescribed as 5.25%. Since, the units of SSTPP have natural draft Cooling Tower. Accordingly, the norms for Auxiliary Energy Consumption considered is 5.25% for FY 2018-19 as per Regulation 39.3 of MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015, in this order.

Specific Fuel Oil Consumption

205. With regard to Specific Fuel Oil Consumption, the petitioner in the subject petition considered the Specific Secondary Fuel Oil Consumption of 0.50 ml/kWh for FY 2018-19 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 normative Specific Secondary Fuel oil Consumption of 0.50 ml/kWh for the generating unit in accordance with Regulations for FY 2018-19 in this order.

Transit Losses

206. Regulation 36.8 of MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015, provides as the following norms for transit and handling loss :
"*Pithead generating stations : 0.2%*
Non-pithead generating stations : 0.8%

207. The Commission has observed that the petitioner's power project is Non pit-head and therefore, the normative transit and handling losses of 0.80 % is considered as per Provisions under Regulations in this order.

208. In view of the above, the following norms as prescribed in the Tariff Regulations, 2015 for FY 2018-19 is considered for determination of Energy Charges in this order.

Table 45: Operating Parameters Considered

Sr. No.	Particular	Norms
1	Gross Station Heat Rate (kCal/kWh)	2175.28
2	Auxiliary Consumption (%)	5.25%
3	Specific Fuel Consumption (ml/kWh)	0.50
4	Transit Losses (%)	0.80

Landed Cost of Coal

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

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

Pithead generating stations: 0.2%
Non-pithead generating stations: 0.8%

Provided that in case of pit head stations if coal is procured from sources other than the pit head mines which is transported to the station through rail, transit loss of 0.8% shall be applicable:
Provided further that in case of imported coal, the transit and handling losses shall be 0.2%.

210. Regulation 36.8 of Regulations, 2015 provides that the landed cost of coal shall be arrived at by considering normative transit and handling losses as percentage of the quantity of coal dispatched by the coal supply company during the month. The transit and handling losses are considered in determination of Energy charges rate in this order.

211. Vide Commission's letter dated 12th June' 2020, the petitioner was asked to file the reasons for higher transportation charges of coal i.e. approximately 40% of the landed cost of coal. By affidavit dated 15th October' 2020, the petitioner submitted the following reasons along with the copy of sample invoice/bill of coal purchased during the year:

In regard to SSTPP, Khandwa, it is to clarify that the coal linkage for the power station is from long distant mines of South Easter Coalfields Limited (SECL), Western Coalfield Limited (WCL) and Northern Coalfield Limited (NCL). Though the basic price of the coal supplied is less in comparison to the freight charges charged by Indian Railways which are substantially high for delivering it from various mines / Areas 900+ Km (SECL), 500+ Km (WCL) and 800+ Km (NCL) respectively.

The GoI has issued directives, enabling Thermal Power Generating Companies for swapping the coal linkage between their thermal power stations. All out attempts are being made by MPPGCL for optimizing the landed coal rate to certain extent at SSTPP, Khandwa by way of swapping coal.

The Bill/ Invoice of Freight charges issued by Indian Railways towards transportation of coal upto power station for generation of power at SSTPP Stage-2 Khandwa of MPPGCL are available at site. Being voluminous documents it is not safe and practical to call them at this point of time as COVID-19 Pandemic is spreading in the State of MP.

A sample of Bill/Invoice towards Freight Charges for transportation of Coal from NCL mines / siding upto SSTPP, Khandwa is annexed as Annexure-21 for the clarity in understanding Therefore, MPPGCL humbly request Commission to kindly consider the same.

212. The petitioner has submitted that the coal linkage for the power station is from long distant mines approximately 800 km to 1000 km. However, efforts are being made by MPPGCL for optimizing the landed coal rate to certain extent at SSTPP, by way of swapping coal.

213. Based on the information submitted by the petitioner, the weighted average landed

price of coal for latest three months i.e., Nov'18, Dec'18 and Jan'19 for Unit No 3 and preceding three months i.e. Dec'18, Jan'19 and Feb'19 for Unit No 4 has been worked out as follows:

Table 46: Weighted Average Price/MT for FY 2018-19 (Unit 3)

Month	Indian Coal		Imported Coal		Total
	Qty (MT)	Price (Rs/MT)	Qty (MT)	Price (Rs/MT)	Weighted Avg. price (Rs/MT)
Nov'18	630366	3925.89	40286	10035.01	4292.86
Dec'18	262562	4076.61	8386	10153.14	4264.68
Jan'19	337805	3944.67	22246	10160.51	4328.72
Total	**1230733**		**70918**		**4296.91**

Table 47: Weighted Average Price/MT for FY 2018-19 (Unit 4)

	Indian Coal		Imported Coal		Total
Month	Qty (MT)	Price (Rs/MT)	Qty (MT)	Price (Rs/MT)	Weighted Avg. price (Rs/MT)
Dec'18	262562	4076.61	8386	10153.14	4264.68
Jan' 19	337805	3944.67	22246	10160.51	4328.72
Feb' 19	329220	3945.85	14986	10173.49	4216.99
Total					**4271.49**

Gross Calorific Value (GCV) of Coal

214. With regard to GCV of coal for Coal based Thermal Power Stations, Regulation 36.6 (a) of MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015 provides that weighted average gross calorific value of coal "as received" in kCal per kg is considered for determination of energy charges. The aforesaid Regulation further provides that in case of blending of fuel from different sources, the weighted average GCV of primary fuel shall be arrived in proportion to blending ratio.

215. Regulation 36.7 of the Tariff Regulations, 2015 further provides as under:

The generating company shall provide to the beneficiaries of the generating station the 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 the weighted average GCV of the fuels as received shall also be provided separately, along with the bills of the respective month:

Provided further that copies of the bills and details of parameters of GCV and price of fuel i.e. domestic coal, imported coal, e-auction coal, etc., details of blending ratio of the imported coal with domestic coal, proportion of e-auction coal shall also be displayed on the website of the generating company. The details should be available on its website on monthly basis for a period of three months.

216. In view of the above, the Gross Calorific Value of the fuel is determined as per actual for the three preceding months. On examination of the petition, the Commission observed that the petitioner filed Energy Charges based on the actual annual weighted average GCV of coal for FY 2018-19 for 5 months ie., Nov'18, Dec'18, Jan'19, Feb'19 and March'19 for Unit No. 3 and for the month of March' 2019 for the Unit No. 4. However, the aforesaid tariff Regulations, 2015 provides that the weighted average GCV of fuel for the preceding three months should be considered for determination of Energy charges of thermal power stations.

217. Vide Commission's letter dated 12th June' 2020, the petitioner was asked to file the copy of laboratory test report for for GCV of coal 'as received' basis for Unit No. 3&4.

218. By affidavit dated 15th October' 2020, the petitioner submitted the following:.

The Day wise GCV details as per laboratory test report indicating Wt. Average Month wise GCV of Indian coal for the period Nov'18 to Mar'19 is annexed as Annexure-22A. As coal of imported origin was also consumed, the month wise Wt. Average GCV as per the blending ratio as detailed in Form TPS 15 isalso annexed as Annexure-22B for kind reference please

219. Based on the information submitted by the petitioner in Form TPS 15 of the petition, for the purpose of computation of energy charges, the weighted average GCV of coal has been worked out as follows:

Table 48: Weighted Average GCV of Coal during FY 2018-19

Month	Indian Coal		Imported Coal		Wtd. Avg. GCV (kCal/kg)
	Qty (MT)	GCV (Kcal/KG)	Qty (MT)	GCV (kCal/kg)	
Nov'18	630366	3742	40286	6348	3898.54
Dec'18	262562	3655	8386	6346	3738.29
Jan'19	337805	3488	22246	6260	3659.27
Total	**1230733**		**70917.90**		**3799.00**

Table 49: Weighted Average GCV of Coal during FY 2018-19

Month	Indian		Imported		Wtd. Avg. GCV (kCal/kg)
	Qty (MT)	GCV (Kcal/KG)	Qty (MT)	GCV (kCal/kg)	
Dec'18	262562	3655	8386	6346	3738.29
Jan'19	337805	3488	22246	6260	3659.27
Feb'19	329220	3419	14986	6112	3536.25
Total			**6875857**		**3637.80**

Landed Cost of Secondary Fuel Oil

220. With regard to the Cost of Secondary Fuel Oil, the petitioner in TPS Form 15 of the petition filed the weighted average landed cost of oil for the month of Nov'18, Dec'18, Jan'19, Feb'19 and March'19, whereas Regulation 34.2 of the Tariff Regulations, 2015 provides that the landed cost of fuel 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.

221. Since, the petitioner had not submitted the details of the fuel oil procurements during the three months preceding the date of the CoD of Unit 3, hence, the Commission has considered the weighted average rate of secondary fuel oil for the month Nov'18, Dec'18 and Jan'19 whereas for Unit No 4, the Commission has considered the month of Dec'18, Jan'19 and Feb'19 for considering the weighted average rate of secondary Fuel Oil as follows:

MONTH	FURNACE OIL			L.D.O			SECONDARY OIL		
	Quantity (KL)	RATE Rs./KL	Amount Rs. Lakhs	Quantity (KL)	RATE Rs./KL	Amount Rs. Lakhs	Quantity (KL)	RATE Rs./KL	Amount Rs. Lakhs
Nov-18	1715.60	39833	683.38	879.56	50980	448.40	2595.16	43611	1131.77
Dec-18	1554.00	39833	619.01	795.36	50980	405.47	2349.36	43607	1024.48
Jan-19	5520.68	42199	2329.67	2084.34	49568	1033.16	7605.02	44218	3362.82
			Weighted average rate of Secondary Fuel Oil					**43978**	

MONTH	FURNACE OIL			L.D.O			SECONDARY OIL		
	Quantity (KL)	RATE Rs./KL	Amount Rs. Lakhs	Quantity (KL)	RATE Rs./KL	Amount in Rs. Lakhs	Quantity (KL)	RATE Rs./KL	Amount Rs. Lakhs
Dec.-18									
Jan-19	5520.68	42199	2329.67	2084.34	49568	1033.16	7605.02	44218	3362.82
Feb-19	4947.68	42199	2087.87	1715.34	49568	850.25	6663.02	44096	2938.12
Weighted average rate of Secondary Fuel Oil								**44082.8**	

222. In view of the above, the weighted average rate of secondary fuel oil for preceding three months considered for Unit No 3 is Rs 43978/Kl and for Unit No 4 is Rs 44128 /Kl in this order.

223. Based on the above, the following energy charges ex-bus for SSTPP, Stage II, Unit No. 3&4 are determined:

Table 50: Energy Charges for Unit No. 3 and 4:

Sr. No.	Particular	Unit	18.11.2018 to 27.03.2019	28.03.2019 to 31.03.2019
			Unit No. 3	**Unit No. 3&4**
1	Capacity	MW	660	1320
2	Gross Station Heat Rate	kCal/kWh	2175.28	2175.28
3	Sp. Fuel Oil Consumption	ml/kWh	0.50	0.50
4	Aux. Energy Consumption	%	5.25	5.25
5	Transit Loss	%	0.80	0.80
6	Weighted average GCV of Oil	kCal/ltr.	10,000	10,000
7	Weighted average GCV of Coal	kCal/kg	3799	3637
8	Weighted Average price of Coal	Rs./MT	4297	4271
9	Weighted Average price of Oil	Rs. / KL	43978	44082.85

10	Heat Contributed from Oil	kCal/kWh	5.00	5.00
11	Heat Contributed from Coal	kCal/kWh	2170.28	2170.28
12	Specific Coal Consumption	kg/kWh	0.5713	0.5967
13	Sp. Coal Consumption including Transit Loss	kg/kWh	0.5759	0.6015
14	Rate of Energy Charges from Oil	Paise/kWh	0.0216	0.0217
15	Rate of Energy Charge from Coal	Paise/kWh	2.475	2.569
16	Total Energy Charges	Paise/kWh	2.497	2.591
17	**Rate of Energy Charge from Coal at ex bus**	**Rs./kWh**	**2.635**	**2.734**

224. The energy charges rate as determined above is for working capital purpose. 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

Petitioner's Submission

225. With regard to other charges, the petitioner submitted the following:

"Other Charges comprises of Rent, Rates & Taxes payable to Government, MPERC Fees, Water Charges, Cost of Chemical & Consumable, Publication Charges, EL encashment, arrears paid to employees, etc.. 12.2 As per the proviso 35.4 of MPERC Regulations 2015, the expenditure towards actual Pension & Terminal benefits shall be claimed by Transmission Licensee. Accordingly, MPPGCL had not claimed these expenses in this petition. 12.3 The Other Charges total amounting to Rs. 3.98 Crores as captured in Annual Statement of Accounts for FY 2018-19, towards SSTPP Stage-II Khandwa from the date of respective CoDs till 31.03.2019 are detailed hereunder."

226. The petitioner claimed the other charges pertaining to SSTPP Stage II, Unit No. 3&4 for FY 2018-19 are as given below:

Table 51: Other Charges Claimed **(Rs. in Crore)**

Sr No	SSTPP Stage-2	FY-2019	FY-2019
		Unit No. 3	Unit No. 4
1	MPERC Fees	0.137	0.137
2	Water Charges	3.598	0.107
	Total	**3.735**	**0.244**

Commission's Analysis

227. Regarding the Application fee, publication expenses 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*.

228. In view of the above, the petitioner is allowed to recover the fee paid to MPERC and publication expenses as per Regulation 52 of (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015 on submission of documentary evidence.

229. The petitioner is also allowed to recover water charges in accordance with Regulation 52.5 of the MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015.

Implementation of the order:

230. The final generation tariff for FY 2018-19 is determined for Shri Singaji thermal generating units from its COD till 31st March' 2019 in accordance to Annual Audited Accounts for FY 2018-19 under the Tariff Regulation' 2015.

231. The petitioner must take steps to implement the Order after giving seven (7) days' public notice in accordance with Clause 1.30 of MPERC (Details to be furnished and fee payable by licensee or generating company for determination of tariff and manner of making application) Regulations, 2004 and its amendments and recalculate its bills for the energy supplied to Distribution Companies of the State/ M.P. Power Management Company Ltd. since COD of Unit.

232. The petitioner is also directed to provide information to the Commission in support of having complied with this order. The deficit/surplus amount as a result of this order shall be recovered by the petitioner or passed on to the MP Power Management Company Ltd / three Distribution Companies of the state in six equal monthly installments in terms of applicable Regulation in the ratio of energy supplied to them.

233. With the above directions, this petition No. 25 of 2020 is disposed of.

(Shashi Bhushan Pathak) **Member**	**(Mukul Dhariwal)** **Member**	**(S.P.S Parihar)** **Chairman**

Date: 18th May' 2021

Place : Bhopal

Annexure 1

Petitioner's Response on the comments offered by the Stakeholder along with the observations:

Stakeholder Comment

For future Demand and Supply, whether consideration for available Power Stations and Voltage profile in Malwa Region was taken care prior to installation of Shri Singaji TPP.

Petitioner's Reply

On the observation that whether consideration for future Demand and Supply, Available Power Stations and Voltage profile in Malwa Region was taken care prior to installation of Shri Singaji TPP, MPPGCL wish to submit that Such an observation, raised now at this stage, i.e. in Nov.'2020, for the Units already installed and achieved its CoD in Nov.'2018 and Mar.'2019 is surprising and irrelevant.

The GoMP, taking various facts in to consideration like Studies & Assessment Reports on Demand and Supply Gap analysis, Voltage profile, Energy deficit situation etc. in the State of MP and Western Region, Coal Linkage, Water & Land availability etc., and after due diligence of all relevant factors, accorded the administrative approval for setting up of SSTPP Stage-2, Khandwa. Accordingly, MPPGCL had opted for EPC tendering on ICB route for setting up of Power Station.

Further regarding compliance of Power Purchase Act 2004, the matter pertains to MPPMCL (TRADECO) and not MPPGCL. MPPMCL has executed a Power Purchase Agreement with MPPGCL on 04.01.2011.

MPPGCL therefore humbly request Hon'ble Commission that the comment under Point 1) by Shri Rajendra Agrawal is misleading and irrelevant therefore may please be quashed.

Observation:

The observation raised by the stakeholder is not relevant to the subject petition for determination of tariff.

Stakeholder Commemt:

It is humbly requested not to permit additional benefit of 0.5% on Return on Equity.

Petitioner's Response:

In regard to observation towards not to permit additional benefit of 0.5% on Return on Equity MPPGCL wish to submit that:-:-

The proviso 30 (a) of MPERC Regulation, 2015 provides that, 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 App.-I.

The Appendix-I "Time line for completion of Project" of MPERC Regulation, 2015, provides that the time schedule for Unit size 660/ 800 MW, for Extension Projects is ***50 months*** *and subsequent Units at an interval of* ***6 months*** *each.*

The Unit No. 3 of SSTPP Stage-2, Khandwa has achieved the Commercial operation in ***47 months*** *and Unit No. 4 has achieved the Commercial operation in* ***51 months****. Accordingly, MPPGCL is entitled to avail the additional 0.5% Return on Equity for SSTPP Stage – II, Khandwa, as per proviso 30 read with Appendix-I of the Regulations, 2015, therefore the applicable Return on Equity in this case is 16.0%.*

Further, regarding observation towards installation and operation of these units in careless manner, MPPGCL wish to submit that:-

During construction stage of the project, MPPGCL has availed the services of M/s NTPC for Project Management, M/s TEPL for obtaining Consultancy Services for installation of the project and M/s Lloyds Register Asia as a Third party Inspector for ensuring quality of critical machinery/ equipment at the works of the manufacturers.

All the above agencies have put their best efforts by way of monitoring/ inspection during Construction, Erection and Commissioning stages of the project so as to plug any loophole. M/s L&T had put their machinery and *manpower to the best and achieved commissioning target within 47 months and 51 months, which is a record in Public Sector Power Plants. From the above it is evident that full care has been taken in installation of Units and achieving the commissioning targets.*

In regard to observation towards Forced Outage of Units / Under recovery of Annual Fixed Charges, MPPGCL wish to submit that:-

The recovery of fixed Charges is on pro-rata basis to actual availability with NAPAF. Any inefficiency/ outage of Power Station therefore do not get passed on to beneficiaries and the losses on account of outages are being borne by MPPGCL.

MPPGCL therefore humbly request Hon'ble Commission that the comment under Point 2) by Shri Rajendra Agrawal is misleading and therefore may please be quashed.

Observation:

The Commission has examined the claim of additional ROE in accordance to the provisions under MPERC (Terms and Conditions for determination of Generation Tariff) Regulations, 2015.

Stakeholder Comment:

Whether Clause 31 of MPERC Regulations, 2020 for the Control period FY 2019-20 to FY 2023-24 for revised Emission norms is complied by MPPGCL? It is humbly requested from the Commission to direct the petitioner on the same.

Petitioner's Response

In regard to observation towards compliance of proviso 31 of Terms & Condition for determination of Generation Tariff, 2020, MPPGCL wish to submit that:-

The subject petition has been filed for determination of Final generation Tariff of SSTPP Stage-2, Khandwa (a New Power Project) in accordance with Regulations, 2015. Further in the petition, under Form TPS-5b detailing "Breakup of Capital Cost for New Coal Based Project", at S. No. 6 under the Head "Installation of FGD including coating of Chimney flue cans & associated works", MPPGCL has clearly shown the expenditure made/ proposed which *amounts to Rs. 642 Crores, out of which Rs. 8.89 Crores have already been incurred till FY 2018-19.*

The tendering activities (an open tender on ICB basis) for installation of wet FGD have been completed in Jun.'2020 and approval of the BoD of MPPGCL has also been obtained. However, order will be issued only after grant of approval by the Energy Deptt. of GoMP regarding tie up of equity. The approval is awaited. It is further to submit that Clause 31 of MPERC Regulations, 2020 for the Control period FY 2019-20 to FY 2023-24 is towards revised Emission norms and shall be complied by MPPGCL.

Observation:

With regard to expenditure incurred towards compliance of the environmental norms, the petitioner shall file the true up in the corresponding/respective year along with the details and supporting of actual Capital Expenditure on account of installation of FGD in line with the prevailing MPERC Regulation.

Stakeholder Comment

In Page 17 to 51 of the petition, the petitioner has provided the details regarding technical features of the power station which covers 42% information of the whole petition. This information is unnecessary in accordance to the Tariff Regulations, 2015.

Petitioner Response

In regard to observation towards unnecessary submission of Information regarding technical features of Main Plant Equipment in the petition (Page 17 to 51 of the petition) MPPGCL wish to submit that:-

In past, during the hearing on one of the petition for determination of Final Tariff, Hon'ble Commission has desired that Utility should furnish the major technical information about the plant with the petition which will help in proper due diligence. Accordingly, MPPGCL has made it a practice to incorporate the same in the petition for determination of Tariff of New Projects.

As MPPGCL has installed 2x660 MW (Supercritical) Shree Singaji Thermal Power Project Stage-II (Load Based Power Station) near village Dongalia in Khandwa district, being first of its kind, it was the prime duty of MPPGCL to suitably inform Hon'ble Commission, the technical details of the power station.

Therefore, most appropriate way of submission, in respect of above, was inclusion of technical details in Final Tariff petition. The proviso 9 of the Regulations, 2015 demands the same. Further, the Form TPS- 2 for Plant Characteristic needs documentation in support. MPPGCL has therefore complied the directive and do not find anything wrong in submitting the same.

MPPGCL humbly request Hon'ble Commission that the comment under Point 4) by Shri Rajendra Agrawal is irrelevant and misleading and therefore may please be quashed.

Observation

The comments is not relevant to the subject petition.

Stakeholder Comment:

It is mentioned in para 2.2 (d) of the petition that 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 released to L&T on 31.12.2014 due to this delay in giving the award of the EPC Contract, capital cost has increased from Rs 6500 Crore to Rs 7738 Crore. This award of EPC Contract on M/s L&T indicates a lot of financial irregularities.

Petitioner's Response

Regarding observation towards Financial irregularities in award of the EPC contract on M/s L&T, MPPGCL wish to submit that:-

The financial commitment towards Price Variation was not considered in the evaluation of tendered prices because the commitment depends on the future trend of identified price indices, as it is in-built in Price Variation (PV) formulae. As such, the estimation of price variation was made in Aug. / Sept. 2017 and the same was incorporated in the revised project cost estimate.

As regards to placement of EPC contract on M/s L&T, the BoD of MPPGCL during its meeting held on 31.08.2013 at Bhopal, resolved that the offer of M/s L&T, the L-1 bidder, be accepted for placement of order. However, LoAs may be issued only after receipt of Environmental Clearance from MoEF for installation of the project.

In the aforementioned tender (issued on ICB basis) in which M/s L&T was qualified as L-1 bidder, M/s BHEL has also participated and stood as L-2 bidder. The representation of M/s BHEL vide their letter dated 31.07.2014 about inviting fresh bids for the project therefore could not be considered due to being a post tender submission. In view of the above, the allegation of financial irregularities in awarding the EPC contract on M/s L&T is totally away from facts and hence not sustainable in a contract entered against an open tender on ICB basis.

MPPGCL humbly request Hon'ble Commission that the comment by Shri Rajendra Agrawal is irrelevant, misleading, and hypothetic, therefore may please be quashed.

Observation:

The details which were relevant to the subject matter has been obtained from the petitioner and the petitioner has submitted details on this issue.. The Commission has considered the submission of the petitioner in the order

Stakeholder Comment:

It is observed that the petitioner has not submitted head wise details/breakup of expenditure incurred and proposed in the petition.

Petitioner Response:

Regarding observation towards non submission of Head wise Expenditure MPPGCL wishes to submit that:-

The Final Tariff Petition filed for SSTPP Stage-2, Khandwa is complete in all respect, wherein Head wise details of Expenditure incurred and proposed with breakup of Land, Main Plant, Civil Works, Railway Infrastructure, and other details like Interest and Finance Charges, Start up Power, Infirm Power etc. have been clearly shown in Form TPS 5B (BREAK-UP OF CAPITAL COST FOR NEW COAL BASED PROJECT) and other relevant Forms.

MPPGCL humbly request Hon'ble Commission that the comment under Point 6) by Shri Rajendra Agrawal is irrelevant and misleading and therefore may please be quashed.

Observation:

All details regarding breakup of head wise expenditure incurred/proposed have been submitted in Form TPS 5B.

Stakeholder Comment:

The Petitioner has not submitted the details of the capital expenditure incurred/proposed, assets capitalized, asset funding etc in the petiton.

Petitioner's Reply

Regarding observation towards non submission of details of Capital Expenditure, MPPGCL wishes to submit that:-

The details of Capital Expenditure incurred/ proposed, Assets capitalized, Asset funding details etc in regard to 2x660 MW Shree Singaji Thermal Power Project Stage-II, Khandwa have already been furnished in the petition in relevant forms applicable for the same and supporting documents have also been submitted before Hon'ble Commission. As such the present petition has been filed complying all the provisions of Regulations, 2015.

MPPGCL humbly request Hon'ble Commission that the comment by Shri Rajendra Agrawal is irrelevant and baseless and therefore may please be quashed.

Observation:

The petitioner has submitted the required details regarding capital expenditure incurred/proposed, assets capitalized, asset funding etc in the TPS Forms attached with the petition as well as annexures attached with the additional submission vide affidavit dated 15th October' 2020

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