

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 582/GT/2020**

**Coram:**

**Shri Jishnu Barua, Chairperson  
Shri Arun Goyal, Member  
Shri Pravas Kumar Singh, Member**

**Date of Order: 19<sup>th</sup> May, 2024**

**In the matter of:**

Petition for determination of tariff of Solapur Super Thermal Power Station (1320 MW) for the period from COD of the Unit-I (25.9.2017) to 31.3.2019, after truing-up exercise.

**And**

**In the matter of:**

NTPC Limited,  
NTPC Bhawan, Core-7, Scope Complex  
7, Institutional Area, Lodhi Road,  
New Delhi-110 003.

**.... Petitioner**

**Vs**

1. Madhya Pradesh Power Management Company Limited,  
Shakti Bhawan, Vidyut Nagar, Jabalpur 482 008.
2. Maharashtra State Electricity Distribution Company Limited,  
Prakashgad, Bandra (East), Mumbai 400 051.
3. Chhattisgarh State Power Distribution Company Limited,  
P.O. Sundar Nagar, Danganiya, Raipur – 492013.
4. Electricity Department of Goa,  
Vidyut Bhawan, Panaji, Goa-403001.
5. DNH Power Distribution Corporation Limited,  
UT of DNH, Silvassa-396230.
6. Electricity Department,  
Administration of Daman & Diu,  
Daman-396210.

**..... Respondents**



**Parties Present:**

Ms. Swapna Seshadri, Advocate, NTPC  
Ms. Ritu Apurva, Advocate, NTPC  
Ms. Neelam Singh, Advocate, NTPC  
Shri M. Karthikeyan, Advocate, NTPC  
Shri Sameer Aggarwal, NTPC  
Shri Suraj Kumar, NTPC  
Shri Harsh V. Kabra, NTPC  
Shri Ravi Sharma, Advocate, MPPMCL

**ORDER**

The Petitioner, NTPC Limited, has filed this Petition for revision of tariff of Solapur Super Thermal Power Station (2 x 660 MW) (in short, “the generating station”) after the truing-up exercise for the period 2014-19, in terms of the Regulation 8 (1) of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (in short “the 2014 Tariff Regulations”).

**Background**

2. The Investment Approval (IA) of the Project was accorded by the Board of the Petitioner Company in its 379<sup>th</sup> meeting held on 19.3.2012, at an estimated completed project cost of Rs.10154.27 crore, based on the Price Level of 1<sup>st</sup> quarter 2012. The Petitioner has entered into a Power Purchase Agreement (PPA) with the Respondents for the supply of power generated from the project, based on the allocation made by the Ministry of Power, GOI vide its letter dated 23.5.2017 as under:

<b>State/Union Territory</b>	<b>Total Allocation in (MW)</b>	<b>Share in Installed Capacity (%)</b>
Madhya Pradesh	295.88	22.42
Maharashtra ( <i>including home State share</i> )	616.04	46.67
Chhattisgarh	158.89	12.04
Goa	15.09	1.14
Daman & Diu	14.53	1.10
D&N Haveli	21.57	1.63
Unallocated	198.00	15.00
<b>Total</b>	<b>1320.00</b>	<b>100.00</b>



3. The dates of commercial operation of the units of the generating station are as under:

Unit-I	25.9.2017
Unit-II	30.3.2019

4. The Commission, vide its order dated 6.1.2020 in Petition No.178/GT/2017, had approved the tariff of Unit-I of the generating station from the COD of Unit-I (25.9.2017) to 31.3.2019. In the said order, liberty was granted to the Petitioner to approach the Commission by way of a separate Petition for approval of the tariff for Unit-II of the generating station, as on the COD of the said unit. Accordingly, the capital cost and the annual fixed charges allowed in an order dated 6.1.2020 in Petition No. 178/GT/2017 are as under:

**Capital Cost allowed**

*Rs. in lakh*

	2017-18	2018-19	
	25.9.2017 (COD of Unit-I) to 31.3.2018	1.4.2018 to 29.3.2019	30.3.2019 (COD of Unit-II) to 31.3.2019
Opening capital cost	517104.26	520548.32	528024.89
Add: Projected additional capital expenditure	3444.06	7476.57	0.00
<b>Closing capital cost</b>	<b>520548.32</b>	<b>528024.89</b>	<b>528024.89</b>
Average capital cost	518826.29	524286.60	528024.89

**Annual Fixed Charges allowed**

*(Rs. in lakh)*

	2017-18	2018-19	
	25.9.2017 (COD of Unit-I) to 31.3.2018	1.4.2018 to 29.3.2019	30.3.2019 (COD of Unit-II) to 31.3.2019
Depreciation	24227.13	24482.10	24656.67
Interest on Loan	24738.55	24041.33	23582.62
Return on Equity	30670.42	31076.56	31298.15
Interest on Working Capital	7877.69	7918.20	7916.86
O&M Expenses	12308.24	13021.04	13021.04
<b>Total</b>	<b>99822.03</b>	<b>100539.23</b>	<b>100475.33</b>

5. In respect of the disallowed time over run of 110 days for Unit-I, the Petitioner had filed an Interlocutory Application (IA No. 48/2021 in Petition No. 178/GT/2017) seeking the correction of certain errors with regard to the (i)



disallowance of excess IDC and IEDC due to non-consideration of capitalisation ratio as on COD of Unit-I; and (ii) disallowance of notional IDC due to non-consideration of corresponding workings submitted in Petition No.178/GT/2017. However, vide order dated 14.8.2021, the IA was rejected as not maintainable at the admission stage. The Petitioner has also filed an appeal (Appeal No.337/2022) before the Appellate Tribunal of Electricity (APTEL) with regard to the disallowance of the time overrun (of 110 days), and the same is pending. Thus, the contentions of the Petitioner in the present petition are without prejudice to the submissions in the pending appeal.

### **Present Petition**

6. Regulation 8 (1) of the 2014 Tariff Regulations provides as follow:

*“8. Truing up (1) The Commission shall carry out truing up exercise along with the tariff Petition filed for the next tariff period, with respect to the capital expenditure including additional capital expenditure incurred up to 31.3.2019, as admitted by the Commission after prudence check at the time of truing up:*

*Provided that the generating company or the transmission licensee, as the case may be, shall make an application for interim truing up of capital expenditure including additional capital expenditure in FY 2016-17.”*

7. In terms of the above Regulation, the Petitioner has filed the present petition for the truing-up of the tariff of the generating station for the period 2014-19, based on the capital cost and the annual fixed charges, as under:

### **Capital Cost claimed**

*(Rs. in lakh)*

	2017-18		2018-19	
	25.9.2017 (COD of Unit-I) to 31.3.2018	1.4.2018 to 29.3.2019	30.3.2019 (COD of Unit-II) to 31.3.2019	
Capital cost as on COD of Units	520107.12		883165.47	
Add: FERV not taken to capital cost	(-) 3846.48		(-) 3248	
Add: Un-amortised bond issue expense	332.57		651.63	
Add: Notional IDC	843.63		5193.89	
<b>Opening capital cost</b>	<b>517436.84</b>	<b>534176.86</b>	<b>885762.99</b>	
Add: Addition during the year / period	5301.73	27654.23	0.00	



	2017-18	2018-19	
	25.9.2017 (COD of Unit-I) to 31.3.2018	1.4.2018 to 29.3.2019	30.3.2019 (COD of Unit-II) to 31.3.2019
Less: De-capitalisation during the year /period	41.07	28.84	0.00
Add: Discharges during the year /period	11479.36	4451.01	0.00
<b>Closing capital cost</b>	<b>534176.86</b>	<b>566253.26</b>	<b>885762.99</b>
Average capital cost	525806.85	550215.06	885762.99

### **Annual Fixed Charges claimed**

(Rs.in lakh)

	2017-18	2018-19	
	25.9.2017 (COD of Unit-I) to 31.3.2018	1.4.2018 to 29.3.2019	30.3.2019 (COD of Unit-II) to 31.3.2019
Depreciation	24584.20	25766.19	44796.55
Interest on Loan	24953.46	25811.30	42412.67
Return on Equity	31083.07	32613.45	52502.72
Interest on Working Capital	8225.23	8401.29	20654.44
O&M Expenses	13325.74	14178.40	26309.20
<b>Total</b>	<b>102171.70</b>	<b>106770.62</b>	<b>186675.58</b>
<b>Additional O&amp;M expenses claimed</b>			
Impact of Pay revision	1064.79	1876.47	1876.47
Impact of GST	158.72	211.94	211.94
Total Additional O&M Expenditure	1223.51	2088.41	2088.41
<b>Total Annual Fixed Charges (annualised)</b>	<b>103395.21</b>	<b>108859.03</b>	<b>188763.99</b>

8. The Respondent MPPMCL vide affidavits dated 27.8.2021 and 18.10.2022, the Respondent, MSEDCL vide affidavit dated 22.2.2021 and the Respondent, CSPDCL vide affidavit dated 28.6.2021, have filed their replies and in response, the Petitioner vide affidavits dated 8.11.2021 and 27.10.2022, 21.7.2021 respectively, has filed its rejoinder to said replies. The Petitioner vide affidavits dated 29.6.2021 and 16.7.2021 has filed certain additional submissions after serving a copy to the Respondents. Accordingly, the Commission, after hearing the Petition along with Petition No. 246/GT/2021 (tariff of the generating station for 2019-24) and after directing the Petitioner to file additional information with regard to the 'Reconciliation of un-amortized Bond issue expenses,' reserved its order in these Petitions. However, as the order in the Petition could not be issued



prior to one Member demitting office, these Petitions were re-listed and heard on 6.2.2024. The Commission, after hearing the parties and after directing the Petitioner to file certain additional information, reserved its order in this Petition. In compliance with the directions vide ROP of the hearings dated 20.9.2022 and 6.2.2024, as above, the Petitioner has filed the additional information vide affidavits dated 7.10.2022 and 21.3.2024, respectively, after serving copies on the Respondents. Accordingly, based on the submissions of the parties and documents available on record, and after a prudence check, we proceed with the truing-up of the tariff of the generating station for the period 2014-19 in this Petition, as stated in the subsequent paragraphs.

9. As stated, the Commission vide its order dated 6.1.2020 in Petition No. 178/GT/2017 had, out of the total delay of 433 days for completion of Unit-I, allowed the time overrun of 323 days, but had not condoned the time over run for the balance 110 days. Accordingly, the scheduled COD and the actual COD of the Unit-I of the generating station and the time overrun allowed are as under:

Unit No.	Date of Investment Approval	Schedule COD	Actual COD	Time Overrun (in days)		
				Actual	Allowed	Disallowed
Unit-I	19.3.2012	19.7.2016	25.9.2017	433	323	110

10. The Petitioner, in the present Petition, has claimed the time over run for Unit-II, indicating the same reasons for the delay, which had affected the implementation/ completion of Unit-I. The Petitioner has submitted that the delay due to the events viz., Right of Use (ROU) for Make-up water pipeline laying, non-availability of construction materials at site, Stoppage of works due to agitation by PAPs, Severe drought in Solapur, and certain other reasons like additional land acquisition for Railway siding works, Global merger of Hitachi



Power Europe (HPE), etc., were beyond the control of the Petitioner, which has led to delay in the declaration of COD of Unit-II of the generating station also. The Petitioner has stated that the various events/reasons for the delay had already been submitted in Petition No. 178/GT/2017. We now examine the time overrun issues as stated below:

### **Analysis of Time Overrun**

11. The Petitioner, in the present Petition, has submitted that there is a delay of 800 days in the commissioning of Unit-II from the scheduled COD and the major reasons attributable to the delay are as under:

- a. *Law and order and Right of Use (ROU),*
- b. *Work stoppage due to agitations by project affected persons (PAPs),*
- c. *Non-availability of Sand and Moroom due to delay in permission for mining, restrictive auction and strike by stone crushers*
- d. *Reduced Manpower on account of increase in the Minimum wages by the Government of Maharashtra; and*
- e. *Merger of Hitachi Power Europe (HPE), a JV venture partner for Execution of Boiler Package, with Mitsubishi.*

12. The Petitioner has reiterated its submissions made in Petition No. 178/GT/2017 in the present Petition as under:

#### **A. *Law and order and Right of Use (ROU):***

i) The Make-up water requirement for the project is being met from the Ujjani reservoir on the Bhima River at a distance of about 117 km from the project site. More than 90% of the pipeline is passing through private agricultural land along the length of Solapur through four different Talukas. For laying of makeup water line, the Right of use (ROU) for the land was required from the State Government. As there is no ROU Act in place in the state of Maharashtra, the Petitioner had to face lots of problems in the physical possession of land and laying of the pipeline. The work got delayed in view of the procedural delays, as permission of ROU kept on deferring due to heavy resistance from the farmers in laying of pipeline. Subsequently, the work was taken up after obtaining statutory orders passed by the respective Tahsildar of concerned Talukas, through which the pipeline is passing. Despite of having valid orders issued by the Competent Authorities, the landowners obstructed the works and unlawfully prevented the Petitioner from carrying out their official duties and laying the pipeline. The matter was



taken up with district authorities regularly to expedite the procedures. The correspondence between the station and district authorities was also submitted by the Petitioner.

ii) Further, the work of laying a 132 KV transmission line from Solapur Plant to Ujjani reservoir for Makeup water Pump House also got delayed on account of agitation for higher compensation by local people. The work was planned from March 2012 to June 2015. Keeping in view the readiness of the units and to avoid further delay, the unit was made operational by making a contingency arrangement of power from outside. The makeup water system is situated 117 km from the plant, and the power supply is planned to be fed through this arrangement from the power station for uninterrupted and reliable supply. There is an additional burden on APC & O&M.

iii) The delay on account of procedural delay in issuing permission of ROU by the State Authority and the forceful and illegal stoppage of works was beyond the reasonable control of the Petitioner leading to the delay in the Boiler light up and chemical cleaning for Unit-II.

**B. Work stoppage due to agitations by PAPs (project-affected persons):**

i) Subsequent to starting the construction activities of Solapur STPP, the project faced obstructions and agitations from the local villagers, mainly the project-affected persons (PAPs), demanding higher compensation than was earlier accepted and paid to them. There were several events of severe protests, forceful stoppage of construction activity, and threats to vehicles carrying materials and equipment, which caused delays in the execution of the project. The agitation by PAPs was not only limited to blockades, threats etc, but also incidents of physical assault to the labours. These incidents spread fear among the workers as well as employees of many contractors, resulting in a reduction of the workforce and causing delays. The situation came under a little bit of control by the intervention of the police. To avoid hampering work and delay, NTPC officials and CISF personnel started patrolling and persuaded the workers to report to the duties.

ii) Further, these unlawful agitations created severe hindrances to the works and threat for the life of the employees of the Petitioner and contractors & their families throughout the construction period. The Petitioner mentioned that it took up this issue at all possible levels. It persisted till the end of 2016 when the State Government took a tough stand for its resolution after the issue was raised at the PMO level by the Petitioner.

**C. Non-Availability of Sand and Moorum**





**a) Due to delay in mining permission**

i) The Dy. Secretary, Revenue and Forest Department, Maharashtra Government, vide letter dated 21.1.2013, informed the Divisional Commissioners and the District Collectors that the approval of the State Pollution Committee is necessary for obtaining the secondary mineral excavation permit as per order dated 27.2.2012 passed by the Hon'ble Supreme Court. In view of the above change in procedure for secondary mineral excavation following the Hon'ble Supreme Court order, the supply of sand and Moorum, essential raw materials used in civil construction, got affected, which delayed the civil works of SG and other associated works, which in turn affected the erection works of SG & Auxiliaries. The Petitioner has furnished a copy of the Office Memorandum issued by the MOEF, GOI, dated 18.5.2012, and a letter from the Dy. Secretary, Revenue & Forest Department, Maharashtra, dated 21.1.2013.

ii) On account of the procedural delay in the auctioning process, the window for clear season sand extraction got narrowed by 50%, which ultimately caused shortage of sand at the construction site. The mining agencies as well as the Petitioner, followed up the matter with the District administration on a regular basis, for an early resolution of the issue, but the procedural delay took time. The delay in the construction activities, due to the shortage of sand caused by change in law and the procedural delays was beyond the control of the Petitioner, which may be condoned.

**b) Strike by Stone Crushers:**

i) The Department of Forest and Revenue, Govt of Maharashtra had increased the rate of Royalty for gravel & moorum from Rs 200 per brass to Rs.400 per brass vide notification dated 11.5.2015. Against the above increase in the rate of Royalty, the Stone crushers Associations called for strike from 31.10.2015 demanding the reduction of rate of Royalty, which hampered the construction work for about 2 months. The strike also resulted in the non-availability of gravel and moorum, which are essentially required for carrying out the civil works and hence the work was delayed.

**D. Reduced manpower on account of increase in the Minimum wages by the Government of Maharashtra:**

i) During the implementation of the project, the Govt. of Maharashtra, during the month of July, 2014 had increased the Minimum Wage of Labour from Rs.278.79 to Rs.391. The said wage hike of Rs.112 was very steep in comparison to the regular hike of Rs.7 to Rs.8. As the payment of Minimum Wages by the agencies to the workers is a statutory requirement, the contracting agencies responded to this situation by reducing the manpower



(and /or) stopping the wage payments, which was an unprecedented event. This severely impaired the progress of the work, which was in full swing, thereby hampering the momentum and the pace of the work.

**E. Merger of Hitachi Power Europe (HPE), a JV venture partner for Execution of Boiler Package, with Mitsubishi:**

i) The issue of delay caused due to the global merger of Hitachi Power Europe, a JV partner of executing agency BGR Energy System Limited (BGR), with Mitsubishi was addressed in Petition No. 178/GT/2017, and the Commission vide its order dated 6.1.2020, held that the same is a contractual issue and the time overrun on this count was not allowed. This global merger cannot be termed as a contractual reason. The contract between the Petitioner and BGR Energy System Limited was for the execution of the BTG package. The scope of the contract cannot be widened since a global merger of one of the JV Partners of the executing agency could not have been contractually taken care of by the Petitioner while drafting the contract. No contracting party can predict whether its counterparty would be having a global merger and also predict how this global merger would affect the BTG contract and provide appropriate remedies for the same. The Petitioner has further provided details on the issue.

ii) As part of the GOI initiative to indigenize manufacturing of Super Critical Boiler and Turbine in India in a phased manner as per the phased manufacturing plan (PMP), the MOP, GOI vide letter dated 4.9.2009, had directed the Petitioner's company to carry out bulk tendering of 660 MW generating units of the Petitioner for itself and on behalf of the JV companies and DVC. With a view to eliciting wide participation, five categories called Qualifying Route (QR) for eligibility of Bidders for participation in the bidding of projects under bulk tendering were specified, which are as under:

- i) *Qualified Steam Generator Manufacturer (QSGM)/ Qualified Steam Turbine Generator Manufacturer (QSTGM). QSGM/ QSTGM was to set up an Indian Manufacturing facility as a subsidiary or as a Joint Venture company with some Indian promoter.*
- ii) *The Indian subsidiary company of QSGM/QSTGM as per sl. No.(i)*
- iii) *The Indian JV company as per sl. No. (i) between an Indian company having experience in large turnkey projects and holding minimum 51% equity and QSGM/ QSTGM.*
- iv) *The Indian promoter of JV company at sl. No. (iii)*
- v) *An Indian Manufacturing company having experience of 500 MW subcritical Boiler/ turbine.*



vi) Further to the above Qualifying Routes, the MOP letter also stipulated that the bidders shall be required to furnish a Deed of Joint Undertaking (DJU), in which all the executing parties i.e. the bidder, the technology provider (QSGM/ QSTGM), the Indian manufacturing company and the Indian promoter of JV, as applicable, would be jointly and severally liable for the successful performance of the contract, including successful implementation of the phased manufacturing program.

vii) In addition to the above stipulation, the subsidiary or the JV, as the case may be, should have a valid technology transfer agreement, including a licence to manufacture and supply in India, with a qualified supercritical Boiler manufacturer or a qualified supercritical steam turbine manufacturer. The technology transfer agreement shall also necessarily cover the transfer of technological know-how in the form of a complete design dossier, design software, drawings and documentation, quality system manuals, and imparting relevant personnel training to the Subsidiary/ JV company.

viii) The Petitioner was required to necessarily carry out bidding as per the guidelines issued by MOP and include the same in its tender document and in the contract to be signed with the successful bidder. Based on the guidelines, bids for Steam Generator (Boiler) and Steam Turbine Generator were invited under the Bulk Tender (11 x 660 MW), including Solapur STPP (2 x 660 MW), which was issued on 23.6.2010, with a condition to set up manufacturing facilities in India by the bidders along with the QSGM and QSTGM. The entities that filed their bids in response to the invitation were Bharat Heavy Electrical Ltd. (BHEL), L&T Power & MHI Boilers Private Limited, Faridabad (L&T-MHI Boilers), BGR Energy System Limited, New Delhi (BGR) and Ansaldo-Caldaie Boilers India Pvt. Ansaldo-Caldaie Boilers India Pvt. was eliminated from the tendering process in Stage I (at the stage of opening the techno-commercial bid) on the ground that its bid did not meet the Qualification Requirements (QR). Against the above bid rejection, Ansaldo-Caldaie Boilers India Pvt filed a Writ Petition (WP('C) no 296/2011) before the Hon'ble Delhi High Court and the Division Bench of the Hon'ble Court vide its order dated 1.3.2011 quashed the Ansaldo-Caldaie Boilers India Pvt bid rejection and directed the Petitioner to allow them in accordance with the terms of the bid documents, not only to proceed to the next stage i.e., Stage-II (price bid) but also to permit them to participate in the technical discussions qua the tendering process.

ix) Against the Hon'ble High Court's Order, the Petitioner filed a Civil Appeal (C.A. No. 2134 of 2012) before the Hon'ble Supreme Court and the Hon'ble Supreme Court vide its order dated 16.2.2012 allowed the



Petitioner's appeal and set aside the impugned order dated 1.3.2011 of the Division Bench of the Hon'ble High Court. Immediately thereafter, the Petitioner carried out Stage II (price bid) of the tendering process for selecting the successful bidder for the projects included in bulk tendering. Subsequently, the above litigations delayed the evaluation of bids and the subsequent award for the Power Projects covered under bulk tendering.

x) BGR Energy System Ltd (BGRE) participated in SG Bulk Tender (660 MW) under Route (iv) of Qualifying Route (QR) by collaborating with M/s Hitachi Power Europe, Germany (HPE), a 100% subsidiary of Hitachi Ltd., Japan (HL) as the Qualified Steam Generator Manufacturer (QSGM). Further, in order to create a manufacturing facility in India by BGR & HPE, a JV company, i.e., M/s BGR Boilers Pvt. Ltd., was formed wherein BGRE is holding 70% equity and HPE is holding 30% equity. BGRE, HPE and JV Company, i.e., M/s BGR Boilers Pvt. Ltd had also submitted a Deeds of Joint Undertaking (DJU) for the successful performance of the contract, including the successful implementation of a phased manufacturing program. Subsequent to the bid process, BGRE was awarded the Solapur and Meja Projects of the Petitioner and the Raghunathpur Project of DVC.

xi) After the execution of the aforementioned agreements and contracts for the execution of the project amongst parties, the Thermal Power Generation systems of Hitachi Ltd.(HL), and Mitsubishi Heavy Industries Ltd (MHI) underwent a global merger into a new company i.e. Mitsubishi Hitachi Power Systems, Japan (MHPS) with a share of HL @35% and share of MHI @65% and became effective from 1.2.2014. For HPE, the new company formed after the merger was Mitsubishi Hitachi Power Systems Europe GmbH (MHPSE) (as a 100% subsidiary of MHPS).

xii) Pursuant to the above merger, all the assets of the Thermal Power Generation systems of HL & HPE, including the employees, intellectual property etc., have been transferred to the newly incorporated companies, i.e., MHPS and MHPSE, with the result that HL & HPE have been rendered merely as shell companies for thermal power business, post-merger. However, on the other hand, the aforementioned NTPC contracts were excluded from the above merger and were retained by HL/ HPE Europe for execution by them through agreements. Accordingly, HL/HPE lost the QSGM status.

xiii) The obligations, representations and assurances given by BGRE, HL/HPE and Indian JV company in the Deeds of Joint Undertaking (DJU) which was submitted along with the Bids (in line with the direction as



contained in the MOP letter dated 4.9.2009 and incorporated in the bid document) in respect to the capabilities and competence of the parties were essentially required to be valid for the entire implementation/contract period. As per the DJUs, the QSGM, i.e., HL/HPE, have the primary responsibility for the engineering, preparation of all design, design calculations, and manufacturing drawings and not merely to step into the shoes of BGRE and execute the contract in case of any failure by the contractor to perform. Hence, the capacity/ capabilities requirements of QSGM were ongoing in nature and must be maintained at all times.

xiv) After the hiving off and transfer of all assets, manpower, and intellectual property rights to the new entity, i.e., MHPS/ MHPSE, HL/ HPE was no longer retained as QSGM, as it became dependent on MHPS/ MHPSE to perform its obligations by way of outsourcing to the new entity i.e. MHPS/ MHPSE, for design and engineering, which was not permitted as per the DJU/ Contracts. The Petitioner made a remark on this issue that as per the MOP guidelines incorporated in the bid document and the contract, the deviation from DJU was not permitted and cannot be dispensed with. Though the issue of the merger has been in progress since early 2013, HL/HPE and BGRE brought the same to the knowledge of the Petitioner only in December 2013. The Petitioner took up the issue with BGRE/HL/HPE through its various letters.

xv) During the various meetings held with HL/ HPE/ MHPS/ MHPSE and BGRE, it was conveyed to BGRE, HL, HPE, MHPS and MHPSE that the provisions of the qualifying requirement and the DJU, as contained in the bid document and the contract were formulated as per the MOP, GOI directions contained in the letter dated 4.9.2009, has to be restored and ensured by the parties. The ability to 'Engineer' and 'Design' must always be maintained by the Technology Provider (QSTGM/QSGM), and no deviations from these requirements were permitted as per the contract. It was specifically conveyed by the Petitioner that consequent to the merger of HL/MHI, all assets, liabilities, manpower, and Intellectual property rights have been transferred to the new companies, i.e., MHPS/ MHPSE. Accordingly, HL/ HPE have become mere shell companies with respect to the thermal power generation systems business, with the ownership of technology, Intellectual property, etc., having been transferred to the new companies, i.e., MHPS and MHPSE. The above fact was also accepted by HL/ HPE vide letter dated 29.1.2014 that HL/ HPE are completely dependent on MHPS/ MHPSE (being the new technology provider) for the design and engineering and for the execution of contracts.



xvi) In view of the non-maintenance of QSGM status of HL/HPE subsequent to the merger, the Petitioner requested BGRE and HL/ HPE to ensure that MHPS and MHPSE (being the new technology provider) should step into the shoes of HL/HPE and sign, novate & execute the DJU and other relevant undertakings and the same was agreed to by Senior Executives of HL, HPE, MHPS, MHPSE, and BGRE during the meeting held on April 29-30, 2014. Further in the above meeting, it was agreed by all parties that MHPS/ MHPSE would step into the shoes of HL/ HPE and sign, novate & execute the DJU and other relevant undertakings, and the same was communicated to all parties i.e., BGRE/ HL/HPE/MHPS/MHPSE by the Petitioner vide its letter dated 1.5.2014. However, subsequent to the above meetings, letters dated 10.5.2014 and 23.5.2014 were issued by HL/ HPE to BGRE, which indicated that no action was taken by HL/HPE/MHPS/MHPSE to implement the understanding/agreement reached during the meeting. The Petitioner vide letters dated 21.5.2014, 25.5.2014, and 20.6.2014 to HL/ HPE/ MHPS/ MHPSE, again requested to promptly act as agreed in the meeting dated 29-30 April 2014. In spite of the above rigorous persuasion and follow-up by the Petitioner, HL/ HPE, instead of taking any action to ensure that MHPS/MHPSE step into the shoes of HL/ HPE, again forwarded a new proposal vide letter dated 28.8.2014. The Petitioner vide letter dated 12.9.2014 again reiterated that measures must be taken immediately so that MHPS/ MHPSE steps into the shoes of HL/ HPE.

xvii) As regards the stand of the Petitioner for signing the novation agreement, it is worth mentioning that BGRE vide letter dated 21.1.2014 forwarded the copies of HL letter dated 26.3.2013 addressed to BGRE, wherein the details of the proposed integration of the thermal power generation systems businesses of HL & MHI was mentioned. HL proposed and sought BGRE consent in relation to the joint venture businesses for turbines, generators, and Boilers as part of the proposed integration.

xviii) The above merger proposal was not honoured by HL. However, M/s Larsen & Toubro (L&T), in association with M/s MHI, Japan, had formed two manufacturing companies, i.e., M/s L&T-MHI Boilers Pvt. Ltd for manufacturing Boilers and M/s L&T-MHI Turbine Generators Pvt Ltd., wherein, MHI was QSGM/ QSTGM. Subsequent to the merger of thermal business of MHI and HL, a new company MHPS had replaced MHI as QSGM/QSTGM. Consequent upon the award of SG package for the Tanda project, MHPS has signed the novation agreement and other documents to establish the change of QSGM from MHI to MHPS, thereby fulfilling the conditions of DJU, as stipulated in the MOP letter dated 4.9.2009/Bid





documents. Unlike the case of Tanda, the approach of HL/HPE/MHPS/MHPSE in the case of BGRE for the Solapur Project was not honoring the commitments as made earlier, thereby causing serious concern and apprehensions for the Petitioner, as the execution of the project was getting delayed due to non-supply of SG equipment. The Petitioner had made all-out efforts to persuade the parties (BGRE/ HL/ HPE/ MHPS/ MHPSE) to maintain the QSGM status. As the issue was not getting resolved, the CMD, NTPC, vide his letter dated 28.8.2014, requested the Ambassador of India to Japan to take up the issue of signing the novation agreement at an appropriate forum.

xix) Based on the letter from the CMD, NTPC, the Ambassador of India to Japan, vide his letter dated 17.9.2014, took up the issue with the then Chairman & CEO of Hitachi Ltd for his personnel intervention in resolving the issue concerning the Petitioner's projects, in order to have faster implementation. The Petitioner, with an endeavor to resolve at the earliest, constantly pursued Hitachi through the Indian Embassy and with BGRE through a series of correspondences and meetings held in India and Japan. The issue was finally resolved after a rigorous follow-up by the Petitioner and the intervention of the GOI, and accordingly, a tripartite agreement between Hitachi Ltd., Mitsubishi Hitachi Power System Ltd. (MHPS) and BGR Energy System Limited (BGRE) was signed on 19.2.2016 (copy of agreement attached as Annexure-X), wherein, M/s Hitachi/ HPE have been granted exclusive, royalty-encumbrance-hindrance free right to use the technologies in India through BGR-Hitachi JV, thereby restating the stipulations as contained in the DJU, as stipulated in the MOP letter dated 4.9.2009.

xx) Consequent upon the loss of QSGM status by M/S HPE w.e.f. 1.2.2014, till regaining the status of QSGM after the execution of tripartite agreement w.e.f. 19.2.2016, the design, manufacturing, inspection/ testing, supply, and erection of major equipment like headers, spiral walls, transition tubes, separators, water collecting vessels, Coal mills, and Burners got delayed with respect to their scheduled dates for Unit-I and Unit-II. All the efforts were made by the Petitioner to ensure the completion of the supply of equipment and its erection for Unit-I for making it ready for sustained full load operation of the Boiler / Unit-I. After the completion of all the major supplies for Unit-II (15.6.2017), the equipment's supplies for Unit-II could be started. The above delay in supplies and its erection led to delays in the hydro test, Boiler chemical cleaning, Boiler light up, and Boiler readiness, which was essentially required to be in place for a sustained full load operation for the declaration of COD of Unit-II.



xxi) The bulk tendering was an initiative of GOI with the intent to induct supercritical technology and to create an indigenous manufacturing facility in India through the transfer of technology. **For carrying out the above process, MOP issued the guidelines and directed the Petitioner to strictly adhere to the same.** Based on the directives and terms and conditions as specified by the GOI, the Petitioner awarded the contracts under “Bulk tenders”. As the entire process was specified by MOP, GOI any modification to the performance requirement and the terms and condition was beyond the purview of the Petitioner. Consequent upon Global merger of Hitachi Power with Mitsubishi Hitachi Power Systems Ltd. (MHPS), HL & HPE no longer remained the technology provider / QSGM. In order to meet the requirements of the contract framed as per the MOP, GOI guidelines, MHPS/ MHPS-E (being the new technology provider) were required to substitute HL/ HPE as QSGM through signing of a novation agreement, which could only be got established by 19.2.2016, after the intervention at the diplomat level between India and Japan. Therefore, the delay on account of the global merger of Hitachi Power with Mitsubishi Hitachi Power Systems Ltd. (MHPS) and its impact on the execution of the works by BGR-HPE (delay of 24 months) cannot be attributable to the Petitioner and is only for complying with the guidelines of MOP, GOI. Therefore, the Commission may condone the same.

xxii) The Petitioner could not have ignored the MOP’s bulk tendering guidelines and had to necessarily undertake the process of awarding contracts by following these guidelines. The contract having been properly awarded by the Petitioner, any delay on account of the global merger of Hitachi Power Europe and Mitsubishi, cannot be termed as a contractual issue, since the Petitioner could not have avoided the delay caused by such a global merger through contractual safeguard.

xxiii) The reasons for time overrun specified above are beyond the control of the Petitioner and therefore, the Commission may condone the delay for the completion of Unit-II.

13. The Petitioner, in compliance with the directions vide ROP of the hearing dated 6.2.2024, has submitted the details of the work completed, including the major milestone achieved along with the CPM and PERT chart. The Petitioner has specifically prayed for the condonation of the delay on the issue of the merger of Hitachi Power Europe (HPE) with Mitsubishi (QSGM issue). The





Petitioner had also submitted that the QSGM issue occurred when the Boiler of Unit-II was under construction, and the Unit-I Boiler was almost ready, and therefore, the QSGM issue severely impacted the Boiler progress of Unit-II. It has also stated that the QSGM issues started in the month of February 2014 and were resolved in February 2016, i.e., after 2 years, after the active intervention of the GOI and the Govt of Japan, and the same was beyond the scope of the Petitioner. All the supporting documents in this regard have been submitted by the Petitioner in the original petition and in the additional information dated 21.3.2024. The Petitioner has also submitted that due to the QSGM issues, Boiler parts/ auxiliaries supply remained badly affected during this period, and since the majority of Boiler parts/ auxiliaries were already received for Unit-I, this issue did not impact Unit-I much and Unit-I Boiler supplies were made by the OEM before the Unit-II supplies started. Further, there was a complete stoppage of Unit-II Boiler parts/ auxiliaries supplies during the ongoing QSGM issues, thus hampering the Unit-II Boiler activities, which were completely beyond the control of the Petitioner. It has further submitted that the Unit-II Boiler parts like Superheater coils (SH2/ 3 Coils), Evaporator connecting tubes, Membrane wall spiral tubes, Mill parts, ID, FD, PA fans parts, etc., were considerably delayed due to the QSGM issue and only after the supply of Boiler parts, the actual Boiler hydro test of Unit-II was completed on 31.8.2018 and subsequently further activities like Boiler light up, Steam blowing, Synchronization and the COD were completed within the scheduled timeline without any delay.

14. Further, the Petitioner, in compliance with the directions contained in the ROP of the hearing dated 6.2.2024, has submitted the revised Form 5E(ii) vide



affidavit dated 21.3.2024, indicating the causes of delay under each activity, as follows:

S. No	Milestone	Scheduled completion date	Actual completion date	Schedule duration (month)	Actual duration (month)	Delay (month)	Delay (days)	Reasons for the delay	Other activity affected
1	Zero Date	19.3.2012	19.3.2012	-	-	-	-	-	-
2	Boiler Erection start	19.11.2013	29.9.2013	20	18	0	0	-	-
3	Coils installation Unit-II	15.9.2014	25.9.2017	29	66	37	1110	QSGM Exceptional Delay in receipt of SH2/3 coils	Boiler light up steam blowing commissioning/full load COD
4	Connecting tubes installation Unit-II	19.11.2014	19.5.2018	32	74	42	1260	QSGM Evaporator connecting tubes received in 1/2018	Boiler light up steam blowing commissioning/full load COD
5	Membrane walls spiral and hopper installation Unit-II	5.5.2015	19.5.2018	37	74	37	1110	Sequential erection after completion of SH3 halted balance erection of pressure Parts.	Boiler light up steam blowing commissioning/full load COD
6	Boiler Hydro Test	21.9.2015	1.9.2018	42	77	35	1077	QSGM Make up water /Agitations (12 months) QSGM Issues (10 months)	Boiler light up steam blowing commissioning/ full load COD
7	Boiler Light up	1.4.2016	1.11.2018	48	79	31	955	Agitations RoU of MuW & RoW for 132 KV line (13 months) QSGM Issues.	steam blowing commissioning/ full load COD
8	Steam Blowing completion	19.7.2016	25.1.2019	52	82	30	920	Sequential activity	commissioning/ full load COD



S. No	Milestone	Scheduled completion date	Actual completion date	Schedule duration (month)	Actual duration (month)	Delay (month)	Delay (days)	Reasons for the delay	Other activity affected
9	Condenser erection Start	20.11.2014	5.9.2015	32	41	9	289	Non-Availability of Sand (14 months) Agitation	
10	TG Erection Start	19.1.2015	31.5.2015	34	38	4	116	Non-Availability of Sand	TG Box Up Synchronization commissioning/ full load COD
11	TG Box Up	19.2.2016	31.8.2016	47	53	6	194	Non-Availability of Sand/ Agitations	
12	Unit Synchronization	19.9.2016	15.2.2019	54	82	28	879	Agitations RoU of MuW QSGM Sequential Activity	commissioning/ full load COD
13	Commissioning/Full load	19.11.2016	17.3.2019	56	83	27	848	All Above issues and mentioned in Petition	COD
14	COD	19.1.2017	30.3.2019	58	84	26	800	All Above issues and mentioned in Petition	

15. The Respondent, MSEDCL, has submitted that the interval between the commissioning of the units taken by the Petitioner is 18 months, which is three times the allowable interval as per Appendix I of the 2014 Tariff Regulations. The Respondent has also submitted that the prolonged delay is not acceptable as it bears a direct impact on the opening capital cost, and as per IA dated 19.3.2012, the COD of Unit-II was scheduled for January 2017, but the same was achieved on 30.3.2019, with a delay of about 26 months. The Respondent has also submitted that the documentary dates pertain to the period 2009-15 do not justify the impact of the delay in the commissioning of Unit-II. It has further stated that the period of delay claimed has already been settled till the commissioning of



Unit-I and has therefore submitted that the Commission may disallow the claim for the delay. The Respondent, CSPDCL, in its reply, has submitted that in an order dated 6.1.2020 in Petition No. 178/GT/2017, the delay due to the merger of Hitachi Power Europe (HPE) resulting in the delay for the supply of material, being a contractual issue, has not been condoned and as such, the Petitioner cannot be compensated for the same.

16. The Petitioner, in its rejoinder to the above Respondents, has submitted that section 61 (d) of the Act provides for the recovery of costs and expenses in a reasonable manner and therefore, if it is established that the reasons for the time overrun are beyond the control of the Petitioner, the IDC & IEDC cannot be disallowed. It has also been submitted that the reasons for the time overrun run concurrently from the time the Petitioner started to execute the project. It has stated that the reasons for the delay in the declaration of the COD of Unit-I will be equally valid for Unit-II for the same time period, as many of the procedural activities pertaining to Unit-II also got delayed accordingly. The Petitioner has further submitted that the Commission has already passed an order dated 6.1.2020 with regard to the time overrun related to Unit-I, and though the Petitioner has filed an appeal against the said order, the issue in the present Petition is with regard to the interval between the COD of Unit-I and Unit-II, which has to be dealt with on its own merits and not mixed up with the findings given in the order dated 6.01.2020 with regard to the Unit-I. The Petitioner has further submitted that it is not at fault for the delay due to the merger of Hitachi Power with Mitsubishi, as it had put all-out efforts to resolve the issue in the best possible manner and at all levels and the issue could only get resolved by



19.2.2016, due to intervention at the diplomatic level of both countries viz., India and Japan. It has been further submitted that the delay has a severe impact on achieving the timely completion of many critical activities, leading to a further procedural delay for each of the units of the station. The Petitioner, while pointing out that the time interval of 6 months between the commercial operation of various units is a directory and not mandatory, has submitted that in several cases, it is noticed that the practical situations on the ground delay the declaration of COD of the subsequent units and in such cases, the right approach would be to examine the reasons for such delay, and apply prudence check, based on the law laid down by the APTEL as well as the earlier orders passed by the Commission and thereafter to decide on the question of time overrun and cost overrun to be allowed. The Petitioner has further submitted that the submissions made by the Respondent MPPMCL are incorrect and proceed on a misunderstanding of Regulation 22(1)(b) of the 2014 Tariff Regulations. It has stated that if the issue can be resolved by providing adequate contractual safeguards, the said issue may be considered as controllable. For instance, in the present case, the Petitioner could not have ignored the stipulations of the MOP, GOI to float the contract for project execution and it was for the first time that a supercritical technology was being implemented by any thermal generator in the country and several such plants were expected to be set up including Solapur, Lara, Meja, Nabinagar, etc. It has stated that to ensure that the supercritical technology is implemented without any major challenges, the Petitioner had followed the guidelines of the MOP, GOI while calling for bids and the award of contracts with regard to the generating station. Since BGR was a successful bidder, the Petitioner executed the contract in such a manner that



there was no deviation from the standard contract prescribed by the MOP. The Petitioner has submitted that if the technology supplier of BGR i.e., Hitachi entered into a global merger with another conglomerate, Mitsubishi Corporation, surely, the Petitioner could not have done anything but to protect itself in respect of its contract with BGR that would absorb the effects of such a global merger. The test, therefore, to be applied is whether the generating company would have, despite due diligence, provided any safeguards in its contracts, so as to ensure that the project implementation does not get affected. In so far as the present case is concerned, the Petitioner has submitted that it had provided adequate safeguards in its contract with BGR, however, a global merger of technology supplier of BGR would never have been anticipated by any of the parties and therefore to contend that the Petitioner ought to have managed the situation and built-in adequate contractual safeguards is incorrect and ought to be rejected. The Petitioner has reiterated that the delay which occurred due to the global merger of Hitachi & Mitsubishi, is an event outside the control of the Petitioner and must be treated as such, for the purposes of tariff determination. The Petitioner has further submitted that this Commission has in its order dated 6.1.2020 (Petition No. 178/GT/2017) expressed its views on this issue in a summary manner, without dealing with the contentions raised by the Petitioner, and therefore, nothing prevents the Commission from taking a different view, since the generating station has achieved COD only with the commissioning of Unit-II and the full reasons for time overrun along with the documentary evidence is available before this Commission at this stage. The Petitioner has contended that there is no incorrectness in its approach, either in conducting the competitive bidding, awarding the contract, or the terms of the contract, and this is not the



case where the Petitioner is seeking to take advantage of its own wrong. Accordingly, the Petitioner has prayed that the Commission may examine the detailed reasons for the time overrun that occurred in the commissioning of Unit-II, which was completely beyond its control.

17. The submissions have been considered. The Commission has examined the reasons/events indicated by the Petitioner for the delay in the COD of Unit-II of the generating station. The decisions of the Commission in its order dated 6.1.2020 (in Petition No. 178/GT/2017) on the various issues raised by the Petitioner for the delay in commissioning of Unit-I, which had also caused the delay in the commissioning of Unit-II, are summarised below:

- (a) Law and order and Right of Use (ROU) issue: The Commission had condoned the delay for the period from 1.8.2015 to 31.8.2016.
- (b) Work stoppage due to agitation by Project Affected Persons (PAP): Work stoppage due to agitation by the Project Affected Persons (PAP) during the period [1.6.2013 to 31.7.2013, 1.7.2014 to 31.12.2014 and 1.9.2016 to 31.12.2016] was beyond the control of the Petitioner and the delay on this count, was condoned.
- (c) Non-availability of Sand and Moorum due to the (i) delay in mining permission and (ii) Strike by Stone crushers: The Commission had condoned the delay for the period from 1.12.2012 to 31.3.2013 and from 1.1.2014 to 30.4.2014.
- (d) Reduced manpower on account of increase in minimum wages by the Government of Maharashtra: The Commission had condoned the delay for this reason.
- (e) Severe drought in Solapur: The Commission had condoned the delay for the period from 1.6.2012 to 31.7.2012, 1.7.2013 to 31.7.2013, 1.6.2014 to 31.7.2014 and 1.6.2015 to 31.7.2016
- (f) Merger of Hitachi Power Europe (HPE), a JV venture partner for the execution of Boiler Package, with Mitsubishi: - The delay was not condoned on this count.
- (g) Additional Land Acquisition for Railway Siding works: The delay was not condoned.

18. On careful scrutiny of the documents now submitted by the Petitioner in



justification of the time over run of Unit-II due to the merger issue following facts emerge which need fresh consideration of the issue in hand:

- a) The bulk tendering for BTG under phased manufacturing program was an initiative of GOI with the intent to induct supercritical technology and for creating an indigenous manufacturing facility in India through the transfer of technology. For carrying out the above process, MOP issued the guidelines and directed the Petitioner to strictly adhere to the same.
- b) In terms of the guidelines issued by MoP, GOI, the petitioner awarded the contracts under "Bulk tenders". As the entire process was specified by MOP, GOI, any modification to the performance requirement and the terms and conditions was beyond the purview of the Petitioner
- c) Consequent upon Global merger of Hitachi Power with Mitsubishi Hitachi Power Systems Ltd. (MHPS), HL & HPE no longer remained the technology provider / QSGM.
- d) In order to meet the requirements of the contract framed as per the MOP, and GOI guidelines, MHPS/ MHPS-E (being the new technology provider) was required to substitute HL/ HPE as QSGM through signing of a novation agreement, which could only be got established by 19.2.2016, after the intervention at the highest diplomatic level between India and Japan.

19. The matter has been considered. We notice that the Petitioner had actively pursued the matter with regard to the non-availability of boiler material due to the global merger of the Japanese companies and had made correspondences with the Embassies of India and Japan, the Ministry of External Affairs, GOI, and the Ministry of Power, GOI. Since the matter was taken up by the Embassies of





India and Japan and the Ministry of External Affairs at an International Stage for the resolution involving multiple stakeholders, the Petitioner had minimal controlling influence in the matter. The Petitioner has made multiple correspondences and made an effort at the highest possible level for the resolution of the matter with utmost priority. Hence, we are of the view that the above-mentioned issue is a force majeure event, which was beyond the reasonable control of the Petitioner. Accordingly, we hold that the delay from 1.2.2014 (date of merger) to 19.2.2016 (signing of novation agreement) on this count and its consequential impact on Boiler readiness for unit-II, is an uncontrollable event for which the Petitioner cannot be held responsible. Therefore, the said delay is condoned.

20. Accordingly, based on the above deliberations and the time overrun allowed in Petition no. 178/GT/2017 (para-17 to para19 above) for unit-I, which is also applicable to Unit-II, the details of the time overrun allowed for unit-II after removing the overlapping periods are as under:

- a) 1.6.2013-31.7.2013 (61 days due to work stoppage due to agitation by project-affected persons)
- b) 1.2.2014-19.2.2016 (749 days due to global merger issue and GOI policy of indigenisation)
- c) 20.2.2016-31.8.2016 (194 due to Law & order and Right of Use issue)
- d) 1.9.2016-31.12.2016 (122 days due to work stoppage due to agitation by project-affected persons)

Accordingly, the total time overrun condonable due to various reasons beyond the reasonable control of the Petitioner is 1126 days.

21. Further, we analyse the progress of the project based on the milestone



activities submitted by the Petitioner are as under:

Description	Scheduled	Actual	Delay claimed (days)
Boiler Erection Start	19.11.2013	29.9.2013	0
Boiler Hydro Test	19.9.2015	31.8.2018	1077
Boiler Light Up	19.4.2016	30.11.2018	955
Steam Blowing Completion	19.7.2016	25.1.2019	920
Synchronization	19.9.2016	15.2.2019	879
Full Load	19.11.2016	17.3.2019	848
<b>COD</b>	<b>19.1.2017</b>	<b>30.3.2019</b>	<b>800</b>

22. From the above table, it is observed that cumulative delay in achieving the COD is 800 days. Based on the deliberations at para 20 above, we have concluded that delay of 1126 days was beyond the reasonable control of the Petitioner. Thus, the Petitioner has been able to compress the time schedule of the activities subsequent to Boiler Hydro Test. Accordingly, time overrun of 800 days till COD of Unit-II/station is condoned.

23. Accordingly, based on the order dated 6.1.2020 in Petition no.178/GT/2017 and the deliberations above, the revised SCOD /actual COD for the units/ generating station is as under:

	SCOD	Time Overrun condoned (in days)	Revised SCOD	Actual COD	Time Overrun disallowed (in days)
Unit-I	19.7.2016	323	7.6.2017	25.9.2017	110
Unit II	19.1.2017	800	30.3.2019	30.3.2019	0

**Impact of time overrun on the contract price, IDC and IEDC etc.,**

24. As stated above, Commission has disallowed time overrun of 110 days for COD of Unit-I and has condoned total delay of 800 days for COD of Unit-II. Accordingly, the Commission has computed the capital cost of the project as on COD of Unit-I and Unit-II after making appropriate adjustment in IDC and IEDC due to time over run. The amount allowed for Unit-I is in accordance with order



dated 6.1.2020 in Petition No. 178/GT/2017 for IDC and IEDC etc.

### **Cost Overrun**

25. On scrutiny of Form-5B, it is observed that the Petitioner has incurred an expenditure of Rs.983508.43 lakh, on an accrual basis, as on the COD of Unit-II and the total estimated expenditure up to the cut-off date of generating station is Rs.1038847.16 lakh, as against the IA of Rs.1015426.40 lakh for the generating station.

26. It is observed that the estimated expenditure till the cut-off date is more than the IA amount approved by the Board of Petitioner. It is observed that the expenditure till the COD of Unit-II (30.3.2019) / 31.3.2019, works out to 96.86% of the IA expenditure decided for the generating station. Further, the amount projected by the Petitioner at the time of cut-off date which is above the IA expenditure approved, has been restricted, and any further expenditure will be pro-rated accordingly.

### **Capital Cost**

27. Clause (1) of Regulation 9 of the 2014 Tariff Regulations provides that the capital cost as determined by the Commission after prudence check, in accordance with this regulation, shall form the basis of determination of tariff for existing and new projects. Clause (2) of Regulation 9 of the 2014 Tariff Regulations provides as under:

*“(2) The Capital cost of a new project shall include the following:  
(a) The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;  
(b) Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;*



- (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 11 of these regulations;
- (e) Capitalised Initial spares subject to the ceiling rates specified in Regulation 13 of these regulations;
- (f) Expenditure on account of additional capitalization and de-capitalisation determined in accordance with Regulation 14 of these regulations;
- (g) Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the COD as specified under Regulation 18 of these regulations; and
- (h) adjustment of any revenue earned by the transmission licensee by using the assets before COD.”

### **Capital cost as on COD of Unit-I (25.9.2017)**

28. The Petitioner has claimed the capital cost of Rs.517436.84 lakh as on the COD of Unit-I as against Rs.517104.26 lakh admitted vide order dated 6.1.2020 in Petition No. 178/GT/2017. The capital cost of Rs.517104.26 lakh allowed as on COD of Unit-I, vide order dated 6.1.2020, was based on the auditor-certified gross block as per IGAAP amounting to Rs.612915.37 lakh, on an accrual basis (or Rs.543150.70 lakh on a cash basis). The reconciliation of the capital cost claimed in the Petition vis-à-vis the capital cost allowed in an order dated 6.1.2020, as on COD of Unit-I, is as under:

	<i>(Rs. in lakh)</i>
Capital cost allowed in an order dated 6.1.2020 as on COD of Unit-I	517104.26
Add: Unamortized bond issue expenses disallowed in order dated 6.1.2020	332.57
<b>Capital cost claimed in the Petition as on COD of Unit-I</b>	<b>517436.84</b>

29. While allowing the capital cost vide order dated 6.1.2020 in Petition No. 178/GT/ 2017, it was presumed that the auditor certified gross block as per IGAAP, amounting to Rs.612915.37 lakh on an accrual basis (or Rs.543150.70 lakh on a cash basis) includes all the adjustments pertaining to IND-AS including the unamortized bond issue expenses of Rs.332.57 lakh. Accordingly, the Petitioner’s claim towards the unamortized bond issue expenses for Rs.332.57 lakh was not considered in order dated 6.1.2020, with liberty to consider the same at the time of truing-up of tariff, based on the additional documents to be



furnished in this regard.

30. The Petitioner vide affidavit dated 7.10.2022 has submitted a revised auditor certified gross block reconciliation as per IND-AS and IGAAP, as on the COD of Unit-I (25.9.2017) and COD of Unit-II (30.3.2017). On perusal of the auditor certified gross block reconciliation statement, it is clear that the unamortised bond issue expenses of Rs.332.57 lakh was earlier not part of the auditor certified gross block as per IGAAP, as on COD of Unit-I. Accordingly, the unamortised bond issue expenses of Rs.332.57 lakh is allowed, as on the COD of Unit-I, over and above the capital cost of Rs.517104.26 lakh as allowed in order dated 6.1.2020.

31. In view of above, the capital cost of Rs.517436.84 lakh as claimed by the Petitioner is allowed as on the COD of Unit-I.

**Capital cost as on COD of Unit-II (30.3.2019)**

32. The Petitioner has claimed the capital cost of Rs.885762.99 lakh as on the COD of Unit-II / the generating station. The reconciliation of capital cost claimed by the Petitioner as on the COD of Unit-II from the audited books of the Petitioner is as under:

	<i>(Rs. in lakh)</i>
Gross Block (as per IND AS) for the generating station as on COD of Unit-II*	986912.00
Add: IND AS adjustment to the Gross Block as on COD of Unit-II*	194.91
Gross Block as per IGAAP pertaining to the generating station, as on COD of Unit-II (on accrual basis) *	987106.91
Less: Un-discharged liabilities included above*	80897.87
Gross Block as per IGAAP pertaining to the generating station, as on COD of Unit-II (on cash basis) *	906209.05
Less: IEDC disallowed vide order dated 6.1.2020 as on COD of Unit-I	8706.24
Less: Expenditure towards contingency disallowed vide order dated 6.1.2020 as on COD of Unit-I	3598.49
Less: IDC disallowed vide order dated 6.1.2020 as on COD of Unit-I	10738.85



Gross Block as per IGAAP claimed for capitalisation, on cash basis, as on COD of Unit-II	883165.47
Add: Notional IDC	5193.89
Less: FERV gain not taken to capital cost / charged to revenue	3248.00
Add: Unamortized bond issue expenses	651.63
<b>Capital cost claimed as on COD of Unit-II</b>	<b>885762.99</b>

\* Auditor certified. Subsequently, the Petitioner vide affidavit dated 7.10.2022 has furnished a revised auditor certified gross block reconciliation as per IND AS and IGAAP as on COD of Unit-I (25.9.2017) and COD of Unit-II (30.3.2019). As per this reconciliation sheet, the revised gross block as per IGAAP as on COD of Unit-I is Rs.613247.94 lakh and that as on COD of Unit-II is Rs.987758.44 lakh. The difference between the earlier submitted auditor certified gross block as per IGAAP and that submitted vide affidavit dated 7.10.2022 is due to inclusion of unamortized bond issue expense as part of revised auditor certified gross block as per IGAAP. The unamortised bond issue expense was earlier claimed over and above IGAAP numbers by the Petitioner in the Petition. However, the Petitioner has not revised tariff forms and auditor certified reconciliation's pertaining to additional capital expenditure based on the revised IGAAP numbers. Accordingly, to remove ambiguity except for treatment of unamortised bond issue expense as on COD the earlier submitted auditor certificates has been considered.

33. The auditor certified capital cost, on accrual as well as on cash basis, amounting to Rs.987106.91 lakh and Rs.906209.05 lakh as on COD of Unit-II, includes IDC & FC amounting to Rs.129445.21 lakh and loan FERV amounting to Rs.20018.26 lakh. Accordingly, the hard cost component of capital cost as on COD of Unit-II works out to Rs.837643.44 lakh on accrual basis and ₹756745.58 lakh on cash basis. Further, the hard cost (on cash as well as accrual basis) includes IEDC amounting to Rs.69015.75 lakh as on COD of Unit-II. However, considering the details of IEDC as furnished by the Petitioner and disallowance of IEDC amounting to Rs.8706.24 lakh as on COD of Unit-I, in order dated 6.1.2020 in Petition No. 178/GT/2017, the allowable IEDC as on COD of Unit-II works out to Rs.60309.51 lakh. Further, considering the disallowance of expenditure towards contingency amounting to Rs.3625.55 lakh, on accrual basis and Rs.3598.49 lakh on cash basis, as on COD of Unit-I vide order dated 6.1.2020 in Petition No. 178/GT/2017, the hard cost considered for the purpose of tariff, as on the COD of Unit-II, works out to Rs.744440.85 lakh (net of un-discharged liabilities amounting to Rs.80870.81 lakh).



34. We now proceed to examine the Petitioner's claim for IDC & FC, FERV, Notional IDC, FERV gain charged to revenue and un-amortized bond issue expenses as on the COD of Unit-II as under:

(a) IDC & FC- The Petitioner has claimed IDC & FC amounting to Rs.129445.21 lakh as on the COD of Unit-II. However, considering the details of drawls, repayments, rate of interest applicable to each loan and disallowed IDC & FC of Rs.10738.85 lakh as on COD of Unit-I vide order dated 6.1.2020, the allowable IDC and FC, as on the COD of Unit-II works out to Rs.118160.56 lakh. Accordingly, the IDC & FC to be deducted as on COD of Unit-II works out to Rs.11284.66 lakh (including IDC & FC of Rs.10738.85 lakh disallowed in order dated 6.1.2020).

(b) FERV- The Petitioner has claimed FERV on loan amounting to Rs.20018.26 lakh as on the COD of Unit-II. Considering the details of drawls, repayments and exchange rates, the same is found to be in order and has accordingly been allowed for the purpose of tariff.

(c) Notional IDC- The Petitioner has claimed the notional IDC amounting to Rs.5193.89 lakh as on the COD of Unit-II. There is no provision under the 2014 Tariff Regulations for allowing Notional IDC. However, Regulation 9(2)(b) of the 2014 Tariff Regulations provides for the allowance of normative IDC (over and above actual IDC). Accordingly, considering the quarterly debt-equity position on *pari passu* basis corresponding to the actual cash expenditure, the allowable Normative IDC (over and above actual IDC) works out to Rs.1587.13 lakh as on COD of Unit-II.



(d) FERV charged to revenue- The Petitioner has claimed an amount of (-) Rs.3248.00 lakh towards FERV charged to revenue [Rs.2111.87 lakh pertaining to loan FERV charged to revenue post 1.4.2016 and (-) Rs.5359.87 lakh pertaining to short-term FERV charged to revenue pertaining to package FERV, as on COD of Unit-II]. On perusal of the statement showing details of FERV calculations, it is observed that FERV amounting to Rs.2111.87 lakh was charged to revenue prior to COD. As per consistent methodology adopted by the Commission, FERV charged to revenue up to COD is allowed as part of the capital cost for the purpose of tariff. Accordingly, the Petitioner's claim under this head is found to be in order and is therefore allowed.

(e) Un-amortized finance cost-The Petitioner has claimed Rs.651.63 lakh as the un-amortized bond issue expenses corresponding to the loan drawn after 1.4.2015. The Petitioner has submitted that in the erstwhile IGAAP, loan issue expenses paid upfront were accounted as and when incurred and the same used to be claimed as part of IDC. However, under IND AS, the upfront bond issue expenses are to be amortized over the tenure of the loan, resulting in part capitalization of IDC. It appears from the Petitioner's submission that the claim under this head is on account of differential treatment of upfront fees under IND-AS and IGAAP. Further, the claim under this head is over and above the auditor-certified (cash) capital cost (as per IGAAP), amounting to Rs.906209.05 lakh. Since the auditor certified cash capital cost of Rs.906209.05 lakh is as per IGAAP, any further adjustment to the same on account of IND-AS adjustment, without proper documentation/justification, is not justifiable. However, as stated above on perusal of the auditor certified gross block reconciliation statement





furnished by the Petitioner vide affidavit dated 7.10.2022, it is clear that the unamortised bond issue expenses of Rs.651.63 lakh were earlier not part of the auditor certified gross block as per IGAAP as on the COD of Unit-II. Accordingly, the unamortised bond issue expense of Rs.651.63 lakh is allowed, as on the COD of Unit-II.

35. Based on the above discussions, the capital cost allowed as on COD of Unit-II works out to Rs.881610.42 lakh (net of un-discharged liabilities of Rs.80870.81 lakh) as under:

<i>(Rs. in lakh)</i>	
Hard cost	744440.85
Add: IDC & FC	118160.56
Add: FERV	20018.26
Add: Normative IDC	1587.13
Add: FERV charged to revenue	(-) 3248.00
Add: Unamortised finance cost	651.63
<b>Capital cost allowed as on COD of Unit-II</b>	<b>881610.42</b>

### Initial Spares

36. Regulation 13 of the 2014 Tariff Regulations provides as under:

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

(a) Coal-based / lignite-fired thermal generating stations - 4.0%

(b) Gas Turbine / Combined Cycle thermal generating stations - 4.0%

xxx

Provided that:

i. where the benchmark norms for initial spares have been published as part of the benchmark norms for capital cost by the Commission, such norms shall apply to the exclusion of the norms specified above:

xxx

iv. for the purpose of computing the cost of initial spares, plant and machinery cost shall be considered as project cost as on cut-off date excluding IDC, IEDC, Land Cost and cost of civil works. The transmission licensee shall submit the break-up of head wise IDC & IEDC in its tariff application.”

37. The cut-off date of the generating station is 31.3.2022. The value of initial spares included in the claimed capital cost and cost of Plant and Machinery, as indicated in Form-5B by the Petitioner, as on the COD of Unit-I and Unit-II/station



is as under:

*(Rs. in lakh)*

			As on COD of Unit-I	As on COD of Unit-II / Station
A	Initial Spares claimed on cash basis		6269.50	9886.53
B	Add: Un-discharged liabilities corresponding to 'A' above		0.00	502.43
C	<b>Total initial spares claimed on accrual basis</b>	<b>(A+B)</b>	<b>6269.50</b>	<b>10388.95</b>
D	Cost of plant & machinery claimed on cash basis		331100.12	553055.16
E	Add: Liabilities corresponding to 'D' above		65513.65	73639.12
F	<b>Total cost of Plant &amp; Machinery claimed on an accrual basis</b>	<b>(D+E)</b>	<b>396613.77</b>	<b>626694.28</b>

38. Further, the Plant & Machinery cost as above, includes the cost of land as under:

*(Rs. in lakh)*

			As on the COD of Unit-I	As on the COD of Unit-II / Station
A	Cost of land on cash basis		40903.76	36965.96
B	Add: Un-discharged liabilities corresponding to 'A' above		31455.87	3405.39
C	<b>Total cost of Land claimed on an accrual basis</b>	<b>(A+B)</b>	<b>72359.63</b>	<b>40371.35</b>

39. On scrutiny of footnote to Form-5B along with Note-2 to the audited Financial statements for 2018-19, it is observed that an amount of Rs.33197.00 lakh pertaining to the expenditure of R&R nature, which was earlier capitalised as the cost of freehold land in the books of accounts, has been transferred from Land to Plant and Machinery in 2018-19 and has accordingly been considered by the Petitioner, as on the COD of Unit-II. The Petitioner has also submitted that the same has been done based on the opinion of the Expert Advisory Committee (EAC) of the Institute of Chartered Accountants of India (ICAI). Though the Petitioner is at liberty to frame/implement the accounting policies based on the opinion of the EAC of ICAI, however, as noted in paragraph no. 4 of order dated



12.9.2022 in Petition No. 18/RP/2022 in Petition No. 395/GT/2020, the mere re-classification of an asset (from freehold land to plant & machinery) in the books of accounts, does not change the very basic nature of the asset and should not also impact the tariff. Accordingly, irrespective of the re-classification of assets done by the Petitioner, the cost of Land and Plant and Machinery (excluding land) has been reinstated as under:

		<i>(Rs. in lakh)</i>			
			Accrual	Liabilities	Cash
<b>As on COD of Unit-I</b>					
A	Cost of plant & machinery claimed		396613.77	65513.65	331100.12
B	Less: Value of land included in above		72359.63	31455.87	40903.76
C	Less: Value of land re-classified to Plant & Machinery		0.00	0.00	0.00
D	<b>Plant &amp; machinery as on COD of Unit-I (net of cost of land)</b>	<b>(A-B-C)</b>	<b>324254.14</b>	<b>34057.78</b>	<b>290196.36</b>
E	<b>Revised cost of land as on COD of Unit-I *</b>	<b>(B+C)</b>	<b>72359.63</b>	<b>31455.87</b>	<b>40903.76</b>
<b>As on COD of Unit-II</b>					
F	Cost of plant & machinery claimed		586,322.94	70,233.73	516,089.21
G	Less: Value of land included in above		40371.34	3405.39	36965.95
H	Less: Value of land re-classified to plant & machinery		33197.00	0.00	33197.00
I	<b>Plant &amp; machinery as on COD of Unit-II (net of cost of land)</b>	<b>(F-G-H)</b>	<b>512754.60</b>	<b>66828.34</b>	<b>445926.26</b>
J	<b>Revised cost of land as on COD of Unit-II #</b>	<b>(G+H)</b>	<b>73568.34</b>	<b>3405.39</b>	<b>70162.95</b>

\* includes freehold land amounting to Rs.70264.90 lakh on accrual basis and Rs.38809.03 lakh on cash basis as on COD of Unit-I. # Includes freehold land amounting to Rs.71473.61 lakh on accrual basis and Rs.68068.22 lakh on cash basis as on COD of Unit-II.

40. Considering the cost of the initial spares claimed and the value of Plant and Machinery (net of cost of land), the initial spares claimed as a percentage of the Plant and Machinery works out to 1.93% on an accrual basis and 2.16% on a cash basis, as on the COD of Unit-I. Similarly, the initial spares claimed as a percentage of the Plant and Machinery work out to 2.03% on an accrual basis and 2.22% on a cash basis, as on the COD of Unit-II/Station. In view of the above, the initial spares claimed are well within the ceiling norm of 4% of the Plant and Machinery cost as specified in Regulation 13 of the 2014 Tariff



Regulations. Accordingly, no adjustment has been made for the purpose of tariff towards initial spares from the capital cost as allowed above, as on the COD of Unit-I and Unit-II.

### **Infirm Power**

41. The Commission vide its order dated 6.1.2020 in Petition No. 178/GT/2017 had recognized that the net revenue earned from the sale of infirm power from Unit-I of the project is Rs.1666.95 lakh as on the COD of Unit-I, and therefore, no separate adjustments are to be made. In the present Petition, the Petitioner has claimed fuel expenses of Rs.27430.68 lakh, on a cash basis and Rs.1101.19 lakh as an undischarged liability as on the COD of Unit-II, i.e., Rs.28531.87 lakh, after adjustment in the capital cost vide Form-5B.

42. The matter has been considered. On perusal of relevant documents, it is observed that there is a recovery of Rs.1508.86 lakh towards the sale of infirm power, as on the COD of Unit-II. Further, the Petitioner has claimed an amount of Rs.323.02 lakh under sub-heads of "Others". Also, the Petitioner, in compliance with the directions vide ROP of the hearing dated 6.2.2024 has submitted that the amount of Rs.323.02 lakh in the auditor certificate pertains to 'water charges' for the pre-commissioning activities of Unit-II. The Petitioner has further deducted the said amount from the water charges. Accordingly, the net pre-commissioning expenses work out to Rs.27011.25 lakh for the COD of Unit-II and the same is allowed.

43. Based on the above, the capital cost allowed as on COD of Unit-I and Unit-II works out to Rs.517436.83 lakh and Rs. 881610.42 lakh, respectively.



## **Additional Capital Expenditure**

44. Regulations 14 of the 2014 Tariff Regulations provides as under:

*“14. Additional Capitalization and De-capitalization:*

*(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 13;*
- (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.*

*(2) The capital expenditure incurred or projected to be incurred in respect of the new project on the following counts within the original scope of work after the cut-off date may be admitted by the Commission, subject to prudence check:*

- (i) Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law;*
- (ii) Change in law or compliance of any existing law;*
- (iii) Deferred works relating to ash pond or ash handling system in the original scope of work; and*
- (iv) Any liability for works executed prior to the cut-off date, after prudence check of the details of such un-discharged liability, total estimated cost of package, reasons for such withholding of payment and release of such payments etc.*

*(3) The capital expenditure, in respect of existing generating station or the transmission system including communication system, incurred or projected to be incurred on the following counts after the cut-off date, may be admitted by the Commission, subject to prudence check:*

- (i) Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law;*
- (ii) Change in law or compliance of any existing law;*
- (iii) Any expenses to be incurred on account of need for higher security and safety of the plant as advised or directed by appropriate Government Agencies of statutory authorities responsible for national security/internal security;*
- (iv) Deferred works relating to ash pond or ash handling system in the original scope of work;*
- (v) Any liability for works executed prior to the cut-off date, after prudence check of the details of such un-discharged liability, total estimated cost of package, reasons for such withholding of payment and release of such payments etc.;*
- (vi) Any liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments;*



(vii) Any additional capital expenditure which has become necessary for efficient operation of generating station other than coal /lignite-based stations or transmission system as the case may be. The claim shall be substantiated with the technical justification duly supported by the documentary evidence like test results carried out by an independent agency in case of deterioration of assets, report of an independent agency in case of damage caused by natural calamities, obsolescence of technology, up-gradation of capacity for the technical reason such as increase in fault level;

(viii) In case of hydro generating stations, any expenditure which has become necessary on account of damage caused by natural calamities (but not due to flooding of power house attributable to the negligence of the generating company) and due to geological reasons after adjusting the proceeds from any insurance scheme, and expenditure incurred due to any additional work which has become necessary for successful and efficient plant operation;

(ix) In case of transmission system, any additional expenditure on items such as relays, control and instrumentation, computer system, power line carrier communication, DC batteries, replacement due to obsolescence of technology, replacement of switchyard equipment due to increase of fault level, tower strengthening, communication equipment, emergency restoration system, insulators cleaning infrastructure, replacement of porcelain insulator with polymer insulators, replacement of damaged equipment not covered by insurance and any other expenditure which has become necessary for successful and efficient operation of transmission system; and

(x) Any capital expenditure found justified after prudence check necessitated on account of modifications required or done in fuel receiving system arising due to non-materialization of coal supply corresponding to full coal linkage in respect of thermal generating station as result of circumstances not within the control of the generating station:

Provided that any expenditure on acquiring the minor items or the assets including tools and tackles, furniture, air-conditioners, voltage stabilizers, refrigerators, coolers, computers, fans, washing machines, heat convectors, mattresses, carpets etc. brought after the cut-off date shall not be considered for additional capitalization for determination of tariff w.e.f. 1.4.2014:

Provided further that any capital expenditure other than that of the nature specified above in (i) to (iv) in case of coal/lignite-based station shall be met out of compensation allowance:

Provided also that if any expenditure has been claimed under Renovation and Modernization (R&M), repairs and maintenance under (O&M) expenses and Compensation Allowance, same expenditure cannot be claimed under this regulation.

(4) In case of de-capitalisation of assets of a generating company or the transmission licensee, as the case may be, the original cost of such asset as on the date of de-capitalisation shall be deducted from the vale of gross fixed asset and corresponding loan as well as equity shall be deducted from the outstanding loan and the equity respectively in the year such de-capitalisation takes place, duly taking into consideration the year in which it was capitalised.”

45. The projected additional capital expenditure allowed for the period from the COD of Unit-I (25.9.2017) to 31.3.2019, vide order dated 6.1.2020 in Petition No.



178/GT/2017, is as under:

*(Rs. in lakh)*

2017-18	2018-19	
25.9.2017 (COD of Unit-I) to 31.3.2018	1.4.2018 to 29.3.2019	30.3.2019 (COD of Unit-II) to 31.3.2019
3444.06	7476.57	0.00

46. The additional capital expenditure claimed for the period from the COD of Unit-I till 31.3.2019 is as under:

*(Rs. in lakh)*

S No.	Head of Work /Equipment	2017-18	2018-19		Regulations under which claimed
		25.9.2017 (COD of Unit-I) to 31.3.2018	1.4.2018 to 29.3.2019	30.3.2019 (COD of Unit-II) to 31.3.2019	
<b>Works part of the original scope of work</b>					
1	Works deferred for execution	5182.66	25283.66	0.00	14(1)(ii)
2	Capital spares	119.07	2370.57	0.00	14(1)(iii)
3	De-capitalization of MBOA	(-) 41.07	(-) 28.84	0.00	14(4)
	<b>Sub-total</b>	<b>5260.66</b>	<b>27625.39</b>	<b>0.00</b>	
4	Discharge of liabilities	11479.36	4451.01	0.00	14(1)(i)
	<b>Total additional capital expenditure claimed</b>	<b>16740.02</b>	<b>32076.40</b>	<b>0.00</b>	

### Reconciliation of the additional capital expenditure

47. The reconciliation of the additional capital expenditure claimed with the books of accounts for the period from the COD of Unit-I to 31.3.2019 is as under:

*(Rs. in lakh)*

			2017-18	2018-19	
			25.9.2017 (COD of Unit-I) to 31.3.2018	1.4.2018 to 29.3.2019	30.3.2019 (COD of Unit-II) to 31.3.2019
A	Opening Gross Block as per audited books *		611686.85	617602.67	986912.00
B	Closing Gross Block as per audited books *		617602.67	986912.00	986912.00
C	Additional capital expenditure as per audited books *	B-A	5915.82	369309.33	0.00
D	Capitalization pertaining to Unit-II *		0.00	336565.55	0.00
E	Additional capital expenditure claimed as per audited books *	C-D	5915.82	32743.78	0.00
F	IND AS Adjustment		36.33	424.01	0.00
G	Additional capital expenditure as per IGAAP for the generating station	E-F	5879.49	32319.77	0.00
H	Exclusions		(-) 4.82	(-) 146.55	0.00





I	Additional capital expenditure claimed for the generating station (on accrual basis)	G-H	5884.30	32466.32	0.00
J	Un-discharged liabilities included above		623.65	4840.93	0.00
K	Additional capital expenditure claimed for the generating station (on cash basis)	I-J	5260.66	27625.39	0.00
L	Discharges of liabilities		11479.36	4451.01	0.00
M	<b>Net Additional capital expenditure claimed including discharges for the generating station</b>	<b>K+L</b>	<b>16740.02</b>	<b>32076.40</b>	<b>0.00</b>

48. We now proceed to examine the additional capital expenditure claimed for the period 2017-19 as under:

**2017-18 (COD of Unit-I to 31.3.2018)**

49. The additional capital expenditure claimed by the Petitioner for the period 2017-18 is as under:

(Rs. in lakh)

S No.	Head of Work /Equipment	ACE claimed (Actual for 2017-18)						Regulations under which claimed
		Accrual basis	Ind AS Adj.	Accrual basis as per IGAAP	Un-discharged Liability included in col. 3	Cash basis	IDC included in col. 3	
1	2	3	3A	3B = 3+3A	4	5= (3B-4)	6	7
<b>New Claims</b>								
1	Turbine Generator	89.74	-0.79	88.96	41.56	47.40	27.73	14(1)(ii)
2	Ventilation System	25.82	0.00	25.82	4.91	20.91	0.00	14(1)(ii)
3	DM Water Plant	12.18	0.00	12.18	10.05	2.12	0.00	14(1)(ii)
4	Steam Generator	124.94	3.39	128.33	0.00	128.33	17.46	14(1)(ii)
5	Switchyard	1627.64	-11.45	1616.19	16.79	1599.40	290.20	14(1)(ii)
6	ESP	135.36	-0.19	135.18	9.81	125.37	0.00	14(1)(ii)
7	Fire Detection and Prevention System	32.86	0.00	32.86	22.71	10.15	0.00	14(1)(ii)
8	HT Switchgears	2.31	0.00	2.31	2.31	0.00	0.00	14(1)(ii)
9	Railway Siding-Track and S&T Works	49.93	0.00	49.93	47.94	1.99	0.00	14(1)(ii)
10	Tools & Plant	199.90	0.00	199.90	80.84	119.07	0.00	14(1)(iii)
11	Power Transformers	541.86	0.00	541.86	0.00	541.86	161.13	14(1)(ii)
12	PT Water Plant	94.53	0.00	94.53	82.95	11.57	0.00	14(1)(ii)
13	Station Lighting and Illumination	29.87	0.00	29.87	27.72	2.15	0.00	14(1)(ii)
14	Air Conditioning System	1.11	0.00	1.11	1.02	0.09	0.00	14(1)(ii)
15	Ash Handling Plant and AWRS	2131.29	-9.48	2121.81	117.11	2004.70	381.29	14(1)(ii)





S No.	Head of Work /Equipment	ACE claimed (Actual for 2017-18)						Regulations under which claimed
		Accrual basis	Ind AS Adj.	Accrual basis as per IGAAP	Un-discharged Liability included in col. 3	Cash basis	IDC included in col. 3	
16	Cooling Towers	46.45	0.00	46.45	4.64	41.81	0.00	14(1)(ii)
17	Capitalization of MBOA-Communication Equipment	7.75	0.00	7.75	5.27	2.48	0.00	14(1)(ii)
18	Capitalization of MBOA- EDP, WP machines & SATCOM equipment	97.70	0.00	97.70	6.35	91.35	0.00	14(1)(ii)
19	Capitalization of MBOA- Furniture & Fixture	3.33	0.06	3.38	0.00	3.38	0.00	14(1)(ii)
20	Capitalization of MBOA- Laboratory & workshop equipment's	12.87	0.00	12.87	0.00	12.87	0.00	14(1)(ii)
21	Capitalization of MBOA- Other Office Equipment's	20.94	0.15	21.09	2.38	18.71	0.00	14(1)(ii)
22	Capitalization of MBOA-Software	39.39	0.00	39.39	39.03	0.36	0.00	14(1)(ii)
23	MBOA- Hospital equipment's	1.17	0.00	1.17	1.17	0.00	0.00	14(1)(ii)
24	Capital Spares Total	1094.36	0.00	1094.36	99.07	995.29	0.00	14(1)(ii)
25	Construction Equipment's	1.82	0.00	1.82	0.00	1.82	0.00	14(1)(ii)
26	MBOA Vehicle	0.64	0.00	0.64	0.00	0.64	0.00	14(1)(ii)
27	Loan FERV	-482.10	0.00	-482.10	0.00	-482.10	0.00	14(1)(ii)
28	Decapitalisation of MBOA-Furniture & Fixture	-0.08	-0.07	-0.14	0.00	-0.14	0.00	14(4)
29	Decapitalisation of MBOA-EDP, WP machines & SATCOM equipment	-20.84	-19.30	-40.13	0.00	-40.13	0.00	14(4)
30	Decapitalisation of MBOA-Other Office Equipment's	-0.63	-0.16	-0.79	0.00	-0.79	0.00	14(4)
	<b>Total claim</b>	<b>5922.14</b>	<b>-37.83</b>	<b>5884.30</b>	<b>623.65</b>	<b>5260.66</b>	<b>877.81</b>	
	Add: Discharge of liability	0.00	0.00	11479.36	0.00	11479.36	0.00	14(1)(i)
	<b>Total including Discharge of liability</b>	<b>5922.14</b>	<b>-37.83</b>	<b>17363.67</b>	<b>623.65</b>	<b>16740.02</b>	<b>877.81</b>	



50. The Petitioner has claimed the total additional capitalization of Rs.5260.66 lakh in 2017-18, along with the discharge of liabilities for Rs.11479.36 lakh. The additional capitalization claimed in 2017-18 comprises of works, namely a Turbine Generator, Ventilation System, DM Water Plant, Steam Generator, Switchyard, ESP, Fire Detection and Prevention System, HT Switchgears, Railway Siding- Track, and S&T Works, Tools & Plant, Power Transformers, PT Water Plant, Station Lighting and Illumination, Air Conditioning System, Ash Handling Plant and AWRS, Cooling Towers, Capitalization of MBOA- (Communication Equipment, EDP, WP machines & SATCOM equipment, Furniture & Fixture, Laboratory & workshop equipment's, Other Office Equipments, Software and Hospital equipment's), Construction Equipment's, MBOA vehicle, Loan FERV which are within the original scope of work and in terms of Regulation 14(i)(ii) of the 2014 Tariff Regulations. The Petitioner has further claimed works like Decapitalisation of MBOA- Furniture& Fixture, EDP, WP machines & SATCOM equipment, and Other Office Equipment's as decapitalisation of assets in terms of Regulation 14(4) of the 2014 Tariff Regulations.

51. The Respondent MPPMCL has submitted that the claim for additional expenditure is about five times the amount allowed in an order dated 6.1.2020 in Petition No. 178/GT/ 2017. It has further submitted that the difference between the tools and plants and spares is undefined and hence the claim on tools and plants may be included in the spares amount. The Respondent has also submitted that the amount of Rs.5922 lakh on new claims is minor in nature and after the commissioning of Unit-I. and these claims cannot be considered



for capitalization and may be catered through O&M expenses. The Respondent has added that the claim is not acceptable as no justification has been submitted by the Petitioner for claiming the same in the year in which it has been put to use. In response, the Petitioner has clarified that in Petition No. 178/GT/2017, had claimed projected additional capital expenditure and did not include many components like the liability discharge for the years 2017-18 and 2018-19 and capital spares. It has stated that out of the claim for Rs.49816.42 lakh, an amount for Rs.15930.37 lakh was the discharge of liabilities and further Rs 2489.64 lakh was the claim against capital spares. Further, the claim of Rs.6449.37 lakh was against Loan ERV. The Petitioner has submitted that the Commission, vide its order dated 6.1.2020 in Petition No. 178/GT/2017, had directed the Petitioner to furnish the asset-wise details of the actual capital expenditure incurred along with the liabilities discharged for items within the original scope of work at the time of truing-up of tariff and accordingly, the Petitioner has provided all details. In justification of the claim, the Petitioner has submitted that all the works claimed are within the original scope of work.

52. Considering the submissions of the Petitioner and on prudence check, it is observed that the Petitioner claimed an amount of Rs.995.29 lakh in 2017-18 as additional capitalization towards capital spares under Regulation 14(1)(ii) of the 2014 Tariff Regulations. Since the initial spares allowed to the generating station up to the COD of Unit-II/31.3.2019 are within the ceiling limit as specified under Regulation 13 of the 2014 Tariff Regulations, the claim for capital spares is allowed under Regulation 14(1)(iii) of 2014 Tariff Regulations. Further, as the works are within the original scope and within the cut-off date (31.3.2022), we



allow the claim for additional capital expenditure of Rs.5301.73 lakh under Regulations 14(1)(ii) of the 2014 Tariff Regulations along with the liabilities discharged for Rs.11479.36 lakh in 2017-18 under Regulation 14(1)(i) of the 2014 Tariff Regulations.

53. The Petitioner has also claimed Rs.41.07 lakh towards the de-capitalisation of MBOA items (furniture & fixtures, WP machines & SATCOM equipment and other Office Equipment's) under Regulation 14(4) of the 2014 Tariff Regulations and on prudence check, the same is allowed.

### 2018-19

54. The additional capital expenditure claimed by the Petitioner for the period 2018-19, is as under:

(Rs. in lakh)

S. No	Head of Work /Equipment	ACE claimed (actual for 2018-19)						Regulation
		Accrual basis	Ind AS Adj.	Accrual basis as per IGAAP	Un-discharged Liability included in col. 3	Cash basis	IDC included in col. 3	
1	2	3	3A	3B = 3+3A	4	5= (3B-4)	6	7
<b>New Claims</b>								
1	Air Conditioning System	6.05	0.00	6.05	0.60	5.45	0.67	14(1)(ii)
2	Ash Dyke	3269.58	13.03	3282.61	0.00	3282.61	340.67	
3	Ash Handling Plant and AWRS	2730.18	39.39	2769.57	92.09	2677.48	520.61	
4	Chimney	233.70	0.00	233.70	0.00	233.70	53.77	
5	Coal Handling Plant	0.82	0.00	0.82	0.45	0.36	0.00	
6	Coal Handling Plant	4433.69	56.31	4490.00	283.60	4206.41	68.80	
7	Cooling Towers	185.27	0.03	185.30	0.00	185.30	0.69	
8	CW System	505.71	4.20	509.92	15.05	494.87	108.44	
9	DM Water Plant	10.30	0.04	10.34	0.00	10.34	1.39	
10	Enabling Works	0.23	0.00	0.23	0.10	0.12	0.00	
11	Enabling works-Communication Equipment's	19.54	0.00	19.54	8.60	10.94	0.00	14(1)(ii)
12	ESP	375.18	0.00	375.18	23.23	351.96	43.00	



S. No	Head of Work /Equipment	ACE claimed (actual for 2018-19)						Regulation
		Accrual basis	Ind AS Adj.	Accrual basis as per IGAAP	Un-discharged Liability included in col. 3	Cash basis	IDC included in col. 3	
1	2	3	3A	3B = 3+3A	4	5= (3B-4)	6	7
13	Fire Detection and Prevention System	86.90	0.00	86.90	0.00	86.90	8.60	
14	HT Switchgears	29.26	1.77	31.03	4.87	26.16	3.97	
15	Electrical Installation	33.02	0.00	33.02	4.65	28.37	0.00	
16	LT Switchgears	22.51	0.07	22.58	0.00	22.58	1.23	
17	Main Plant Buildings	38.70	0.00	38.70	15.18	23.52	0.00	
18	Main Plant Civil	252.46	0.00	252.46	3.16	249.30	52.51	
19	Makeup Water System	0.43	0.01	0.44	0.20	0.24	0.03	
20	MGR & Railway siding Buildings	19.35	0.00	19.35	0.00	19.35	0.00	
21	Offsite civil & Mech work	89.43	0.00	89.43	0.00	89.43	32.35	
22		53.01	0.00	53.01	0.00	53.01	0.00	
23		0.87	0.00	0.87	0.00	0.87	0.00	
24		0.01	0.00	0.01	0.00	0.01	0.00	
25	Outdoor Transformers	22.32	0.00	22.32	9.76	12.56	0.00	
26	Tools & Plants	511.35	0.00	511.35	50.59	460.76	0.00	
27	Power Transformers	27.31	0.06	27.37	0.00	27.37	3.59	
28	PT Water Plant	96.80	0.00	96.80	9.53	87.27	1.39	
29	Railway Siding-Track and S&T Works	71.93	0.00	71.93	0.00	71.93	0.00	
30	Roads	16.57	0.00	16.57	0.00	16.57	0.00	
31	Site Levelling & Infrastructure	239.74	0.00	239.74	65.31	174.43	37.96	
32	Station C&I System	345.49	4.23	349.72	47.44	302.28	26.58	
33	Station Lighting and Illumination	42.65	0.00	42.65	0.00	42.65	11.43	14(1)(ii)
34	Station Piping System	64.99	1.37	66.35	7.45	58.91	13.34	
35	Steam Generator	6334.05	-636.73	5697.32	3497.62	2199.70	146.22	
36	Switchyard	648.32	89.65	737.97	0.06	737.91	141.79	
37	Township	41.53	0.00	41.53	29.24	12.29	0.00	
38	Turbine Generator	1922.63	5.87	1928.50	0.83	1927.67	35.98	
39	Ventilation System	71.08	0.00	71.08	9.82	61.26	4.17	
40	Water Supply and Drainage System in Plant Area	219.69	0.00	219.69	0.00	219.69	32.94	14(1)(ii)
41		1.29	0.00	1.29	0.00	1.29	0.00	14(1)(ii)



S. No	Head of Work /Equipment	ACE claimed (actual for 2018-19)						Regulation
		Accrual basis	Ind AS Adj.	Accrual basis as per IGAAP	Un-discharged Liability included in col. 3	Cash basis	IDC included in col. 3	
1	2	3	3A	3B = 3+3A	4	5= (3B-4)	6	7
42	Capitalisation of MBOAs	367.44	0.00	367.44	6.97	360.47	0.00	
43	Capital Spares	3025.10	0.00	3025.10	654.53	2370.57	0.00	14(1)(iii)
44	Loan ERV	6449.37	0.00	6449.37	0.00	6449.37	0.00	14(1)(ii)
45	Decapitalisation of MBOAs: Part of Capital Cost	-26.40	-2.44	-28.84	0.00	-28.84	0.00	14(4)
	<b>Total claim</b>	<b>32889.46</b>	<b>-423.14</b>	<b>32466.32</b>	<b>4840.93</b>	<b>27625.39</b>	<b>1692.11</b>	
	Add: Discharge of liability:	0.00	0.00	4451.01	0.00	4451.01	0.00	14(1)(i)
	<b>Total add-cap claimed including Discharge of liability</b>	<b>32889.46</b>	<b>-423.14</b>	<b>36917.33</b>	<b>4840.93</b>	<b>32076.40</b>	<b>1692.11</b>	

55. The Petitioner has claimed the total additional capitalization of Rs.27625.39 lakh in 2018-19, along with the discharge of liabilities for Rs.4451.01 lakh. The additional capitalization claimed in 2018-19 comprise works, namely the Air Conditioning System, Ash Dyke, Ash Handling Plant and AWRS, Chimney, Coal Handling Plant, Cooling Towers, Electrical Installation, LT Switchgears, Main Plant Buildings, Makeup Water System, MGR & Railway siding Buildings, Offsite civil & Mech work, Station Lighting and Illumination, Station Piping System, Steam Generator, Water Supply and Drainage System in Plant Area, etc. within the original scope of work in terms of Regulation 14(i)(ii) of the 2014 Tariff Regulations. The Petitioner has also claimed the de-capitalisation of the MBOAs (part of the capital cost) within the decapitalisation of assets in terms of Regulation 14(4) of the 2014 Tariff Regulations. The Petitioner has also claimed an amount of Rs.2370.57 lakh for capitalisation of spares in terms of Regulation 14(1)(iii) of the 2014 Tariff Regulations. The Petitioner, in justification for the



same, has submitted that the claims are within the original scope of work.

56. The Respondent MPPMCL has submitted that the excessive amount of Rs.1692.11 lakh towards IDC is beyond the scope of the regulation and may be disallowed. It has also been submitted that the difference between the tools and plants and spares is undefined and hence, the claim on tools and plants may be included in the spares amount. The Respondent has further submitted that the loan FERV claimed under Regulation 14(1)(ii) cannot be considered as the work has been deferred for execution. It has, however, submitted that in case the FERV amount is found justifiable, the same may be permitted to be recovered from the beneficiaries directly through the monthly bills. The Respondent has also pointed out that the claim for Rs.32889.46 lakh towards new claims is minor in nature, and after the commissioning of Unit-I, these claims cannot be considered for capitalization, and may be catered through the O&M expenses.

57. In response, the Petitioner has clarified that the additional capital expenditure for 2018-19 towards the capital spares and tools and plants are different in nature and was shown in the Petition no. 178/GT/2017 and was also included in the Investment Approval. It has also been submitted that the amount claimed against the tools and plants has also not exceeded the original estimate. As regards the claim of Loan ERV amounting to Rs.6449.37 lakh in 2018-19, the Petitioner has clarified that up to the COD of the generating station, any gain or loss on account of FERV pertaining to the loan amount availed during the construction period is to be included in the capital cost and the Petitioner has been claiming the same as per the settled principles and the Commission has also been determining the capital cost accordingly. The Petitioner has stated that





to meet the demand of its beneficiaries, it has, in all prudence, duly undertaken the overhaul/maintenance of its units/equipment and carried out its regular inspection to discover any wear and tear, to maintain high machine availability at all times for the generating station. It has further submitted that the de-capitalisation claimed for the respective years is on account of small tools and tackles, C&I/ IT and communication related equipment's, which are the data and communication system of the plant, and due to rapid advancement of these technologies, they either become obsolete and the generating station have to replace them with the latest technologies. The Petitioner has added that this equipment is very sensitive, has a low life period and is prone to malfunctioning/accidental failure, and it is in this background that the Petitioner has claimed the de-capitalisation of the equipment's'. It has stated that while carrying out the aforesaid activities, parts of the equipment which become damaged / unserviceable are replaced/consumed so that the machine continues to perform up to its expected efficiency on a sustained basis. The Petitioner has submitted that it has not claimed the de-capitalisation of any other equipment, as they have a longer useful life and do not require frequent replacement.

58. Considering the submissions of the Petitioner and on prudence check, it is observed that the Petitioner has claimed additional capital expenditure of Rs.2370.57 lakh in 2018-19 towards spares under Regulation 14(1)(iii) of the 2014 Tariff Regulations. Since the initial spares allowed to the generating station up to the COD of Unit-II/31.3.2019 is within the ceiling limit as specified under Regulation 13 of the 2014 Tariff Regulations, the Petitioner claim for capital spares is allowed under Regulation 14(1)(iii) of 2014 Tariff Regulations. Further,



as the works are within the original scope of work and are within the cut-off date (31.3.2022), we allow the claim for additional capital expenditure of Rs.27625.39 under Regulations 14(1)(ii) of the 2014 Tariff Regulations along with the liabilities discharged for Rs.4451.01 lakh under Regulation 14(1)(i) of the 2014 Tariff Regulations for 2017-18. The Petitioner has further claimed an amount of Rs.28.84 lakh towards the decapitalisation of MBOA under Regulation 14(4) of the 2014 Tariff Regulations, and on prudence check, the same is allowed.

### Discharge of liabilities

59. The Petitioner has claimed discharge of liabilities as under:

*(Rs. in lakh)*

2017-18	2018-19	
25.9.2017 (COD of Unit-I) to 31.3.2018	1.4.2018 to 29.3.2019	30.3.2019 (COD of Unit-II) to 31.3.2019
11479.36	4451.01	0.00

60. The discharges as claimed above are in order and allowed for the purpose of tariff. The balance un-discharged liabilities corresponding to the admitted capital cost, as on 31.3.2019, works out as Rs.80870.81 lakh.

### Exclusions

61. The Petitioner has sought the exclusion for capitalization of the following items for the period 2017-19.

*(Rs. in lakh)*

S. No	Head of Work/ Equipment	2017-18	2018-19	
		25.9.2017 (COD of Unit-I) to 31.3.2018	1.4.2018 to 29.3.2019	30.3.2019 (COD of Unit-II) to 31.3.2019
A	IUT	5.66	(-) 145.51	0.00
B	Reversal of liabilities	(-) 10.48	(-) 1.04	0.00
C	Regrouping of plant equipment (effective)	0.00	0.00	0.00
	<b>Total (A+B+C)</b>	<b>(-) 4.82</b>	<b>(-) 146.55</b>	<b>0.00</b>

#### (a) Inter unit Transfer

62. The Petitioner has excluded amounts of Rs.5.66 lakh in 2017-18 and (-)



Rs.145.51 lakh in 2018-19 on account of Inter-Unit transfer. The Petitioner has submitted that the items under inter-unit transfer are not being considered by the Commission for the purpose of tariff and, hence kept under exclusion. The Commission has consistently allowed the exclusion of both positive and negative entries arising out of inter unit-transfers of a temporary nature, and accordingly, the Petitioner's claim under this head is allowed.

**(b) Reversal of liabilities**

63. The Petitioner has claimed the exclusion of reversal of liabilities amounting to Rs.10.48 lakh in 2017-18 and Rs.1.04 lakh in 2018-19. In justification for the same, the Petitioner has submitted that since the tariff is on a cash basis, the liabilities are excluded for the purpose of the tariff as per consistent methodology and hence, the reversal of liabilities has been considered as exclusions. Since the reversal of liabilities shall not impact the capital cost considered for the purpose of tariff determined on a cash basis, the exclusion of reversal of liabilities is in order and is allowed.

**(c) Regrouping of plant equipment**

64. The Petitioner has excluded amounts of (-) Rs.9639.12 lakh in 2017-18 for Power Transformers (Unit-I) Electrical Installation and Rs.9639.12 lakh towards Power Transformers (Unit-I) and Plant & Machinery. The Petitioner has further excluded amounts of (-) Rs.33197.00 lakh in 2018-19 for land and Rs.16598.50 lakh and Rs.16598.50 on account of Steam Generator (Unit-I) and Turbine Generator (Unit-I). The Petitioner has submitted that these assets have been regrouped in the books of account. Since the regrouping of these amounts has no impact on the additional capital expenditure for the period 2017-19, the



exclusion claimed under this head is allowed.

65. Accordingly, the claim of the Petitioner for exclusions is allowed.

### **Capital cost allowed for the period 2014-19**

66. Based on the above, the capital cost allowed for the period from COD of Unit-I (25.9.2017) to 31.3.2019 is as under:

	<i>(Rs. in lakh)</i>		
	2017-18	2018-19	
	25.9.2017 (COD of Unit-I) to 31.3.2018	1.4.2018 to 29.3.2019	30.3.2019 (COD of Unit-II) to 31.3.2019
Opening capital cost	517436.84	534176.85	881610.42
Add: Additional capital expenditure	16740.02	32076.40	0.00
<b>Closing capital cost</b>	<b>534176.85</b>	<b>566253.26</b>	<b>881610.42</b>
Average capital cost	525806.84	550215.06	881610.42

### **Debt-Equity Ratio**

67. Regulation 19 of the 2014 Tariff Regulations provides as under:

*“19. (1) For a project declared under commercial operation on or after 1.4.2014 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:*

*(i) where equity actually deployed is less than 30% of the capital cost actual equity shall be considered for determination of tariff:*

*(ii) the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:*

*(iii) 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 or the transmission licensee as the case may be 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 or the transmission system.*

*(2) The generating Company or the transmission licensee shall submit the resolution of the Board of the company or approval from Cabinet Committee on Economic Affairs (CCEA) regarding infusion of fund from internal resources in support of the utilisation made or proposed to be made to meet the capital expenditure of the generating station or the transmission system including communication system as the case may be.*

*(3) In case of the generating station and the transmission system including*



*communication system declared under commercial operation prior to 1.4.2014 debt equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2014 shall be considered.*

*(4) In case of generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2014 but where debt: equity ratio has not been determined by the Commission for determination of tariff for the period ending 31.3.2014 the Commission shall approve the debt: equity ratio based on actual information provided by the generating company or the transmission licensee as the case may be.*

*(5) Any expenditure incurred or projected to be incurred on or after 1.4.2014 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 (1) of this regulation.”*

68. Considering the details of the cumulative cash expenditure, as submitted in Form-14A, and the net loan position on the COD of Unit-I and Unit-II, the debt-equity ratio on the COD of Unit-I and Unit-II works out as 67.88:31.12 and 67.28:32.72; As per the above regulation, the debt-equity ratio of 70:30 has been considered for the purpose of tariff. Further, for the purpose of additional capital expenditure, the actual debt-equity ratio is within the normative norm of 70:30, and hence, the same has been considered.

### **Return on Equity**

69. Regulation 24 of the 2014 Tariff Regulation provides as under:

*“24. Return on Equity: (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 19.*

*(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, transmission system including communication system and run of the river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run of river generating station with pondage:*

*Provided that:*

- i) in case of projects commissioned on or after 1st April, 2014, an additional return of 0.50 % shall be allowed, if such projects are completed within the timeline specified in Appendix-I:*
- ii) the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever:*
- iii) additional RoE of 0.50% may be allowed if any element of the transmission project is completed within the specified timeline and it is certified by the*



*Regional Power Committee/National Power Committee that commissioning of the particular element will benefit the system operation in the regional/national grid:*

- iv) 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 or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO)/ Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system:*
- v) as and when any of the above requirements are found lacking in a generating station based on the report submitted by the respective RLDC, RoE shall be reduced by 1% for the period for which the deficiency continues:*
- vi) additional RoE shall not be admissible for transmission line having length of less than 50 kilometer.”*

70. Regulation 25 of the 2014 Tariff Regulations provides as under:

*“25. Tax on Return on Equity: (1) The base rate of return on equity as allowed by the Commission under Regulation 24 shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in the respect of the financial year in line with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee, as the case may be. The actual tax income on other income stream (i.e., income of non-generation or non-transmission business, as the case may be) shall not be considered for the calculation of “effective tax rate”*

*(2) Rate of return on equity shall be rounded off to three decimal places and shall be computed as per the formula given below:*

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

*Where “t” is the effective tax rate in accordance with Clause (1) of this regulation and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the company on pro-rata basis by excluding the income of non-generation or non-transmission business, as the case may be, and the corresponding tax thereon. In case of generating company or transmission licensee paying Minimum Alternate Tax (MAT), “t” shall be considered as MAT rate including surcharge and cess*

*(3) The generating company or the transmission licensee, as the case may be, shall true up the grossed up rate of return on equity at the end of every financial year based on actual tax paid together with any additional tax demand including interest thereon, duly adjusted for any refund of tax including interest received from the income tax authorities pertaining to the tariff period 2014-15 to 2018-19 on actual gross income of any financial year. However, penalty, if any, arising on account of delay in deposit or short deposit of tax amount shall not be claimed by the generating company or the transmission licensee as the case may be. Any under- recovery or over recovery of grossed up rate on return on equity after trueing up, shall be recovered or refunded to beneficiaries or the long term transmission customers/DICs as the case may be on year to year basis.”*



71. The Petitioner has claimed tariff considering the rate of Return on Equity (ROE) of 19.705% in 2017-18 and 19.758% in 2018-19. The Petitioner has arrived at these rates after grossing up the base rate of ROE of 15.50% with the MAT rate of 21.3416% in 2017-18 and 21.5488% in 2018-19. The same is in order and has accordingly been considered for the purpose of tariff. Accordingly, ROE has been worked out as under:

		(Rs. in lakh)			
		2017-18	2018-19		
		25.9.2017 (COD of Unit-I) to 31.3.2018	1.4.2018 to 29.3.2019	30.3.2019 (COD of Unit-II) to 31.3.2019	
A	Notional Equity- Opening	155231.05	160253.06	264483.13	
B	Addition of Equity due to additional capital expenditure	5022.01	9622.92	0.00	
C	Normative Equity – Closing	A+B	169875.98	264483.13	
D	Average Normative Equity	(A+C)/2	165064.52	264483.13	
E	Return on Equity (Base Rate)		15.500%	15.500%	
F	Effective Tax Rate		21.3416%	21.5488%	
G	Rate of Return on Equity (Pre-tax)	E/(1-F)	19.705%	19.758%	
H	<b>Return on Equity (Pre-tax) - (annualized)</b>	<b>D x G</b>	<b>31083.07</b>	<b>32613.45</b>	<b>52256.58</b>
I	<b>Return on Equity (Pre-tax) - (pro-rata)</b>		<b>16009.91</b>	<b>32434.74</b>	<b>286.34</b>

### Interest on loan

72. Regulation 26 of the 2014 Tariff Regulations provides as under:

*“26. Interest on loan capital: (1) The loans arrived at in the manner indicated in regulation 19 shall be considered as gross normative loan for calculation of interest on loan.*

*(2) The normative loan outstanding as on 1.4.2014 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2014 from the gross normative loan.*

*(3) The repayment for each of the year of the tariff period 2014-19 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of Decapitalization 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 up to the date of de-capitalization of such asset*

*(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be, 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.*





*(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 or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.*

*(6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.*

*(7) The generating company or the transmission licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such refinancing shall be borne by the beneficiaries and the net savings shall be shared between the beneficiaries and the generating company or the transmission licensee, as the case may be, in the ratio of 2:1.*

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

*(9) In case of dispute, any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, as amended from time to time, including statutory re-enactment thereof for settlement of the dispute: Provided that the beneficiaries or the long term transmission customers /DICs shall not withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of re-financing of loan.”*

73. Interest on the loan has been worked out as under:

- (i) The gross normative loan corresponding to the admissible capital cost works out to Rs.362205.78 lakh as on COD of Unit-I and Rs.617127.29 lakh as on COD of Unit-II/Station.
- (ii) The net normative opening loan as on the COD of Unit-I is the same as the gross normative opening loan, the cumulative repayment of normative loan up to the previous year/period being nil.
- (iii) Addition to the normative loan on account of additional capital expenditure allowed above has been considered.
- (iv) Depreciation allowed has been considered as repayment of a normative loan during the respective year of the period 2017-19. Further, repayments have been adjusted for de-capitalisation of assets considered for the purpose of tariff.



- (v) The Petitioner has claimed interest on the loan considering the weighted average rate of interest (WAROI) of 6.8983% for the period COD of Unit-I to 31.3.2018, 7.1757% for the period 1.4.2018 to COD of Unit-II and 7.2915% for the period from COD of Unit-II to 31.3.2019. However, after rectifying the minor linkage errors in the WAROI computation, the WAROI considered for the purpose of tariff works out to 6.8163% for the period COD of Unit-I to 31.3.2018, 7.0993% for the period 1.4.2018 to COD of Unit-II and 7.2120% for the period from COD of Unit-II to 31.3.2019, the same has been considered.

74. Necessary calculation of interest of loan is as under:

		<i>(Rs. in lakh)</i>			
			<b>2017-18</b>	<b>2018-19</b>	
			<b>25.9.2017 (COD of Unit-I) to 31.3.2018</b>	<b>1.4.2018 to 29.3.2019</b>	<b>30.3.2019 (COD of Unit-II) to 31.3.2019</b>
A	Gross opening loan		362205.78	373923.80	617127.29
B	Cumulative repayment of loan upto previous year / period		0.00	12672.14	38296.12
C	Net Loan Opening	A-B	362205.78	361251.66	578831.17
D	Addition on account of additional capital expenditure		11718.01	22453.48	0.00
E	Repayment of loan during the year/period		12672.63	25625.00	235.73
F	Less: Repayment adjustment on account of de-capitalization		0.49	1.02	0.00
G	Net Repayment	E-F	12672.14	25623.98	235.73
H	Net Loan Closing	C+D-G	361251.66	358081.16	578595.44
I	Average Loan	(C+H)/2	361728.72	359666.41	578713.31
J	WAROI		6.8163%	7.0993%	7.2120%
K	<b>Interest on Loan (annualised)</b>	<b>I x J</b>	<b>24656.44</b>	<b>25533.96</b>	<b>41736.93</b>
L	<b>Interest on Loan (pro-rata)</b>		<b>12699.76</b>	<b>25394.05</b>	<b>228.70</b>

## Depreciation

75. Regulation 27 of the 2014 Tariff Regulations provides as under:

*“27. Depreciation: (1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system including communication system or element thereof. In case of the tariff of all the units of a generating station or all elements of a transmission system including communication system 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 or the transmission system taking into consideration the depreciation of individual units or elements thereof.*

*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 or capital cost of all elements of the transmission system, for which single tariff needs to be determined.*



*(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 or multiple elements of transmission system, weighted average life for the generating station of the transmission system shall be applied. 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.*

*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 or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life and the extended life.*

*(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.*

*(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 and transmission system: 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.*

*(6) In case of the existing projects, the balance depreciable value as on 1.4.2014 shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to 31.3.2014 from the gross depreciable value of the assets.*

*(7) The generating company or the transmission license, as the case may be, 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.*

*(8) In case of de-capitalization of assets in respect of generating station or unit thereof or transmission system or element 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.”*

76. The Petitioner has claimed depreciation considering the weighted average rate of depreciation (WAROD) of 4.6755% for the period from COD of Unit-I to 31.3.2018, 4.6829% for the period from 1.4.2018 to COD of Unit-II and 5.0574%



for the period from COD of Unit-II to 31.3.2019. However, while doing so, the Petitioner has considered Rs.33197.00 lakh of land as Plant & Machinery. After rectification and considering the rates of depreciation as specified in Appendix-III to the 2014 Tariff Regulations, WAROD considered for the purpose of tariff works out to 4.6792% for the period from COD of Unit-I to 31.3.2018, 4.6829% for the period from 1.4.2018 to COD of Unit-II and 4.8798% for the period from COD of Unit-II to 31.3.2019. Further, the cumulative depreciation has been adjusted towards de-capitalisation of assets considered for the purpose of tariff. Depreciation has been calculated as under:

			<i>(Rs. in lakh)</i>		
			2017-18	2018-19	
			25.9.2017 (COD of Unit-I) to 31.3.2018	1.4.2018 to 29.3.2019	30.3.2019 (COD of Unit-II) to 31.3.2019
A	Average capital cost		525806.84	550215.06	881610.42
B	Value of freehold land included in 'A'		38809.03	38809.03	68068.22
C	Depreciable value	(A-B) x 90%	438298.03	460265.42	732187.98
D	Remaining depreciable value at the beginning of the year	(C) - 'J' of preceding year/period	438298.03	447593.29	693891.86
E	WAROD		4.6792%	4.6829%	4.8798%
F	<b>Depreciation during the period (pro-rata)</b>	#	<b>12672.63</b>	<b>25625.00</b>	<b>235.73</b>
G	<b>Depreciation during the year (annualised)</b>	<b>(A x E)</b>	<b>24603.78</b>	<b>25766.19</b>	<b>43021.07</b>
H	Cumulative depreciation before adjustment for de-capitalisation of assets, at the end of the year	(F) + 'J' of preceding year/period	12672.63	38297.14	38531.85
I	Depreciation adjustment on account of de-capitalization		0.49	1.02	0.00
J	<b>Net cumulative depreciation at the</b>	<b>H - I</b>	<b>12672.14</b>	<b>38296.12</b>	<b>38531.85</b>



			2017-18	2018-19	
			25.9.2017 (COD of Unit-I) to 31.3.2018	1.4.2018 to 29.3.2019	30.3.2019 (COD of Unit-II) to 31.3.2019
<b>end of the year/period</b>					

# (A x E x No. of days during the period)/Total No. of days during the year

### O&M Expenses

77. Regulation 29(1) (a) of the 2014 Tariff Regulations provides the following O & M norms for coal-based generating stations of 600 MW capacity and above:

*(Rs. in lakh/ MW)*

2017-18	2018-19
17.30	18.38

78. The Petitioner has claimed the O & M expenses as under:

*(Rs. in lakh)*

25.9.2017 (COD of Unit-I) to 31.3.2018	1.4.2018 to 29.3.2019	30.3.2019 (COD of Unit-II) to 31.3.2019
11418.00	12130.80	24261.60

79. It is noticed that the claims of the Petitioner during the period 2017-19 are on an annual basis, but have not been apportioned to the number of days and the capacity thereof. Accordingly, the normative O&M expenses determined in accordance with Regulation 29(1)(a) of the 2014 Tariff Regulations for the generating station vide order dated 6.1.2020 in Petition No. 178/GT/2017 has been considered and allowed in this order as under:

*(Rs. in lakh)*

O&M expenses	2017-18	2018-19	
	25.9.2017 (COD of Unit-I) to 31.3.2018	1.4.2018 to 29.3.2019	30.3.2019 (COD of Unit-II) to 31.3.2019
Annualised	11418.00	12130.80	24261.60
Pro rata	5881.05	12064.33	132.94

### Water Charges

80. Regulation 29(2) of the 2014 Tariff Regulations provide as under:

*“29. (2) The Water Charges and capital spares for thermal generating stations shall be allowed separately:*



*Provided that water charges shall be allowed based on water consumption depending upon type of plant, type of cooling water system etc., subject to prudence check.*

*The details regarding the same shall be furnished along with the Petition:*

*Provided that the generating station shall submit the details of year wise actual capital spares consumed at the time of truing up with appropriate justification for incurring the same and substantiating that the same is not funded through compensatory allowance or special allowance or claimed as a part of additional capitalisation or consumption of stores and spares and renovation and modernization”.*

81. In terms of the above regulation, water charges are to be allowed based on the water consumption, depending upon type of plant, type of cooling water system etc., subject to prudence check of the details furnished by the Petitioner. The Petitioner has claimed water charges vide Form-3A on an annualised basis as under:

<i>(Rs. in lakh)</i>		
<b>25.9.2017 (COD of Unit-I) to 31.3.2018</b>	<b>1.4.2018 to 29.3.2019</b>	<b>30.3.2019 (COD of Unit-II) to 31.3.2019</b>
1907.74	2047.60	2047.60

82. The Respondent MSEDCL has submitted that the actual quantum of water consumed is 21.76 MCM as per Form-3B as against 27.82 MCM considered by the Commission while approving the water charges for 2017-19. The Respondent has further submitted that even though the rate of water charges has increased, the water charges claimed by the Petitioner are 114% to 130% higher than the approved water charges and has therefore requested the Commission to perform prudence check, as the water charges claimed are more than double the approved water charges. The Respondent has submitted that the water charges claimed by the Petitioner is abnormally high and at plant's full capacity, whereas, the actual PLF achieved by the plant is much lower compared to the PLF corresponding to the full capacity. The Respondent has also submitted that as per the MOEF&CC notification dated 7.12.2015, the thermal



power plant needs to achieve specific water consumption up to a maximum of 2.5 m<sup>3</sup> /Mwh, but the Petitioner has claimed above the said limit. It has further stated that looking into the availability and demand scenario in the Western region, it is expected that the generating station was not required to operate at a PLF above 85% because of the MOD obligation of the beneficiaries, and therefore, the Petitioner should be directed to reduce its water contract for a lesser capacity to avoid unnecessary financial burden. The Respondent MPPMCL has submitted that the water consumption stated by the Petitioner in 2017-18 and 2018-19 is 5.92 MCM and 15.84 MCM, respectively, whereas the contracted quantum of water is 26.32 MCM and hence, the Petitioner may be directed to reduce its contracted quantum in view of the actual consumption. The Respondent CSPDCL has submitted that as per the MOEF &CC notification dated 28.6.2018, the plants installed after 1.1.2017 shall have to meet the specific water consumption of 3.0 m<sup>3</sup>/MWh, and accordingly the water consumption worked out corresponding to the actual generation of 1380 MU and 1783 MU in 2017-18 and 2018-9 is 4.14 MCM and 5.349 MCM respectively, and as such the water charges corresponding to above quantum may only be allowed. The Respondent has also contended that the water consumption was lesser as compared to the contracted quantum of the water and accordingly, the contracted quantum may be reduced.

83. The Petitioner, in its rejoinder, has submitted that it has provided all the details of the water allocation for the generating station, which has been done by the Government of Maharashtra from the Ujjani dam, as per the provisions & policy of the Government of Maharashtra. It has further submitted that the water





allocation of 52.6 MCM includes the evaporation loss of 30% (i.e.,15.72 MCM) and therefore, the water allocated, excluding the envisaged evaporation loss, for the usage of the generating station, works out as 36.87 MCM, which corresponds to approx. 3.1 cubic meter/MW/hr of specific water consumption, which is in line with the MOEF &CC notification. The Petitioner has added that the yearly water demand has been revised to 25 MCM by the Petitioner, and the charges have been claimed as per the procedure specified in the agreement entered into by the Petitioner with the Government of Maharashtra to protect the allocation for the variation in demand in future, as well as passing on the benefits to the beneficiaries revising the demand downwards on an annual basis. It has been submitted that as per the terms and conditions in clause 11 of the agreement, if the actual drawl is less than the contracted quantity, the minimum payment of water charges is to be made based on the allocation equivalent to 90% of the specified contracted quantity and if the actual drawl exceeds 10% of the contracted quantity, the water charges are payable @1.25 times of the applicable rate of water charges.

84. The Petitioner has claimed water charges in Form-3A and 3B, which mandates the submission of the details of water consumption depending upon the type of plant, type of cooling water system, etc. The Petitioner has furnished copy of the agreement with MIDC vide Annexure B in support of its claim. It has also provided the actual consumption as 5.92 MCM in 2017-18 and 15.84 MCM in 2018-19. The Petitioner has submitted that details are provided in Form 3A along with the revised detailed explanation of the expenses incurred under the aforesaid head in Form 3B. The actual expenses for water, including the power



charges are shown as Rs. 982.61 lakh in 2017-18 and Rs. 2047.60 lakh in 2018-19. On perusal of the balance sheet submitted by the Petitioner, the amount of water charges paid is Rs. 526.84 lakh in 2017-18 and Rs. 1924.47 lakh in 2018-19. The Petitioner has also submitted the details and the bills in compliance with the directions vide ROP of the hearing dated 6.2.2024. It is observed that the rates for water quantum as per bills provided were Rs. 48 lakh/mm<sup>3</sup> from February 2018 to June 2018 and Rs. 52.80 lakh/mm<sup>3</sup> from July 2018 to March 2019.

85. The matter has been examined. On scrutiny of the documents and Form 3B provided by the Petitioner, it is observed that the Petitioner has also claimed domestic water charges being recovered from its employees. It is observed that the Petitioner, vide additional submission dated 29.6.2021 in Petition No. 246/GT/2021 (tariff period 2019-24), has submitted that the actual water charges paid for the year 2018-19 got settled during 2019-20 and the same got revised from Rs. 2047.60 lakh to Rs. 1990.11 lakh. The Petitioner has not submitted any reconciliation/bill revision documents in the present Petition. Accordingly, in the light of observations made in Petition No. 246/GT/2021, the Commission is inclined to consider an amount of Rs. 1990.11 lakh for the year 2018-19. It is pertinent to mention that as the Petitioner has not submitted any bifurcation for the amount of Rs. 1990.11 lakh, the Commission has considered the Power charges of Rs. 549.01 lakh and the Domestic water charges of Rs. 3.39 lakh (domestic and domestic cess) for the year 2018-19 for computation purposes only. Further, as the water charges for domestic usage are not allowable, the same has been excluded from the computation of water charges.



86. As regards the claim of the Petitioner for Power charges amounting to Rs. 338.95 lakh in 2017-18 and Rs. 549.01 lakh in 2018-19, it is observed that various generating stations regulated by the Commission are located in the different States and the rate of water charges and policies of water allocation are different in different states. To negate the anomaly arising out of this situation, the Commission, in its regulations, has allowed water charges separately. Further, the normative auxiliary consumption norms are in due consideration of historical power consumption furnished for the various generating stations for the past five-year period and the same includes the power charges for pumping water as well. Accordingly, the water charges to be allowed are for the contracted quantum and actual water consumption for the generating station only and the Commission is of the considered view that power charges are not to be allowed separately in the water charges. The power charges incurred by the Petitioner under the Water charges sub-head had already been reimbursed as auxiliary consumption to the Petitioner. Accordingly, the Commission is not inclined to consider the power charges claimed under water charges as a sub-category.

87. Accordingly, the water charges allowed for the period 2017-19 are as under:

*(Rs. in lakh)*

	2017-2018	2018-2019	
	25.9.2017 (COD of Unit-I) to 31.3.2018	1.4.2018 to 29.3.2019	30.3.2019 (COD of Unit-II) to 31.3.2019
Water charges (period)	642.29	1429.83	7.88
Water Charges (annualized)	1246.99	1437.71	1437.71

### **Capital Spares**

88. The Petitioner has not claimed any capital spares on a consumption basis. Accordingly, the same has not been dealt with in this order.



## **Additional O&M expenses**

### **Impact of GST**

89. The Petitioner has claimed additional O&M expenses of Rs.158.72 lakh in 2017-18 and Rs.211.94 lakh in 2018-19 on account of the impact of the payment towards GST. It is observed that the Commission, while specifying the O&M expense norms for the 2014-19 tariff period, had considered taxes to form part of the O&M expense calculations and, accordingly, had factored the same in the said norms. This is evident from paragraph 49.6 of the SOR (Statement of Objects and Reasons) issued with the 2014 Tariff Regulations, which is extracted hereunder:

*“49.6 With regards to suggestion received on other taxes to be allowed, the Commission while approving the norms of O&M expenses has considered the taxes as part of O&M expenses while working out the norms and therefore the same has already been factored in...”*

90. Further, the escalation rates considered in the O&M expense norms are only after accounting for the variations during the past five years of the 2014-19 tariff period, which, in our view, also takes care of any variation in taxes. It is pertinent to mention that in case of a reduction of taxes or duties; no reimbursement is ordered. In this background, we find no reason to grant additional O&M expenses towards payment of GST.

### **Impact on account of Wage Revision**

91. The Petitioner has submitted that the Commission, while specifying the 2014 Tariff Regulations applicable for the 2014-19 tariff period, had taken note in SOR to the said regulations that any increase in the employee expenses, on account of pay revision shall be considered appropriately, on a case-to-case basis, balancing the interest of generating stations and consumers. The Petitioner has,



therefore, claimed the additional O&M expenses (annualized) for Rs.1064.79 lakh in 2017-18, Rs.1876.47 lakh in 2018-19 towards the impact of wage revision of the employees of CISF from 1.1.2016 and the employees of the Petitioner posted in the generating station, with effect from 1.1.2017. The Petitioner submitted the auditor-certified wage impact as Rs.548.45 lakh in 2017-18 and Rs.1876.47 lakh in 2018-19 in the Petition vide Annexure V. In this regard, the Petitioner vide affidavit dated 29.6.2021 has submitted the following:

- (a) Detailed break-up of the actual O&M expenses booked by the Petitioner for the 2014-19 tariff period.
- (b) Detailed break-up of actual O&M expense of the Corporate Centre and its allocation to various generating stations for the 2014-19 tariff period.
- (c) Break-up of wage revision impact on employee costs, corporate centre expenses, and salaries of the generating station CISF for the 2014-19 tariff period.

92. The Respondent MSEDCL has submitted that the impact of pay revision as claimed by the Petitioner does not permit any such additional claim, and the said expenses have already been factored in while determining the normative O&M expenses. The Respondent has referred to the Statement of Objects and Reasons (SOR) to the 2014 Tariff Regulations on this issue to substantiate its contentions. The Respondent CSPDCL has submitted that the Petitioner has claimed the increased O&M expenses under Regulations 54 & 55 of the 2014 Tariff Regulations, under the power to relax and power to remove of difficulty. It has stated that the Commission has determined the norms for O&M charges for the generating sets of different sizes and these norms include employee expenses as well. The Respondent has pointed out that for arriving at the norms for O&M expenses, the Commission has considered the employee expenses for



five years for the period 2008-09 to 2012-13, which were normalized, and subsequently, the norms for O&M charges were fixed. It has stated that any increase in employee expenses on account of the wage revision was supposed to be accounted for in the Tariff Regulations for the next control period, i.e., 2019-24. The Respondent has added that there is no provision in the 2014 Tariff Regulations for any additional O&M charges and as such, the claim of the Petitioner may be rejected on this count. It has stated that any additional O&M charges on account of pay revision cannot be passed on to the beneficiaries. The Respondent MPPMCL has submitted that the actual allowable O&M expenses for 2017-18 are less than the normative O&M expenses allowed and the actual O&M expenses would come under the range of the normative O&M expenses after disallowing and normalising the O&M expenses by excluding the claims which are disallowable, and therefore, the claim is not tenable. It has further submitted that since the Petitioner is a profit-making PSU, the burden of wage revision of its employees should be borne by the Petitioner as indicated in clause 3 and 17 of the Ministry of Heavy Industries and Public Enterprises Memorandum dated 3.8.2017. The Respondent has further submitted that that the Commission has determined the norms for O&M charges for the generating sets of different sizes, and these norms include the employee expenses as well. It has stated that for arriving at the norms for O&M charges, the Commission has considered the employee expenses for five years for the period 2008-09 to 2012-13, which were normalized, and subsequently, norms for O&M charges were fixed, and any increase in the employee expenses on account of wage revision were accounted under the Tariff Regulations for the next control period i.e., 2019-24. The Petitioner has clarified that the pay revision has not been



considered by the Commission in the 2019 Tariff Regulations, (for the control period 2019-24) also while determining the O&M expense norms. The Petitioner has further submitted that the wage revision is due to the implementation of the recommendations of 7th Pay Commission / Office Memorandum for DPE, which has resulted into an increase in the O&M expenses of the Petitioner and the recovery of the same is to be considered and allowed in line with Tariff principles enshrined under Section 61 (d) of the Electricity Act, 2003. It has stated that the increase claimed by Petitioner is a direct result of the implementation of the 7th Pay Commission recommendations and the decision of the GOI communicated vide OM of DPE dated 3.8.2017. The Petitioner has also submitted that while determining the normative O&M expenses for the period 2014-19, the Commission had taken into account the data in pre-defined templates for the previous tariff period, and since the impact of the 7th Pay Commission recommendations were not implemented in the previous tariff period, this could not have been part of the normative O&M expenses determined by the Commission. The Petitioner has therefore prayed for invocation of the powers under Regulation 54 (power to relax) and Regulation 55 (power to remove difficulty) under the 2014 Tariff Regulations in order to pass on the impact of the 7th Pay Commission recommendations. It is denied by the Petitioner that it has given incomplete information. The Petitioner has submitted that it has furnished all details in the formats vide additional affidavit dated 29.6.2021, including the breakup of the actual O&M expenses for the period 2014-19, the comparative table indicating the actual O&M expenditure vis-à-vis the normative O&M expenses recovered in tariff, the break-up of the actual O&M expenses including pay revision impact for Corporate Centre/other offices and the breakup of the





wage revision impact on employee cost claimed, expenses on corporate salaries of CISF & KV employee of the generating station for the period 2014-19.

93. We have examined the submissions and the documents available on record. As stated, the Petitioner has claimed a total amount of Rs.2941.26 lakh (Rs.1064.79 lakh of in 2017-18, and Rs. 1876.47 lakh in 2018-19) vide Form 3A as the impact of wage revision of employees of CISF and Kendriya Vidyalaya staff and for the employees of the Petitioner posted at the generating station. However, on perusal of Annexure C submitted vide affidavit dated 29.6.2021, it is observed that the Petitioner has claimed a total amount of Rs. 2424.90 lakh (Rs.548.44 lakh in 2017-18, and Rs.1876.46 lakh in 2018-19). Accordingly, we consider the amount of Rs.2424.90 lakh as the impact of wage revision claimed by the Petitioner vide Annexure V for computation. It is noted that the Petitioner has furnished the actual O&M expenses data prorated for the COD of Unit-I to 31.3.2019. The actual O&M expenses for 2017-18 are Rs.6744.97 (excluding water charges) as against the normative O&M expenses of Rs.5881.05 lakh, thereby causing a deficit of Rs.863.92 lakh. During 2018-19, the actual O&M expenses, on a pro-rata basis, were Rs.17491.54 lakh (excluding water charges) as against the normative O&M expenses of Rs.12163.24 lakh, showing a deficit of Rs. 5328.30 lakh in 2018-19. However, it is pointed out that the pro-rated normative O&M expenses work out to Rs.5881.05 lakh and Rs.12197.27 lakh for 2017 and 2018, respectively.

94. The Commission, while specifying the O&M expense norms under the 2014 Tariff Regulations, had considered the actual O&M expense data for the period from 2008-09 to 2012-13. However, considering the submissions of the



stakeholders, the Commission, in the SOR to the 2014 Tariff Regulations, had observed that the increase in employees' costs due to the impact of pay revision impact, will be examined on a case-to-case basis, balancing the interest of generating stations and the consumers. The relevant extract of the SOR is extracted under:

*“29.26. Some of the generating stations have suggested that the impact of pay revision should be allowed on the basis of actual share of pay revision instead of normative 40% and one generating company suggested that the same should be considered as 60%. In the draft Regulations, the Commission had provided for a normative percentage of employee cost to total O&M expenses for different type of generating stations with an intention to provide a ceiling limit so that it does not lead to any exorbitant increase in the O&M expenses resulting in spike in tariff. The Commission would however, like to review the same considering the macroeconomics involved as these norms are also applicable for private generating stations. In order to ensure that such increase in employee expenses on account of pay revision in case of central generating stations and private generating stations are considered appropriately, the Commission is of the view that it shall be examined on case-to-case basis, balancing the interest of generating stations and consumers.*

*33.2 The draft Regulations provided for a normative percentage of employee cost to total O&M expenses for generating stations and transmission system with an intention to provide a ceiling limit so that the same should not lead to any exorbitant increase in the O&M expenses resulting in spike in tariff. The Commission shall examine the increase in employee expenses on case-to-case basis and shall consider the same if found appropriate, to ensure that overall impact at the macro level is sustainable and thoroughly justified. Accordingly, clause 29(4) proposed in the draft Regulations has been deleted. The impact of wage revision shall only be given after seeing impact of one full year and if it is found that O&M norms provided under Regulations are inadequate/insufficient to cover all justifiable O&M expenses for the particular year including employee expenses, then balance amount may be considered for reimbursement.”*

95. The methodology indicated in the SOR quoted above suggests a comparison of the normative O&M expenses with the actual O&M expenses on a year-to-year basis. However, in this respect, the following facts need consideration:

- (a) The norms are framed based on the averaging of the actual O&M expense of past five years to capture the year-on-year variations in sub-heads of O&M;
- (b) Certain cyclic expenditures may occur with a gap of one year or two years and as such, adopting a longer duration, i.e. five years for



framing of norms, also captures such expenditure, which is not incurred on year to year basis;

- (c) When generating companies find that their actual expenditures have exceeded the normative O&M expenses in a particular year, they put departmental restrictions in place and try to bring the expenditures for the next year below the norms.

96. In consideration of the above facts, we find it appropriate to compare the normative O&M expenses with the actual O&M expenses for a longer duration so as to capture the variation in the sub-heads. Accordingly, it is decided that for ascertaining that the O&M expense norms provided under the 2014 Tariff Regulations are inadequate/ insufficient to cover all justifiable O&M expenses, including employee expenses, the comparison of the normative O&M expenses and the actual O&M expenses incurred shall be made for 2017-19 (COD of Unit-I to 31.3.2019) on a combined basis, which is commensurate with the wage revision claim being spread over these three years.

97. In order to substantiate the wage revision impact, the Petitioner has furnished a detailed breakup of the actual O&M expenses incurred during the 2014-19 tariff period.

98. The impact of wage revision/ pay revision could not be factored by the Commission while framing the O&M expense norms under the 2014-19 Tariff Regulations since the pay/wage revision came into effect from 1.1.2016 (CISF) and 1.1.2017 (employees of the Petitioner) respectively. As such, in terms of SOR to the 2014 Tariff Regulations, the following approach has been adopted for arriving at the allowable impact of pay revision:

- (a) Comparison of the normative O&M expenses with the actual O&M expenses incurred for the period from 2017-19, commensurate to the period for which wage revision impact has been claimed, after COD of the units. For like-to-like



comparison, the components of O&M expenses like productivity linked incentive, water charges, filing fee, ex-gratia, loss of provisions, prior period expenses, community development store expenses, ash utilization expenses, RLDC fee & charges and other Miscellaneous (without breakup/ details) which were not considered while framing the O&M expense norms for the 2014-19 tariff period, have been excluded from the yearly actual O&M expenses. Having done so, if the normative O&M expenses for the period 2016-19 are higher than the actual O&M expenses (normalized) for the said period, then the impact of wage revision (excluding PRP and ex-gratia) as claimed for the said period is not admissible / allowed as the impact of pay revision gets accommodated within the normative O&M expenses. However, if the normative O&M expenses for the period 2016-19 are lesser than the actual O&M expenses (normalized) for the same period, the wage revision impact (excluding PRP and ex-gratia) to the extent of under recovery or wage revision impact (excluding PRP and Ex-gratia), whichever is lower, is required to be allowed as wage revision impact for the period 2016-19.

99. As a first step, the expenditure against sub-heads of the O&M expenses, as indicated above, have been excluded from the actual O&M expenses incurred to arrive at the actual O&M expenses (normalized) for the generating station. Accordingly, based on the details as furnished by the Petitioner for the actual O&M expenses incurred for the generating station for the period from 25.9.2017 to 31.3.2019, the normalised O&M expenses calculated are as under:

*(Rs. in lakh)*

Year	Actual O&M expenses claimed	Normalized O&M expenses (computed)
2017-18	6974.01	4450.76
2018-19	19420.69	14216.27

100. The wage revision impact claimed by the Petitioner and the wage revision impact claimed (excluding PRP and ex-gratia) for the generating station are as under:

*(Rs. in lakh)*

Year	Wage revision impact claimed in Annexure C for the generating station	Wage revision impact claimed for the generating station (excluding PRP / ex-gratia and CC) (page 309 of Petition)
2017-18	548.44	199.18
2018-19	1876.46	670.11
<b>Total</b>	<b>2424.90</b>	<b>869.29</b>

101. Accordingly, the comparison of the normative O&M expenses with the



actual O&M expenses (normalized), along with the wage revision impact claimed by the Petitioner for the generating station for the period 2017-19 is as under:

	<i>(Rs. in lakh)</i>		
	<b>2017-18</b>	<b>2018-19</b>	<b>Total</b>
Actual O&M expenses (normalized) (a)	4450.76	14216.27	18667.03
Normative O&M Expenses allowed (b)	5881.05	12197.27	18078.32
Under / (Excess) recovery for the generating station (c)	(-) 1430.29	2019.00	588.71
Wage Revision Impact claimed excluding PRP/ex-gratia/CC expenses	199.18	670.11	869.29

102. It is observed that for wage revision impact during the period 2017-19, the actual O&M expenses (normalized) are in excess of the normative O&M expenses, and under-recovery is to the tune of Rs.588.71 lakh. The wage revision impact (excluding PRP/incentive, etc.) is Rs.869.29 lakh. As such, in terms of the methodology described above, the wage revision impact (excluding PRP/ex-gratia, etc.) is allowed to the extent of Rs.588.71 lakh for this generating station.

103. Accordingly, the total O&M expenses allowed to the generating station for the period 2017-19 is summarised below:

	<i>(Rs. in lakh)</i>		
	<b>2017-18</b>	<b>2018-2019</b>	
	<b>25.9.2017 (COD of Unit-I) to 31.3.2018</b>	<b>1.4.2018 to 29.3.2019</b>	<b>30.3.2019 (COD of Unit-II) to 31.3.2019</b>
Normative O&M expenses claimed under Regulation 29(1)(a) of the 2014 Tariff Regulations (a)	11418.00	12130.80	24261.60
<b>Normative O&amp;M expenses allowed under Regulation 29(1)(a) of the 2014 Tariff Regulations (b)</b>	<b>11418.00</b>	<b>12130.80</b>	<b>24261.60</b>
Water Charges Claimed (c)	1907.74	2047.60	2047.60
<b>Water Charges Allowed (d)</b>	<b>1246.99</b>	<b>1437.71</b>	<b>1437.71</b>
Capital Spares consumed claimed under Regulation 29(2) of the 2014 Tariff Regulations (e)	0.00	0.00	0.00
<b>Capital Spares consumed allowed under Regulation 29(2) of the 2014 Tariff Regulations (f)</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
Total O&M expenses claimed under Regulation 29 of the 2014 Tariff Regulations (a + c + e)	13325.74	14178.40	26309.20
<b>Total O&amp;M expenses allowed under Regulation 29 of the 2014 Tariff Regulations (b + d + f) - annualised</b>	<b>12664.99</b>	<b>13568.51</b>	<b>25699.31</b>



	2017-18	2018-2019	
	25.9.2017 (COD of Unit-I) to 31.3.2018	1.4.2018 to 29.3.2019	30.3.2019 (COD of Unit-II) to 31.3.2019
<b>Total O&amp;M expenses allowed under Regulation 29 of the 2014 Tariff Regulations (pro-rata)</b>	<b>6523.34</b>	<b>13494.16</b>	<b>140.82</b>
Impact of Wage revision claimed (i)	1064.79	1876.47	1876.47
<b>Impact of Wage revision allowed (j)</b>		<b>588.71</b>	
Impact of GST claimed (k)	158.72	211.94	211.94
<b>Impact of GST allowed (l)</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

*Note- The Figures mentioned above particularly for 2018-19 are on annualized basis. However, the tariff would be given on pro-rata basis.*

## Operational Norms

104. The operational norms in respect of the generating station, i.e., normative annual plant availability factor, gross station heat rate, specific fuel oil consumption, and auxiliary power consumption, are discussed below:

### **Normative Annual Plant Availability Factor**

105. Regulation 36(A)(a) of the 2014 Tariff Regulations provides the target availability of the generating station as under:

#### **(A) Normative Annual Plant Availability Factor (NAPAF)**

*(a) All Thermal generating stations, except those covered under clauses (b) (c) (d) & (e)- 85%. Provided that in view of the shortage of coal and uncertainty of assured coal supply on sustained basis experienced by the generating stations, the NAPAF for recovery of fixed charges shall be 83% till the same is reviewed.*

106. In terms of Regulation 36(A)(a) of the 2014 Tariff Regulations, the Commission, vide its order dated 6.1.2020 in Petition No. 178/GT/2014, allowed the NAPAF of 85% for the periods 2017-18 and 2018-19. The same is considered.

### **Gross Station Heat Rate (kCal/kWh)**

107. The Petitioner has claimed the GSHR of 2226.09 kCal/kWh. The Commission vide order dated 6.1.2020 in Petition 178/GT/2017 had allowed the



GSHR of 2226.09 kCal/kWh in terms of Regulation 36(C)(a) of the 2014 Tariff Regulations. Hence, the same is considered.

### **Specific Oil Consumption**

108. The secondary fuel oil consumption of 0.50 ml/kWh as allowed vide order dated 6.1.2020 in Petition No. 178/GT/2017, is in terms of Regulation 36(D)(a) of the 2014 Tariff Regulations and hence considered for the purpose of tariff.

### **Auxiliary Power Consumption**

109. The Auxiliary Power Consumption of 5.75% allowed vide order dated 6.1.2020 in Petition No. 178/GT/2017 is in terms of Regulation 36(E)(a) of the 2014 Tariff Regulations. Hence, the same has been considered for the purpose of revision of the tariff.

### **Interest on Working Capital**

110. Regulation 28 of the 2014 Tariff Regulations provides as under:

*“28 (1) The working capital shall cover:*

*(a) Coal-based/lignite-fired thermal generating stations*

*(i) Cost of coal or lignite and limestone 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/lignite stock storage capacity whichever is lower;*

*(ii) Cost of coal or lignite and limestone for 30 days for generation corresponding to the normative annual plant availability factor;*

*(iii) 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;*

*(iv) Maintenance spares @ 20% of operation and maintenance expenses specified in regulation 29;*

*(v) Receivables equivalent to two months of capacity charges and energy charges for sale of electricity calculated on the normative annual plant availability factor; and*

*(vi) Operation and maintenance expenses for one month.*

*xxx*





(2) The cost of fuel in cases covered under sub-clauses (a) and (b) of clause (1) of this regulation 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. (3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 or as on 1st April of the year during the tariff period 2014-15 to 2018-19 in which the generating station or a unit thereof or the transmission system including communication system or element thereof as the case may be is declared under commercial operation whichever is later. (4) Interest on working capital shall be payable on normative basis notwithstanding that the generating company or the transmission licensee has not taken loan for working capital from any outside agency.”

### **Fuel Cost and Energy Charges in Working Capital**

111. Regulation 28(2) of the 2014 Tariff Regulations provides that the computation of the cost of fuel, as part of the Interest on Working Capital (IWC), is to be based on the landed price and GCV of fuel as per actuals for the three months preceding the first month for which the tariff is to be determined.

Regulation 30(6)(a) of the 2014 Tariff Regulations provides as under:

*“30. Computation and Payment of Capacity Charge and Energy Charge for Thermal Generating Stations:*

*(6) Energy charge rate (ECR) in Rupees per kWh on ex-power plant basis shall be determined to three decimal place in accordance with the following formula:*

*(a) For coal based and lignite fired stations*

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

*Where,*

*AUX = Normative auxiliary energy consumption in percentage.*

*CVPF = Gross calorific value of primary fuel as received, in kCal per kg, per litre or per standard cubic metre, as applicable.*

*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.*

*LC = Normative limestone consumption in kg per kWh.*

*LPL = Weighted average landed price of limestone in Rupees per kg.*

*LPPF = Weighted average landed price of primary fuel, in Rupees per kg, per litre or per standard cubic metre, as applicable during the month.*

*SFC = Normative specific fuel oil consumption, in ml/ kWh*



*LPSFi= Weighted average landed price of secondary fuel in Rs/ ml during the month”.*

112. In terms of the above regulation, for determination of the energy charges in the working capital, the GCV on an ‘as received’ basis is to be considered.

Regulation 30(7) of the 2014 Tariff Regulations provides as under:

*“(7) 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, lignite, natural gas, RLNG, liquid fuel etc., as per the forms prescribed at Annexure-I 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, lignite, natural gas, RLNG, liquid fuel etc., details of blending ratio of the imported coal with domestic coal, proportion of e-auction coal shall also be displayed on the website of the generating company. The details should be available on its website on monthly basis for a period of three months.”*

113. The issue of ‘as received’ GCV as specified in Regulation 30 of the 2014 Tariff Regulations for the computation of energy charges was challenged by the Petitioner and other generating companies through various writ Petitions filed before the Hon’ble High Court of Delhi (W.P. No.1641/2014-NTPC v CERC). The Hon’ble Court directed the Commission to decide the place from where the sample of coal should be taken for measurement of GCV of coal on an ‘as received’ basis on the request of Petitioner. In terms of the directions of the Hon’ble High Court, the Commission vide its order dated 25.1.2016 in Petition No. 283/GT/2014 (approval of tariff of Kahalgaon STPS for the period 2014-19) decided as under:

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

*(a) There is no basis in the Indian Standards and other documents relied upon by NTPC etc. to support their claim that GCV of coal on as received basis should be measured by taking samples after the crusher set up inside the generating*



*station in terms of Regulation 30(6) of the 2014 Tariff regulations. (b)The samples for the purpose of measurement of coal on as received basis should be collected from the loaded wagons at the generating stations either manually or through the Hydraulic Auger in accordance with provisions of IS 436(Part1/Section1)- 1964 before the coal is unloaded. While collecting the samples the safety of personnel and equipment as discussed in this order should be ensured. After collection of samples the sample preparation and testing shall be carried out in the laboratory in accordance with the procedure prescribed in IS 436(Part1/Section1)-1964 which has been elaborated in the CPRI Report to PSERC.”*

114. Review Petition No.11/RP/2016 was filed by the Petitioner against the order dated 25.1.2016 in Petition No. 283/GT/2014 which was rejected by the Commission vide order dated 30.6.2016. The Petitioner has also filed Petition No. 244/MP/2016 before this Commission inter alia, praying for the removal of difficulties in view of the issues faced by it in implementing the Commission's orders dated 25.1.2016 and 30.6.2016 with regard to sampling of coal from loaded wagon top for measurement of GCV. The Commission, by its order dated 19.9.2018, disposed of the preliminary objections of the respondents therein and held that the Petition is maintainable. Against this order, some of the respondents have filed an appeal before the APTEL in Appeal Nos. 291/2018 (GRIDCO v NTPC & others), and the same is pending adjudication.

115. In Petition No. 327/GT/2014 filed by the Petitioner for determination of tariff of this generating station for the period 2014-19, the Petitioner had furnished the GCV of coal on an 'as billed' and not on an 'as received' basis for the preceding 3 months, i.e., for January 2014, February 2014 and March 2014 that were required for determination of Interest on Working Capital (IWC). Therefore, the Commission vide its order dated 6.2.2017 in Petition No.327/GT/2014 had considered GCV of coal on an 'as billed' basis and provisionally allowed adjustment for total moisture while allowing the cost of coal towards generation



and stock and two months' energy charges in the working capital.

116. As per the Commission's order dated 25.1.2016 in Petition No. 283/GT/2014, the Petitioner in Form-13F has considered the average GCV of coal on an "as received basis," i.e., from wagon top for the period from October 2016 to March 2019 for the purpose of computation of working capital for the period 2014-19. The Petitioner has further submitted that CEA vide letter dated 17.10.2017 has opined that a margin of 85-100 kCal/kg for the pit-head station and a margin of 105-120 kCal/kg for the non-pit head station is required to be considered as loss of GCV of coal on "as received" and on "as fired basis respectively. Accordingly, the Petitioner has considered a margin of 120 kCal/kg on average GCV of coal for the computation of the working capital of the generating station. The cost of fuel component in the working capital of the generating station based on (i) 'as received' GCV of coal with adjustment of 120 kCal/kg towards storage loss, (ii) landed price of coal for the preceding three months, i.e. December 2018 to February 2019 and (iii) GCV and landed price of Secondary fuel oil procured for the preceding three months i.e. December 2018 to February 2019 for the generating station, the cost of fuel component claimed by the Petitioner in the working capital is as under:

	<i>(Rs. in lakh)</i>		
	<b>2017-18</b>	<b>2018-1901</b>	
	<b>25.9.2017 (COD of Unit-I) to 31.3.2018</b>	<b>1.4.2018 to 29.3.2019</b>	<b>30.3.2019 (COD of Unit-II) to 31.3.2019</b>
Cost of Coal towards stock (30 days)	10845.039	10845.039	32041.493
Cost of Coal towards Generation (30 days)	10845.039	10845.039	32041.493
Cost of Secondary fuel oil 2 months	121.679	121.679	367.985

117. The Petitioner has further, claimed Energy Charge Rate (ECR) ex-bus of 286.45 paise/kWh from the COD of Unit-I till 29.3.2019 and 423.21 paise/kWh



from 30.3.2019 to 31.3.2019 for the generating station, based on the GCV and price of fuel (coal and secondary fuel oil) as indicated above.

118. The Respondent MSEDCL has submitted that Regulation 28(2) of the 2014 Tariff Regulations provides that the cost of fuel, for cases covered under sub-clauses (a) and (b) of clause 28(1) of the 2014 Tariff Regulations, for consideration of the working capital, shall be based on the gross calorific value of the fuel as per actuals for the three months preceding the first month for which tariff is to be determined. Further, even in the 2019 Tariff Regulations, the GCV of the fuel as per actual weighted average for the third quarter of preceding financial year in the case of each financial year for which tariff is to be determined for computing working capital. In view of provisions of both the Regulations, the Respondent has requested to disallow consideration of any such loss in GCV for computing working capital. The Respondent has submitted that for the calculation of energy charges for coal based and lignite fired stations, the weighted average GCV of coal as received, needs to be considered as per Regulation 30(6) of the 2014 Tariff Regulations. The Respondent has further submitted that there is no such provision to consider the GCV of coal after adjusting the GCV loss due to storage under the 2014 Tariff Regulations. The Respondent CSPDCL has submitted that the margin of 120 Kcal/Kg claimed by the Petitioner on the average GCV for the period from September 2017 to March 2019 for calculation of the working capital may be disallowed as the same is not supported by any regulations. The Respondent MPPMCL has submitted that the Petitioner has not submitted Form 15 in respect of Unit-I. It has also stated that the Petitioner is paying CIL a GCV of about 4800-4545 kCal/kg loading the



same on the beneficiaries and claiming the GCV of only 3832-3574 for the calculation of energy charges. It has further stated that the Petitioner may be directed to submit the clarification on the high landed price of domestic coal, the steep hike in the cost of domestic coal in January 2019, and also the justification for the 62% hike in the coal prices in 18 months from COD of Unit-I to COD Unit-II.

119. In response, the Petitioner has submitted that Form-15 for the period from June 2017 to August 2017 was already submitted in the additional submission vide Annexure-I in compliance with the direction contained in the ROP of the hearing dated 13.3.2019 in Petition No. 178/GT/2017. As regards the slippage of GCV, the Petitioner has clarified that the values are computed based on different parameters, and hence, the comparison of both values would not be appropriate. It has further been submitted that GCV, as billed, is based on the measurement of GCV of coal as stipulated in the FSA with the coal supplier. The Petitioner has submitted that the generating station is a non-pit head station, and because of the coal transportation charges, the landed price of the domestic coal was higher, for which the Petitioner has no control. Further, in order to serve its beneficiaries in a better and more efficient manner, the Petitioner has to make the fuel arrangement in order to make the machine available.

120. The matter has been examined. Regulation 28(2) of the 2014 Tariff Regulations provides that the computation of the cost of fuel as a part of IWC is to be based on the landed price and gross calorific value of the fuel, as per actuals, for the three months preceding the first month for which the tariff is to be determined. Thus, the calculation of IWC for the period 2014-19 is to be



based on such values for the months of June 2017, July 2017, and August 2017 for Unit-I and December 2018, January 2019 and February 2019 for Unit-II. Also, the consideration of loss of GCV of 120 kCal/kg cannot be considered, as the same is not as per provisions of the 2014 Tariff Regulations. The Commission has allowed the GCV, weightage average rate for coal and oil for Unit-I vide order dated 6.1.2020, which is applicable from 25.9.2017 till 29.3.2019. The Commission has also considered the data submitted vide Form 13F and Form 15 for Unit-II, for the GCV and landed cost of oil as well as coal and ECR are determined from COD of Unit-II to 31.3.2019 i.e. from COD of the generating station to 31.3.2019 as follows:

Sl. No	Description	Unit	Unit-I (25.9.2017 to 31.3.2018) and from 1.4.2018 to 29.3.2019	Unit-II /Station (30.3.2019 to 31.3.2019))
(1)	Capacity	MW	1x660	2x660
(2)	Gross Station Heat Rate	Kcal/kWh	2226.09	2226.09
(3)	Auxiliary Power Consumption	%	5.75	5.75
(4)	Weighted Average GCV of Oil	Kcal/L	10000.00	9679.76
(5)	Weighted Average GCV of Coal (as received)	Kcal/kg	3427.09	3739.10
(6)	Weighted Average price of oil	Rs/KL	29711.84	44927.68
(7)	Weighted Average price of Coal	Rs/MT	3997.75	6462.35
(8)	Rate of energy charge ex-bus	Rs/kWh	2.765	4.097

121. Considering the above, the cost for the fuel component in the working capital is worked out and allowed as under:

	<i>(Rs. in lakh)</i>		
	2017-18	2018-19	
	25.9.2017 (COD of Unit-I) to 31.3.2018	1.4.2018 to 29.3.2019	30.3.2019 (COD of Unit-II) to 31.3.2019
Cost of Coal towards stock (30 days per annum) corresponding to NAPAF	10465.30	10465.30	31013.18
Cost of Coal towards Generation (30 days per annum) corresponding to NAPAF	10465.30	10465.30	31013.18
Cost of Secondary fuel oil 2 months per annum corresponding to NAPAF	121.68	121.68	367.98





### Working Capital for Maintenance Spares

122. Regulation 28(1)(a)(iv) of the 2014 Tariff Regulations provides for maintenance spares @ 20% of the O&M expenses. Accordingly, maintenance spares @ 20% of the O&M expenses allowed for the generating station is as under:

*(Rs. in lakh)*

2017-18	2018-19	
25.9.2017 (COD of Unit-I) to 31.3.2018	1.4.2018 to 29.3.2019	30.3.2019 (COD of Unit-II) to 31.3.2019
2533.00	2713.70	5139.86

### Working Capital for Receivables

123. Receivables equivalent to two months of capacity charges and energy charges has been worked out duly taking into account mode of operation of the generating station on secondary fuel, is allowed as under:

*(Rs. in lakh)*

	2017-18	2018-19	
	25.9.2017 (COD of Unit-I) to 31.3.2018	1.4.2018 to 29.3.2019	30.3.2019 (COD of Unit-II) to 31.3.2019
Variable Charges - for two months corresponding to NAPAF	21344.81	21344.81	63254.73
Fixed Charges - for two months corresponding to NAPAF	16820.30	17587.42	30440.86
<b>Total</b>	<b>38165.11</b>	<b>38932.23</b>	<b>93695.60</b>

### O&M Expenses (1 month) for computation of working capital

124. In terms of Regulation 28(1)(a)(vi) of the 2014 Tariff Regulations, one month's O&M expenses allowed is as under:

*(Rs. in lakh)*

2017-18	2018-19	
25.9.2017 (COD of Unit-I) to 31.3.2018	1.4.2018 to 29.3.2019	30.3.2019 (COD of Unit-II) to 31.3.2019
1055.42	1130.71	2141.61

### Rate of Interest on Working Capital

125. In terms of Regulation 28(3) of the 2014 Tariff Regulations, the rate of



interest on working capital has been considered as 12.60% (Bank rate of 9.10% as on 1.4.2017 + 350 bps) for the period from COD of Unit-I to COD of Unit-II and 12.20% (Bank rate of 8.70% as on 1.4.2018 + 350 bps).

126. Accordingly, Interest on working capital has been computed as under:

		<i>(Rs. in lakh)</i>		
		2017-18	2018-19	
		25.9.2017 (COD of Unit-I) to 31.3.2018	1.4.2018 to 29.3.2019	30.3.2019 (COD of Unit-II) to 31.3.2019
A	Working Capital for Cost of Coal towards Stock (30 days per annum) corresponding to NAPAF	10465.30	10465.30	31013.18
B	Working Capital for Cost of Coal towards Generation (30 days per annum) corresponding to NAPAF	10465.30	10465.30	31013.18
C	Working Capital for Cost of Secondary fuel oil (2 months per annum) corresponding to NAPAF	121.68	121.68	367.98
D	Working Capital for Maintenance Spares @ 20% of O&M expenses	2533.00	2713.70	5139.86
E	Working Capital for Receivables – 2 months per annum corresponding to NAPAF	38165.11	38932.23	93695.60
F	Working Capital for O&M expenses – 1 month	1055.42	1130.71	2141.61
G	<b>Total Working Capital (A+B+C+D+E+F)</b>	<b>62805.80</b>	<b>63828.92</b>	<b>163371.40</b>
H	Rate of Interest	12.60%	12.60%	12.20%
I	<b>Interest on Working Capital (GxH) - annualised</b>	<b>7913.53</b>	<b>8042.44</b>	<b>19931.31</b>
J	<b>Interest on Working Capital (GxH) – pro-rata</b>	<b>4076.01</b>	<b>7998.38</b>	<b>109.21</b>

#### Annual Fixed Charges approved for the period 2014-19

127. Accordingly, the annual fixed charges approved for the generating station for the period 2014-19 are summarized as under:

		<i>(Rs. in lakh)</i>		
		2017-18	2018-19	
		25.9.2017 (COD of Unit-I) to 31.3.2018	1.4.2018 to 29.3.2019	30.3.2019 (COD of Unit-II) to 31.3.2019
	Depreciation	24603.78	25766.19	43021.07
	Interest on loan	24656.44	25533.96	41736.93
	Return on Equity	31083.07	32613.45	52256.58
	Interest on Working Capital	7913.53	8042.44	19931.31



O&M Expenses	12664.99	13568.51	25699.31
<b>Total</b>	<b>100921.81</b>	<b>105524.55</b>	<b>182645.19</b>

**Note:**(1) All figures are on annualized basis. (2) All the figures under each head have been rounded. The figure in total column in each year is also rounded. Because of rounding of each figure, the total may not be arithmetic sum of individual items in columns.

128. The pro rata fixed charges shall be calculated using the bases as shown below:

	2017-18	2018-19	
	25.9.2017 (COD of Unit-I) to 31.3.2018	1.4.2018 to 29.3.2019	30.3.2019 (COD of Unit-II) to 31.3.2019
Days in year	365	365	365
No. of days for which tariff is to be calculated	188	363	2

### **Summary**

129. The annual fixed charges approved in an order dated 6.1.2020 in Petition No. 178/GT/2017 and those claimed and approved in this order are summarised below:

	<i>(Rs. in lakh)</i>		
	2017-18	2018-19	
	25.9.2017 (COD of Unit-I) to 31.3.2018	1.4.2018 to 29.3.2019	30.3.2019 (COD of Unit-II) to 31.3.2019
Approved in order dated 6.1.2020	99822.03	100539.23	100475.33
Claimed in Petition	102171.70	106770.62	186675.58
<b>Allowed in this order</b>	<b>100921.81</b>	<b>105524.55</b>	<b>182645.19</b>

130. The difference between the annual fixed charges already recovered in terms of the Commission's order dated 6.1.2020 in Petitioner No. 178/GT/2017 and the annual fixed charges determined by this order shall be adjusted in terms of Regulation 8(13) of the 2014 Tariff Regulations.

### ***Month to Month Energy Charges***

131. The Petitioner shall compute and claim the Energy Charges on a month-to-month basis from the beneficiaries based on the formulae given under



Regulation 30(6)(a) of the 2014 Tariff Regulations.

132. Petition No. 582/GT/2020 is disposed of in terms of the above.

**Sd/-**  
**(Pravas Kumar Singh)**  
**Member**

**Sd/-**  
**(Arun Goyal)**  
**Member**

**Sd/-**  
**(Jishnu Barua)**  
**Chairperson**

