

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 701/GT/2025

Coram:

**Shri Ramesh Babu V., Member
Shri Harish Dudani, Member
Shri Ravinder Singh Dhillon, Member**

Date of Order: 28th May, 2026

In the matter of:

Petition for revision of tariff of Tanda Super Thermal Power Station Stage-I (440 MW) for the period from 1.4.2019 to 31.3.2024 after truing-up exercise.

And

In the matter of:

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

...Petitioner

Vs.

Uttar Pradesh Power Corporation Limited
Shakti Bhawan, 14 Ashok Marg, Lucknow- 226001

...Respondent

Parties Present:

Shri Adarsh Tripathi, Advocate, NTPC
Shri Ajitesh Garg, Advocate, NTPC
Shri Shashwat Singh, Advocate, UPPCL

ORDER

This Petition has been filed by the Petitioner, NTPC Limited, for revision of tariff of Tanda Thermal Power Station Stage-I (440 MW) (in short “the generating station”) for the period 2019-24, in accordance with the provisions of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (in short “the 2019 Tariff Regulations”). The generating station, with a total capacity of 440 MW,



comprises four units of 110 MW each. The unit-wise dates of commissioning of the generating station are as under:

Unit(s)	Installed Capacity (MW)	Actual COD
Unit – I	110	21.3.1988
Unit-II	110	11.3.1989
Unit- III	110	28.3.1990
Unit-IV/Generating Station	110	20.2.1998
(Date of take-over by NTPC)		(14.1.2000)

2. Petition No. 450/GT/2020 was filed by the Petitioner for truing up of tariff of the generating station for the period 2014-19 and the order dated 16.4.2024 had approved the annual fixed charges and the capital cost of the generating station.

3. While so, Petition No. 445/GT/2020 was filed by the Petitioner for approval of the tariff of the generating station for the period 2019-24, and the order dated 17.4.2024 approved the tariff of the said period as under:

Capital Cost allowed

	(Rs. in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Opening capital cost	123835.89	123988.14	124374.52	124374.52	124374.52
Add: Additional capital expenditure	152.24	386.38	0.00	0.00	0.00
Closing capital cost	123988.14	124374.52	124374.52	124374.52	124374.52
Average capital cost	123912.02	124181.33	124374.52	124374.52	124374.52

Annual Fixed Charges allowed

	(Rs. in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	4000.81	4056.82	4102.70	4102.70	4102.70
Interest on Loan	30.18	0.00	0.00	0.00	0.00
Return on Equity	6980.04	6988.22	6994.03	6994.04	6994.05
Interest on Working Capital	3837.96	3568.72	3328.36	3328.36	3809.54
O&M Expenses	21697.52	21423.83	21423.83	21423.83	21423.83
Total	36546.51	36037.59	35848.92	35848.92	36330.11

4. Thereafter, the Petitioner had filed the Review Petition No. 23/RP/2024, against the order dated 16.4.2024 in Petition No. 450/GT/2020, on the following issue:

(A) Review the disallowance of additional capital expenditure on account of the unreconciled gap between the additional capital expenditure as per books (Form-9C



Ind AS) and as per Form-9A/9D and to allow the deducted additional capitalization for the purpose of tariff.

5. The Commission vide its order dated 31.12.2024 in Petition No. 23/RP/2024 (in Petition No. 450/GT/2020), allowed the review on the issue above, and revised the tariff for the generating station for the period 2014-19 as under:

Capital Cost

	(Rs. in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening capital cost	115680.89	119143.24	120517.98	122085.21	123078.71
Add: Additional capital expenditure	3462.35	1374.74	1567.23	993.51	1601.79
Closing capital cost	119143.24	120517.98	122085.21	123078.71	124680.51
Average capital cost	117412.06	119830.61	121301.59	122581.96	123879.61

Annual Fixed Charges

	(Rs. in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	3154.03	3428.78	3619.16	3766.89	3942.95
Interest on Loan	611.90	710.29	653.13	454.69	179.12
Return on Equity	6907.35	7083.79	7170.74	7246.43	7342.84
Interest on Working Capital	5760.28	5902.70	5950.71	6111.88	6170.78
O&M Expenses	15991.76	17978.61	18770.77	19602.04	20551.02
Total	32425.32	35104.17	36164.51	37181.92	38186.72

Present Petition

6. The Petitioner has filed the present Petition for truing up of the tariff of the generating station for the period 2019-24 in accordance with Regulation 13 of the 2019 Tariff Regulations, which provides as under:

“13. Truing up of tariff for the period 2019-24: (1) The Commission shall carry out the truing up exercise for the period 2019-24 along with the tariff petition filed for the next tariff period, for the following:

(1a) The input price of coal or lignite from the integrated mine(s) of the generating station(s) for the tariff period 2019-24 shall be trued up for the capital expenditure including additional capital expenditure incurred up to 31.3.2024, as allowed by the Commission;

the capital expenditure including additional capital expenditure incurred up to 31.3.2024, on account of Force Majeure and Change in Law, as admitted by the Commission.

a. the capital expenditure including additional capital expenditure incurred up to 31.3.2024, as admitted by the Commission after prudence check at the time of truing up:



b. the capital expenditure including additional capital expenditure incurred up to 31.3.2024, on account of Force Majeure and Change in Law.

(2) The generating company or the transmission licensee, as the case may be, shall make an application, as per **Annexure – I**, to these regulations, for carrying out truing up exercise in respect of the generating station or a unit thereof of the transmission system or an element thereof by 30.11.2024.

(3) The generating company or the transmission licensee, as the case may be, may make an application for interim truing up of tariff in the year 2021-22, if the annual fixed cost increased by more than 20% over the annual fixed cost as determined by the Commission for the respective year of the tariff period:

Provided that if the actual additional capital expenditure falls short of the projected additional capital expenditure allowed under provisions of Chapter 7 of these regulations, the generating company or the transmission licensee, as the case may be, shall not be required to file any interim true up petition for this purpose and shall refund to the beneficiaries or the long term customers, as the case may be, the excess tariff recovered corresponding to the projected additional capital expenditure not incurred at the bank rate as on 1st April of the respective years, under intimation to the Commission:

Provided further that the generating company or the transmission licensee shall submit the complete details along with the calculations of the refunds made to the beneficiaries or the long term customers, as the case may be, at the time of truing up.

(4) After truing up, if the tariff already recovered exceeds or falls short of the tariff approved by the Commission under these regulations, the generating company or the transmission licensee, shall refund to or recover from, the beneficiaries or the long term customers, as the case may be, the excess or the short fall amount along with simple interest at the rate equal to the bank rate as on 1st April of the respective years of the tariff period in six equal monthly instalments.

(4a) After truing up, if the input price already recovered exceeds or falls short of the input price approved by the Commission under these regulations, the excess or the shortfall amount shall be refunded or recovered, as the case may be, by the generating company along with simple interest at the rate equal to the bank rate as on 1st April of the respective years of the tariff period in six equal monthly instalments:
Provided that the generating company shall refund such excess amount or recover the shortfall amount from the beneficiaries based on scheduled energy.”

7. Accordingly, in terms of the above regulation, the Petitioner has claimed capital cost and annual fixed charges for the period 2019-24 as under:

Capital Cost Claimed

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
(a) Claimed to be eligible for ROE at base rate of 15.50%:					
Opening capital cost	124680.51	124930.51	125023.75	125021.99	124765.68
Add: Additional capital expenditure	250.00	93.24	(-) 1.75	(-) 256.31	531.94
Closing capital cost	124930.51	125023.75	125021.99	124765.68	125297.62
Average capital cost	124805.51	124977.13	125022.87	124893.84	125031.65



(b) Claimed to be eligible for ROE at base rate of WAROI					
Opening capital cost	0.00	45.19	170.44	229.70	295.28
Add: Additional capital expenditure	45.19	125.25	59.26	65.58	# 5.54
Closing capital cost	45.19	170.44	229.70	295.28	300.82
Average capital cost	22.59	107.81	200.07	262.49	298.05
(c) Total capital cost claimed					
Opening capital cost	124680.51	124975.70	125194.18	125251.69	125060.96
Add: Additional capital expenditure	295.19	218.48	57.51	-190.73	537.47
Closing capital cost	124975.70	125194.18	125251.69	125060.96	125598.44
Average capital cost	124828.10	125084.94	125222.93	125156.32	125329.70

The Petitioner has claimed a cost adjustment towards Construction of Type-D and Type-C Quarters amounting to (-) Rs.3.63 lakh in the year 2023-24 as per Form-9, and is also adjusted in the Auditor certified Form-J. However, the Petitioner has not considered the same for computation of capital cost in Form-1(i) as well as at above. The same has been considered by the commission for computation of tariff and has been dealt under Para 51 of this order.

Annual Fixed Charges claimed

	(Rs. In lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	4095.20	4143.63	4178.78	4169.36	4555.69
Interest on Loan	40.91	0.00	0.00	0.00	0.00
Return on Equity	7032.94	7044.63	7049.24	7044.28	7053.77
Interest on Working Capital	3868.45	3948.70	3645.83	3685.05	5660.47
O&M Expenses	26078.37	22020.29	23165.42	23514.75	22862.28
Total	41115.88	37157.24	38039.28	38413.44	40132.20

8. The Petition was heard on 28.8.2025 wherein the Commission directed the Petitioner to submit additional information, and parties were further directed to complete the pleadings. In compliance, the Petitioner has filed the additional information vide affidavit dated 9.10.2025. The Respondent, UPPCL, has filed its reply vide affidavit dated 1.11.2025, and the Petitioner has filed its rejoinder to the said reply vide affidavit dated 27.11.2025. Pursuant to the hearing on 9.12.2025, the order in the Petition was reserved. Based on the submissions of the parties and the documents on record, we proceed with truing up the tariff of the generating station for the period 2019-24, after a prudence check, as stated in the subsequent paragraphs.

Capital Cost

9. Regulation 19 of the 2019 Tariff Regulations provides as under:

“19. Capital Cost: (1) The Capital cost of the generating station or the transmission system, as the case may be, as determined by the Commission after prudence check in accordance with these regulations shall form the basis for 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) Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period;*
- (d) Interest during construction and incidental expenditure during construction as computed in accordance with these regulations;*
- (e) Capitalised initial spares subject to the ceiling rates in accordance with these regulations;*
- (f) Expenditure on account of additional capitalization and de-capitalisation determined in accordance with these regulations;*
- (g) Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the date of commercial operation as specified under Regulation 7 of these regulations;*
- (h) Adjustment of revenue earned by the transmission licensee by using the assets before the date of commercial operation;*
- (i) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*
- (j) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of the generating station but does not include the transportation cost and any other appurtenant cost paid to the railway;*
- (k) Capital expenditure on account of biomass handling equipment and facilities, for co-firing;*
- (l) Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;*
- (m) Expenditure on account of fulfilment of any conditions for obtaining environment clearance for the project;*
- (n) Expenditure on account of change in law and force majeure events; and*
- (o) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.*

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

- (a) Capital cost admitted by the Commission prior to 1.4.2019 duly trued up by excluding liability, if any, as on 1.4.2019;*
- (b) Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;*
- (c) Capital expenditure on account of renovation and modernisation as admitted by this Commission in accordance with these regulations;*
- (d) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*
- (e) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal up to the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway;*
- (f) and Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.*

(4) The capital cost in case of existing or new hydro generating station shall also



include:

(a) cost of approved rehabilitation and resettlement (R&R) plan of the project in conformity with National R&R Policy and R&R package as approved; and

(b) cost of the developer's 10% contribution towards Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) and Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) project in the affected area.

(5) The following shall be excluded from the capital cost of the existing and new projects:

(a) The assets forming part of the project, but not in use, as declared in the tariff petition;

(b) De-capitalised Assets after the date of commercial operation on account of replacement or removal on account of obsolescence or shifting from one project to another project: Provided that in case replacement of transmission asset is recommended by Regional Power Committee, such asset shall be decapitalised only after its redeployment; Provided further that unless shifting of an asset from one project to another is of permanent nature, there shall be no de-capitalization of the concerned assets.

(c) In case of hydro generating stations, any expenditure incurred or committed to be incurred by a project developer for getting the project site allotted by the State Government by following a transparent process;

(d) Proportionate cost of land of the existing project which is being used for generating power from generating station based on renewable energy; and

(e) Any grant received from the Central or State Government or any statutory body or authority for the execution of the project which does not carry any liability of repayment."

10. The Commission vide order dated 16.4.2024 in Petition No. 450/GT/2020 (pertaining to truing up of tariff for the period 2014-19), approved the closing capital cost of Rs.123835.89 (net of un-discharged liabilities of Rs.572.04 lakh) as on 31.3.2019. Subsequently, the Commission vide order dated 31.12.2024 in Review Petition No. 23/RP/2024 in Petition No. 450/GT/2024 revised the tariff of the generating station for the 2014-19 tariff period, considering the closing capital cost of Rs.124680.51 lakh as on 31.3.2019. The Petitioner, in the instant Petition, has also claimed the opening capital cost of Rs.124680.51 lakh as on 1.4.2019. Accordingly, the same is considered as opening capital cost as on 1.4.2019, for the purpose of truing up the tariff for the period 2019-24, in accordance with Regulation 19(3) of the 2019 Tariff Regulations

Additional Capital Expenditure:

11. Regulations 25 and 26 of the 2019 Tariff Regulations provides as under:



“25. Additional Capitalisation within the original scope and after the cut-off date:

(1) The additional capital expenditure incurred or projected to be incurred in respect of an existing project or a new project on the following counts within the original scope of work and after the cutoff date may be admitted by the Commission, subject to prudence check:

- (a) Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority, or order or decree of any court of law;*
- (b) Change in law or compliance of any existing law;*
- (c) Deferred works relating to ash pond or ash handling system in the original scope of work;*
- (d) Liability for works executed prior to the cut-off date;*
- (e) Force Majeure events;*
- (f) Liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments; and*
- (g) Raising of ash dyke as a part of ash disposal system.*

(2) In case of replacement of assets deployed under the original scope of the existing project after cut-off date, the additional capitalisation may be admitted by the Commission, after making necessary adjustments in the gross fixed assets and the cumulated depreciation, subject to prudence check on the following grounds:

- (a) The useful life of the assets is not commensurate with the useful life of the project and such assets have been fully depreciated in accordance with the provisions of these regulations.*
- (b) The replacement of the assets or equipment is necessary on account of change in law or Force Majeure conditions;*
- (c) The replacement of such assets or equipment is necessary on account of obsolescence of technology; and*
- (d) The replacement of such assets or equipment has otherwise been allowed by the Commission.*

26. Additional Capitalisation beyond the original scope

(1) 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 beyond the original scope, may be admitted by the Commission, subject to prudence check:

- (a) Liabilities to meet award of arbitration or for compliance of order or directions of any statutory authority, or order or decree of any court of law;*
- (b) Change in law or compliance of any existing law;*
- (c) Force Majeure events;*
- (d) Need for higher security and safety of the plant as advised or directed by appropriate Indian Government Instrumentality or statutory authorities responsible for national or internal security;*
- (e) Deferred works relating to ash pond or ash handling system in addition to the original scope of work, on case to case basis:*

Provided also that if any expenditure has been claimed under Renovation and Maintenance (R&M) or repairs and maintenance under O&M expenses, the same shall not be claimed under these Regulations;

- (f) Usage of water from sewage treatment plant in thermal generating station.*

(2) 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 decapitalisation shall be deducted from the value of gross fixed asset and corresponding loan as well as equity shall be deducted from outstanding loan and the equity respectively in the year such de-capitalisation takes place with corresponding adjustments in cumulative depreciation and cumulative repayment of loan, duly taking into consideration the year in which it was capitalised.”



12. The projected additional capital expenditure for the period 2019-24, as allowed in the order dated 17.4.2024 in Petition No. 445/GT/2020, is summarised as under:

<i>(Rs. in lakh)</i>						
Sl.No.	Head of Work/ Equipment	2019-20	2020-21	2021-22	2022-23	2023-24
A.	Works under Original Scope, Change in law etc., eligible for ROE at normal rate					
1.	Real Time Monitoring of AAQMS	7.23	0.00	0.00	0.00	0.00
	Total(A)	7.23	0.00	0.00	0.00	0.00
B	Works beyond Original Scope, excluding additional capitalization due to change in law, eligible for ROE at weighted average rate of interest					
2.	Fire Fighting system for CHP area	0.00	224.88	0.00	0.00	0.00
3.	Construction of 32 nos. Residential Building type D and 16 nos. of Type C Quarters	83.07	0.00	0.00	0.00	0.00
4.	Generator relay panels for 110 MW Unit 1& Unit-3	93.86	0.00	0.00	0.00	0.00
5.	Assumed deletion on account of Generator relay panel of 110 MW Unit 1 & Unit 3	(-)31.91	0.00	0.00	0.00	0.00
6.	Air washer system for Unit-1 and Unit-2	0.00	119.65	0.00	0.00	0.00
7.	Rack & Pinion lifts at crusher house	0.00	41.85	0.00	0.00	0.00
	Total(B)	145.01	386.38	0.00	0.00	0.00
	Total Additional Capital Expenditure allowed(A+B)	152.24	386.38	0.00	0.00	0.00

13. The Petitioner has submitted that there are certain capital expenditures, which were not projected earlier, but had been incurred by the Petitioner, due to site-specific requirements, for successful and efficient operation of the generating station, and the same is required to be included as part of the capital base for the purpose of tariff. The year-wise additional capital expenditure claimed by the Petitioner, duly supported by an auditor certificate, for the period 2019-24, is as under:

<i>(Rs. in lakh)</i>							
Sl. No	Head of Work /Equipment	2019-20	2020-21	2021-22	2022-23	2023-24	Regulation
1	Digital Distributed Control & Management Information System (DDCMIS) PG Test of Unit-1,2 & 4	60.52	-	-	-	-	27 read with 25 (1) (f) & 76
2	Real Time Monitoring of AAQMS	7.24	-	-	-	-	26(1)(b)
3	Automatic Generation Control -AGC	-	-	17.36	0.91	(-) 0.50	26 (1) (b)
4	Gen. Relay Panel for 110 MW Unit 1&3	46.13	8.41	-	-	-	25(2) (c)
5	Online Energy Monitoring System	14.60	-	-	-	-	26 (1) (b)
6	ABT Upgradation	-	19.83	-	-	-	25 (2) (c)



Sl. No	Head of Work /Equipment	2019-20	2020-21	2021-22	2022-23	2023-24	Regulation
7	Steam Generator (BHEL make 110MW) UNIT 1	-	-	-	6.51	-	25 (1) (a)
8	3rd Ash Dyke Raising	-	-	-	-	0.81	25 (1) (g)
9	Up-gradation of HMI - Stage-1	-	-	-	-	710.27	25 (2) (C)
10	Online Coal Analyzer for existing stations	-	-	-	335.99	-	26(1)(b)
11	RTU Replacement	-	-	-	10.72	-	26(1)(b)
12	100 MT PIT TYPE ELECTRONIC WEIGHBRIDGE	-	-	-	0.94	-	26(1)(b)
13	Supply & installation of 140 MT in-motion W/Bridge	-	-	-	-	8.69	26(1)(b)
14	Sprinkler system for dust suppression of Ash Dyke B	-	-	-	-	73.01	26(1)(b)
15	Dry Fly Ash Extraction System	-	-	-	-	2.76	26(1) (b)
16	Geopolymer Concrete interlocking work	-	-	-	-	6.38	26(1)(b)
17	Photo Voltaic Plant at ETH & VIPGH	-	67.63	6.25	-	-	26 (1) (b) read with 76
18	Cap of MBOA, EDP-PC	-	0.60	-	-	-	25 (2) (a)
19	Construction of 32 nos. Residential Building Type-D and 16 nos. of Type-C Quarters	45.19	32.26	10.51	29.65	(-) 3.17	27
20	Air washer System	-	92.30	-	17.78	-	27
21	Rack & Pinion Lifts at crusher house	-	-	40.76	-	-	26 (1)(d)
	Total additions claimed (A)	173.68	221.03	74.87	402.51	798.25	
	Decapitalization of assets: Part of Capital cost	-	-	39.66	595.23	158.61	26(2)
	Decapitalization of Spares: Part of Capital cost	-	9.83	-	33.31	110.85	26(2)
	Decapitalization of MBOA items: Part of Capital cost	-	-	1.46	-	3.76	26(2)
	Total de-cap (B)	-	9.83	41.12	628.54	273.22	
	Total ACE claimed (A-B)	173.67	211.20	33.75	(-) 226.02	525.04	
	Add: Discharges during the year	121.52	7.28	23.75	35.29	8.81	
	ACE claimed on cash basis	295.19	218.48	57.51	(-) 190.73	533.85	

14. Considering the submissions of parties and after exercising prudence check, the claims with respect to additional capitalisation are dealt with in the subsequent paragraphs.

Digital Distributed Control & Management Information System (DDCMIS) PG Test of Units-1,2 & 4



15. The Petitioner has claimed additional capitalisation of Rs. 60.52 lakh in the year 2019-20 towards DDCMIS PG Test of Unit-1,2 &4 under Regulation 27 read with Regulation 25(1)(f) in exercise to the Power to relax in terms of Regulation 76 of the 2019 Tariff Regulations. In justification, the Petitioner has submitted that the Commission vide order dated 21.3.2017 in Petition No. 336/GT/2014 allowed Rs 40.00 lakh on account of PG Test of DDCMIS System, whose R&M was done in the period 2009-14 and was approved earlier by the Commission in order dated 17.10.2012 in Petition No. 229/2009. The Petitioner has also submitted that the PG test of DDCMIS could not be carried out during the period 2014-19 as M/s BHEL could not mobilise the required resources for the same, and the work was finally carried out successfully in the year 2019-20. Further, the Petitioner has submitted that the variation between the projected and actual costs is due to a long-time gap between the award and execution of the work; the projected cost of PG Test for the work was based on the original awarded contract in the year 2010. The original contract had no provision for GST in it, and the actual expenditure incurred and paid to BHEL was as per the terms and conditions of the awarded contract and the imposition of GST.

16. The matter has been considered. It is observed that the order dated 21.3.2017 in Petition No. 336/GT/2014 had approved additional capital expenditure claimed under this head amounting to Rs. 40.00 lakh, under Regulation 15 (1) of the 2014 Tariff Regulations, however the work could not be carried out during the period 2014-19 as M/s BHEL could not mobilise required resources for the same, and the work was finally carried out successfully in year 2019-20. Further, on a prudence check of the justification submitted by the Petitioner regarding the variation in the projected and actual cost, which was due to a long time gap between the award and execution of



the work, the expenditure is allowed under Regulation 25(1)(f) along with Regulation 27 of the 2019 Tariff Regulations.

Real Time Monitoring of AAQMS

17. The Petitioner has claimed additional capital expenditure of Rs. 7.24 lakh in 2019-20 under Regulation 26(1)(b) of the 2019 Tariff Regulations for Real Time Monitoring of Ambient Air Quality Monitoring System (AAQMS). Since the additional capital expenditure claimed under this head had already been approved by the Commission vide order dated 17.4.2024 in Petition No. 445/GT/2020, in which the Petitioner had furnished the CPCB letter dated 5.2.2014, directing the SPCBs/PCCs to require highly polluting industries to install online effluent quality monitoring systems. Accordingly, to comply with the said direction, the Petitioner has incurred additional capital expenditure. Hence, the claim of the Petitioner is allowed under Regulation 26(1)(b) of the 2019 Tariff Regulations.

Automatic Generation Control-AGC

18. The Petitioner has claimed additional capital expenditure of Rs.17.36 lakh, Rs.0.91 lakh, and (-) Rs.0.50 lakh (cost adjustment) in 2021-22, 2022-23 and 2023-24, respectively, towards the AGC system under Regulation 26(1)(b) of the 2019 Tariff Regulations. In justification, the Petitioner has submitted that the said expenditure has been claimed based on the directions of the Commission in its order dated 2.8.2019 in Petition No. 319/RC/2018.

19. The matter has been considered. It is observed that in an order dated 2.8.2019 in Petition No. 319/RC/2018, the Commission had directed as under:

“All thermal ISGS stations with installed capacity of 200 MW and above and all hydro stations having capacity exceeding 25 MW excluding the Run-of-River Hydro Projects irrespective of size of the generating station and whose tariff is determined or adopted by CERC are directed to install equipment at the unit control rooms for transferring the



required data for AGC as per the requirement to be notified by NLDC. NLDC shall notify the said requirements within one month of this order”

20. It is therefore evident that the additional capital expenditure claimed by the Petitioner is for compliance to the above directions. This, according to us, is a change in law event and therefore, the claim of the Petitioner is allowed under Regulation 26(1)(b) of the 2019 Tariff Regulations.

Gen. Relay Panel for 110 MW Unit 1&3

21. The Petitioner has claimed additional capital expenditure of Rs. 46.13 lakh and Rs. 8.41 lakh in 2019-20 and 2020-21, respectively, towards Gen. Relay Panel for 110 MW Unit#1&3 under Regulation 25(2)(c) of the 2019 Tariff Regulations. Since the additional capital expenditure claimed under this head had already been approved by the Commission vide order dated 17.4.2024 in Petition No. 445/GT/2020, the same is allowed. However, it is noticed that the Petitioner has not submitted the decapitalisation value of the old asset, despite the directions vide order dated 17.4.2024 in Petition No. 445/GT/2020 to furnish the gross value of old replaced assets. Accordingly, an assumed deletion has been considered in respect of the claimed expenditure as mentioned in paragraph 58 of this order.

Online Energy Monitoring System

22. The Petitioner has claimed additional capitalisation of Rs. 14.60 lakh in the year 2019-20 under Regulation 26(1)(b) of the 2019 Tariff Regulations. The Petitioner has submitted that the Online Energy Monitoring System was installed in compliance of CEA (Installation & Operation of Meters), Regulations, 2006 at the instant station to replace the obsolete Energy Monitoring System in order to monitor the Station Auxiliary Power consumption of the generating station for optimisation of the same.



23. The matter has been examined. It is noticed that the Petitioner has also claimed the same expenditure towards an online energy monitoring system under capital spares, which are separately allowed under O&M expenses on a consumption basis. Considering the nature of work, the same forms part of O&M expenses and is considered under capital spares only. Hence, the same is not allowed under additional capital expenditure.

ABT Upgradation

24. The Petitioner has claimed additional capitalisation of Rs. 19.83 lakh in the year 2020-21 under Regulation 25(2)(c) of the 2019 Tariff Regulations ABT upgradation. The Petitioner has stated that the operating system of the ABT server was based on Windows Server 2003, for which support in terms of software updates, security patches, etc., was not available due to its obsolescence and end of life. Further, the Petitioner has submitted that, to run and regulate the Station Load as per schedule on a real-time basis, in line with the provisions of the latest DSM Regulations and Grid Code, the ABT system was upgraded.

25. The matter has been examined. The Petitioner has submitted the lifecycle policy of Windows Server 2003 by Microsoft regarding the declaration of obsolescence and end of life of Windows Server 2003 (EOL July 2015). Since the expenditure is claimed under regulation 25(2)(c) of the 2019 Tariff Regulations, considering the submission of the Petitioner regarding the obsolescence and the necessary proof attached, the expenditure is allowed. However, the Petitioner has not submitted the decapitalisation value of the old asset; accordingly, an assumed deletion has been considered in respect of the claimed expenditure as stated under paragraph 58.



Steam Generator (BHEL make 110MW) UNIT-1

26. The Petitioner has claimed additional capitalisation of Rs. 6.51 lakh in the year 2022-23 under Regulation 25(1)(a) of the 2019 Tariff Regulations towards a steam generator in compliance with order of Dy. Commissioner, Commercial Tax, Govt. of UP on 31.3.2022. The Petitioner has submitted that the above expenditure was incurred in compliance with the order of the State Govt. of UP, through Dy. Commissioner, Commercial Tax, while disposing of the matter of entry tax on the machinery brought to plant premises during R&M of Units in the year 2003-04. The initial order was passed on 31.3.2006, against which a revised order was passed on 30.7.2017. The final order with respect to the entry tax was settled by the order of Dy. Commissioner, Commercial Tax. Govt. of UP on 31.3.2022. The Petitioner has provided a copy of the challan dated 27.3.2023, deposited with the Department of Commercial Tax, Govt. of UP, treasury.

27. The matter has been examined. Since the expenditure is claimed under Regulation 25(1)(a) of the 2019 Tariff Regulations, considering the submission of the Petitioner regarding the compliance with the direction of the Department of Commercial Tax, Govt. of UP and the necessary proof attached, the expenditure is allowed.

3rd Ash Dyke raising

28. The Petitioner has claimed additional capitalisation of Rs. 0.81 lakh in the year 2023-24 under Regulation 25(1)(g) of the 2019 Tariff Regulations towards the 3rd Ash Dyke Raising on account of free issue material to the agency. The Petitioner has submitted that the above work was on account of free-issue material provided to the agency. Since the Petitioner has not provided a valid justification in support of the claim and the expenditure is towards free issue material to the agency and does not



pertain to raising the ash dyke as a part of the ash disposal system, the claim of the Petitioner is not allowed.

Up-gradation of HMI - Stage-1

29. The Petitioner has claimed additional capitalisation of Rs. 710.27 lakh in the year 2023-24 under Regulation 25(2)(c) of the 2019 Tariff Regulations towards Up-gradation of HMI - Stage-1. The Petitioner, in its justification, has submitted that the HMI system installed at the generating stations was based on Windows XP for which no support from OEM was available due to the declaration of obsolescence and End of Life (EOL) of Windows XP (EOL April 2014). Further, the Petitioner has submitted that in compliance with CEA (Cyber Security in Power Sector) Guidelines, 2021 and direction from Ministry of Electronics and Information Technology (MeitY), GoI, order dated 28.4.2022, the HMI system was upgraded to ensure safe and reliable operation of the Station, as no spares and service support were available for the obsolete HMI system.

30. The matter has been examined. The Petitioner has placed on record the direction from MeitY vide its order dated 28.4.2022 with respect to the obsolescence of the asset replaced. Since the expenditure is claimed under Regulation 25(2)(c) of the 2019 Tariff Regulations, considering the submission of the Petitioner regarding the obsolescence and necessary proof attached, the expenditure is allowed. The corresponding decapitalisation of the replaced asset amounting Rs. 158.61 lakh has been considered under the head 'Decapitalization'.

Online Coal Analyser

31. The Petitioner has claimed additional capital expenditure of Rs. 335.99 lakh in 2022-23 under Regulation 26(1)(b) of 2019 Tariff Regulations towards online coal



analyser. In justification, the Petitioner has submitted that MOEF&CC vide its OM dated 26.8.2015 had directed that all coal-based thermal power plants with installed capacity of 100 MW or above and located between 500-749 km from the coal source, shall be supplied with and shall use raw or blended or beneficiated coal with ash content not exceeding 34%, on a quarterly average basis. A copy of the said OM has been enclosed by the Petitioner. The Petitioner has stated that, in terms of the said OM, real-time monitoring, using automatic mechanical sampling (online) from a moving stream of coal, is to be used for sampling fuels. The Petitioner has also stated that as the generating station is located at a distance of more than 500 km from the linked source and also from other mines from where coal is being received under the flexible coal utilisation scheme, the Petitioner has to necessarily incur the expenditure towards the installation of an online coal analyser to comply with the directions contained in MOEF&CC OM dated 26.8.2015.

32. The matter has been examined. The MOEF&CC OM dated 26.8.2015 mandates that all coal-based thermal power Plants with an installed capacity of 100 MW or above and located between 500-749 km from the pit head, shall be supplied with and shall use raw or blended or beneficiated coal with ash content not exceeding 34%, on a quarterly average basis. Prior to this notification, the Petitioner was not required to monitor the ash content of the coal used for generation. Since the generating station is required to use raw or blended coal with ash content not exceeding 34%, in terms of the MOEF&CC OM dated 26.8.2015, the additional capitalisation claimed by the Petitioner is allowed under Regulation 26(1)(b) of the 2019 Tariff Regulations.



RTU Replacement

33. The Petitioner has claimed additional capital expenditure of Rs. 10.72 lakh in 2022-23 under Regulation 26(1)(b) of 2019 Tariff Regulations towards RTU replacement. In justification, the Petitioner has submitted that the Commission vide its order dated 28.8.2019 in Petition No. 319/RC/2018 directed ISGS stations as under:

- “ii. All such ISGS stations whose tariff is determined or adopted by CERC shall have communication from the nearest wide band node to the RTU in the unit control room.*
- iii. The Central Transmission Utility (CTU) is directed to have communication availability from NLDC/ RLDCs to the nearest wide band node/ switchyard for the generating stations in a redundant and alternate path ensuring route diversity and dual communication.*
- iv. The NLDC is also directed to commission the required communication infrastructure.*
- v. The expenditure as a result of compliance of the above directions may be claimed as per relevant regulations or provisions of the PPA.”*

34. Further, the Petitioner has submitted that in various meetings of NRPC, including the 16th TeST Sub Committee meeting of NRPC held on 14.11.2019, it was decided to replace existing old RTUs with the latest RTUs on 104 Protocol so as to enable seamless communication required for AGC implementation as well as for communication of other telemetry and protection data. A copy of the extract of the NRPC meeting dated 14.11.2019 has been provided by the Petitioner.

35. It is therefore evident that the additional capital expenditure claimed by the Petitioner is for compliance with the directions contained in the order dated 2.8.2019 in Petition 319/RC/2018. This, being a change in law event, the claim of the Petitioner is allowed under Regulation 26(1)(b) of the 2019 Tariff Regulations.

100 MT Pit Type Electronic Weighbridge

36. The Petitioner has claimed additional capital expenditure of Rs. 0.94 lakh in 2022-23 under Regulation 26(1)(b) of 2019 Tariff Regulations towards balance payment for the installation of a 100 MT Pit Type Electronic Weighbridge. In



justification, the Petitioner has submitted that the asset was capitalised in 2015-16 and allowed by the Commission vide order dated 16.4.2024 in Petition No. 450/GT/2020. The current expenditure is incurred due to the release of the balance payment for the installation of a 100 MT Pit Type Electronic Weighbridge.

37. The matter has been examined. Since the expenditure is towards the balance payment for the installation of a 100 MT Pit Type Electronic Weighbridge, the same is allowed. However, the said asset was allowed under Regulation 14(3)(i) (Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law) of the 2014 Tariff regulations in order dated 16.4.2024 in Petition No. 450/GT/2020, accordingly the said expenditure is allowed under Regulation 26(1)(a) of the 2019 Tariff Regulations.

Supply & installation of 140 MT in-motion weighbridge

38. The Petitioner has claimed additional capital expenditure of Rs. 8.69 lakh in 2023-24 under Regulation 26(1)(b) of 2019 Tariff Regulations towards supply & installation of a 140 MT in-motion weighbridge. In justification, the Petitioner has submitted that as per the Railway Board letter dated 6.6.2022, codal life for Electronic Weighbridges has been revised to 12 years from 8 years; however, actual replacement of the weigh bridge may be done based on actual condition. The in-motion electronic weighbridges installed inside the CHP area are used for the weighing of wagons and installed in the tracks through which Railway rakes are coming for the unloading of coal.

39. The matter has been considered. The Petitioner has claimed the additional capital expenditure under Regulation 26(1)(b) of the 2019 Tariff Regulations. The Petitioner has referred to the Railway Board letter dated 6.6.2012, in which codal



life of certain assets was revised. Though the Petitioner has relied upon the said circular to claim the expenditure, no document has been furnished in support of the same to demonstrate that the expenditure claimed is based on the change in law or in compliance with the existing law. Accordingly, the additional capital expenditure claimed by the Petitioner on this count is not allowed.

Sprinkler system for dust suppression of Ash Dyke B

40. The Petitioner has claimed additional capital expenditure of Rs. 73.01 lakh in 2023-24 under Regulation 26(1)(b) of the 2019 Tariff Regulations towards sprinkler system for dust suppression of Ash Dyke B. In justification, the Petitioner has submitted that the expenditure has been incurred in compliance with the directions of the Uttar Pradesh Pollution Control Board (UPPCB) dated 13.3.2023. A copy of the UPPCB letter dated 13.3.2023 has been provided by the Petitioner.

41. The matter has been examined. The Petitioner has placed on record the UPPCB letter dated 13.3.2023, which directs the Petitioner to carry out the said works. Since the expenditure is claimed under Regulation 26(1)(b) of the 2019 Tariff Regulations, necessary proof has been attached and keeping in view that the claim is on account of directions from UPPCB, the expenditure is allowed.

Dry Fly Ash Extraction System

42. The Petitioner has claimed additional capital expenditure of Rs. 2.76 lakh in 2023-24 under Regulation 26(1)(b) of the 2019 Tariff Regulations towards the balance payment of the DAES system commissioned in 2014-15. In justification of the same, the Petitioner has submitted that the DAES System was commissioned in 2014-15, and the order dated 16.4.2024 in Petition No. 450/GT/2020 allowed the work of the



DAES System. The current expenditure of Rs. 2.76 lakh is due to the release of the balance payment.

43. The matter has been examined. Since the expenditure is towards balance payment for the Dry Fly Ash Extraction System, which was allowed by the order dated 16.4.2024 in Petition No. 450/GT/2020, the same is allowed under Regulation 26(1)(b) of the 2019 Tariff Regulations.

Geopolymer Concrete interlocking work

44. The Petitioner has claimed additional capital expenditure of Rs. 6.38 lakh in 2023-24 under Regulation 26(1)(b) of the 2019 Tariff Regulations towards Geopolymer Concrete interlocking work. In justification, the Petitioner has submitted that the work of Geopolymer Concrete interlocking paver block was carried out for the making of pavements/ roads using a new technology of ash-based material by replacing traditional cement based/ coal tar-based pavements/ roads. This has cut down the cost of making roads & pavements as the basic material used to make blocks is made of fly ash. Further, the Petitioner has submitted that the above work was taken up for demonstrating a new avenue for ash utilisation for ensuring 100% Ash utilisation in compliance with the MOEF&CC Notification dated 31.12.2021 which provides as under:

“...the Central Government hereby issues the following notification on ash utilisation from coal or lignite thermal power plants which shall come into force on the date of the publication of this notification, namely: -

A. Responsibilities of thermal power plants to dispose fly ash and bottom ash. —

(1) Every coal or lignite based thermal power plant (including captive or co-generating stations or both) shall be primarily responsible to ensure 100 per cent utilisation of ash (fly ash, and bottom ash) generated by it in an eco-friendly manner as given in sub-paragraph (2);

(2) The ash generated from coal or lignite based thermal power plants shall be utilised only for the following eco-friendly purposes, namely: -

(i) Fly ash-based products viz. bricks, blocks, tiles, fibre cement sheets, pipes, boards, panels;

(ii) Cement manufacturing, ready mix concrete;



(iii) Construction of road and fly over embankment, Ash and Geo-polymer-based construction material;”

45. The matter has been examined. It is observed that the MoEF&CC Notification dated 31.12.2021 primarily mandates the disposal and utilisation of fly ash generated by coal-based thermal power plants. However, the expenditure claimed by the Petitioner is towards Geopolymer Concrete interlocking work for pavements/roads, which is not directly attributable to the disposal of fly ash as envisaged under the said notification. Further, such works are O&M in nature, which are required to be met from the normative O&M expenses already allowed to the generating station under the 2019 Tariff Regulations. Since, the expenditure claimed does not qualify as additional capital expenditure on account of a change in law under Regulation 26(1)(b) of the 2019 Tariff Regulations, the same is not allowed.

Photo Voltaic Plant at ETH & VIPGH

46. The Petitioner has claimed additional capital expenditure of Rs. 67.63 lakh and Rs. 6.25 lakh in 2020-21 and 2022-23, respectively, under Regulation 26(1)(b) of the 2019 Tariff Regulations towards the Photo Voltaic Plant at ETH & VIPGH. In justification, the Petitioner has submitted that the work of installation of rooftop solar PV Plant at Instant Station was carried out under the policy framework of GoI to achieve its ambitious 2022 target of achieving 175 GW of RE, which includes 100 GW from solar, 60 GW from wind, 10 GW from bio-power and 5 GW from small hydro-power, marking 75 years of our independence. The Petitioner has also submitted that the project is towards compliance with the GoI initiative for promoting renewable energy, such as rooftop solar PV plants, to reduce in-house power consumption from coal and thus help cut down carbon emissions. The Petitioner has further submitted that there are many initiatives being taken up at the instant station to reduce carbon



footprint by enhancing the station heat rate as well as reducing Auxiliary Energy Consumption. The installation of Solar PV is one such initiative by the station. Further, the Petitioner has submitted that the electricity generated from the rooftop Solar PV from its commissioning till 31.10.2024 has been 0.91 MUs. As such, the station has replaced its auxiliary energy consumption from coal by 0.91 MUs, which has, in turn, reduced CO2 emissions by approximately 928 MT.

47. The matter has been examined. It is noted that the Commission has not considered the expenditure pertaining to the Solar PV plant in the order dated 16.4.2024 in Petition No. 450/GT/2020 due to a lack of any valid technical justification, duly supported by documentary evidence, such as test results carried out by an independent agency. Further, it is observed that similar works were disallowed by the order dated 7.11.2021 in Petition No. 288/GT/2020 and vide order dated 13.5.2022 in Petition No. 301/GT/2020, on the same grounds. Moreover, the Petitioner in the present Petition has not provided valid technical justification and test results; on this count, the Petitioner's claim regarding the Photovoltaic Plant is not allowed.

Capitalisation of MBOA, EDP-PC

48. The Petitioner has claimed additional capitalisation of Rs. 0.60 lakh in 2020-21 under Regulation 25(2)(a) of the 2019 Tariff Regulations against capitalisation of MBOA, EDP-PC. In justification, the Petitioner has submitted that these are miscellaneous assets which have been bought and capitalised to replace such assets which have outlived their useful life and whose life is not commensurate with the useful life of the Plant.

49. The matter has been considered. The Commission, under its various Tariff Regulations notified in the past, has consistently adopted the approach of not



permitting minor assets to be capitalised as part of additional capital expenditure beyond the cut-off date. In the present case, the MBOA items claimed are miscellaneous spares and components, procured as replacements during the normal course of operation and maintenance of the generating station. Such items are inherently operational in nature and are routinely required to be replaced over the life of the Plant. The expenditure towards replacement of worn-out equipment and spares is already covered under the normative O&M expenses allowed to the Petitioner under the Tariff Regulations.

50. Accordingly, we are of the concerned view that the additional capital expenditure with respect to MBOA items is not allowed.

Construction of 32 nos. Residential Building Type-D and 16 nos. of Type-C Quarters

51. The Petitioner has claimed additional capitalisation of Rs. 45.19 lakh, Rs. 32.26 lakh, Rs. 10.51 lakh, Rs. 29.65 lakh and Rs. 0.46 lakh in 2019-20, 2020-21, 2021-22, 2022-23, 2023-24, respectively, under Regulation 27 of the 2019 Tariff Regulations against the construction of 32 nos. Residential Building Type-D and 16 nos. of Type-C Quarters, further, the Petitioner has also claimed cost adjustment of (-) Rs.3.63 lakh in year 2023-24 under Form 9A. In justification, the Petitioner has submitted that in Petition No. 445/GT/2020, the Commission had approved the additional capital expenditure of Rs 83.07 Lakh for the balance payment against the same work. The total expenditure incurred during the period 2019-24 on this head is Rs 145.07 Lakh on an accrual basis against the approved cost of Rs 83.07 Lakh. In this regard, the Petitioner has submitted that the increase in total completed cost incurred was due to the fact that work was carried out in phases by multiple agencies. It is further submitted by the Petitioner that originally the package was awarded to M/s. Gangotri Enterprises



and the agency invoked arbitration and the balance work was subsequently awarded to M/s. Modern Trading Co, due to the non-completion of work by M/s. Modern Trading Co., the work was further executed through three different agencies. The Petitioner has submitted that the awarded price of M/s. Gangotri Enterprises was inclusive of all taxes; however, the subsequent award and execution by M/s. Modern Trading and the other three agencies were paid GST extra as applicable, resulting in additional cost, due to which there is a variation of Rs 61.94 Lakh against the approved amount.

52. The matter has been considered. It is noticed that the additional capital expenditure claimed under this head has already been approved vide order dated 21.3.2017 in Petition No. 336/GT/2014. Further, the Commission had allowed Rs. 83.07 lakh in 2019-20 towards the balance payment in respect of the above works/assets vide its order dated 17.4.2024 in Petition No. 445/GT/2020. However, in the present Petition, an amount of Rs.145.07 lakh has been claimed against the approved cost of Rs. 83.07 lakh. The Petitioner has justified the variation between the claimed and approved cost, stating that due to the fact that the work initially awarded was inclusive of all taxes and due to disputes, subsequent award and execution were given to multiple agencies, who were paid extra GST as applicable, which resulted in additional cost, due to which there is a variation of Rs 61.94 lakh. Considering that the expenditure is towards the balance payment for the construction of 32 nos. Residential Building Type-D and 16 nos. of Type-C Quarters, which were allowed under Regulation 27 of the 2019 Tariff Regulations, and the Petitioner has also provided justification for variation in the amount claimed against the approved amount; therefore, the expenditure is allowed. Further, the Petitioner has also claimed cost adjustment of (-) Rs.3.63 lakh in year 2023-24 under Form 9A, and the same has been considered by the Petitioner under Form-J, however, the Petitioner has not considered



this adjustment for computation of capital cost under Form-1(i) and subsequently for computation of Tariff. The same has been adjusted, and an adjustment of (-) Rs.3.63 lakh has been considered for the purpose of the tariff.

Air Washer System

53. The Petitioner has claimed additional capitalisation of Rs. 92.30 lakh and 17.78 lakh in 2020-21 and 2022-23, respectively, under Regulation 27 of the 2019 Tariff Regulations towards the air washer system. The additional capital expenditure claimed under this head, had already been approved by the order dated 17.4.2024 in Petition No. 445/GT/2020 where the Petitioner had submitted that that though the work was completed in 2012-13, the system could not be put into service due to vibration problem and M/s Blue Star had made efforts to resolve the vibration problem but could not succeed, therefore, they agreed to the replacement of all the blowers. The Petitioner had also stated that the blowers had been replaced in two Units, and the vibration was found to be normal. Therefore, the work was completed for two units and was capitalised during the period 2014-19, and for the balance of two units, the work is to be completed and be capitalised in the period 2019-24, in line with the work allowed for Units 3 & 4 during the period 2014-19. In view of the above and considering that additional capital expenditure claimed under this head had already been approved by the Commission vide order dated 17.4.2024 in Petition No. 445/GT/2020, the same is allowed. Accordingly, an assumed deletion has been considered in respect of the claimed expenditure as stated under paragraph 58.

Rack & Pinion Lifts at the crusher house

54. The Petitioner has claimed additional capitalisation of Rs. 40.76 lakh in 2021-22, respectively, under Regulation 26(1)(d) of the 2019 Tariff Regulations for Rack & Pinion Lifts at the crusher house. The additional capital expenditure claimed under



this head had already been approved by the Commission vide order dated 17.4.2024 in Petition No. 445/GT/2020, wherein the Petitioner had furnished a detailed justification for the installation of a lift at the crusher house in view of the various Acts and guidelines. Further, the Petitioner had furnished that the safety provisions and guidelines mandated by (i) the National Building Code, 2005, (ii) the Factories Act, 1948, and (iii) The Occupational Safety, Health, and Working Conditions Code, 2020, notified by the Ministry of Law & Justice, GoI, and the “National Policy on Safety, Health and Environment at Workplace” notified by the Ministry of Labour and Employment, GoI, will also be complied. Considering the justification furnished by the Petitioner and keeping in view that the additional capital expenditure claimed is on account of the safety of the manpower, which will facilitate the safe operation of the plant, the claim of the Petitioner is allowed under Regulation 26 1(d) of the 2019 Tariff Regulations.

55. Accordingly, the additional capital expenditure allowed for the period 2019-24 is summarised as under:

<i>(Rs. in lakh)</i>					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Additional capital expenditure within scope	106.65	28.24	-	6.51	710.27
Additional capital expenditure beyond scope	52.42	124.56	68.62	396.01	72.11
Total Additional capital expenditure allowed	159.08	152.80	68.62	402.51	782.38

Decapitalisation

56. The Petitioner has claimed the decapitalisation of the items given as under:

<i>(Rs. in lakh)</i>					
	2019-20	2020-21	2021-22	2022-23	2023-24
Decapitalisation of assets: Part of Capital cost	-	-	39.66	595.23	158.61
Decapitalisation of Spares: Part of Capital cost	-	9.83	-	33.31	110.85
Decapitalisation of MBOA items: Part of Capital cost	-	-	1.46	-	3.76



	2019-20	2020-21	2021-22	2022-23	2023-24
Total	-	9.83	41.12	628.54	273.22

55. On prudence check, it is observed that these assets, capital spares and MBOA items which form part of the capital cost of the generating station had been de-capitalised, hence the Commission allows the decapitalisation of the asset/ items as per the claimed submissions of the Petitioner.

56. It is also noticed that the Petitioner has not provided the de-capitalisation value of certain assets claimed under additional capital expenditure on a replacement basis. Hence, the de-capitalisation of the same is covered under the "Assumed deletions" section below.

Assumed Deletions

57. As per the consistent methodology adopted by the Commission, the expenditure on replacement of assets, if found justified, is allowed for the purpose of tariff, provided that the capitalisation of the said asset is followed by the de-capitalisation of the gross value of the old asset. However, in certain cases, where the de-capitalisation is proposed to be affected during the future year of capitalisation of the new asset, the decapitalisation of the old asset for the purpose of tariff is shifted to the very same year in which the capitalisation of the new asset is allowed. Such de-capitalisation, which is not a book entry in the year of capitalisation, is termed as 'Assumed Deletion'. Therefore, the methodology of arriving at the fair value of the decapitalised asset, i.e., escalation rate of 5% per annum from the COD has been considered in order to arrive at the gross value of the old asset under consideration as on COD as 100% and escalated it @5% per annum, till the year, during which additional capital expenditure is claimed against the replacement of the same. The amount claimed for the additional capital expenditure against the asset is multiplied



by the derived ratio from above values i.e., value in year of COD divided by value in capitalised year.

58. The Petitioner, in this petition, has claimed additional capital expenditure on a replacement basis under Regulation 25(2)(c) of the 2019 Tariff Regulations, towards items such as ABT upgradation, Gen. Relay Panel etc., but has not furnished the de-capitalised value of the old assets. The Commission had also directed the Petitioner to provide the corresponding de-capitalised value of the assets capitalised; however, the Petitioner, vide its affidavit dated 9.10.2025, has submitted that the corresponding de-capitalisation against the assets is not available. Accordingly, the de-capitalised value of the assets/ works has been calculated in terms of the above-mentioned methodology. The 'Assumed deletions' allowed for the purpose of tariff is as under:

(Rs. in lakh)

Year of Claim	Head	Additions claimed for new assets on replacement (Accrual basis)	Assumed deletion for old asset allowed
2019-20	Gen. Relay Panel for 110MW Unit#1&3	46.13	17.38
2020-21	Gen. Relay Panel for 110MW Unit#1&3	8.41	3.02
2020-21	Air washer System	92.30	33.13
2022-23	Air washer System	22.76	7.41
2020-21	ABT Upgradation	21.66	7.78

Exclusions Claimed

59. The summary of exclusions from the books of accounts, as claimed (on accrual basis) by the Petitioner, is as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Additional capital expenditure of assets (not claimed)	-	2384.48	-2384.48 (Decapitalized)	-	-
Capitalisation of Capital Spares	251.09	517.84	418.16	366.71	85.25
De-capitalisation of assets (not part of capital cost)	-	-	-85.56	-	-
De-capitalisation of spares (not part of capital cost)	-36.14	-	-	-	-



	2019-20	2020-21	2021-22	2022-23	2023-24
De-capitalisation of MBOA's (not part of capital cost)	-9.72	-5.75	-7.27	-55.21	-270.40
Inter Unit Transfer	-878.94	-1.57	-	61.40	840.13
Liability reversal	-59.72	-	-	-	-
Cost adjustment	-0.06	-	-	0.80	0.11
Total Exclusions claimed	-733.49	2895.00	-2059.14	373.71	655.08

60. We now examine the exclusions claimed by the Petitioner for the period 2019-24, as under:

Additional capital expenditure on assets (not claimed)

61. The Petitioner has claimed exclusion of capital spares amounting to a total of Rs. 2384.48 lakh in the period 2019-24. In justification for the same, the Petitioner has submitted that the Dry Sorbent Injection (DSI) system is being installed at the generating station in order to meet revised environmental norms in compliance with the MOEF Notification dated 7.12.2015 and the asset was inadvertently capitalised in the current year, and after being acknowledged, the same was decapitalised from the books in the subsequent year of 2021-22. The Petitioner has further submitted that the tariff against the expenditure incurred on the DSI system will be claimed as a supplementary tariff through a separate ECS Tariff Petition, which is being shown under exclusion. Accordingly, the Petitioner's claim for exclusion under this head is allowed.

Capitalisation of capital spares

62. The Petitioner has claimed exclusion of capital spares amounting to a total of Rs. 1639.05 lakh in the period 2019-24. In justification for the same, the Petitioner has submitted that capital spares capitalised after the cut-off date are not allowable as per the 2019 Tariff Regulations and accordingly, the same have been claimed as an



exclusion. As the capitalisation of spares over and above initial spares procured after the cut-off date of the generating station is not allowed as part of capital cost as per the 2019 Tariff Regulations, the claim of the Petitioner is allowed.

De-capitalisation of assets (not claimed)

63. The Petitioner has claimed exclusion of de-capitalisation of capital spares of Rs. -2384.48 lakh in the period 2019-24. In justification for the same, the Petitioner has submitted that in justification for the same, the Petitioner has submitted that Dry Sorbent Injection System is being installed at instant station in order to meet revised environmental norms in compliance of MOEFF Notification dated 7.12.2015 and the asset was inadvertently capitalised in the year 2020-21 and after being acknowledged, same was decapitalised from the books in the year 2021-22. Accordingly, the Petitioner's claim for exclusion under this head is allowed.

De-capitalisation of assets and Capital Spares (not part of capital cost)

64. The Petitioner has claimed exclusion of de-capitalisation of assets of Rs. -85.56 lakh in the period 2019-24 and exclusion of de-capitalisation of capital spares of Rs. -36.14 lakh in the period 2019-24. In justification, the Petitioner has submitted that these capital spares are not part of the allowed capital cost of the generating station and accordingly their de-capitalisation has been claimed as an exclusions. It is observed that these capital spares do not form part of the capital cost allowed to the generating station. Accordingly, the Petitioner's claim for exclusion under this head is allowed.

De-capitalisation of MBOA's (not part of capital cost)

65. The Petitioner has claimed exclusion of de-capitalisation of MBOA's of Rs. -348.35 lakh in the period 2019-24. In justification, the Petitioner has submitted that



these MBOAs do not form part of the allowed capital cost of the generating station and, accordingly, their de-capitalisation has been claimed as an exclusion. Since these de-capitalised MBOAs do not form part of the allowed capital cost of the generating station, the exclusion claimed under this head is allowed.

Inter-unit transfer of assets

66. The Petitioner has claimed an exclusion amounting to a total of Rs. 21.02 lakh in the period 2019-24, on account of inter-unit transfer of assets to/ from the generating station. In justification, the Petitioner has submitted that, since the Commission is not considering the temporary inter-unit transfer of assets for tariff purposes, the same has been kept under exclusions. The Commission, in its various orders, while dealing with the application for additional capitalisation in respect of other generating stations of the Petitioner, 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 claimed under this head is allowed.

Liability Reversal

67. The Petitioner has claimed exclusion of liability reversal amounting to a total of Rs. -59.72 lakh in the period 2019-24. In justification, the Petitioner has submitted that, since the tariff is on a cash basis, liability reversal is kept under exclusion. Since the tariff has been claimed on a cash basis, the exclusion claimed under this head is allowed.

Cost Adjustment

68. The Petitioner has claimed exclusion of cost adjustment amounting to a total of Rs. 0.85 lakh in the period 2019-24. In justification, the Petitioner has submitted that,



the above cost adjustment is with respect to accounting adjustment. Since the cost adjustment is on account of an accounting adjustment, the exclusion claimed under this head is allowed.

Discharge of Liabilities

69. The discharges of liabilities claimed by the Petitioner are as under:

<i>(Rs. in lakh)</i>				
2019-20	2020-21	2021-22	2022-23	2023-24
121.52	7.28	23.75	35.29	8.81

70. On scrutiny of the details of liabilities submitted by the Petitioner at Form-S, it is observed that the Petitioner has inadvertently claimed liabilities of Rs.43.00 lakh and Rs.6.79 lakh existing as on 1.4.2019 pertaining to allowed MBOA and Bio-Methanation during the year 2017-18 as corresponding to exclusions. Since these liabilities pertain to assets already allowed for the purpose of tariff, the same have been considered as allowed liabilities during the year 2020-21 & 2021-22 for the purpose of tariff. Accordingly, considering the details of liabilities corresponding to the assets/works allowed for the purpose of tariff, the admissible discharges for the tariff period 2019-24 have been worked out and allowed as under:

<i>(Rs. in lakh)</i>				
2019-20	2020-21	2021-22	2022-23	2023-24
76.79	44.38	17.67	21.28	8.81

71. Further, the flow of un-discharged liabilities corresponding to the allowed capital cost for the tariff period 2019-24 is as under:

<i>(Rs. in lakh)</i>					
	2019-20	2020-21	2021-22	2022-23	2023-24
(a) Eligible for ROE at base rate of 15.50%					
Opening liabilities	572.04	435.53	393.93	384.26	381.12
Add: Addition during the year	0.00	1.84	0.00	0.00	0.00
Less: Discharges during the year	76.79	43.44	9.67	3.14	0.00
Less: Reversal during the year	59.72	0.00	0.00	0.00	0.00
Closing liabilities	435.53	393.93	384.26	381.12	381.12
(b) Eligible for ROE at base rate of WAROI					



	2019-20	2020-21	2021-22	2022-23	2023-24
(a) Eligible for ROE at base rate of 15.50%					
Opening liabilities	0.00	0.95	8.00	21.00	39.31
Add: Addition during the year	0.95	8.00	21.00	36.45	0.00
Less: Discharges during the year	0.00	0.95	8.00	18.15	8.81
Less: Reversal during the year	0.00	0.00	0.00	0.00	0.00
Closing liabilities	0.95	8.00	21.00	39.31	30.50
(c) Total Liabilities					
Opening liabilities	572.04	436.48	401.93	405.26	420.43
Add: Addition during the year	0.95	9.83	21.00	36.45	0.00
Less: Discharges during the year	76.79	44.38	17.67	21.28	8.81
Less: Reversal during the year	59.72	0.00	0.00	0.00	0.00
Closing liabilities	436.48	401.93	405.26	420.43	411.62

Net Additional Capital Expenditure allowed for the period 2019-24

72. Accordingly, the net capital expenditure allowed for the period 2019-24 is under:

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Additional capital expenditure within original scope (a)	106.65	28.24	0.00	6.51	710.27
Additional capital expenditure beyond original scope (b)	52.42	124.56	68.62	396.01	72.11
Additional capital expenditure allowed (c=a+b)	159.08	152.80	68.62	402.51	782.38
Decapitalization allowed (d)	0.00	9.83	41.12	628.54	273.22
Assumed Deletions allowed (e)	17.38	43.93	0.00	7.41	0.00
Total Decapitalization allowed (f=d+e)	17.38	53.75	41.12	635.95	273.22
Discharge of Liabilities (within scope) (g)	76.79	43.44	9.67	3.14	0.00
Discharge of Liabilities (beyond scope) (h)	0.00	0.95	8.00	18.15	8.81
Discharge of Liabilities allowed (i=g+h)	76.79	44.38	17.67	21.28	8.81
Net additional capital expenditure allowed (j=c-f+i)	218.48	143.43	45.17	(-) 212.15	517.97

Capital cost allowed for the period 2019-24

73. Based on the above, the capital cost allowed for the generating station is as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
(a) Claimed to be eligible for ROE at base rate of 15.50%					
Opening capital cost	124680.51	124846.57	124864.49	124833.04	124206.74
Add: Additional capital expenditure	166.06	17.92	(-) 31.45	(-) 626.30	437.06
Closing capital cost	124846.57	124864.49	124833.04	124206.74	124643.80



Average capital cost	124763.54	124855.53	124848.77	124519.89	124425.27
(b) Claimed to be eligible for ROE at base rate of WAROI					
Opening capital cost	0.00	52.42	177.93	254.54	668.70
Add: Additional capital expenditure	52.42	125.50	76.62	414.15	80.92
Closing capital cost	52.42	177.93	254.54	668.70	749.61
Average capital cost	26.21	115.18	216.24	461.62	709.16
(c) Total capital cost allowed					
Opening capital cost	124680.51	124898.99	125042.42	125087.59	124875.44
Add: Additional capital expenditure	218.48	143.43	45.17	(-) 212.15	517.97
Closing capital cost	124898.99	125042.42	125087.59	124875.44	125393.41
Average capital cost	124789.75	124970.71	125065.00	124981.52	125134.43

Debt Equity Ratio

74. Regulation 18 of the 2019 Tariff Regulations provides as under:

“18. Debt-Equity Ratio: (1) For new projects the debt-equity ratio of 70:30 as on date of commercial operation shall be considered. 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:

- where equity actually deployed is less than 30% of the capital cost actual equity shall be considered for determination of tariff;
- the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment;
- 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 as the case may be shall submit the resolution of the Board of the company or approval of the competent authority in other cases regarding infusion of funds from internal resources in support of the utilization 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 1.4.2019 debt: equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2019 shall be considered:

Provided that in case of a generating station or a transmission system including communication system which has completed its useful life as on or after 1.4.2019 if the equity actually deployed as on 1.4.2019 is more than 30% of the capital cost equity in excess of 30% shall not be taken into account for tariff computation;

Provided further that in case of projects owned by Damodar Valley Corporation the debt: equity ratio shall be governed as per sub-clause (ii) of clause (2) of Regulation 72 of these regulations.

(4) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2019 but where debt: equity ratio has not been determined by the Commission for determination



of tariff for the period ending 31.3.2019 the Commission shall approve the debt: equity ratio in accordance with clause (1) of this Regulation.

(5) Any expenditure incurred or projected to be incurred on or after 1.4.2019 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.”

(6) Any expenditure incurred for the emission control system during the tariff period as may be admitted by the Commission as additional capital expenditure for determination of supplementary tariff, shall be serviced in the manner specified in clause (1) of this Regulation”

75. The Commission vide order dated 31.12.2024 in the Review Petition No. 23/RP/2024 had considered gross normative loan and equity amounting to Rs. 87276.35 lakh and Rs. 37404.15 lakh, respectively, as on 31.3.2019. The proportionate equity, as a percentage of admitted capital cost, as on 31.3.2019, is 30%; accordingly, the gross normative loan and equity amounting to Rs. 87276.35 lakh and Rs. 37404.15 lakh, respectively, have been retained as on 1.4.2019. Further, the additional capital expenditure approved above has been allocated between debt and equity in the debt-equity ratio of 70:30.

Return on Equity

76. Regulations 30 and 31 of the 2019 Tariff Regulations provide as under:

“30. Return on Equity:

(1) Return on equity shall be computed in rupee terms on the equity base determined in accordance with Regulation 18 of these regulations.

(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating station transmission system including communication system and run-of 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 return on equity in respect of additional capitalization after cut-off date beyond the original scope, excluding additional capitalization on account of emission control system, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system or in the absence of actual loan portfolio of the generating station or the transmission system, the weighted average rate of interest of the generating company or the transmission licensee, as the case may be, as a whole shall be considered, subject to ceiling of 14%.

Provided further that:

i. In case of a new project the rate of return on equity shall be reduced by 1.00% 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) or Free Governor Mode Operation (FGMO) data telemetry communication system up to load dispatch centre or protection system based on the report submitted by the respective RLDC;

ii. in case of existing generating station as and when any of the requirements under (i) above of this Regulation are found lacking based on the report submitted by the concerned RLDC rate of return on equity shall be reduced by 1.00% for the period for which the deficiency continues;

iii. in case of a thermal generating station with effect from 1.4.2020:

a) rate of return on equity shall be reduced by 0.25% in case of failure to achieve the ramp rate of 1% per minute;

b) an additional rate of return on equity of 0.25% shall be allowed for every incremental ramp rate of 1% per minute achieved over and above the ramp rate of 1% per minute subject to ceiling of additional rate of return on equity of 1.00%:

Provided that the detailed guidelines in this regard shall be issued by National Load Dispatch Centre by 30.6.2019.

(3) The return on equity in respect of additional capitalization on account of emission control system shall be computed at the base rate of one year marginal cost of lending rate (MCLR) of the State Bank of India as on 1st April of the year in which the date of operation (ODE) occurs plus 350 basis point, subject to ceiling of 14%;”

31. Tax on Return on Equity:

(1) The base rate of return on equity as allowed by the Commission under Regulation 30 of these regulations 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 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 paid on income from other businesses including deferred tax liability (i.e. income from business other than business of generation or transmission as the case may be) shall be excluded 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.

Illustration-

(i) In case of a generating company or a transmission licensee paying Minimum Alternate Tax (MAT) @ 21.55% including surcharge and cess: Rate of return on equity = $15.50 / (1 - 0.2155) = 19.758\%$

(ii) In case of a generating company or a transmission licensee paying normal corporate tax including surcharge and cess:

(a) Estimated Gross Income from generation or transmission business for FY 2019-20 is Rs. 1000 crore;

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

(c) Effective Tax Rate for the year 2019-20 = Rs. 240 Crore / Rs. 1000 Crore = 24%;

(d) Rate of return on equity = $15.50 / (1 - 0.24) = 20.395\%$.



(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 2019-24 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 customers as the case may be on year to year basis."

77. The Petitioner has claimed return on equity (ROE) at the base rate of 15.50% by grossing up with the effective tax rate of 17.472%, corresponding to applicable MAT rate (comprising 15% MAT, 12% Surcharge and 4% Health and Education Cess), in respect of additional capital expenditure claimed within the original scope of work and additional capital expenditure beyond the original scope on account of change in law. In respect of other additional capital expenditures, the Petitioner has claimed ROE at the base rate of weighted average rate of interest (WAROI) by grossing up with the aforesaid effective tax rate.

78. However, in terms of first proviso under Regulation 30 (2) of the 2019 Tariff Regulations as amended vide the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) (First Amendment) Regulations, 2020, ROE in respect of additional capitalisation beyond the original scope of work, incurred after the cut-off date, is required to be computed at WAROI after grossing up with the applicable effective tax rate.

79. Accordingly, ROE at the base rate of 15.50% has been considered in respect of additional capital expenditure allowed within the original scope of work. Further, for additional expenditure allowed beyond the original scope of work and incurred after the cut-off date, ROE has been allowed at the base rate of WAROI, in terms of the above provisions.



80. Since MAT is applicable to the Petitioner's Company, the effective tax rate of 17.472% has been considered for the purpose of grossing up. Accordingly, the admissible ROE has been worked out as under:

(a) Return on Equity at Normal Rate:

	(Rs. in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Notional Equity- Opening	37404.15	37453.97	37459.35	37449.91	37262.02
Add: Addition due to additional capital expenditure	49.82	5.38	(-) 9.43	(-) 187.89	131.12
Normative Equity - Closing	37453.97	37459.35	37449.91	37262.02	37393.14
Average Normative Equity	37429.06	37456.66	37454.63	37355.97	37327.58
Return on Equity (Base Rate)	15.500%	15.500%	15.500%	15.500%	15.500%
Effective Tax Rate for respective years	17.472%	17.472%	17.472%	17.472%	17.472%
Rate of Return on Equity (Pre-Tax)	18.782%	18.782%	18.782%	18.782%	18.782%
Return on Equity (Pre-Tax)- (annualized)	7029.93	7035.11	7034.73	7016.20	7010.87

(b) Return on Equity at base rate of WAROI:

	(Rs. in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Notional Equity- Opening	0.00	15.73	53.38	76.36	200.61
Add: Addition due to additional capital expenditure	15.73	37.65	22.98	124.25	24.28
Normative Equity - Closing	15.73	53.38	76.36	200.61	224.88
Average Normative Equity	7.86	34.55	64.87	138.49	212.75
Return on Equity (Base Rate)	7.9660%	6.8163%	6.4672%	7.3533%	8.0638%
Effective Tax Rate for respective years	17.472%	17.472%	17.472%	17.472%	17.472%
Rate of Return on Equity (Pre-Tax)	9.652%	8.259%	7.836%	8.910%	9.771%
Return on Equity (Pre-Tax)- (annualized)	0.76	2.85	5.08	12.34	20.79

57. In view of the above, the total ROE allowed for the purpose of tariff for the tariff period 2019-24 is as under:

	(Rs. in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Return on Equity					
(a) At normal rate	7029.93	7035.11	7034.73	7016.20	7010.87
(b) At WAROI	0.76	2.85	5.08	12.34	20.79
Total Return on Equity	7030.69	7037.96	7039.81	7028.54	7031.65

Interest on loan

81. Regulation 32 of the 2019 Tariff Regulations provides as under:



“32. Interest on loan capital:

(1) The loans arrived at in the manner indicated in Regulation 18 of these regulations shall be considered as gross normative loan for calculation of interest on loan.

(2) The normative loan outstanding as on 1.4.2019 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2019 from the gross normative loan.

(3) The repayment for each of the year of the tariff period 2019-24 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 upto the date of de-capitalisation 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;

The rate of interest on loan for installation of emission control system shall be the weighted average rate of interest of actual loan portfolio of the emission control system or in the absence of actual loan portfolio, the weighted average rate of interest of the generating company as a whole 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 changes to the terms and conditions of the loans shall be reflected from the date of such re-financing.”

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

- (a) The gross normative loan amounting to Rs.87276.35 lakh and cumulative repayment amounting to Rs.86249.13 lakh as on 31.3.2019, as determined vide order dated 31.12.2024 in Review Petition No. 23/RP/2024 in Petition No. 450/GT/2020 has been retained as on 1.4.2019.
- (b) Addition to the normative loan on account of additional capital expenditure approved above has been considered;
- (c) The depreciation allowed during the respective years of the 2019-24 tariff period has been considered as repayment of the normative loan. Further, the repayments have been duly adjusted to account for the de-capitalisation of assets considered for the purpose of the tariff.
- (d) The WAROI, as claimed by the Petitioner, has been considered after a due prudence check.

83. Necessary calculations for interest on loan are as under:



		(Rs. in lakh)				
		2019-20	2020-21	2021-22	2022-23	2023-24
A	Gross opening loan	87276.35	87429.29	87529.69	87561.31	87412.80
B	Cumulative repayment of loan up to previous year	86249.13	87429.29	87529.69	87561.31	87412.80
C	Net Loan Opening (A-B)	1027.22	0.00	0.00	0.00	0.00
D	Addition due to additional capital expenditure	152.94	100.40	31.62	(-) 148.50	362.58
E	Repayment of loan during the year	1192.32	138.03	60.40	291.47	553.83
F	Repayment adjustment on account of de-capitalization	12.17	37.63	28.79	439.97	191.25
G	Repayment adjustment on account of discharges out of un-discharged liabilities deducted as on 1.4.2009	0.00	0.00	0.00	0.00	0.00
H	Net Repayment (E-F+G)	1180.15	100.40	31.62	-148.50	362.58
I	Net Loan Closing (C+D-H)	0.00	0.00	0.00	0.00	0.00
J	Average Loan [(C+I)/2]	513.61	0.00	0.00	0.00	0.00
K	WAROI	7.9660%	6.8163%	6.4672%	7.3533%	8.0638%
L	Interest on Loan (J x K)	40.91	0.00	0.00	0.00	0.00

Depreciation

84. Regulation 33 of the 2019 Tariff Regulations provides as under:

33. Depreciation: (1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system or element thereof including communication system. In the case of the tariff of all the units of a generating station or all elements of a transmission system including the 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:

Provided that the 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 a 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 a transmission system, the weighted average life for the generating station or the transmission system shall be applied. Depreciation shall be chargeable from the first year of commercial operation. In the case of commercial operation of the asset for a part of the year, depreciation shall be charged on a pro rata basis.

(3) The salvage value of the asset shall be considered as 10%, and depreciation shall be allowed up to the maximum of 90% of the capital cost of the asset:

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

Provided further that in the case of hydro generating stations, the salvage value shall be as provided in the agreement, if any, signed by the developers with the State Government for the development of the generating station:

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

(4) Land other than the land held under lease and the land for a reservoir in case of a hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing the depreciable value of the asset.

(5) Depreciation for Existing Projects shall be calculated annually based on the Straight Line Method and at rates specified in Appendix-I 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 generating station or transmission system, as the case may be, shall be spread over the balance useful life of the assets.

Provided further that in the case of an existing hydro generating station, the generating company, with the consent of the beneficiaries, may charge depreciation at a rate lower than that specified in Appendix I and Appendix II to these Regulations to reduce front loading of tariff.

(6) Depreciation for New Projects shall be calculated annually based on the 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 15 years from the effective date of commercial operation of the generating station or the transmission system, as the case may be, shall be spread over the balance useful life of the assets.

Provided further that in the case of a new hydro generating stations, the generating company, with the consent of the beneficiaries, may charge depreciation at a rate lower than that specified in Appendix II to these Regulations to reduce front loading of tariff.

(7) In the case of the existing projects, the balance depreciable value as on 1.4.2024 shall be worked out by deducting the cumulative depreciation as admitted to by the Commission up to 31.3.2024 from the gross depreciable value of the assets.

(8) The generating company or the transmission licensee, as the case may be, shall submit the details of capital expenditure proposed to be incurred during five years before the completion of useful life along with proper justification and proposed life extension. The Commission, based on prudence check of such submissions, shall approve the depreciation by equally spreading the depreciable value over the balance Operational Life of the generating station or unit thereof or fifteen years, whichever is lower, and in case of the transmission system shall equally spread the depreciable value over the balance useful life of the Asset or 10 years whichever is higher.

(9) 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-capitalised asset during its useful service.

(10) Where the emission control system is implemented within the original scope of the generating station and the date of commercial operation of the generating station or unit thereof and the date of operation of the emission control system are the same, depreciation of the generating station or unit thereof including the emission control system shall be computed in accordance with Clauses (1) to (8) of this Regulation.

(11) Depreciation of the emission control system of an existing generating station that is yet to complete its useful life or a new generating station or unit thereof where the date of operation of the emission control system is subsequent to the date of commercial operation of the generating station or unit thereof, shall be computed annually from the date of operation of such emission control system based on the straight line method with salvage value of 10%, over a period of –



- a). twenty-five years, in case the generating station or unit thereof is in operation for fifteen years or less as on the date of operation of the emission control system; or
b). balance useful life of the generating station or unit thereof plus fifteen years, in case the generating station or unit thereof is in operation for more than fifteen years as on the date of operation of the emission control system; or
c). ten years or a period mutually agreed by the generating company and the beneficiaries, whichever is higher, in case the generating station or unit thereof has completed its useful life.”

85. The Cumulative depreciation amounting to Rs.87143.84 lakh, value of freehold land amounting to Rs.1674.71 lakh and balance useful life of 5.79 years, as considered as on 31.3.2019 in order dated 31.12.2024 in the Review Petition No. 23/RP/2024, has been retained as on 1.4.2019. Further, based on the details furnished by the Petitioner, the cost of IT equipment & software amounting to Rs.169.71 lakh as on 1.4.2019 has been considered for the 2019-24 tariff period. Also, the details relating to subsequent additions and deletions in the cost of freehold land and IT equipment & software, as submitted by the Petitioner have been considered in accordance with additional capital expenditure and de-capitalization allowed for the period 2019-24. Since the elapsed life of the generating station as on 1.4.2019 is more than 12 years from the Effective Station COD of 14.1.2000, depreciation for the tariff period 2019-24 has been computed by spreading the remaining depreciable value over the balance useful life of the generating station. Further, the cumulative depreciation has been duly adjusted to account for de-capitalisation of assets considered for the purpose of tariff. Accordingly, depreciation has been computed and allowed as under:

		(Rs. in lakh)				
		2019-20	2020-21	2021-22	2022-23	2023-24
A	Average capital cost	124789.75	124970.70	125065.00	124981.51	125134.42
B	Freehold land included in 'A'	1674.71	1674.71	1674.71	1674.71	1674.71
C	Value of IT equipment & Software included in 'A'	169.71	169.71	169.06	168.41	167.78
D	Depreciable value [(A-B) x 90% + C]	110820.50	110983.36	111068.17	110992.96	111130.52
E	Remaining useful life at the beginning of the year	5.79	4.79	3.79	2.79	1.79
F	WAROD	Spread over the balance useful life				



G	Balance depreciable value (D - 'I' of preceding year)	23676.67	19765.87	15772.56	11572.74	8134.71
H	Depreciation (G/E)	4089.23	4126.49	4161.63	4147.94	4544.53
I	Cumulative depreciation at the end ('K' of preceding year + H)	91233.07	95343.98	99457.23	103568.16	107540.34
J	Cumulative depreciation adjustment on account of de-caps	15.58	48.38	37.01	572.35	245.89
K	Cumulative depreciation adjustment on account of discharges out of un-discharged liabilities deducted as on 1.4.2009	0.00	0.00	0.00	0.06	0.00
L	Net cumulative depreciation at the end (I - J + K)	91217.49	95295.60	99420.22	102995.81	107294.44

Operation & Maintenance Expenses

86. Regulation 35(1)(2) of the 2019 Tariff Regulations provides as under:

"Talcher Thermal Power Station (TPS), Tanda TPS and Chandrapura TPS Unit 3 and Durgapur TPS Unit 1 of DVC

Year	Talcher TPS	Chandrapura TPS(Unit-3), Tanda TPS, Durgapur TPS(Unit-1)
FY 2019-20 to FY 2023-24	56.34	46.16

87. The O&M expenses claimed by the Petitioner are as under:

	2019-20	2020-21	2021-22	2022-23	2023-24
(Rs. In lakh)					
O&M expenses under Reg.35(1)					
Normative O&M expenses	20310.40	20310.40	20310.40	20310.40	20310.40
O&M expenses under Regulation 35(1)(6) of the 2019 Tariff Regulations:					
Water Charges	133.29	133.04	87.74	93.24	98.55
Security Expenses	1567.19	1003.54	960.24	999.74	977.76
Capital Spares consumed	479.62	573.31	128.73	396.59	611.43
Total O&M expenditure	22490.50	22020.29	21487.11	21799.97	21998.14
Additional O&M Expenses					
Ash Transportation	3587.87	0.00	1678.31	1714.78	864.14

88. We have considered the matter, the normative O&M expenses claimed by the Petitioner are in line with the O&M expenses norms in terms of Regulation 35 (1) (2) of the 2019 Tariff Regulations, and are hereby allowed. The additional O&M Expenses claimed are dealt with in subsequent paragraphs.



Additional O&M Expenses

(a) Water Charges

89. The first proviso to Regulation 35(1)(6) of the 2019 Tariff Regulations provides for claims towards water charges, security expenses and capital spares as under:

35(1)(6) The Water, Security Expenses and Capital Spares for thermal generating stations shall be allowed separately and after prudence check:

Provided that water charges shall be allowed based on water consumption depending upon type of plant, type of cooling water system etc., subject to prudence check. The details regarding the same shall be furnished along with the petition; and considering the norms of specific water consumption notified by the Ministry of Environment, Forest and Climate Change.

90. 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., subject to a prudence check. The Petitioner has claimed water charges based on actual water consumption of the generating station as per the details below:

	(Rs. In lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Water charges claimed	133.29	133.04	87.74	93.24	98.55

91. The Petitioner has submitted that water charges is paid to Uttar Pradesh Irrigation Department (UPID), which consists of the following:

(i) Water charges based on drawl as described above @ Rs 12.48/ 1000 Cubic Feet of water drawl

(ii) Annual Royalty Charges @ Rs 6 Lakh/ Cusec per Annum

92. The Petitioner vide its affidavit dated 9.10.2025 had placed on record, Uttar Pradesh Government order dated 12.9.2013 for water allocation and agreement dated 5.10.2021. Further, the Petitioner had also provided water charges bills from April 2019 to March 2024, along with water charges reconciliation for the station with bill paid to UPID. The Petitioner has also clarified that water charges are booked in the accounts as and when they are paid to UPID. Further, the Petitioner has submitted that considering that the water charges bills of the months at the fag end of the



financial year are paid in the next financial year, the water charges are claimed on the basis of payments made.

93. The Respondent, UPPCL, has submitted that the Petitioner has not furnished year-wise data of actual water consumption for the entire tariff period of 2019–24. Further, it has been submitted that the Petitioner has also not produced copies of any agreement or correspondence with the UPID to substantiate the applicable drawl rate or royalty charges. The Petitioner in its rejoinder has furnished the details of water bills paid to UPID during the 2019-24 period as per actual water drawl and as per the rate notified by the Govt. of Uttar Pradesh vide office order dated 15.7.2011.

94. The matter has been considered. It is noticed that, as per the MoEF&CC notification dated 7.12.2015, the specific water consumption allowed for the generating station is 3.50 m³/MWh for plants installed before 1.1.2017. Further, Regulation 35(1)(6) of the 2019 Tariff Regulations provides for consideration of the actual consumption of water depending upon the type of plant, the type of cooling water system, etc., subject to a threshold of 3.5 m³ /MWh as set by MoEF&CC. The Petitioner has furnished actual water consumption for Tanda TPS (Stage I & II) as a whole and has allocated the water consumption for Tanda Stage I as per the actual generation for respective year of 2019-24 tariff period. It is observed that the water consumption for Tanda stage I is within the prescribed limit notified by MoEF&CC for the generating station during the period 2019-24.

95. Further, the Petitioner has submitted a notification dated 15.7.2011 regarding water charges rate revision from the Uttar Pradesh Government. Based on a prudence check of the water consumption and applicable rate of water charges, the claim of the Petitioner does not reconcile completely with the annual computed water charges. In



this regard, the Petitioner has clarified that the claim of the water charges is in accordance with the actual payments made to UPID, and the same has been booked under the audited accounts; therefore, the billed amount does not reconcile with the claimed amount. It is observed that the water charges for the consolidated Tanda TPS plant (Stage-I and Stage-II) have been booked in a consolidated manner in the audited accounts and have been further allocated to Tanda Stage-I and Stage-II as per Form-19 provided by the Petitioner. On a prudence check of the said information and documents furnished, the water charges claimed by the Petitioner are in order and allowed.

(b) Capital Spares

96. The last proviso to Regulation 35(1)(6) of the 2019 Tariff Regulations provides as under:

“Provided also 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 as per Regulation 17 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 or Special Allowance or claimed as a part of additional capitalisation or consumption of stores and spares and renovation and modernization.”

97. In terms of the above proviso, capital spares consumed are admissible separately, at the time of truing up the tariff, based on the details furnished by the Petitioner. The capital spares claimed by the Petitioner for the period 2019-24 are as under:

(Rs. in lakh)				
2019-20	2020-21	2021-22	2022-23	2023-24
479.62	573.31	128.73	396.59	611.43

98. We have examined the list of spares furnished by the Petitioner. It is pertinent to mention that the term “capital spares” has not been defined in the 2019 Tariff



Regulations. The term capital spares, in our view, is a piece of equipment, or a spare part, of high cost that is maintained in inventory for use in the event that a similar piece of critical equipment fails or must be rebuilt. Keeping in view the principle of materiality and to ensure standardised practices in respect of earmarking and treatment of capital spares, the value of capital spares exceeding Rs.1.00 lakh, on prudence check of the details furnished by the Petitioner in the Petition, has been considered for the purpose of tariff. Based on this, the details of capital spares consumption allowed for the period 2019-24 are summarised as under:

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Total Capital spares (A)	479.62	573.31	128.73	396.59	611.43
Exclusions of Capital Spares below 1 lakh (B)	1.84	0.68	0.46	-	-
Net Capital Spares for Tanda (C=A-B)	477.78	572.63	128.27	396.59	611.43

99. Further, we are of the view that spares do have a salvage value. Accordingly, in line with the practice of considering salvage value, presumed to be recovered by the Petitioner on sale of capital assets, on becoming unserviceable, the salvage value of 10% has been deducted from the cost of capital spares considered above for the period 2019-24. Therefore, on prudence check of the information furnished by the Petitioner and on applying the said ceiling limit along with deduction of the salvage value @10%, the net capital spares allowed in terms of Regulation 35(1)(6) of the 2019 Tariff Regulations are as under:

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Capital spares allowed for Tanda	477.78	572.63	128.27	396.59	611.43
Salvage value @10%	47.78	57.26	12.83	39.66	61.14
Capital spares allowed	430.00	515.37	115.44	356.93	550.29

(c) Security Expenses

100. The second proviso to Regulation 35 (1) (6) of the 2019 Tariff Regulations provides as under:



*“(6) The Water Charges, Security Expenses and Capital Spares for thermal generating stations shall be allowed separately after prudence check:
Provided further that the generating station shall submit the assessment of the security requirement and estimated expenses;”*

101. The Respondent, UPPCL, has submitted that no item-wise breakup or classification of security-related costs has been furnished by the Petitioner. It has further submitted that the Petitioner has not provided any comparison or benchmarking with normative or industry-standard security costs for similarly situated generating stations. The Petitioner, in its rejoinder, has clarified that the security arrangements are driven by statutory/ administrative security obligations, site-specific risk assessments, and NTPC’s own internal security norms, and the security manpower deployment. Further, the Petitioner has submitted that the 2019 Tariff Regulations do not prescribe a specific benchmarking list for security expenses.

102. The matter has been examined. The security expenses claimed by the Petitioner are based on the actual expenditure of the station from the audited accounts. The Petitioner has also bifurcated the expenses based on the installed capacity between Tanda Stage-I and stage II. Further, the Petitioner, vide its additional submission, has also submitted the security assessment details in a separate sealed envelope for maintaining the obligation of secrecy and the same is found to be in line with the claims made by the Petitioner. Accordingly, we allow the claimed security expenses given as under:

<i>(Rs. in lakh)</i>				
2019-20	2020-21	2021-22	2022-23	2023-24
1567.19	1003.54	960.24	999.74	977.76

(d) Additional expenditure towards Fly ash transportation

103. The Petitioner has submitted Form-3A, including the expenditure of Ash Transportation for the entire period 2019-24. The ash transportation expense claimed by the Petitioner for the period 2019-24 is as follows:



<i>(Rs. in lakh)</i>				
2019-20	2020-21	2021-22	2022-23	2023-24
3587.87	0.00	1678.31	1714.78	864.14

104. The Petitioner has stated that in compliance to the directives vide order dated 28.10.2022 in Petition No. 205/MP/2021 (para 43), it had continued monthly billing of ash transportation expenditure @90% of expenditure provisionally for the balance period 2022-24.

105. The Respondent, UPPCL, vide its reply, has submitted that the Petitioner has claimed ash transportation expenses as additional O&M for recovery from beneficiaries, relying on the order dated 28.10.2022 in Petition No. 205/MP/2021, which allowed only provisional billing at 90% subject to subsequent submission of station-wise actual expenditure data duly certified by auditors for prudence check at true-up. However, the Petitioner has failed to furnish the mandatory station-specific details such as vendor invoices, distance-wise transportation data, auditor-certified statements, or end-user certificates evidencing actual dispatch and utilisation of ash. The Petitioner, in its rejoinder, has clarified that it has fully complied with the directions in Petition No. 205/MP/2021 by submitting audited ash transportation costs, transportation contracts, price discovery details, end-user certificates, and ash fund statements for 2019-22, and continuing provisional monthly billing at 90% for 2022-24 strictly as permitted, subject to truing-up. Further, the Petitioner has also submitted that it has furnished year-wise actual ash transportation expenditure, gross and net of ash sales, and prorated to Tanda Stage-I in Form-3A & 3B, and vide affidavit dated 9.10.2025, provided detailed distance-wise ash transportation data along with end-user certificates and auditor certificates, thereby meeting all requirements for allowance of these expenses.



106. The matter has been examined. The order dated 5.11.2018 in Petition No. 172/MP/2016 had decided the Notification dated 25.1.2016 regarding revised ECS as a 'change in law' event. It is, however, observed that the order dated 28.10.2022 in Petition 205/MP/2021 filed by the Petitioner for recovery of additional expenditure incurred due to Ash transportation charges consequent to MOEF&CC, GOI Notification dated 3.11.2009 and Notification dated 25.1.2016, on a recurring basis, had allowed the expenditure incurred towards the Ash transportation expenses for 2019-20, 2020-21 and 2021-22.

107. On prudence check, it is observed that the Petitioner vide its affidavit dated 9.10.2025 has provided details regarding the award of transportation contracts, the distance to which fly ash has been transported, along with auditor-certified reconciled statements of expenditure incurred on ash transportation. Therefore, we allow the additional expenditure incurred for fly ash transportation, as claimed by the Petitioner.

108. Accordingly, the total O&M expenses allowed to the generating station for the period 2019-24 are summarized as under:

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Normative O&M Expenses	20310.40	20310.40	20310.40	20310.40	20310.40
Water Charges	133.29	133.04	87.74	93.24	98.55
Security Expenses	1567.19	1003.54	960.24	999.74	977.76
Capital Spares	430.00	515.37	115.44	356.93	550.29
Total O&M expenses allowed	22440.88	21962.34	21473.82	21760.31	21937.00
Ash transportation expenses allowed separately	3587.87	0.00	1678.31	1714.78	864.14

Operational Norms

109. The Petitioner has considered following norms of operation:

Normative Annual Plant Availability Factor (NAPAF) (%)	85%
Heat Rate (kCal/kwh)	2750
Auxiliary Power Consumption (%)	11.50%
Specific Oil Consumption (ml/kwh)	0.50



(a) Normative Annual Plant Availability Factor (NAPAF)

110. Regulation 49 of the 2019 Tariff Regulations provides as under:

*“(A) Normative Annual Plant Availability Factor (NAPAF)
(a) For all thermal generating stations, except those covered under clauses (b), (c), (d), & (e) - 85%”*

111. In terms of Regulation 49(A)(a) of the 2019 Tariff Regulations, the Petitioner has considered NAPAF of 85% during the period 2019-24, and hence the same is allowed.

(b) Gross Station Heat Rate (kCal/kWh)

112. Regulation 49(C)(a) of the 2019 Tariff Regulations provides as under:

“For existing Coal – based Thermal Generating Stations, other than those covered under clause (ii) and (iii) below:

200/210/250 MW Sets	500 MW Sets(Sub-critical)
2430 kCal/kWh	2390 kCal/kWh

In respect of 500 MW and above units where the boiler feed pumps are electrically operated, the gross station heat rate shall be 40 kCal/kWh lower than the gross station heat rate specified above

.....

Note 4

(ii) For following Thermal generating stations of NTPC Ltd:

<i>Talcher TPS</i>	<i>2830 kCal/kWh</i>
<i>Tanda TPS</i>	<i>2750 kCal/kWh</i>

113. The Gross Station Heat Rate of 2750 kCal/kWh, as claimed by the Petitioner, is as per provisions of Regulation 49(C) of the 2019 Tariff Regulations and, hence, the same is allowed.

(c) Specific Oil Consumption

114. In terms of Regulation 49(D)(a) of the 2019 Tariff Regulations, the Petitioner has considered secondary fuel oil consumption of 0.50 ml/kWh during the period 2019-24 and hence, the same is allowed.



(d) Auxiliary Power Consumption

115. Regulation 49(E)(b) of the 2019 Tariff Regulations provides as under:

“(b) For other Coal-based generating stations:

(i)	Talcher Thermal Power Station	10.50%
(ii)	Tanda Thermal Power Station	11.50%
(iii)	Bokaro Thermal Power Station	10.25%
(iv)	Chandrapur Thermal Power Station	9.50%
(v)	Durgapur Thermal Power Station	10.50%

116. As the auxiliary power consumption of 11.50% is applicable to the generating station, in terms of the above regulation, the claim of the Petitioner is allowed.

Interest on Working Capital

117. Regulation 34 of the 2019 Tariff Regulations provides as under:

“34. Interest on Working Capital: (1) The working capital shall cover: (a) For Coal-based/lignite-fired thermal generating stations:

(i) Cost of coal or lignite and limestone towards stock if applicable for 10 days for pit-head generating stations and 20 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) Advance payment for 30 days towards cost of coal or lignite and limestone 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 including water charges and security expenses;

(v) Receivables equivalent to 45 days of capacity charge and energy charge for sale of electricity calculated on the normative annual plant availability factor; and

(vi) Operation and maintenance expenses including water charges and security expenses for one month.

(b) xxx

(3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2019 or as on 1st April of the year during the tariff period 2019-24 in which the generating station or a unit thereof or the transmission system including communication system or element thereof as the case may be is declared under commercial operation whichever is later.

Provided that in case of truing-up the rate of interest on working capital shall be considered at bank rate as on 1st April of each of the financial year during the tariff period 2019-24.

(4) Interest on working capital shall be payable on normative basis notwithstanding that the generating company or the transmission licensee has not taken loan for working capital from any outside agency.”



118. The Petitioner has claimed interest on working capital as per the provisions of Regulation 34 of the 2019 Tariff Regulations. Further, for the purpose of computation of interest on working capital, the landed fuel cost and gross calorific value of the fuel as per actual weighted average for the third quarter of 2018-19, 2019-20, 2020-21, 2021-22 and 2022-23 have been considered by the Petitioner. Accordingly, the interest on working capital as claimed by the Petitioner is as under:

	(Rs. in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Cost of Coal/Lignite	10984.25	12656.11	12607.27	12713.05	18798.11
Cost of Main Secondary Fuel Oil	142.13	133.89	113.62	137.74	226.37
O & M Expenses	1874.21	1835.02	1790.59	1816.66	1833.18
Maintenance Spares	4498.10	4404.06	4297.42	4359.99	4399.63
Receivables	14604.65	16070.45	15913.29	16068.25	21913.28
Total Working Capital	32103.33	35099.53	34722.19	35095.69	47170.57
Rate of Interest	12.05%	11.25%	10.50%	10.50%	12.00%
Interest on Working Capital	3868.45	3948.70	3645.83	3685.05	5660.47

(a) Fuel Cost and Energy Charges in Working Capital

119. Regulation 34(2) of the 2019 Tariff Regulations provides that the computation of the cost of fuel as part of interest on working capital is to be based on the landed price and GCV of fuel as per actuals, for the third quarter of the preceding financial year, in case of each financial year for which the tariff is to be determined. Regulation 43(2) of the 2019 Tariff Regulations provides as under:

“(2) Energy charge rate (ECR) in Rupees per kWh on ex-power plant basis shall be determined to three decimal places in accordance with the following formulae:

(a) For coal based and lignite fired stations:

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

xxxx Where,

AUX = Normative auxiliary energy consumption in percentage.

CVPF = (a) Weighted Average Gross calorific value of coal as received, in kCal per kg for coal based stations less 85 Kcal/Kg on account of variation during storage at generating station;

(b) Weighted Average Gross calorific value of primary fuel as received, in kCal per kg, per litre or per standard cubic meter, as applicable for lignite, gas and liquid fuel based stations;



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

CVSF = Calorific value of secondary fuel, in kCal per ml;

ECR = Energy charge rate, in Rupees per kWh sent out;

SHR = Gross station heat rate, in kCal per kWh;

LC = Normative limestone consumption in kg per kWh;

LPL = Weighted average landed cost of limestone in Rupees per kg;

LPPF = Weighted average landed fuel cost of primary fuel, in Rupees per kg, per litre or per standard cubic metre, as applicable, during the month. (In case of blending of fuel from different sources, the weighted average landed fuel cost of primary fuel shall be arrived in proportion to blending ratio);

SFC= Normative specific fuel oil consumption, in ml per kWh;

LPSFi= Weighted Average Landed Fuel Cost of Secondary Fuel in Rs./ ml during the month:

Provided that energy charge rate for a gas or liquid fuel based station shall be adjusted for open cycle operation based on certification of Member Secretary of respective Regional Power Committee during the month.”

120. The Petitioner has claimed Energy Charge Rate (ECR) of Rs. 2.795, 3.214, 3.198, 3.229 and 4.780 per kWh for 2019-20, 2020-21, 2021-22, 2022-23 and 2023-24, respectively and the following fuel component in working capital for truing up of the period 2019-24:

	(Rs. in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Cost of Coal (50 days generation corresponding to NAPAF)	10984.25	12656.11	12607.27	12713.05	18798.11
Cost of Secondary fuel oil (2 months generation corresponding to NAPAF)	142.13	133.89	113.62	137.74	226.37

121. In support of the claimed values, the Petitioner has submitted an audited Form-15 and Form-15A and has furnished the details of ‘as received’ GCV and the price of coal and oil for the preceding three months of October to December for each preceding year. The Respondent, UPPCL, has submitted that the Petitioner has computed Interest on Working Capital using only the third-quarter landed fuel cost and GCV data of the respective/ preceding years instead of annual weighted averages, without any justification for this selective methodology, rendering the claim distorted, non-transparent and potentially inflated. Further, the computation ignores normative parameters such as transit & handling losses, blending ratios and stock optimisation prescribed under the 2019 Tariff Regulations, thereby failing the test of prudence. The



Petitioner, in its rejoinder, has clarified that the computation of Interest on Working Capital has been strictly carried out in accordance with regulations that expressly mandate the use of weighted average landed fuel cost and GCV for the third quarter of the preceding financial year, and not annual averages. The Petitioner has fully accounted for normative transit and handling losses as required under Regulation 39, and all components of working capital.

122. The matter has been considered. The Petitioner has submitted the audited Forms 15 and 15A containing details of GCV and the landed price of coal for three months (Oct.-Dec.) for the respective period, as per the 2019 Tariff Regulations. Based on the scrutiny of the Form 15, it is observed that the Petitioner has considered the normative transit losses for the Quantity of Coal supplied by Coal Company, without factoring in the adjustment in quantity supplied made by Coal Company. Since the 'adjustment in quantity' is part of the total quantity of coal supplied, the normative transit losses have been applied on the coal supplied after 'adjustment in quantity' for working out the normative transit losses.

123. Considering the fact that 'GCV as billed' is equal to 'GCV as received' in case of imported coal, the Commission, for the purpose of computing the weighted average GCV of imported coal, has considered the 'GCV as billed'.

124. Further, the Petitioner has computed the weighted average cost of coal and the weighted average Gross Calorific Value (GCV) by factoring in the opening quantity and opening value of coal stock. It is pertinent to mention that while determining the tariff of the different generating stations for the period 2019-24, the Commission, in some of the generating stations, has considered the GCV and landed price of opening stock along with the fuel received during the month and for some of the generating



stations, only the GCV and landed price of fuel received during the month was considered. Further, it is noted that the information submitted for three months is stated to be representative of the entire year, however, procurement from certain sources, such as imported coal, is not undertaken on a uniform or continuous basis throughout the year, and accordingly, the Petitioner may or may not have procured coal from such sources during the three months for which information has been submitted in Form-15. On scrutiny of various petitions filed by different generating stations, it is noted that in few cases no coal has been procured from few sources during the three months (Oct.- Dec.), but the inventory of such sources have been utilized and blending ratio of these sources have been considered for computation of weighted average cost and GCV of coal, in such cases non-consideration of the opening stock of coal will lead to significant variation in the Energy Charge Rate (ECR) with respect to claim of the Petitioner and ECR recovered for respective months. To negate further ambiguity, the Commission, after detailed deliberation, has considered the inclusion of opening quantity and opening value of coal stock along with the fuel supplied during the month, for truing up of tariff and the same has been adopted for computation of Weighted average cost of coal and weighted average GCV of coal.

125. Similarly, the Petitioner in Form 15A has submitted the opening stock of oil, its value and GCV for the months October to December for the respective years, and it is observed that the Petitioner has not procured any oil during the three months in the respective periods and has considered the weighted average cost and GCV of oil corresponding to the opening stock of oil and quantity of the oil supplied (if any) for computation of Weighted average cost of oil and weighted average GCV of oil for the respective years. Accordingly, the same is found to be in line with provisions of the



2019 Tariff Regulations and is considered in line with the methodology adopted for coal.

126. The observations stated above have been duly dealt with in accordance with the 2019 Tariff Regulations and the necessary adjustments have been made to the fuel details (Cost and GCV) as per audited Form 15 and Form 15A provided by the Petitioner. Accordingly, the weighted average price and GCV of coal and oil claimed and allowed for the period 2019-24 are as under:

	(Rs. in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Weighted average price of coal (Rs. /MT) claimed	3686.54	3789.87	3765.74	3877.89	5497.54
Weighted average price of coal (Rs. /MT) allowed	3692.52	3855.15	3765.64	3875.06	5377.55
Weighted average GCV of coal (kCal/kg) claimed	4220.00	3774.67	3765.33	3843.33	3688.33
Weighted average GCV of coal (kCal/kg) allowed	4188.97	3794.12	3762.90	3842.55	3685.78
Weighted average price of oil (Rs. /kL) claimed & allowed	51915.12	49042.16	41614.31	50449.97	82687.09
Weighted average GCV of oil (kCal/Ltr.) claimed & allowed	9599.00	9149.00	9214.33	9310.00	9300.00

** Weighted Average Gross calorific value of coal as received, in kCal per kg for coal based stations has been adjusted by 85 Kcal/Kg on account of variation during storage at the generating station, for the purpose of computation of ECR and interest on working capital.*

127. It is observed that, in terms of Regulation 43(2)(a) of the 2019 Tariff Regulations, the weighted average GCV of coal as received at the generating station is required to be adjusted by 85 kCal/kg to account for variation during storage. Accordingly, for the purpose of computation of the ECR and interest on working capital, the weighted average GCV of coal has been considered after making the said adjustment of 85 kCal/kg, in line with the provisions of the regulations.

128. Further, the difference in the weighted average GCV and price of fuel as claimed by the Petitioner and as allowed by the Commission above is due to the fact



that the Petitioner has computed by way of a simple average of the GCV and price for October to December whereas the Commission has considered weighted average GCV and price of fuel with the Total Coal/Oil during the month as the weights.

129. Accordingly, the fuel component in working capital computed and allowed for the period 2019-24 is as under:

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Cost of coal for 50 days corresponding to NAPAF	11085.24	12806.56	12615.25	12706.43	18400.91
Cost of secondary fuel oil for 2 months corresponding to NAPAF	142.13	133.89	113.62	137.74	226.37
Energy charges for 45 days corresponding to NAPAF	10080.63	11624.90	11439.01	11539.11	16729.56

(b) Energy Charge Rate (ECR) for calculating working capital

130. The Petitioner has claimed ECR of Rs. 2.795, 3.214, 3.198, 3.229 and 4.780 per kWh for 2019-20, 2020-21, 2021-22, 2022-23 and 2023-24, respectively. Accordingly, the energy charges for 45 days have been calculated by considering the cost and GCV of the fuel as approved above. The ECR claimed vis-à-vis the ECR allowed for the computation of energy charges for 45 days corresponding to NAPAF, as under:

	<i>(Rs. /Unit)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Energy Charge Rate ex-bus Claimed	2.795	3.214	3.198	3.229	4.780
Energy Charge Rate ex-bus Allowed	2.820	3.252	3.200	3.228	4.680

131. The difference in the ECR claimed by the Petitioner and allowed by the Commission above is due to the fact that the Petitioner has computed GCV and cost of Coal by way of a simple average of the GCV and price for the period 2019-24, whereas the Commission has considered the weighted average GCV and price of fuel with the total Coal during the month as the weights.



(c) Working Capital for Maintenance Spares

132. The Petitioner has claimed the maintenance spares in the working capital as under:

<i>(Rs. in lakh)</i>				
2019-20	2020-21	2021-22	2022-23	2023-24
4498.10	4404.06	4297.42	4359.99	4399.63

133. Regulation 34(1)(a)(iv) of the 2019 Tariff Regulations provides for maintenance spares @ 20% of the O&M expenses (including water charges and security expenses). Accordingly, maintenance spares @ 20% of the O&M expenses (including the water charges and security expenses) allowed are as under:

<i>(Rs. in lakh)</i>				
2019-20	2020-21	2021-22	2022-23	2023-24
4402.18	4289.40	4271.68	4280.68	4277.34

(d) Working Capital for Receivables

134. In terms of Regulation 34(1)(a)(v) of the 2019 Tariff Regulations, the receivables equivalent to 45 days of capacity charges and energy charges is worked out and allowed as under:

<i>(Rs. in lakh)</i>					
	2019-20	2020-21	2021-22	2022-23	2023-24
Variable Charges - for 45 days	10080.63	11624.90	11439.01	11539.11	16729.56
Fixed Charges - for 45 days	4607.71	4572.55	4477.62	4513.27	4802.39
Total	14688.34	16197.44	15916.63	16052.38	21531.95

(e) Working Capital for O&M Expense (1month)

135. The Petitioner has claimed the O&M expenses for 1 month in the working capital as under:

<i>(Rs. in lakh)</i>				
2019-20	2020-21	2021-22	2022-23	2023-24
1874.21	1835.02	1790.59	1816.66	1833.18



136. Regulation 34(1)(a)(vi) of the 2019 Tariff Regulations provides for O&M expenses equivalent to 1 month of the O&M expenses (including water charges and security expenses).

137. Accordingly, O&M expenses equivalent to 1 month of the O&M expenses (including water charges and security expenses) allowed are as under:

<i>(Rs. in lakh)</i>				
2019-20	2020-21	2021-22	2022-23	2023-24
1834.24	1787.25	1779.87	1783.61	1782.23

(f) Rate of interest on working capital

138. In line with Regulation 34(3) of the 2019 Tariff Regulations, the rate of interest on working capital is considered as under:

	2019-20	2020-21	2021-22	2022-23	2023-24
1-year SBI MCLR as on 1 st April	8.55%	7.75%	7.00%	7.00%	8.50%
Add: 350 bps	3.50%	3.50%	3.50%	3.50%	3.50%
Rate of Interest considered for IoWC	12.05%	11.25%	10.50%	10.50%	12.00%

139. Accordingly, interest on working capital is allowed as under:

<i>(Rs. in lakh)</i>					
	2019-20	2020-21	2021-22	2022-23	2023-24
Working Capital for Cost of Coal towards Stock - (20 days generation corresponding to NAPAF)	4434.10	5122.63	5046.10	5082.57	7360.36
Working Capital for Cost of Coal towards Generation – (30 days generation corresponding to NAPAF)	6651.14	7683.94	7569.15	7623.86	11040.54
Working Capital for Cost of Secondary fuel oil - (2 months generation corresponding to NAPAF)	142.13	133.89	113.62	137.74	226.37
Working Capital for Maintenance Spares @ 20% of O&M expenses	4402.18	4289.40	4271.68	4280.68	4277.34
Working Capital for Receivables – (45 days of sale of electricity at NAPAF)	14688.34	16197.44	15916.63	16052.38	21531.95
Working Capital for O&M expenses - 1 month	1834.24	1787.25	1779.87	1783.61	1782.23
Total Working Capital	32152.13	35214.55	34697.04	34960.83	46218.79
Rate of Interest	12.05%	11.25%	10.50%	10.50%	12.00%
Interest on Working Capital	3874.33	3961.64	3643.19	3670.89	5546.26



Annual Fixed Charges approved for the period 2019-24

140. Accordingly, the annual fixed charges approved for the generating station for the period 2019-24 are summarised as under:

	(Rs. in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	4089.23	4126.49	4161.63	4147.94	4544.53
Interest on loan	40.91	0.00	0.00	0.00	0.00
Return on Equity	7030.69	7037.96	7039.81	7028.54	7031.65
Interest on Working Capital	3874.33	3961.64	3643.19	3670.89	5546.26
O&M Expenses	22440.88	21962.34	21473.82	21760.31	21937.00
Annual Fixed Cost allowed	37476.05	37088.43	36318.45	36607.67	39059.44
Ash transportation expenses allowed separately	3587.87	0.00	1678.31	1714.78	864.14
Total	41063.92	37088.43	37996.76	38322.45	39923.58

Note: All figures are on annualized basis. All figures under each head have been rounded. The figure in total column in each year is also rounded. As such, the sum of individual items may not be equal to the arithmetic total of the column.

141. The difference between the annual fixed charges already recovered in terms of the Commission's order dated 17.4.2024 in Petition No. 445/GT/2020 and the annual fixed charges determined by this order shall be adjusted in terms of Regulation 12 and 13 of the 2019 Tariff Regulations.

Summary

142. The annual fixed charges allowed vide order dated 17.4.2024, claimed and allowed in the instant Petition for the period 2019-24, are as under:

	(Rs. in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Annual Fixed Charges allowed vide order dated 17.4.2024	36546.51	36037.59	35848.92	35848.92	36330.11
Annual Fixed Charges claimed	41115.88	37157.24	38039.28	38413.44	40132.20
Annual Fixed Charges allowed	37476.05	37088.43	36318.45	36607.67	39059.44

143. Petition No. 701/GT/2025 is disposed of in terms of the above.

Sd/-
(Ravinder Singh Dhillon)
Member

Sd/-
(Harish Dudani)
Member

Sd/-
(Ramesh Babu V.)
Member

