

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 264/GT/2021

Coram:

**Shri Jishnu Barya, Chairperson
Shri Ramesh Babu V., Member
Shri Harish Dudani, Member**

Date of Order: 22nd January, 2025

In the matter of:

Petition for revision of tariff of Muzaffarpur Thermal Power Station Stage-I (220 MW) for the period 2014-19, after the truing up exercise.

And

In the matter of:

Kanti Bijlee Utpadan Nigam Limited,
NTPC Bhawan, Core-7, Scope Complex,
7, Institutional Area, Lodhi Road, New Delhi – 110 003

.....Petitioner

Vs

1. Bihar State Power Holding Company Limited,
Vidyut Bhawan, Bailey Road,
Patna – 800 001.
2. North Bihar Power Distribution Company Limited,
Vidyut Bhawan, Bailey Road,
Patna 800 001
3. South Bihar Power Distribution Company Limited,
Vidyut Bhawan, Bailey Road
Patna 800 001

.... Respondents

Parties Present:

Shri Anand K Ganesan, Advocate, KBUNL
Ms. Swapna Seshadri, Advocate, KBUNL
Ms. Ritu Apurva, Advocate, KBUNL
Shri Prashant Chaturvedi, KBUNL
Shri Saurav Lalhol, KBUNL
Ms. Rohini Prasad, Advocate, BSPHCL



ORDER

This petition has been filed by the Petitioner, Kanti Bijlee Utpadan Nigam Limited (KBUNL) for truing-up of tariff of Muzaffarpur Thermal Power Station, Stage-I (2x110 MW) (in short, “the generating station”) 2014-19, in terms of 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 Petitioner is a wholly owned subsidiary of NTPC Limited and is a Government company covered under Section 79(1)(a) of the Electricity Act, 2003. Earlier, the Petitioner was set up as a joint venture company with the Respondent, BSPHCL (erstwhile BSEB), to take over the assets and business of the generating station from the then BSEB. The generating station comprises two units of 110 MW each and was established by the Respondents during the year 1985-86. The generating station was under shut down from October 2003 and has been transferred and vested in favour of the Petitioner, with effect from 8.9.2006, in terms of the Bihar Electricity Reforms (Transfer of Muzaffarpur Thermal Power Station) Scheme, 2006. As per the Bihar State Electricity Transfer Reforms, 2012, the Bihar State Power Holding Company Limited (BSPHCL) is vested with the rights and liabilities and interest in the property of the erstwhile BSEB. The entire power generated from the generating station is supplied to the Respondents, in terms of the Power Purchase Agreement (PPA) dated 22.8.2006, which forms part of the Transfer scheme notified on 8.9.2006.

3. The Petitioner has submitted that the project was in a depleted condition at the time of transfer, and the generating station was in a position to generate power only up to 10% to 15% of its capacity. The Petitioner has further stated that since there was an



acute shortage of power being faced by the Respondent, BSEB, only a selective refurbishment work for the restoration of the generation from Unit-II was taken up, and the commercial operation of Unit-II was declared on 15.10.2010, without doing any major Renovation & Modernisation (R&M) work. Subsequently, Unit-II was taken under R&M from 29.3.2012 to 14.11.2014. Unit-I was taken under R&M in 2010.

4. The Commission, in its order dated 22.1.2020 in Petition Nos. 240 & 241/GT/2017, considered the COD of Unit-I, after R&M, as 1.11.2013 and the COD of Unit-II as 15.11.2014 and accordingly approved the tariff of the generating station for the period 2014-19, considering the capital expenditure incurred on an actual basis for the period up to 31.3.2016 and based on the anticipated expenditure thereafter. Aggrieved by the said order dated 22.1.2020, the Petitioner filed a Review Petition (Petition No. 10/RP/2020) on various issues, and the Commission, vide its order dated 22.2.2022, revised the tariff order dated 22.1.2020, after rectification of certain inadvertent errors. Accordingly, the capital cost and the annual fixed charges were approved by the Commission for the period 2014-19, vide order dated 22.2.2022, considering the actual/audited additional capital expenditure incurred up to 31.3.2016 and the projected additional capital expenditure for the period 2016-19 as under:

Capital Cost allowed

(Rs. in lakh)

	2014-15		2015-16	2016-17	2017-18	2018-19
	1.4.2014 to 14.11.2014	15.11.2014 to 31.3.2015				
Opening capital cost	4476.98	16996.05	17373.17	18194.06	18871.098	20424.78
Additional capital expenditure	1250.59	49.13	751.15	677.04	1553.68	5570.80
Discharge of liabilities	35.70	327.99	69.74	0.00	0.00	0.00
Closing capital cost	5763.27	17373.17	18194.06	18871.10	20424.78	25995.58



Annual Fixed Charges allowed

(Rs. in lakh)

	2014-15		2015-16	2016-17	2017-18	2018-19
	1.4.2014 to 14.11.2014	15.11.2014 to 31.3.2015				
Depreciation	300.27	546.38	1626.46	1716.57	1871.46	2456.41
Interest on Loan	236.43	570.50	1186.89	1020.48	896.78	928.66
Return on Equity	73.97	236.26	515.30	699.37	765.30	975.89
Interest on Working Capital	927.60	1129.00	3035.96	3067.75	3104.85	3160.94
O&M Expenses	2465.40	2962.80	8390.80	8918.80	9479.80	10076.00
Total	4003.67	5444.94	14755.40	15422.97	16118.19	17597.90

5. This Petition has been filed by the Petitioner, in terms of Regulation 8(1) of the 2014 Tariff Regulations, for true up of tariff of the generating station for the period 2014-19. The Petitioner has submitted that since the Commission vide order dated 22.1.2020 had allowed the tariff for the period 2014-19, based on actual expenditure incurred during the period 2014-16 and projected expenditure for the period 2016-19, the Petitioner has carried out true-up for the period 2016-19 in this Petition. The capital cost and annual fixed charges claimed by the Petitioner for the period 2014-19 are as under:

Capital Cost claimed

(Rs. in lakh)

	2014-15			2015-16	2016-17	2017-18	2018-19
	1.4.2014 to 14.11.2014 (Unit-I)	1.4.2014 to 14.11.2014 (Unit-II)	15.11.14 to 31.3.2015 (Stage-I)				
Opening capital cost	28066.98	0.00	50211.71	50588.83	51409.72	52250.25	52904.08
Add: Addition during the year / period	1250.59	0.00	49.13	751.15	681.15	515.86	451.86
Less: De-capitalisation during the year /period	0.00	0.00	0.00	0.00	0.50	14.61	0.00
Less: Reversal during the year / period	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Add: Discharges during the year /period	35.70	0.00	327.99	69.74	159.89	152.58	2585.29
Closing capital cost	29353.27	0.00	50588.83	51409.72	52250.25	52904.08	55941.24
Average capital cost	28710.13	0.00	50400.27	50999.27	51829.99	52577.17	54422.66
RSVY grant addition as on 14.11.2014	0.00	0.00	12863.46	0.00	0.00	0.00	0.00
RSVY opening grant	23590.00	6513.54	42967.00	42967.00	42967.00	42967.00	42967.00



	2014-15			2015-16	2016-17	2017-18	2018-19
	1.4.2014 to 14.11.2014 (Unit-I)	1.4.2014 to 14.11.2014 (Unit-II)	15.11.14 to 31.3.2015 (Stage-I)				
RSVY grant addition in additional capital expenditure	0.00	0.00	0.00	0.00	0.00	0.00	3065.00
RSVY Closing Grant	23590.00	6513.54	42967.00	42967.00	42967.00	42967.00	46032.00
Average RSVY Grant	23590.00	6513.54	42967.00	42967.00	42967.00	42967.00	44499.50

Annual Fixed Charges claimed

	2014-15			2015-16	2016-17	2017-18	2018-19
	1.4.2014 to 14.11.2014 (Unit-I)	1.4.2014 to 14.11.2014 (Unit-II)	15.11.2014 to 31.3.2015 (Stage-I)				
Depreciation	480.70	0.00	657.12	769.17	869.12	972.90	1024.79
Interest on Loan	546.92	0.00	690.73	569.00	529.98	487.28	415.87
Return on Equity	91.27	0.00	270.33	226.22	249.62	270.66	356.24
Interest on Working Capital	1582.81	0.00	3151.35	3186.55	3236.09	3317.95	3464.25
O&M Expenses	3946.80	3946.80	7893.60	8390.80	8933.32	9580.14	10129.84
Total Annual Fixed Charges	6648.49	3946.80	12663.14	13141.74	13818.12	14628.94	15390.99

6. The Respondents, BSPHCL, North Bihar Power Distribution Company Limited (NBPDC), and South Bihar Power Distribution Company Limited (SBPDCL) (in short, 'Bihar Discoms') filed their replies vide a common affidavit dated 3.11.2022 and the Petitioner filed a rejoinder to the same vide affidavit dated 24.3.2023. The Petition was heard on 20.9.2022. and the Commission, after directing the Petitioner to furnish certain additional information, adjourned the matter due to a paucity of time. In compliance with the commission's directions, the Petitioner submitted the additional information vide affidavit dated 30.11.2022. Thereafter, the Petition was heard on 6.12.2022, and the Commission, after directing the Petitioner to furnish certain additional information, reserved its order in the matter. In compliance, the Petitioner submitted the additional information vide affidavit dated 21.3.2023. Thereafter, the Respondents, Bihar Discoms, vide common affidavit dated 11.4.2023, filed a short reply to the additional information filed by the Petitioner vide affidavit dated 21.3.2023.



In response to the short reply of Respondents, the Petitioner submitted a rejoinder dated 10.5.2023. Subsequently, the matter was listed for hearing on 6.12.2022, and after hearing the parties and directing the Petitioner to file certain additional information, the matter was reserved for orders. In compliance, the Petitioner has filed additional information vide affidavit dated 19.6.2024. However, as the order in the Petition could not be issued due to one member of the Commission demitting office, the Petition was listed on 6.2.2024 and 27.6.2024, and the Commission, after seeking certain additional information, reserved its order in the matter. In compliance, the Petitioner has submitted the additional information vide its affidavit dated 28.8.2024. The Respondents, Bihar Discoms vide common affidavit dated 17.9.2024, filed their replies to the additional submission filed by the Petitioner vide affidavit dated 28.8.2024. Subsequently, the matter was listed for hearing on 30.9.2024, and the Commission, after allowing the Petitioner to file a rejoinder to the reply of the Respondents dated 17.9.2024, reserved its order in the matter. The Petitioner has filed its rejoinder to the said reply vide affidavit dated 30.9.2024. 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 in this petition, as stated in the subsequent paragraphs.

Capital Cost

7. Regulations 9(1), 9(2) and 9(3) of the 2014 Tariff Regulations provide for capital cost of new and existing projects, as under:

“(1) 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.

(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.

(3) The Capital cost of an existing project shall include the following:

(a) the capital cost admitted by the Commission prior to 1.4.2014 duly trued up by excluding liability, if any, as on 1.4.2014;

(b) additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with Regulation 14; and

(c) expenditure on account of renovation and modernisation as admitted by this Commission in accordance with Regulation 15”

8. The Commission, vide order dated 22.2.2022 in Review Petition No. 10/RP/2020, while revising the tariff of the generating station for the period 2014-19, had considered capital cost of Rs.4476.98 lakh (i.e., cash capital cost of Rs.28066.98 lakh *minus* grant of Rs.23590.00 lakh) as on COD of Unit-I, Rs.16996.05 lakh (i.e., gross cost on a cash basis amounting to Rs.52163.22 lakh *minus* grant of Rs.35167.17 lakh) as on COD of Unit-II, and Rs.18194.06 lakh (i.e. cash capital cost of Rs.61161.06 lakh *minus* grant of Rs.42967.00 lakh) as on 31.3.2016. The Petitioner has submitted that since the tariff for the period 2014-19 has been allowed (vide order dated 22.2.2022/ 22.1.2020) based on actual capital expenditure incurred up to 31.3.2016 thus, truing up of capital cost has been claimed only for the period 2016-19. Accordingly, the capital cost approved vide order dated 22.2.2022/ 22.1.2020 for the period 2014-16 has been retained for the purpose of tariff in this Petition.

Additional Capital Expenditure

9. 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.”

10. For the purpose of truing up of tariff in this Petition, the Petitioner has retained the additional capital expenditure of Rs.1286.29 lakh, Rs.377.12 lakh, and Rs.820.89 lakh, as allowed in an order dated 22.2.2022 based on actuals, for the period 1.4.2014 to 14.11.2014, 15.11.2014 to 31.3.2015 and the year 2015-16, respectively. Since the additional capital expenditure approved in an order dated 22.2.2022 was based on actuals, the same is allowed for the purpose of tariff.



11. Further, the additional capital expenditure claimed in the Petition (in Form 9A on a cash basis) vis-à-vis considered in an order dated 22.2.2022/ 22.1.2020 for the years 2016-17, 2017-18, and 2018-19 is as under:

	<i>(Rs.in lakh)</i>					
	Additional capital expenditure					
	approved in order dated 22.1.2020 / 22.2.2022			claimed		
	2016-17	2017-18	2018-19	2016-17	2017-18	2018-19
Original scope of R&M works.	187	1278.68	281.80	25.22	0.00	0.00
Other capitalisation works necessary for running of units	3.98	25.00	411.00	0.00	10.62	35.40
Capital spares	486.06	250.00	213.00	476.39	329.35	179.56
MBOA Capitalisation	0.00	0.00	0.00	179.54	175.89	236.90
De-capitalisation of MBOA items.	0.00	0.00	4665.00	(-)0.50	(-)14.61	0.00
Sub-total	677.04	1553.68	5570.80	680.65	501.25	451.86
Discharge of liabilities	0.00	0.00	0.00	159.89	152.58	2585.29
Total Additional capital expenditure including discharge of liabilities	677.04	1553.68	5570.80	840.53	653.83	3037.16

Works Claimed under Original Scope

12. The additional capital expenditure for works under the original scope incurred after the COD as claimed by the Petitioner during the period 2016-19 vis-à-vis approved on a projection basis vide order dated 22.1.2020/22.2.2022 is as under:

	<i>(Rs.in lakh)</i>					
	Additional capital expenditure					
	approved in order dated 22.1.2020 / 22.2.2022			claimed in this Petition		
	2016-17	2017-18	2018-19	2016-17	2017-18	2018-19
Original scope of R&M works	187	1278.68	281.8	25.22	0.00	0.00
	-	-	-	on accrual basis		
	-	-	-	207.70	0.00	2231.18
Total	1747.48			2438.88		

13. The Petitioner has claimed additional capital expenditure amounting to Rs.25.22 lakh on a cash basis (after netting off un-discharged liabilities of Rs.182.48 lakh from the accrual additional capital expenditure of Rs.207.70 lakh) towards R&M works under original scope for the year 2016-17. The additional capital expenditure of Rs.207.70



lakh claimed on an accrual basis includes R&M works of switchyard amounting to Rs.110.40 lakh, R&M works of CHP amounting to Rs.72.07 lakh, and Quick erect scaffolding for boiler amounting to Rs.25.22 lakh. The Petitioner has not claimed any additional capital expenditure towards works under the original scope for the year 2017-18.

14. The Petitioner's additional capital expenditure claim towards works under the original scope on a cash basis for the year 2018-19 is 'nil'; however, the corresponding claim on an accrual basis is Rs.2231.18 lakh. The details of the additional capital expenditure claim under the original scope for the year 2018-19, are as under:

	<i>(Rs.in lakh)</i>		
	on accrual basis	Liability	on cash basis
MGR Track and Siding	8.45	8.45	0.00
Capitalization of leftover works of SG & TG of Unit-I&II	586.17	586.17	0.00
Main Electrical Equipment	135.91	135.91	0.00
Fire Fighting System	1053.04	1053.04	0.00
R&M Consultancy Contract	447.60	447.60	0.00
Total	2231.18	2231.18	0.00

15. The submissions of the Petitioner and Respondents have been examined. Considering the fact that against the projected approved expenditure of Rs.1747.48 lakh, the actual total expenditure is Rs. 2438.88 lakh, on an accrual basis, for the period 2016-19 towards the works under original scope, including certain expenditures on works of original scope which could not be envisaged earlier on a projection basis. In consideration of the fact that these works, which could not be envisaged earlier, are necessarily required for the completion of R&M schemes and successful operation of the plant, we allow the actual expenditure on an accrual basis of Rs.2438.88 lakh for the period 2016-19 under Regulation 14(3) along with Regulation 54 (Power to Relax) & Regulation 55 (Power to Remove Difficulty) of the 2014 Tariff Regulations i.e., the regulations under which the projected expenditure were allowed vide order dated



22.2.2020 in Petition No. 240/GT/2017. Accordingly, the actual cash expenditure allowed on a cash basis under the original scope of R&M works for the period 2016-19 is as under:

<i>(Rs.in lakh)</i>		
2016-17	2017-18	2018-19
25.22	0.00	0.00

Additional capital expenditure for R&M works other than the original scope of work

16. The Petitioner has claimed additional capital expenditure of Rs.10.62 lakh in the year 2017-18 towards Lightning arrester & Leakage current analyser, Rs. 627.83 for the year 2018-19 towards R&M works, which comprises works related to Coal handling plant amounting to Rs.201.02 lakh, Control & Instrumentation related works amounting to Rs.187.24 lakh, Civil works related to switchyard and other plant area amounting to Rs. 204.16 lakh and modified moving blades of LP Rotor amounting to Rs.34.40 lakh. The additional capital expenditure claimed on a cash basis corresponding to these additions for the year 2018-19 is Rs.35.40 lakh after netting off undischarged liabilities, amounting to Rs.592.43 lakh. The details of R&M work other than the original scope as approved vide order dated 20.1.2020 in Petition No. 240 & 241/GT/2017 and the R&M works claimed by the Petitioner are provided as under:

	<i>(Rs.in lakh)</i>					
	Additional capital expenditure					
	approved in order dated 22.1.2020 / 22.2.2022			claimed in this Petition		
	2016-17	2017-18	2018-19	2016-17	2017-18	2018-19
				on cash basis		
R&M works other than the original scope	3.98	25.00	411.00	0.00	10.62	35.40
	-	-	-	on accrual basis		
	-	-	-	0.00	10.62	627.83
Total	439.98			638.45		

17. With regard to the works which are not part of the original scope but have been claimed by the Petitioner stating that the expenditure has been incurred for the



successful operation of the plant, under Regulation 14(3) read with Regulation 54 (Power to Relax) & Regulation 55 (Power to Remove Difficulty) of the 2014 Tariff Regulations, the Petitioner has stated that ‘the original DPR of station for R&M was capped at Rs.471.8 crore, which did not include many important works necessary in other areas like CHP, Control and instrumentation, Switchyard civil works etc. and were not covered in DPR’. The matter has been considered. It is noticed that the plant was taken over by the Petitioner in a depleted stage, operating at 10-15% PLF, and certain works only became evident after the units were opened for R&M and since these do not get covered at the DPR stage and the station is not eligible for compensation allowance and special allowance, we allow need-based actual expenditure of Rs.638.45 lakh (on an accrual basis). Against this expenditure of Rs.638.45 lakh on an accrual basis, the cash basis expenditure allowed for the purpose of the tariff is only Rs.46.02 lakh with the year-wise breakup as under:

(Rs.in lakh)

	2016-17	2017-18	2018-19
Additional capital expenditure allowed on a cash basis on works other than under the original scope of R&M works	0.00	10.62	35.40

MBOA capitalisation

18. The details of MBOA capitalisation for R&M as approved vide order dated 20.1.2020 in Petition No. 240/GT/2017 and claimed by the Petitioner as under:

(Rs.in lakh)

	Additional capital expenditure					
	approved in order dated 22.1.2020 / 22.2.2022			claimed in this Petition		
	2016-17	2017-18	2018-19	2016-17	2017-18	2018-19
				On cash basis		
MBOA Capitalisation	0.00	0.00	0.00	179.54	175.89	236.90
				On accrual basis		
	-	-	-	179.54	176.61	354.06
Total	0.00			710.21		



19. The abovementioned expenditure has been claimed for MBOA items like EDP, WP & SATCOM equipment, furniture and fixtures, and other office equipment. In justification of the same, the Petitioner has stated that there was no provision for MBOA items under R&M funded through a GOI grant. It has also noted that these MBOA items are essential for the smooth operation of the plant as well as for the execution of R&M. The Petitioner has added that as the project is not eligible for compensation allowance and special allowance, the Commission may allow the capitalization of these items in tariff. The Petitioner has further submitted that the MBOA items were allowed to the generating station vide order dated 22.1.2020 till COD of the station, i.e., 15.11.2014. The Petitioner has further clarified that it had not projected any requirement of MBOA items, and accordingly, the Commission vide its order dated 22.1.2020 had acknowledged the additional capital expenditure as zero towards MBOA items during the years 2016-17, 2017-18, and 2018-19.

20. The matter has been considered. It is observed that after taking over the station, the Petitioner has been allowed only an amount of Rs.55.77 lakh (Rs.11.27 lakh and Rs.44.50 lakh) till the station COD, i.e., 15.11.2014 toward MBOAs. As such, considering the fact that the station is not entitled to compensation allowance and special compensation and MBOAs were not covered under the original R&M scope, the Commission allows the claimed expenditure on MBOAs under Regulation 14(3) read with Regulation 54 (Power to Relax) & Regulation 55 (Power to Remove Difficulty) of the 2014 Tariff Regulations as these assets are necessary for the successful operation of any generating station. Accordingly, the year-wise capital expenditure allowed for the purpose of tariff on MBOAs on a cash basis is as under:



<i>(Rs.in lakh)</i>		
2016-17	2017-18	2018-19
179.54	175.89	236.90

Initial Spares

21. 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%

.....

Provided that:

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:

.....

iv. for the purpose of computing of initial the cost 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.”

22. The Commission, vide order dated 22.1.2020, has examined and approved the requirement of capital spares on a projected basis amounting to Rs.486.06 lakh for the year 2016-17, Rs.250.00 lakh for the year 2017-18 and Rs.213.00 lakh for the year 2018-19.

23. The Petitioner has sought additional capital expenditure under Regulation 14(3) read with Regulation 54 (Power to Relax) & Regulation 55 (Power to Remove Difficulty) of the 2014 Tariff Regulations amounting to Rs.476.39 lakh (after netting of undischarged liabilities of Rs.25.63 lakh) for the year 2016-17, Rs.329.35 lakh (on cash cum accrual basis) for the year 2017-18 and Rs.179.56 lakh (after netting of undischarged liabilities of Rs.2.07 lakh) for the year 2018-19 as submitted in Form-9A and also vide affidavit dated 14.12.2022. Further, the Petitioner has, in compliance with the directions vide ROP of the hearing dated 6.12.2022, submitted details of the capital spares for each year vide Annexure-E of the affidavit dated 29.3.2022.



24. The details of capital spares capitalisation for R&M, as approved, vide order dated 20.1.2020 in Petition No. 240/GT/2017 and claimed by the Petitioner, are as under:

(Rs.in lakh)

	Additional capital expenditure					
	approved in the order dated 22.1.2020 / 22.2.2022			claimed in this Petition		
	2016-17	2017-18	2018-19	2016-17	2017-18	2018-19
	on cash basis					
Capital Spares	486.06	250	213	476.39	329.35	179.56
	on accrual basis					
	-	-	-	502.02	329.35	181.63
Total	949.06			1012.99		

25. The Petitioner, vide affidavit dated 21.3.2023, had submitted information regarding capital spares as directed by the Commission vide ROP of the hearing dated 6.12.2022, and the same is provided as under:

(Rs.in lakh)

List of Capital Spares				
		On accrual basis	Undischarged Liability	On cash basis
Capital Spares (2014-15)				
1	Pulse Coupling Stage Module Assembly (DAVR spares of U-1&2)	3.02	0.00	3.02
	Sub total	3.02	0.00	3.02
Capital Spares (2015-16)				
1	Spares for MAX DNA from BHEL	91.75	0.00	91.75
2	Cooling tower Gear Reducer Assembly #1 36 76-4399-1 14.84:1	18.81	0.00	18.81
3	Spares for DAVR	65.34	0.00	65.34
4	Spares for Seal Oil System	18.19	0.00	18.19
5	Components for Service Air Compressors	1.20	0.00	1.20
6	Circuit Breakers: SF 6: 220kV: 3150 Amp: Siemens Make	14.50	0.00	14.50
7	Circuit Breakers: SF 6: 132kV	7.05	0.00	7.05
8	Relays for Switchyard & GRP	9.86	0.99	8.88
9	Moving blades for LP rotor stage-4A.	17.56	0.00	17.56
10	Drive Shaft Assembly – Cooling Tower Fan	20.44	0.00	20.44
	Sub total	264.71	0.99	263.72
Capital Spares (2016-17)				
1	BFP- Bearing shell & Assembly	3.09	0.00	3.09
2	Complete Condensate P/P (CEP)	67.51	0.00	67.51
3	Energy Efficient Cartridge for BFP	180.00	0.00	180.00
4	SOX/NOX Analyzer for Stack Emission	28.51	0.00	28.51
5	Spares for APH	9.26	0.00	9.26
6	Spares for C&I	3.89	0.00	3.89



List of Capital Spares				
		On accrual basis	Undischarged Liability	On cash basis
7	Spares for Generator	100.63	25.63	75.00
8	Thrust Bearing for BFP	8.23	0.00	8.23
9	Spares for Mill	9.68	0.00	9.68
10	Circuit Breakers: SF6 CGL MAKE	6.93	0.00	6.93
11	MOTOR 415V 90KW	5.13	0.00	5.13
12	Generator Seal Ring	46.98	0.00	46.98
13	CT Fan Gear Box	4.67	0.00	4.67
14	Spares for Turbine	27.49	0.00	27.49
	Sub total	502.02	25.63	476.39
Capital Spares (2017-18)				
1	Complete Dozer Assembly	185.66	0.00	185.66
2	Lead Acid Battery: 220V, 1070AH	89.83	0.00	89.83
3	Lead Acid Battery: 220V, 645AH	53.86	0.00	53.86
	Sub total	329.35	0.00	329.35
Capital Spares (2018-19)				
1	Spares for APH	4.79	0.00	4.79
2	Spares for Ash Handling system	2.07	2.07	0.00
3	Spares for Turbine	36.39	0.00	36.39
4	Complete Bowl Assembly	8.57	0.00	8.57
5	Fan Blade Compressor Assembly	15.22	0.00	15.22
6	Generator Bearing Assembly	20.23	0.00	20.23
7	Relays for Switchgear & Panels	17.63	0.00	17.63
8	Spares for Mill	76.72	0.00	76.72
	Sub total	181.63	2.07	179.56

26. The matter has been considered. In view of the above data as provided by the Petitioner and considering the fact that there is not much variation between the claimed actual expenditure of Rs.1012.99 lakh (on an accrual basis) and expenditure admitted on a projection basis of Rs.949.06 lakh, the claim of the Petitioner for the period 2016-19, is allowed. Accordingly, against this expenditure of Rs.1012.99 lakh on an accrual basis, the cash basis expenditure allowed for the capital spares for the purpose of tariff is Rs.985.30 lakh with year-wise breakup as under:

<i>(Rs.in lakh)</i>		
2016-17	2017-18	2018-19
476.39	329.35	179.56

27. In view of the above, the additional capital expenditure allowed, on a cash basis, before consideration of discharges of liabilities, de-capitalisation of assets, and exclusion claim of the Petitioner is as under:



(Rs. in lakh)

S. N.	Head of Work / Equipment	2016-17	2017-18	2018-19
1	Original scope of R&M works	25.22	0.00	0.00
2	Other capitalisation works necessary for running of units	0.00	10.62	35.40
3	Capital spares	476.39	329.35	179.56
4	MBOA Capitalisation	179.54	175.89	236.90
	Total	681.15	515.86	451.86

Discharges of Liabilities

28. The Petitioner has claimed the discharges of liabilities amounting to Rs.159.89 lakh, Rs.152.58 lakh, and Rs.2585.29 lakh for the years 2016-17, 2017-18, and 2018-19, respectively, under regulation 14(1)(i) of the 2014 Tariff Regulations, the same is in order and is accordingly allowed.

29. Further, the balance of un-discharged liabilities corresponding to admitted capital cost, as on 31.3.2019, works out as Rs.3714.82 lakh as shown below:

(Rs. in lakh)

		2016-17	2017-18	2018-19
A	Opening liabilities	3460.92	3509.14	3357.28
B	Addition during the year	208.11	0.72	2942.83
C	Discharges during the year	159.89	152.58	2585.29
D	Closing liabilities	3509.14	3357.28	3714.82

30. As discussed in the above paragraphs, the year-wise additional capitalization and Discharge of liabilities allowed are shown as under:

(Rs. in lakh)

		2016-17	2017-18	2018-19
A	Additional Capitalization	681.15	515.86	451.86
B	Discharge of liabilities	159.89	152.58	2585.29
	Total	841.03	668.44	3037.16

De-capitalization

31. The Petitioner has claimed de-capitalisation of MBOAs amounting to Rs.0.50 lakh in 2016-17 and Rs.14.61 lakh in 2017-18. Regulation 14(4) of the 2014 Tariff Regulations provides that in case of de-capitalisation of assets, the original cost of such



assets shall be removed from the admitted capital cost of the generating station. Accordingly, the claim of the Petitioner under this head is allowed.

Exclusions

32. The Petitioner has claimed exclusions of (-) Rs.24.46 lakh and (-) Rs.0.56 lakh towards Inter Unit Transfer out of assets for the years 2016-17 and 2017-18, respectively. In justification, the Petitioner has submitted that since the Commission is not considering the temporary inter-unit transfer of assets for the purpose of tariff, the same has been kept under exclusion. The Commission, in its various orders, while dealing with the application for additional capitalisation in respect of other generating stations, had decided that both positive and negative entries arising out of inter-unit transfers of a temporary nature shall be ignored for the purposes of tariff. In line with the said decision, the exclusion of the said amounts on account of inter-unit transfer is allowed.

33. The Commission, vide order dated 22.2.2022 in Petition No. 10/RP/2020, had admitted the capital cost of the generating station amounting to Rs.18194.06 lakh (net off RSVY grant of Rs.42967.00 lakh received up to COD of Unit-II) as on 31.3.2016. The Petitioner has submitted that the additional grant of Rs.3065.00 lakh has been received during the year 2018-19 towards the capital cost for R&M works. As such, the total grant received till 31.3.2019 is Rs.46032.00 lakh. Considering the fact that the grant of Rs.3065.00 lakh received during the year 2018-19 is towards the capital cost for R&M works the same is deducted from the additional capital expenditure allowed during the year 2018-19.



34. In view of the above, the additional capital expenditure allowed for the purpose of tariff for the period 2014-19 is as under:

	2014-15		2015-16	2016-17	(Rs.in lakh)	
	1.4.2014 to 14.11.2014	15.11.2014 to 31.3.2015			2017-18	2018-19
Original scope of R&M works.	0.00	0.00	0.00	25.22	0.00	0.00
Other capitalisation works necessary for running of units	0.00	0.00	0.00	0.00	10.62	35.40
Capital spares	0.00	0.00	0.00	476.39	329.35	179.56
MBOA capitalisation	0.00	0.00	0.00	179.54	175.89	236.90
De-capitalisation of MBOA items.	0.00	0.00	0.00	(-) 0.50	(-) 14.61	0.00
Sub-total (A)	0.00	0.00	0.00	680.65	501.25	451.86
Discharge of liabilities (B)	0.00	0.00	0.00	159.89	152.58	2585.29
Exclusions disallowed (C)	0.00	0.00	0.00	0.00	0.00	0.00
ACE allowed based on actuals in order dated 22.2.2022 / 22.1.2020 and considered in this Petition (D)	1286.29	377.12	820.89	0.00	0.00	0.00
Total Additional capital expenditure including discharge of liabilities (A+B+C+D)	1286.29	377.12	820.89	840.53	653.83	3037.16
Less: Grant received	0.00	0.00	0.00	0.00	0.00	3065.00
Net ACE allowed	1286.29	377.12	820.89	840.53	653.83	(-) 27.84

Capital cost allowed for the period 2014-19

35. Based on the above, the capital cost allowed for the generating station for the period 2014-19 is as under:

	2014-15		2015-16	2016-17	(Rs.in lakh)	
	1.4.2014 to 14.11.2014	15.11.2014 to 31.3.2015			2017-18	2018-19
Opening Capital Cost	4476.98	16996.05	17373.17	18194.06	19034.59	19688.42
Add: Additional capital expenditure	1286.29	377.12	820.89	840.53	653.83	(-) 27.84
Closing Capital Cost	5763.27	17373.17	18194.06	19034.59	19688.42	19660.58
Average Capital Cost	5120.13	17184.61	17783.61	18614.32	19361.50	19674.50

Debt-Equity Ratio

36. 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.”

37. Further, as per the views taken by the Commission, vide its order dated 22.2.2022 in Petition No. 10/RP/2020, as shown under:

“25. The matter has been examined. Clause 7.1.1(ii) of the PPA dated 22.8.2006 provides as under:

“For the purpose of tariff, the entire transfer price shall be considered as equity. Entire expenditure through grant shall be treated as debt and further expenditure thereafter shall be split in 70:30 Debt Equity ratio.”

26. The debt-equity ratio was computed in terms of Clause 7.1.1(ii) of the PPA dated 22.8.2006, by treating the take-over price as equity, the amount of grant received as loan and further expenditure in the debt-equity ratio of 70:30. Based on this, the debt-equity ratio of 91.09: 8.91 as on 1.11.2013 and 81.83: 18.17 as on 15.11.2014 was computed in the impugned order dated 22.1.2020. It is observed that the Review Petitioner has not furnished any details/ calculations for the debt-equity ratio claimed in the Review Petition as against the debt-equity ratio allowed vide the impugned order dated 22.1.2020. We, therefore, find no error apparent on the face of the impugned order dated 22.1.2020 and review on this ground is not maintainable.

27. However, as regards the debt-equity ratio in respect of the additional capitalization, the same is required to be considered in the ratio of 70:30, in line with the aforesaid provision of the PPA. The non-consideration of the normative ratio of 70: 30 in respect of additional capitalization, is in



our view, an error apparent on the face of the impugned order and review on this count is maintainable”.

38. In view of the above, the debt-equity ratio of 91.09:8.91 as on 1.4.2014, 81.83:18.17 as on 15.11.2014, and 70:30 for funding of additional capital expenditure during the period 2014-19, as considered in the order dated 22.2.2022 in Petition No. 10/RP/2020 has been retained for the purpose of tariff revision. The debt, equity along with corresponding percentages considered on various dates are as under:

	<i>(Rs.in lakh)</i>				
	Capital cost as on 1.4.2014	Additional capital expenditure during 1.4.2014 to 14.11.2014	Capital cost as on 15.11.2014	Additional capital expenditure during 15.11.2014 to 31.3.2019	Capital cost as on 31.3.2019
Debt (Debt %)	4078.30 (91.09%)	900.40 (70.00%)	13907.83 (81.83%)	1865.17 (70.00%)	15773.00 (80.23%)
Equity (Equity %)	398.68 (8.91%)	385.89 (30.00%)	3088.22 (18.17%)	799.36 (30.00%)	3887.58 (19.77%)
Total (Total %)	4476.98 (100.00%)	1286.29 (100.00%)	16996.05 (100.00%)	2664.53 (100.00%)	19660.58 (100.00%)

Return on Equity

39. 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.”*

40. 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 truing 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.”

41. The Petitioner has claimed tariff considering the rate of return on equity (ROE) of 20.0152% in 2014-15, 15.50% in 2015-18 and 19.7575% in 2018-19. The Petitioner has stated that the MAT rate was applicable to the Petitioner company during the period 2014-19, except for the period 2015-18, where no tax was paid. The Petitioner has arrived at these rates after grossing up a base rate of ROE of 15.50% with an effective tax rate of 22.56% in 2014-15, nil tax rate in 2015-18, and 21.5488% in 2018-



19. However, considering the applicable MAT rates for respective years (where taxes have been paid at MAT rates), the rate of ROE to be considered for the purpose of tariff works out to 19.610% for 2014-15, 15.50% for 2015-18 and 19.758% for 2018-

19. Accordingly, ROE has been worked out as under:

	2014-15		2015-16	2016-17	2017-18	2018-19
	1.4.2014 to 14.11.2014	15.11.2014 to 31.3.2015				
Notional Equity - Opening	398.68	3088.22	3201.36	3447.62	3699.78	3895.93
Add: Addition of Equity due to additional capital expenditure	385.89	113.14	246.27	252.16	196.15	(-) 8.35
Normative Equity - Closing	784.57	3201.36	3447.62	3699.78	3895.93	3887.58
Average Normative Equity	591.62	3144.79	3324.49	3573.70	3797.86	3891.75
Return on Equity (Base Rate)	15.500%	15.500%	15.500%	15.500%	15.500%	15.500%
Effective Tax Rate for respective years	20.961%	20.961%	0.000%	0.000%	0.000%	21.549%
Rate of Return on Equity (Pre-tax)	19.610%	19.610%	15.500%	15.500%	15.500%	19.758%
Return on Equity (Pre-tax) - (annualized)	116.02	616.69	515.30	553.92	588.67	768.93
Return on Equity (Pre-tax) - (pro-rata)	72.47	231.47	515.30	553.92	588.67	768.93

Interest on loan

42. 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."*

43. Interest on loan has been worked out as under:

- (i) The gross normative loan of Rs.4078.30 lakh, as on 1.4.2014, and Rs.13907.83 lakh, as on 15.11.2014 as considered in the order dated 22.2.2022 has been retained for the purpose of tariff revision.
- (ii) The cumulative repayment of the loan, amounting to Rs.159.59 lakh as on 1.4.2014 (corresponding to Unit-I) and Rs.1654.74 lakh (Rs.159.59 lakh + Rs.289.87 lakh, i.e., repayment considered during the period 1.4.2014 to 14.11.2014 + Rs.1205.28 lakh pertaining to Unit-II as on 31.3.2014) as on 15.11.2014 (corresponding to both the Units) has been considered.
- (iii) Addition to normative loan on account of additional capital expenditure approved above has been considered.
- (iv) Depreciation allowed has been considered as repayment of normative loan during the respective years of the period 2014-19. Further, repayments have been adjusted for de-capitalisation of assets considered for the purpose of tariff.
- (v) The Petitioner has claimed tariff considering the weighted average rate of interest (WAROI) of 12.56%, 10.38%, 9.92% and 9.67% in 2014-15, 2015-16, 2016-17, and 2017-19, respectively. Subsequently, the Petitioner vide affidavit dated 30.11.2022 has furnished the revised computation of WAROI. As per this revised submission, the claimed WAROI is 12.56%, 10.38%, 9.68%, 9.73% and 9.14% in 2014-15, 2015-16, 2016-17, 2017-18 and 2018-19, respectively. From the details of the loan, it is observed that WAROI for the period 2014-19 has been calculated using loans drawn from NTPC Limited for



Stage-I and Stage-II loans. With regard to WAROI, the Commission, in its order dated 22.1.2020, has observed as under:

“134. The Weighted Average Rate of Interest (WAROI) claimed by the Petitioner is based on the loan availed from NTPC, the holding company. As per the loan agreement submitted in Petition No. 207/GT/2013, the said loan is a working capital loan. The Petitioner was directed vide ROP of the hearing dated 27.2.2018 to furnish details of the commercial loan, if any, availed by the Petitioner, for purpose of calculation of the WAROI. In response, the Petitioner has computed WAROI based on the commercial loan availed for Stage-II of the project. The same has been considered for the calculation of interest on normative loan, subject to revision at the time of truing-up exercise. Accordingly, Interest on loan has been worked out and allowed as under:”

- (vi) In view of the above, WAROI has been computed considering Stage-II loans, and the loans drawn from NTPC Limited for Stage-I, being working capital loans have been ignored for the purpose of WAROI computation.

44. The necessary calculation of interest on loans allowed is as under:

	2014-15		2015-16	2016-17	2017-18	2018-19
	1.4.2014 to 14.11.2014	15.11.2014 to 31.3.2015				
Gross opening loan (A)	4078.30	13907.83	14171.81	14746.44	15334.81	15792.49
Cumulative repayment of loan up to previous year (B)	159.59	1654.74	2201.55	3829.24	5556.82	7385.51
Net Loan Opening (C = A-B)	3918.71	12253.09	11970.27	10917.20	9777.98	8406.97
Addition due to additional capital expenditure (D)	900.40	263.98	574.62	588.37	457.68	(19.49)
Repayment of loan during the year (E)	289.87	546.80	1627.69	1727.63	1831.41	1883.30
Repayment adjustment on account of de-capitalisation (F)	-	-	-	0.05	2.72	-
Net Repayment of loan during the year (G = E-F)	289.87	546.80	1627.69	1727.59	1828.69	1883.30
Net Loan Closing (H = C+D-G)	4529.24	11970.27	10917.20	9777.98	8406.97	6504.19
Average Loan [I = (C+H)/2]	4223.98	12111.68	11443.73	10347.59	9092.48	7455.58
WAROI (J)	12.5404%	12.5404%	10.3758%	9.6714%	9.7311%	9.1375%
Interest on Loan (K = I x J)	529.70	1518.85	1187.38	1000.76	884.80	681.26

Depreciation

45. 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 licensee, 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.”

46. The Commission vide order dated 22.1.2020 has approved cumulative depreciation, amounting to Rs.159.59 lakh for Unit-I of the generating station (however, this was inadvertently not considered while arriving at the balance depreciable value for the period 1.4.2014 to 14.11.2014) and Rs.1205.28 lakh for Unit-II of the generating



station, till 31.3.2014. Accordingly, cumulative depreciation of Rs.159.59 lakh is being considered as on 1.4.2014, and cumulative depreciation of Rs.1654.74 lakh (Rs.159.59 lakh + Rs.289.87 lakh, i.e., depreciation allowed during the period 1.4.2014 to 14.11.2014 + Rs.1205.28 lakh) is being considered as on 15.11.2014. The useful life, as considered in the order dated 22.1.2020/ 22.2.2022, is being retained for the purpose of tariff calculations. The necessary calculations in support of depreciation are as under:

(Rs.in lakh)

	2014-15		2015-16	2016-17	2017-18	2018-19
	1.4.2014 to 14.11.2014	15.11.2014 to 31.3.2015				
Average capital cost (A)	5120.13	17184.61	17783.61	18614.32	19361.50	19674.50
Value of freehold land included above (B)	0.00	0.00	0.00	0.00	0.00	0.00
Depreciable Value [C = (A-B) x 90%]	4608.11	15466.15	16005.25	16752.89	17425.35	17707.05
Remaining Depreciable value at the beginning of the year (D = C - 'I' of the previous year)	4448.52	13811.41	13803.71	12923.66	11868.53	10321.54
Balance useful life at the beginning of the year (E)	9.59	9.48	8.48	7.48	6.48	5.48
Depreciation during the year (F=D/E) – (annualised)	464.05	1456.81	1627.69	1727.63	1831.41	1883.30
Depreciation during the year (F=D/E) – (pro-rata)	289.87	546.80	1627.69	1727.63	1831.41	1883.30
Cumulative depreciation at the end of the year, before adjustment of de-capitalisation adjustment (G = F + 'I' of the previous year)	449.46	2201.55	3829.24	5556.87	7388.23	9268.81
Cumulative depreciation adjustment on account of de-capitalisation (H)	0.00	0.00	0.00	0.05	2.72	0.00
Cumulative depreciation, at the end of the year (I = G-H)	* 1654.74	2201.55	3829.24	5556.82	7385.51	9268.81

* inclusive of cumulative depreciation of Rs.1205.28 lakh approved pertaining to Unit-II as on 31.3.2014.



O&M Expenses

47. The Petitioner has claimed O&M expenses under Regulation 29(1) of the 2014 Tariff Regulations as under:

(Rs.in lakh)

2014-15			2015-16	2016-17	2017-18	2018-19
1.4.2014 to 14.11.2014 (for Unit-I)	1.4.2014 to 14.11.2014 (for Unit-II)	15.11.2014 to 31.3.2015				
3946.80	3946.80	7893.60	8390.80	8933.32	9580.14	10129.84

48. The Commission, vide para 138 of the order dated 20.1.2020, has decided to consider normative O&M expenses of Tanda TPS as provided in Regulation 29(1)(b) of the 2014 Tariff Regulations to be the normative O&M expenses for the generating Station comprising of two coal-based units of 110 MW each.

49. Regulation 29(1)(b) of the 2014 Tariff Regulations provides the following O&M expense norms for 110 MW Units of Tanda TPS and other generating stations:

(Rs.in lakh)

Year	Talcher TPS	Chandrapura TPS (Units 1 to 3), Tanda TPS, Badarpur TPS (Unit 1 to 3), Durgapur TPS (Unit 1)
2014-15	43.16	35.88
2015-16	45.87	38.14
2016-17	48.76	40.54
2017-18	51.83	43.09
2018-19	55.09	45.80

50. Regulation 30(2) of the 2014 Tariff Regulations provides as under:

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

(2) The capacity charge payable to a thermal generating station for a calendar month shall be calculated in accordance with the following formulae:

xxx

Provided that in case of generating station or unit thereof or transmission system or an element thereof, as the case may be, under shutdown due to Renovation and Modernisation, the generating company or the transmission licensee shall be allowed to recover part of AFC which shall include O&M expenses and interest on loan only.”



51. The Respondents have submitted that this Commission may consider the claim of the Petitioner towards O&M expenses in line with that of Tanda TPS in proportion to their respective capacities and after due verification and prudence check.

52. It is noticed that in addition to the O&M expenses claimed above, the Petitioner has also claimed O&M expenses of Rs.3946.80 lakh for Unit-II during R&M for the period from 1.4.2014 to 14.11.2014 under Regulation 30(2) of the 2014 Tariff Regulations. The Commission, vide order dated 20.1.2020, had granted liberty to the Petitioner to approach the Commission at the time of truing-up with the following details:

For the period of unit/ station shut down for the purpose of carrying out R&M activities, the Petitioner shall provide two separate records as under and shall submit the same.

- (a) *IEDC including man power cost, Construction power cost, Water charges etc. booked under R&M expenses; and*
- (b) *Normal O&M expenses of the generating station (not booked under R&M expenses) which were unavoidable even when the unit/s/station was under shut down.*

53. The Petitioner, in its petition, has submitted as follows in compliance with the above directions of the Commission:

“It is submitted that No IEDC including man power cost, Construction power cost, Water charges etc. were booked under R&M expenses from 01.04.2014 to 14.11.2014. No items in the O&M expenses, which were unavoidable even when the unit/s/station was under shut down, were booked.”

Water Charges

54. 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.

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 capitalization or consumption of stores and spares and renovation and modernization.”



55. In terms of the above regulation, water charges are to be allowed based on water consumption depending upon the type of plant, type of cooling water system, etc. The Petitioner has provided information regarding the water charges in Form A as detailed below:

	<i>(Rs.in lakh)</i>		
	2016-17	2017-18	2018-19
Water charges	12.38	95.08	46.12
Maintenance Charges	2.14	5.26	7.72
Total water charges claimed	14.52	100.34	53.84

56. The Respondents have submitted that this information is provided in Form-3B in respect of charges, however, the Petitioner has not provided any document in support of cost and volume related to water consumption. In response, the Petitioner has submitted that it has provided rate change notification of Bihar Government in respect of water consumption as Annexure-C vide Rejoinder affidavit dated 24.3.2023.

57. The matter has been examined. It is noted that the Petitioner has furnished details of water consumption and water charges per 1000 gallons for the generating station as required under Regulation. It has also provided details of maintenance charges claimed as part of water charges in Form-3B. As such, based on the consumption indicated for each year under consideration and the rates of water charges supported by proper documents, the Commission is inclined to allow the claim of the Petitioner towards water charges. However, as per the consistent practice followed for other generating stations of the Petitioner and the other generating companies, the maintenance charges claimed as a part of water charges are not allowed as these are included in the O&M norms notified in the 2014 Tariff Regulations. Accordingly, water charges excluding maintenance charges allowed for the purpose of tariff for the period under consideration, i.e., 2016-19, are as under:



<i>(Rs.in lakh)</i>		
2016-17	2017-18	2018-19
12.38	95.08	46.12

Capital spares

58. The Petitioner has not claimed any capital spares on a consumption basis.

59. The normative norms for O&M expenses have been allowed vide order dated 22.1.2020, as provided in Regulation 29(1b) of the 2014 Tariff Regulations applicable for Tanda TPS. The O&M expenses for Unit-II are sought by the Petitioner under Regulation 30(2) of the 2014 Tariff Regulations. The Commission, vide its order dated 22.1.2020, has provided the following relief to the petitioner:

“43 Accordingly, we allow the Petitioner to claim O&M expenses during the period of shutdown of Unit-II and the same shall be worked in terms of the PPA, in the following manner:

(a) During the period when the Unit-II was shut down for R&M work (2012-13 and 2013-14), the Petitioner shall claim O&M expenses, based on audited certificate for each financial year. The Respondent discoms shall, before making payment, verify/reconcile the claim with balance sheet and shall also adjust, if any, towards IEDC booked to R&M of Units-I & II and the normative O&M expenses received by Unit-I from 1.11.2013 to 31.3.2014;

(b) The O&M expenses allowed in Commission’s order dated 23.12.2012 for the years 2010-11 and 2011-12 are allowed for the purpose of tariff. However, for the period from 29.3.2012 to 31.3.2014, the Petitioner shall be entitled to actual O&M expenses as per provisions of PPA.”

60. The Commission, vide order dated 22.1.2020, has also disallowed delay for COD of Unit-II beyond its SCOD of 29.3.2014. The delay of COD of Unit-II has not been allowed by the Commission, and the Petitioner cannot be granted O&M expenses from 1.4.2014 to the COD date i.e.14.11.2014. The claim of the Petitioner for O&M expenses of Unit-II during the period 15.11.2014 to 31.3.2015 is allowed. Accordingly, the O&M expenses allowed for the purpose of the tariff are as under:



(Rs.in lakh)

	2014-15			2015-16	2016-17	2017-18	2018-19
	1.4.2014 to 14.11.2014 (for Unit-I)	1.4.2014 to 14.11.2014 (for Unit-II)	15.11.2014 to 31.3.2015				
O&M expenses under Reg.29(1)	3946.80	0.00	7893.60	8390.80	8918.80	9479.80	10076.00
O&M expenses under Reg.30(2)							
Water Charges**	0.00	0.00	0.00	0.00	12.38	95.08	46.12
Capital Spares Consumed	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total O&M Expenses (annualised)	3946.80	0.00	7893.60	8390.80	8931.18	9574.88	10122.12
Total O&M Expenses (pro-rata)	2465.40	0.00	2962.80	8390.80	8931.18	9574.88	10122.12

Additional O&M Expenses towards GST

61. The Petitioner has prayed to recover additional O&M expenses towards GST in the petition. It has claimed additional O&M expenses of Rs.74.50 lakh in 2017-18 and Rs.120.84 lakh in 2018-19 on account of payment towards Goods and service tax.

62. The Respondent, BSPHCL has submitted that the Petitioner's claim of GST expenses over and above O&M norms will lead to an additional burden on the consumers, and this can be applicable only if a service is outsourced. The Respondent has further submitted that services are outsourced because of efficiency issues or lack of expertise within the company. It will obviously be lower than the cost of doing that job internally, and the O&M operating norms are the ceiling norms; generating companies are required to manage within these limits. The Respondent has also submitted that through the enactment of the GST Act, GOI has rationalized the tax regime by subsuming various taxes/cess/duties' this has generally resulted in a reduction of the overall applicable tax rate in the country and, therefore, the claim of the Petitioner does not appear to be in order. In response, the Petitioner has submitted that it is a settled position of law that promulgation of GST is a change in law event, and it falls within the purview of Regulation 3(9) read with Regulation 14(3) of the 2014



Tariff Regulations. The Petitioner has further submitted that the amount claimed is only on account of the differential rate of tax for taxable services relating to O&M, i.e., under the erstwhile service tax of 15% and in GST 18%.

63. The submissions of the parties have been considered. It is observed that the Commission, while specifying the O&M expense norms for the period 2014-19 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...”

64. Further, the escalation rates considered in the O&M expense norms is only after accounting for the variations during the past five years of the period 2014-19, which in our view, takes care of any variation in taxes also. It is pertinent to mention that in case of 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. Hence this claim is not allowed.

Additional O&M Expenses on account of the impact of Wage Revision

65. The Petitioner has submitted that the Commission, while specifying the 2014 Tariff Regulations applicable for the period 2014-19, 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 additional



O&M expenses of Rs.33.39 lakh in 2015-16, Rs.312.46 lakh in 2016-17, Rs.878.04 lakh in 2017-18 and Rs.2611.54 lakh in 2018-19 towards impact of wage revision of 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 bifurcation of additional operations & maintenance expenses due to wage revision impact between employees and CISF is provided in Annexure-II of the present petition for the generating station as under:

<i>(Rs.in lakh)</i>				
	2015-16	2016-17	2017-18	2018-19
Employees	0.00	209.47	860.61	2601.18
CISF	33.39	102.99	17.43	10.5
Total	33.39	312.46	878.04	2611.54

66. The Petitioner has submitted that the Petitioner has incurred additional O&M expenditure as a result of pay revision of Employees w.e.f. 1.1.2017 and that of Central Industrial Security Force (“CISF”) w.e.f. 1.1.2016 for the generating station during the period 1.4.2014 to 31.3.2019. Further, the impact of the increase in gratuity limit from 10 lakhs to 20 lakhs consequent upon amendment in Payment of Gratuity Act,1972 has also been implemented in the year ended 31.3.2017. The Petitioner is accordingly requesting for the recovery of these additional expenditures on the following grounds:

- a) Increase in O&M Cost is a subsequent development: It is submitted that the increase in the salaries and wages forms part of the Operation and Maintenance Expenses of the station, however, the said expenditure was notified post issuance of the Tariff Regulations, 2014 and therefore was not considered for the purpose of specifying the normative O&M expenditure;
- b) The said increase is a result of the implementation of the 7th Pay Commission recommendations and decision of the Gol communicated vide Office Memorandum of DPE dated 4.8.2017 in regard to the recommendation of the 3rd Pay Revision Committee for CPSUs (copy enclosed at Annexure-I);
- c) Tariff Regulations, 2014 stipulates the norms and parameters for the tariff determination for the period 1.4.2014 to 31.3.2019. Regulation 29(1)(a) of the 2014 Tariff Regulations provides for O & M norms which include the employees cost besides repair & maintenance and, administrative & general expenses;



- d) As stated above, the implementation of recommendations of the 7th Pay Commission and Office Memorandum for DPE were communicated in 2016/2017. However, the Tariff Regulations, 2014 were notified by the Commission on 21.2.2014 i.e., much prior to 2016-17;
- e) 2014 Tariff Regulations were founded on the basis of actual O&M expenses for the years 2008-09 to 2012-13. In this regard, the Hon'ble Commission in its Statement of Reason for the Tariff Regulations 2014-19 has observed as under:
"29.2 The Commission in its Explanatory Memorandum to the draft Regulations discussed the approach considered for arriving at O&M expenses for various generating stations, which was based on the actual O&M expenses for the period from FY 2008-09 to FY 2012-13."
- f) Accordingly, in arriving at the above O & M norms, the Hon'ble Commission had no occasion to consider the increase in the salary and wage revision w.e.f 1.1.2017/ 1.1.2016. The Hon'ble Commission while framing Tariff Regulations, 2014 could not factor in the impact of such an increase in the employee cost in normative O & M specified in Regulation 29 of the 2014 Tariff Regulations;
- g) Therefore, it is apparent that the implementation of recommendations of the 7th Pay Commission/ Office Memorandum for DPE is a subsequent event that has led to wage revision that has resulted in an increase in O&M expenses for the Petitioner. The recovery of the enhanced O&M Expenses is to be considered and allowed in line with Tariff principles enshrined under Section 61 (d) of the Electricity Act, 2003.

67. The matter has been considered. With regard to the claim of the Petitioner, the Commission vide its order dated 18.7.2023 in Petition No. 421/GT/2020 for MTPS Stage-II has also included the wage revision analysis in respect of Stage-I, i.e., the generating station under consideration. The findings of the Commission in the said order with respect to wage revision impact for both MTPS Stage-I and Stage-II are reproduced as below:

"54. We have examined the submissions and the documents available on record. It is noted that the Petitioner has furnished the actual O & M data for KBUNL (both stages – Stage I and Stage II). It is also noted that in the form 3 A, the Petitioner has furnished wage revision impact as Rs. 274.51 lakh in 2016– 17, Rs. 361.47 lakh during 01.04.2017 to 30.06.2017, Rs. 361.47 lakh during 01.07.2017 to 31.03.2018 and Rs. 788.59 lakh during 2018 - 19. However, as per the annexure B furnished in support of impact of wage revision and detailed computation given, the claim was of Rs. 10.53 lakh, Rs. 361.47 lakh and Rs. 788.59 lakh during 2016 – 17, 2017 – 18 and 2018 – 19, respectively. Further, as the COD of unit 1 was 18.03.2017 and that of generating station was 01.07.2017, there are inconsistencies in wage revision claim w.r.t. 2016 – 17 and 2017 – 18. In this regard, on examining, it is noted that the claim of Rs. 274.51 lakh during 2016 – 17 was huge and inconsistent with other years. Further, it was also noted that the total wage revision impact during 2017 – 18 was of Rs. 361.47 lakh, however, the Petitioner has claimed this Rs. 361.47 lakh during both periods from 01.04.2017 to 30.06.2017 as well



as 01.07.2017 to 31.03.2018. Accordingly, the total wage revision impact claimed by Petitioner in annexure B for Rs. 1160.59 lakh (Rs. 10.53 lakh in 2016-17, Rs. 361.47 lakh in 2017-18 and Rs. 788.59 lakh in 2018-19) including employees of CISF from 1.1.2016 and for employees of the Petitioner posted at the generating station with effect from 1.1.2017 was considered.

55. In this regard, it is also noted that 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 cost due to 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 macro-economic 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.”

56. The methodology indicated in SOR quoted above suggests a comparison of the normative O&M expenses with the actual O&M expenses, on year to year basis. However, in this respect the following facts needs 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 expenditure 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 expenditure has gone beyond the normative O&M expenses in a particular year put departmental restrictions and try to bring the expenditure for the next year below the norms.



57. In consideration of 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 actuals O&M expenses incurred shall be made for 2016-19 (COD of unit 1 to 31.3.2019) on a combined basis, which is commensurate with the wage revision claim being spread over these three years.

58. In order to substantiate wage revision impact the Petitioner has furnished the detailed breakup of the actual O&M expenses for the MTPS (stage I and II) incurred during the 2014-19 tariff period. Further, it is also noted the Petitioner has transferred some O & M expenses of about Rs. 3737.10 lakh pertaining to 2016 – 19 to expenditure during construction, which accounts for commissioning activities of stage II.

59. 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 2016-17 to 2018-19, 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 Exgratia), whichever is lower, is required to be allowed as wage revision impact for the period 2016-19.

60. In this context, it is also noted that COD of unit 1 and 2 of stage II are 18.03.2017 and 01.07.2017, respectively and the O & M norms applicable for stage I and II are different. Accordingly, it is opined to assess the inadequacy of O & M expenses for MTPS (stage I and II), by considering the normalized O & M expenses of MTPS with O & M norms allowed for stage I and II. Subsequently, the shortfall if any, shall be apportioned to stage I and II and compared with wage revision impact claimed by the Petitioner. Accordingly, the actual and normalized O & M expenses for the MTPS (both stage I and II) from 2016 – 19 are as follows:

(Rs.in lakh)

Year	Actual O&M expenses for whole MTPS, excluding water charges	Normalized O&M expenses for whole MTPS
2016-17	6855.67	6406.24
2017-18	11175.53	10679.77
2018-19	18033.83	16958.23

61. The wage revision impact claimed by the Petitioner and wage revision impact claimed



(excluding PRP and ex-gratia) for the generating station is as under:

(Rs.in lakh)		
Year	Wage revision impact claimed for the generating station	Wage revision impact claimed for the generating station (excluding PRP / ex-gratia)
2016-17	10.53	10.53
2017-18	361.47	321.09
2018-19	788.59	622.32
Total	1160.59	953.94

62. Now, the normalized O & M expenses for the MTPS stage I and II are compared with the norms allowed to Stage I and II and brief of the same from 2016 – 19 is as follows:

(Rs.in lakh)				
	2016-17	2017-18	2018-19	Total
Actual O&M expenses (normalized) MTPS (Stage I and II) (a)	6406.24	10679.77	16958.23	34044.24
Normative O&M Expenses allowed to the Stage I (b)	8918.80	9479.80	10076.00	28474.60
Normative O&M Expenses allowed to the Stage I (c)	201.95	9797.71	11898.90	21898.56
Total Normative O&M Expenses allowable to both Stage I and II (d= b+c)	9120.75	19277.51	21974.90	50373.16
Under / (Excess) recovery for the generating station (e)=(a)-(d)	(2714.51)	(8597.74)	(5016.67)	(16328.92)

63. It is observed that during the period 2016-19, wherein, wage revision impact was claimed by the Petitioner, the normative O&M expenses allowed is higher than that of actual O&M expenses (normalized) and the excess recovery is to the tune of Rs. 16328.92 lakh. As such, in terms of methodology described above, the wage revision impact (excluding PRP / ex-gratia) is not allowed for this generating station.”

68. Accordingly, in terms of the above findings, the wage revision impact as claimed by the Petitioner for the generating station, is not allowed.

Operational Norms

69. 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, have been allowed by the Commission vide order dated 20.1.2020 for the tariff period 1.4.2014 to 31.3.2019 as follows:

“159. Based on the above discussions, the following operational norms have been considered for the generating station for the purpose of tariff.

Normative Annual Plant Availability Factor (%)	80
Specific Fuel Oil Consumption (ml/kWh)	2.0
Auxiliary Power Consumption (%)	12.0
Gross Station Heat Rate (Kcal /kWh)	3000

”



70. The Petitioner in compliance with the directive of the Commission vide order dated 20.1.2020, to furnish the reasons for not achieving the Station Heat Rate (SHR) after R&M at par with similar taken-over stations comprising Units of 110 MW capacity like Tanda TPS (2750 kcal/kWh) at the time of truing-up exercise, has informed the reasons as under:

“The Heat rate of units at the time of takeover was 4800 kcal/kWh. R&M of Boiler, Turbine, Generator & auxiliaries (BTG package) of 2x110 MW units was carried out at the cost of Rs.233.55 Cr. As per the DPR agreed with BHEL for R&M, the gross Station heat Rate (GSHR) of units to be achieved after R&M was 3000 kcal/kWh. There was improvement of unit heat rate from 4800 kcal/kWh to 3200 kcal/kWh after partial refurbishment. After stabilization of units in the subsequent years post completion of R&M from 2014-15 to 2018-19, station has been able to achieve heat rate of around 3000 kcal/kWh. Further, as the amount available for carrying out R&M was restricted to Rs 471.8 Cr, the 346 4 majority works carried out were of refurbishments as per the scope of R&M for achieving the Heat Rate at around 3000 kcal/kWh instead of taking up the complete replacements of major capital equipment’s which required more investment. It is submitted that the Commission vide its order dated 22.01.2020 has allowed GSHR of 3000 Kcal/KWh, APC of 12% and SFC of 2 ml/kwh for the period 2014-19. Further, Heat Rate as per Target performance envisaged in DPR after R&M is of 3000 Kcal/Kwh which the petitioner has been able to achieve after stabilization of units in subsequent years. The petitioner has faced serious problem of non payment of energy bills by sole beneficiary Bihar in past which resulted in inability on part of petitioner to arrange fuel for the station, thereby resulting in poor operating performance of station. The details of year wise energy produced, Auxiliary Consumption and SHR are as below:

Period	Gen (MU)	APC (%)	HR (Kcal/KWH)
2014-15	875.13	11.21	3000
2015-16	778.96	14.0	2979
2016-17	752.15	14.01	3000
2017-18	752.15	12.95	2994.37
2018-19	735.76	12.13	2988.56

71. Considering the fact that the actual heat rate achieved by the generating station is in close conformity to the normative heat rate of 3000 kcal/kWh, the following norms are considered for truing up, as were allowed in the order dated 22.1.2020:

Normative Annual Plant Availability Factor (%)	80
Specific Fuel Oil Consumption (ml/kWh)	2.0
Auxiliary Power Consumption (%)	12.0
Gross Station Heat Rate (Kcal /kWh)	3000



Interest on Working Capital

72. Sub-section (a) of clause (1) of 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.”

Fuel Cost and Energy Charges in Working Capital

73. Regulation 28(2) of the 2014 Tariff Regulations provides that the computation of the cost of fuel as part of 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.

74. 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”.

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

76. The Regulations for computation of energy charges and issue of ‘as received’ GCV specified in Regulation 30 of the 2014 Tariff Regulations were 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 Petitioners. In terms of the directions of the Hon’ble High Court, the Commission vide order dated 25.1.2016 in Petition No. 283/GT/2014 (approval of tariff of Kahalgaon STPS for the 2014-19 tariff period) 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.”

77. The Petitioner has submitted as under:

- i) That the Commission, in its various tariff orders in respect of NTPC stations, has allowed IWC on a provisional basis (based on mine end GCV with moisture adjustment) as ‘GCV as received’ was not available during the period Jan-2014 to March 2014. In MTPS Stage-I also, the GCV ‘as received basis’ at wagon top as per methodology prescribed by the commission was not available from January 2014 to March 2014. Accordingly, as directed by the Hon’ble Commission in various tariff orders of NTPC stations and order dated 28.8.2019 in Petition No. 115/MP/2018, the month-wise GCV for the instant station has been furnished at Annexure-III, and IWC is computed based on the same;
- ii) Further, CEA vide letter dated 17.10.2017 has opined that 85-100 kcal/kg for a pit-head station and a margin of 105-120 kcal/kg for non-pit head station may be considered as a loss of GCV of coal between “as received” and “as fired. In line with the above CEA recommendations, the Petitioner has considered a 120 kcal/kg margin on the average GCV of the period from October 2016 to March 2019 for computing working capital.

78. The Respondents have objected to allowing the higher GSHR to the generating station. The Petitioner vide affidavit 29.3.2023, in compliance with the directive to submit the reports of CIMFR of the period, with reference to the GCV and cost of the coal claimed vide ROP dated 30.12.2022 has submitted as under:

“17. It is submitted that the KBUNL has tied up with CIMFR for third party sampling as per the directions of the commission. CIMFR was not available in 2009-14 period and started during the 2014-19 period, therefore CIMFR reports for the period Jan-Mar 2014 are not available. Further, the Petitioner is submitting audited Form 15 for the months of Jan’14, Feb’14 & Mar’ 14 duly certified by statutory auditor, attached as Annexure-G.”

79. The Petitioner has further submitted that CEA vide letter dated 17.10.2017 has opined that a margin of 85-100 kcal/kg for 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. In line with this, the Petitioner has considered a margin of 120 kCal/kg on average GCV of coal for the period preceding three months of January 2014 to March 2014 for the generating station for computation of working capital of the generating station. Accordingly, the cost of fuel component in the working capital of the generating station is based on (i) ‘as received’ GCV of coal with adjustment of 120 kCal/kg towards storage loss, (ii) landed price of coal for preceding three months of January 2014 to March 2014 and (iii) GCV and landed price of Secondary fuel oil procured for the preceding three months of January 2014 to March 2014 for the generating station. The Petitioner has claimed the cost of the fuel component in the working capital as under:

	<i>(Rs.in lakh)</i>			
	2015-16	2016-17	2017-18	2018-19
Cost of Coal towards stock (30 days)	4516.95	4516.95	4516.95	4516.95
Cost of Coal towards Generation (30 days)	4516.95	4516.95	4516.95	4516.95
Cost of Secondary fuel oil 2 months	402.59	401.49	401.49	401.49

80. The Petitioner has claimed Energy Charge Rate (ECR) ex-bus 422.814 paise/kWh for the generating station based on GCV and price of fuel (coal and secondary fuel oil) as indicated above.

81. 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 from 1.4.2014 to 14.11.2014, when only one Unit of the generating station was operating, is to be based on such values for the months of January 2014, February 2014, and March 2014 and for the period from 15.11.2014 to 31.3.2019, when both Units of the



generating station were under operation, is to be based on the price and GCV of coal and oil received at the station during preceding three months, i.e., August, October and November 2014. Also, the storage loss of GCV of 120 kCal/kg for coal, as claimed by the Petitioner cannot be considered, as the same is not as per provisions of the 2014 Tariff Regulations.

82. The Petitioner has furnished the details of 'as received' GCV and the price of coal and oil for the preceding three months of January 2014 to March 2014 for the generating station. In support of the claimed values, the Petitioner has submitted an audited Form-15 vide affidavit dated 29.3.2023. Further, in response to the ROP of hearing dated 27.6.2024, the Petitioner has also submitted the Form-15 for coal and oil received during August, September, and October 2014, i.e., for the preceding three months to the month of COD of Unit-II which is 15.11.2014. It is observed that the Petitioner has included the opening stock of coal, its GCV, and value while furnishing the coal received during the above relevant months at Form-15, whereas the Regulation requires to determine the GCV and Price of coal received during these months, excluding the opening stock, for the purpose of calculating IWC components. Further to the specific direction of the Commission to provide the month-wise opening coal stock, GCV, and cost of opening stock so as to arrive at the GCV and price of coal received during the relevant months, the Petitioner vide its affidavit dated 28.8.2024 has expressed its inability to provide the same submitting that this station has been permanently closed w.e.f. 8.9.2021 and is in the process of dismantling as such, the month-wise details of opening stock, its value, and its GCV are not available for the relevant months, i.e., January to March of 2014 and August to October of 2014.



83. The submissions of the Petitioner have been considered. Generally, the exclusion of the opening stock for the purpose of arriving at the landed price of coal favours the generator as the coal price of the previous months is generally less than the current month. As such, considering the special circumstances of the generating station and the fact that the inclusion of opening stock would reduce the IWC favouring beneficiaries, the Commission exercising its 'Power to relax' under Regulation 56 of the 2014 Tariff Regulations allows the coal price and GCV as submitted by the Petitioner at Form-15 for the relevant months. It is observed that the "other charges," which include stone picking charges & loco driver's salary & sampling, for the month of March 2014 as claimed by the Petitioner, are exorbitantly high in comparison to these charges for the months of January and February 2014. The Petitioner, vide its affidavit dated 28.8.2024, has submitted the details of these charges. It comes out that for the month of March 2014, the other charges of Rs.667.60 lakh include a major amount of Rs.563.82 lakh as "adjustment with Coal company." As such, considering the same to be the result of "prior period adjustment," the "other charges" for the month of March 2014 have been restricted to Rs.103.77 lakh (Rs.667.60 lakh – Rs.563.82 lakh). Accordingly, the GCV and landed cost of oil, as well as coal and ECR, are determined for the generating station from 1.4.2014 to 31.3.2019 as follows:

	1.4.2014 to 14.11.2014	15.11.2014 to 31.3.2019
Weighted Average GCV of Oil (kCal/ltr)	9610.00	9699.16
Weighted Average cost of Oil (Rs./kl)	78122.76	75051.01
Weighted Average GCV of Coal (kCal/kWh)	3917.18	3951.73
Weighted Average cost of Coal (Rs./Tonne)	4065.53	4546.92
Energy Charge Rate (ECR) in Rs /kWh (rounded off to 3 decimals)	3.693	4.068

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



(Rs.in lakh)

	1.4.2014 to 14.11.2014 (Unit-I)	15.11.2014 to 31.3.2015 (Unit-I&II)	2015-16	2016-17	2017-18	2018-19
Cost of Coal towards stock (30 days per annum) corresponding to NAPAF	1960.15	4345.90	4345.90	4345.90	4345.90	4345.90
Cost of Coal towards Generation (30 days per annum) corresponding to NAPAF	1960.15	4345.90	4345.90	4345.90	4345.90	4345.90
Cost of Secondary fuel oil for 2 months corresponding to NAPAF	200.74	385.70	386.76	385.70	385.70	385.70

Working Capital for Maintenance Spares

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

(Rs.in lakh)

2014-15		2015-16	2016-17	2017-18	2018-19
1.4.2014 to 14.11.2014	15.11.2014 to 31.3.2015				
789.36	1578.72	1678.16	1786.24	1914.98	2024.42

Working Capital for Receivables

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

(Rs.in lakh)

	2014-15		2015-16	2016-17	2017-18	2018-19
	1.4.2014 to 14.11.2014	15.11.2014 to 31.3.2015				
Variable Charges - for two months corresponding to NAPAF	4175.39	9198.76	9223.96	9198.76	9198.76	9198.76
Fixed Charges - for two months corresponding to NAPAF	1078.87	2430.55	2474.50	2561.37	2679.16	2780.92
Total	5254.26	11629.31	11698.46	11760.12	11877.92	11979.67

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

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



2014-15		2015-16	2016-17	2017-18	2018-19
1.4.2014 to 14.11.2014	15.11.2014 to 31.3.2015				
328.90	657.80	699.23	744.27	797.91	843.51

(Rs.in lakh)

Rate of Interest on Working Capital

88. In terms of clause (3) of Regulation 28 of the 2014 Tariff Regulations, the rate of interest on working capital has been considered as 13.50% (Bank rate of 10.00% as on 1.4.2014 + 350 bps). Accordingly, Interest on working capital has been computed as under:

	2014-15		2015-16	2016-17	2017-18	2018-19
	1.4.2014 to 14.11.2014	15.11.2014 to 31.3.2015				
Working Capital for Cost of Coal towards Stock (30 days per annum) corresponding to NAPAF	1960.15	4345.90	4345.90	4345.90	4345.90	4345.90
Working Capital for Cost of Coal towards Generation (30 days per annum) corresponding to NAPAF	1960.15	4345.90	4345.90	4345.90	4345.90	4345.90
Working Capital for Cost of Secondary fuel oil (2 months per annum) corresponding to NAPAF	200.74	385.70	386.76	385.70	385.70	385.70
Working Capital for Maintenance Spares @ 20% of O&M expenses	789.36	1578.72	1678.16	1786.24	1914.98	2024.42
Working Capital for Receivables –2 months per annum corresponding to NAPAF	5254.26	11629.31	11698.46	11760.12	11877.92	11979.67
Working Capital for O&M expenses – 1 month per annum	328.90	657.80	699.23	744.27	797.91	843.51
Total Working Capital	10493.56	22943.33	23154.41	23368.12	23668.30	23925.11
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%
Interest on Working Capital (annualised)	1416.63	3097.35	3125.85	3154.70	3195.22	3229.89
Interest on Working Capital (pro-rata)	884.91	1162.57	3125.85	3154.70	3195.22	3229.89

(Rs.in lakh)



Annual Fixed Charges for the period 2014-19

89. Based on the above, the annual fixed charges approved for the generating station for the period 2014-19 are summarized as under:

(Rs.in lakh)

	2014-15		2015-16	2016-17	2017-18	2018-19
	1.4.2014 to 14.11.2014	15.11.2014 to 31.3.2015				
Depreciation	464.05	1456.81	1627.69	1727.63	1831.41	1883.30
Interest on loan	529.70	1518.85	1187.38	1000.76	884.80	681.26
Return on Equity	116.02	616.69	515.30	553.92	588.67	768.93
Interest on Working Capital	1416.63	3097.35	3125.85	3154.70	3195.22	3229.89
O&M Expenses	3946.80	7893.60	8390.80	8931.18	9574.88	10122.12
Total (annualized)	6473.20	14583.31	14847.01	15368.19	16074.97	16685.50
Total (pro-rata)	4043.53	5473.74	14847.01	15368.19	16074.97	16685.50

90. The difference between the annual fixed charges already recovered in terms of the Commission's order dated 22.2.2022 in Petition No.10/RP/2020 and the annual fixed charges determined by this order shall be adjusted in terms of Regulation 8 of the 2014 Tariff Regulations.

91. Petition No. 264/GT/2021 is disposed of in terms of the above.

Sd/-
(Harish Dudani)
Member

Sd/-
(Ramesh Babu V)
Member

Sd/-
(Jishnu Barua)
Chairperson

