

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No.628 /GT/2025

Coram:

**Shri Jishnu Barua, Chairperson
Shri Ramesh Babu V, Member
Shri Harish Dudani, Member
Shri Ravinder Singh Dhillon, Member**

Date of Order: 27th March, 2026

In the matter of:

Petition for truing-up of tariff of combined cycle gas-based Palatana Power Project of ONGC Tripura Power Company Limited (726.6 MW) for the 2019-24 tariff period.

And

In the matter of

ONGC Tripura Power Company Limited,
6th Floor, 'A' Wing, IFCI Tower, 61, Nehru Place,
New Delhi-110019

...Petitioner

Vs

1. Assam Power Distribution Company Limited,
"Bijulee Bhawan", Paltan bazar, Guwahati-781 001.
2. Department of Power,
Government of Arunachal Pradesh, Vidyut Bhawan, Itanagar – 791111.
3. Department of Power,
Government of Nagaland, Kohima – 797 001.
4. Manipur State Power Distribution Company Limited,
Government of Manipur, Keishampat, Imphal – 795001
5. Power and Electricity Department,
Government of Mizoram, Aizawal, Mizoram – 796001.
6. Meghalaya Energy Corporation Limited,
Short Round road, "LUMJINGSHAI", Shillong – 793001, Meghalaya.



7. Tripura State Electricity Corporation Limited,
Vidyut Bhawan, North Banamalipur, Agartala, Tripura – 799001, **Respondents**

Parties present:

Ms. Poorva Saigal, Advocate, OTPCL
Ms. Kaavya Madaan, Advocate, OTPCL

ORDER

The Petition has been filed by the Petitioner, ONGC Tripura Power Company Limited (in short, 'OTPCL') for truing-up of 2019-24 tariff of Combined Cycle Gas Based Palatana generating station (726.6 MW) (in short, 'the generating station') in accordance with the provisions of the Central Electricity Regulatory Commission (Terms & Conditions of Tariff) Regulations, 2019 (in short 'the 2019 Tariff Regulations').

Background

2. The generating station, having an installed capacity of 726.6 MW, comprises two Gas Turbine (GT) units of 232.39 MW each and two Steam Turbine (ST) units of 130.91 MW each. OTPCL is a joint venture of ONGC (Oil and Natural Gas Corporation), IL&FS (through its affiliate IEDCL) and the Government of Tripura for the development of the project. The equity shareholding pattern of the Petitioner consists of ONGC (50%), IEDCL (26%), Government of Tripura (0.5%), and residual equity of 23.5%. Out of the total installed capacity, 628 MW has been allocated to beneficiaries in the North Eastern States, and the remaining 98 MW is earmarked for merchant sale.

3. Unit-I of the generating station achieved Commercial Operation Date (COD) on 4.1.2014, and Unit-II achieved COD on 24.3.2015. Subsequently, the Commission, vide order dated 11.1.2022 in Petition No. 109/GT/2020, determined and approved the capital cost and annual fixed charges of the generating station for the tariff period 2019–24, as under:



Capital cost allowed

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Capital Cost (A)	333337.85	338616.29	338624.96	338824.96	338824.96
Add: Admitted Net Additional capital expenditure (B)	5278.43	8.68	200.00	0.00	0.00
Closing Gross Block (C) = (A+B)	338616.29	338624.96	338824.96	338824.96	338824.96
Average Gross Block (D) = [(A+C)/2]	335977.07	338620.62	338724.96	338824.96	338824.96

Annual Fixed Charges allowed

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation (A)	16698.06	16863.31	17105.61	17110.66	17110.66
Interest on Loan (B)	13215.04	11533.73	10237.24	8930.74	7618.35
Return on Equity (C)	16242.77	16370.57	16372.75	16374.73	16374.73
Interest on Working Capital (D)	3767.43	3828.60	3593.83	3615.57	3635.92
O&M Expenses (E)	19144.06	19820.07	20517.89	21237.52	21978.97
Total AFC (F) = (A+B+C+D+E)	69067.36	68416.28	67827.32	67269.22	66718.63

Note: All figures are on an annualised basis. All figures under each head have been rounded. The figure in the 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.

Present Petition

4. Regulation 13 of the 2019 Tariff Regulations provides as under:

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

- 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.”*

5. OTPCL has filed the present Petition seeking truing-up of tariff of the generating station for the period 2019-24, in accordance with Regulation 13(1) of the 2019 Tariff Regulations, and has claimed the following annual fixed charges and capital cost:



Capital cost claimed*(Rs. in lakh)*

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Capital Cost	333337.85	363149.88	363512.00	363239.52	368776.75
Add: Addition during the year/period	11327.19	480.22	4423.46	2620.59	2179.04
Less: De-capitalisation during the year/period	135.98	264.44	2043.04	1230.48	1167.50
Less: Reversal during the year/period	-	-	-	-	-
Add: Discharges during the year/ period	17599.89	146.34	46.78	1447.44	-
Add: Normative IDC on Palatana Township Civil Works	1020.93	0.00	0.00	0.00	0.00
Closing Capital Cost	363149.88	363512.00	365939.20	368776.75	369788.29
Average Capital Cost	348243.87	363330.94	364725.60	367357.98	369282.52

Annual Fixed Charges claimed*(Rs. in lakh)*

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	17484.40	18221.25	18396.24	18511.73	18682.14
Interest on Loan	14783.91	11728.04	9384.03	8955.41	8464.12
Return on Equity	16941.94	17758.71	17795.41	17877.89	17962.50
Interest on Working Capital	3850.30	3948.15	3871.24	3990.58	4792.07
O&M Expenses	20198.55	22300.96	21944.45	22541.15	24722.02
Total Annual Fixed Cost	73259.11	73957.11	71391.37	71876.75	74622.85

6. The Petition was listed for hearing on 24.6.2025, wherein the OTPCL was directed to submit certain additional information, which was filed vide affidavit dated 14.7.2025. The matter was thereafter heard on 9.9.2025, and an order was reserved. The Petitioner subsequently filed written submissions dated 29.9.2025 on the limited issue of settlement of liquidated damages with BHEL. The matter was thereafter relisted and heard on 23.12.2025 for placing on record the revised tariff forms, pursuant to which additional information was filed vide affidavit dated 13.11.2025. None appeared for the Respondents during the above-mentioned hearings, and no reply has been filed by the Respondents,



despite the granting of opportunities.

Capital cost

7. Regulation 19(1) of the 2019 Tariff Regulations provides that the capital cost, as determined by the Commission after a prudence check, in accordance with the said Regulations, shall form the basis for the determination of the tariff for existing as well as new projects. Further, Regulation 19(3) of the 2019 Tariff Regulations specifies the components to be included in the capital cost of an existing project. The relevant portion of Regulation 19(3) is extracted below:

“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 modernization 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; and

(f) 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.”

8. In terms of the above provisions, OTPCL has filed the present Petition, for truing up of tariff for the period 2019-24 based on the actual additional capital expenditure incurred during the said period. The order dated 18.12.2021 in Petition No. 108/GT/2020, had carried out the truing-up of tariff for the period 2014–19 and approved the closing capital cost of Rs 333337.85 Lakh as on 31.3.2019. Accordingly, the order dated 11.1.2022 in Petition No. 109/GT/2020 considered the said amount of ₹333337.85 lakh as the opening



capital cost as on 1.4.2019 for the purpose of determining the tariff for the period 2019–24. The annual fixed charges claimed by OTPCL in the present Petition are also based on the closing capital cost of Rs. 333337.85 lakh as on 31.3.2019, which was considered as the opening capital cost for the generating station as on 1.4.2019. Accordingly, under Regulation 19(3) of the 2019 Tariff Regulations, the capital cost of Rs 333337.85 lakh has been considered as the opening capital cost of the generating station as on 1.4.2019.

Additional Capital Expenditure

9. Regulations 25 and 26 of the 2019 Tariff Regulations govern the admissibility of additional capital expenditure for existing projects. Regulation 25 deals with additional capitalisation within the original scope of work after the cut-off date, while Regulation 26 provides for additional capitalisation beyond the original scope. The relevant provisions of the said Regulations are extracted below:

“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 cut-off 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 capitalization may be admitted by the Commission, after making necessary adjustments in the gross fixed assets and the cumulative 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 asset or equipment is necessary on account of change in law or Force Majeure conditions;

(c) The replacement of such asset or equipment is necessary on account of obsolescence of technology; and

(d) The replacement of such asset 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 additional to the original scope of work, on case to case basis:

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

(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."

10. The order dated 11.1.2022 in Petition No.109/GT/2020, had allowed additional capital expenditure of Rs.12440.40 lakh for the 2019-24 tariff period. However, OTPCL, in the instant true-up petition, has claimed the total additional capital expenditure of Rs 21030.50 lakh for the said tariff period. The details of the additional capital expenditure allowed in the order dated 11.1.2022 in Petition No. 109/GT/2020 are as follows:

(Rs. in lakh)



Sl. No	Head of Work /Equipment	2019-20	2020-21	2021-22	2022-23	2023-24
1	Palatana Township Civil Works	11902.87	-	-	-	-
2	Change of Obsolete Relays at Plant OTPCL Switchyard	-	30.00	-	-	-
3	Online Condition Monitoring of Transformers/ Reactors	-	-	200.00	-	-
4	Rainwater Harvesting System	307.54	-	-	-	-
	Sub Total (A)	12210.40	30.00	200.00	0.00	0.00

11. The additional capital expenditure claimed by OTPCL for the purpose of truing-up is Rs 8590.10 lakh higher than the additional capital expenditure allowed by the order dated 11.1.2022 in Petition No. 109/GT/2020. OTPCL has claimed additional capital expenditure in two categories, namely: (a) works under the Original scope, Change in Law, etc., eligible for Return on Equity (RoE) at the normal rate; and (b) works beyond the original scope, excluding additional capitalisation due to Change in Law, eligible for RoE at the weighted average rate of interest. The additional capital expenditure claimed by the Petitioner for the period 2019–24 is examined in the subsequent paragraphs.

12. The details of total additional capital expenditure under the category of the original scope of work and beyond the original scope of work, as claimed by OTPCL for the period 2019-24, are as under:

	<i>(in Lakhs)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Additional Capital Expenditure incurred for Items under Original Scope, Change in Law, etc.	11,280.98	156.03	2,094.19	193.13	1,872.63
Additional capital expenditure beyond the Original Scope of Work, and thus, eligible for the rate of RoE at the weighted average rate of interest	46.22	324.20	2,329.27	2,427.46	306.41

13. We first examine the additional capital expenditure claimed/incurred by OTPCL



towards works within the original scope, including those on account of Change in Law, for the tariff period 2019–24, as detailed below:

(In lakhs)

Sl. No	Head of Work /Equipment	2019-20	2020-21	2021-22	2022-23	2023-24
1	Palatana Township Civil Works	10,905.32	-	-	96.90	-
2	Change of Obsolete Relays at Plant OTPCL Switchyard	-	-	14.13	-	-
3	Replacement of Sodium Lights with LED Lights at Palatana Premises	52.89	5.27	22.52	-	21.68
4	Upgradation of DCS MARK-6 Software	-	-	1,079.22	-	-
5	Rainwater Harvesting System	307.54	-	-	-	-
6	Refresh of the Data Centre and Its Infrastructure	-	84.39	-	-	1,616.45
7	CKA-Upgradation Maxstation from XP to Windows	-	-	955.80	-	-
8	Design, Engineering & Implementation of RGMO	-	-	-	-	183.25
9	DAVR PC for Excitation System	-	-	-	59.71	-
10	Upgradation PLC HMI SCADA	-	-	-	-	27.05
11	Chlorination System Panel Upgradation	-	-	-	-	12.91
12	60kW Draw Out Module	-	-	9.52	-	-
13	H2 Plant Rectifier	-	-	-	-	7.90
14	IT System	4.17	63.57	13.00	31.78	1.11
15	Lab Equipment	11.07	2.80	-	4.75	2.28
	Sub Total (A)	11,280.98	156.03	2,094.19	193.13	1,872.63

Palatana Township Civil Works

14. OTPCL has claimed additional capital expenditure of Rs. 10905.32 lakh for the year 2019-20 and Rs. 96.90 lakh for the year 2022-23 towards Palatana township civil works, under Regulation 25(1)(d) read with Regulation 76 of the Tariff Regulations, 2019. In



support of the claim, OTPCL has submitted that the Commission, vide order dated 11.1.2022 in Petition No. 109/GT/2020, had allowed additional capital expenditure of Rs. 11902.87 lakh during 2019-20, under the same head. However, through strategic planning and efficient utilisation of resources, the actual expenditure incurred was only Rs. 10999.20 lakh, thereby resulting in a saving of around Rs. 900.65 lakh as compared to the expenditure earlier allowed by the Commission. OTPCL has further submitted that the savings achieved reflect OTPCL's prudent financial management, effective supplier negotiations, and regular budget monitoring, demonstrating strategic planning and efficient resource utilisation without compromising quality.

15. The order dated 11.1.2022 in Petition No. 109/GT/2020, had allowed the said additional capital expenditure during 2019-20. However, in the present Petition, OTPCL has claimed the said expenditure for the years 2019-20 and 2022-23. In justification of the time taken to complete the works, OTPCL has placed on record certain documents, including email correspondence relating to completion of works and related meetings, along with rainfall data and climate reports.

16. The submissions have been considered. It is observed that the township civil works formed part of the originally envisaged scope of the project, and the associated additional capital expenditure had earlier been admitted by under Regulation 25(1)(d) of the 2009 Tariff Regulations in its order dated 11.1.2022. It is further noted that the expenditure now claimed pertains to the discharge of the same underlying liability and has resulted in overall savings. Accordingly, in exercise of the powers under Regulation 76 (Power to Relax) of the 2019 Regulations, and considering the established linkage of the expenditure already approved, the actual additional capital expenditure of Rs. 11002.22 lakh (i.e. 10905.32 lakh during 2019-20 and Rs 96.90 lakh during 2022-23) towards Palatana Township Civil Works



for the period of 2019-2024, is allowed under Regulation 25(1)(d) read with Regulation 76 of the 2019 Tariff Regulations.

Normative IDC on Additional Capital Expenditure pertaining to Palatana Township

Civil Works

17. OTPCL, vide the affidavit dated 13.11.2025, has claimed an amount of Rs. 1020.93 lakh towards normative IDC during 2019-20. OTPCL has submitted that the claim for normative IDC amounting to Rs. 1020.93 lakh for the year 2019-20 was inadvertently omitted while filing the present Petition. OTPCL has further submitted that the entire additional capital expenditure (ACE) for the Residential Township has been funded through internal accruals only, and no interest has been capitalised.

18. The Commission, vide RoP of the hearing dated 23.12.2025, directed OTPCL to submit the revised forms along with a detailed calculation of Normative IDC. In compliance with the order, OTPCL, vide affidavit dated 24.12.2025, has submitted the requisite information.

19. OTPCL has submitted that the claim for normative IDC on additional capital expenditure has been computed in accordance with the methodology adopted by the Commission in its order dated 8.1.2022 in Petition No. 408/GT/2020. In this regard, the Petitioner has relied upon the following observations of the Commission in the said order:

“111. We have considered the submissions of the Petitioner. It is noticed that the Petitioner has neither submitted the normative IDC, duly certified by Auditors, nor the date of infusion of funds, the corresponding dates of capitalisation, the applicable interest rates etc. and their supporting documents, if any. Hence, in the absence of the aforesaid information, we have worked out the normative IDC based on assumptions as follows:

a. Infusion of funds has been assumed to be at the beginning of the year of additional capital expenditure incurred;

b. Date of capitalisation has been assumed to be at the mid of the year; and



c. Weighted Average Rate of Interest (WAROI) on actual loan of respective years have been applied for calculation of normative IDC of respective years”

20. OTPCL’s submissions have been considered. It is observed that the additional capital expenditure towards the residential township has been funded entirely through internal accruals only. As discussed above, the additional capital expenditure for the residential township has been allowed. In a similar manner, the order dated 8.1.2022 in Petition No. 408/GT/2020 observed as under:

“112. The normative IDC on additional capital expenditure has been worked out by applying WAROI on actual loan of the particular year on the average normative loan for the respective year, applied for half of the year of the time span. Accordingly, the normative IDC on additional capital expenditure is as follows:”

21. The above decision is also applicable in the present case. OTPCL has furnished the computation of normative IDC based on actual cash expenditure incurred towards quarterly capital work-in-progress and capital advances, duly certified by the auditor. However, for the purpose of computing normative IDC, OTPCL has considered 74.26% as normative debt based on the admitted debt-equity ratio as on COD.

22. Since the additional capital expenditure towards the residential township has been funded entirely through internal accruals, we have considered normative debt up to the limit of 70% in line with the Regulation 19(2)(b) of the 2019 Tariff Regulations which says that the equity in excess of 30% of the funds deployed is to be treated as normative loan.

The relevant provision of Regulation 19(2)(b) is reproduced below:

“(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;”

23. In line with the above provision and discussions, the allowable normative IDC works out as Rs. 962.36 lakh on additional capital expenditure pertaining to Palatana township



civil works during 2019-20.

Change of Obsolete Relays at OTPCL Plant Switchyard

24. OTPCL has claimed an additional capital expenditure of Rs. 14.13 lakh during 2021-22 towards change of obsolete relays at OTPCL Plant Switchyard under Regulation 25(2)(c) of the 2019 Tariff Regulations. OTPCL has submitted that the existing 30-series relays installed at the switchyard were replaced with 40-series relays. In justification of this claim, OTPCL has submitted that the 30-series relays were an old obsolete model, and that the OEM had discontinued support for their servicing. Further, the 30-series relays did not have a PSL facility and communication issues were observed in all four installed relays, resulting in operation, maintenance and defectivity issues. Thus, the 30-series relays were replaced by 40-series relays having excellent fault detection, significantly improving the reliability and efficiency of the Plant, thereby preventing breakdowns arising from obsolete equipment. OTPCL has further submitted that the actual expenditure incurred for the said work is ₹14.13 lakh as against the additional capital expenditure of ₹30.00 lakh earlier approved by the Commission.

25. The matter has been examined. The order dated 11.1.2022 in Petition No. 109/GT/2020, had allowed total additional capital expenditure of Rs 30.00 lakh during 2020-21 towards the replacement of obsolete relays. However, in the said order, the Commission had considered an assumed deletion of Rs 21.32 lakh for the replacement of the said assets, since OTPCL had not furnished the decapitalisation value despite directions of the Commission. In the present Petition, OTPCL has claimed actual expenditure of Rs. 14.13 lakh incurred during 2021-22 on a cash basis, along with the supporting documents and the OEM Certificate. Accordingly, the said expenditure of Rs. 14.13 lakh is allowed under Regulation 25(2)(c) of the 2019 Tariff Regulations. The



corresponding decapitalization due to the replacement of the old relays has been considered under the head “Assumed Deletions”.

Replacement of Sodium Lights with LED Lights at Palatana Premises

26. OTPCL has claimed additional capital expenditure of Rs. 102.35 Lakh (Rs. 52.89 Lakh in 2019-20, Rs. 5.27 Lakh in 2020-21, Rs. 22.52 Lakh in 2021-22 and Rs. 21.68 Lakh in 2023-24) towards replacement of sodium lights with LED lights at Palatana premises under Regulation 25(2)(c) of the 2019 Tariff Regulations. OTPCL has submitted that the sodium lights installed on the OTPCL Plant premises have been replaced with LED lights as part of energy efficiency measures. OTPCL has further submitted that the replacement is in line with the energy efficiency and energy-saving measures promoted by the Government of India (GOI). According to the energy conservation guidelines issued by the Bureau of Energy Efficiency (BEE), Ministry of Power (MOP), GOI, lighting systems should be regularly maintained and inspected, with necessary maintenance and replacement of lights and fixtures to enhance energy management. Furthermore, designated consumers are encouraged to replace inefficient lighting with energy-efficient options, such as LEDs and induction lamps, to ensure standard illumination.

27. OTPCL has also submitted that the initiative of replacing old/ conventional lights with energy-efficient LED lights has been undertaken by the Government of Tripura across the State, including in the Udaipur district, where the generating station is located. In view of the efforts undertaken by both the Central and State Governments towards promoting energy efficiency, OTPCL has submitted that it has undertaken the said replacement as part of its responsibility to support such initiatives.

28. The submissions of the Petitioner and documents available on record have been considered. The order dated 11.1.2022 in Petition No. 109/GT/2020, had rejected the claim



of Rs. 30.00 lakh towards replacement of sodium lights with LED Lights at Palatana premises during 2020-21 under Regulation 25(2)(c) of the 2019 Tariff Regulations with the following observation: -

“31. The submissions have been considered. It is noticed that the additional capital expenditure incurred towards installation of ‘replacement of Sodium light with LED light’ is in terms of the Energy Conservation Guidelines for industries issued by Bureau of Energy Efficiency, Ministry of Power, Government of India, which recommends the replacement of existing old bulbs with LED bulbs, resulting in reduction of energy consumption. We note that Energy Conservation Guidelines for Industries issued by Bureau of Energy Efficiency, Ministry of Power, Government of India is recommendatory in nature and is not a change in law event to allow the additional capital expenditure claimed by the OTPCL. Moreover, the benefits of replacement of existing lighting system with LED lighting system accrues to the account of the OTPCL. In view of this, the additional capital expenditure incurred on account of installation of LED lighting system is not allowed. In case, the OTPCL has already replaced the lighting system, the OTPCL is directed to submit the actual value of de-capitalisation of replaced asset at the time of truing up of tariff.”

29. Regulation 25(2)(c) of the 2019 Tariff Regulations provides for the replacement of assets on account of obsolescence of technology. In the present case, we observe that the replacement of sodium lights with LED lights has been undertaken in pursuance of the recommended energy conservation guidelines issued by the BEE and does not constitute a change in law event. Further, the benefits arising from reduced energy consumption from such replacement accrue to OTPCL and not to the beneficiaries. Accordingly, in line with the order dated 11.1.2022 in Petition No. 109/GT/2020, the additional capital expenditure claimed towards the replacement of sodium lights with LED lights is not allowed. OTPCL has, however, furnished the actual value of the de-capitalisation of the replaced asset. Since the additional capital expenditure for replacing sodium lights with LED lights has not been recognised, the corresponding decapitalisation has not been carried out from the capital cost.

Upgradation of DCS MACH-6 Software

30. OTPCL has claimed additional capital expenditure of Rs. 1079.22 lakh towards the



up-gradation of Distributed Control System (DCS) and MACH-6 software during 2021-22 under Regulation 25(2)(c) of the 2019 Tariff Regulations. In justification of the claim, OTPCL has submitted that the need to address the obsolescence of Microsoft XP and related control systems at the Palatana power plant is grounded in several critical factors. Firstly, the reliance on an outdated operating system exposes the plant to significant operational risks, including potential system failures and cybersecurity threats, which could jeopardise plant safety and performance. OTPCL has further submitted that issues encountered with the existing Human-Machine Interfaces (HMIs), such as frequent system hangs and automatic restarts, further highlight the urgent need for modernisation. By revamping the HMIs and upgrading the operating system during the next major inspection, the plant can ensure higher reliability, enhance operational efficiency, and safeguard against vulnerabilities. OTPCL has additionally submitted that exploring options for upgrading to the Mark-6e control system can provide a robust solution that aligns with industry best practices, as demonstrated by successful implementations in other plants worldwide. OTPCL has also submitted that the proactive measures to update the control systems not only mitigate risks but also enable the plant to maintain seamless operations in a dynamic energy landscape.

31. The matter has been examined. It is observed that the order dated 11.1.2022, in Petition No. 109/GT/2020, had earlier disallowed the additional capital expenditure of Rs. 2562.00 lakh proposed during 2021-22 towards the upgradation of DCS system and MACH-VI Software, as adequate justification regarding obsolescence of the system had not been furnished at that stage. However, in the present Petition, OTPCL has placed on record detailed justification indicating that the existing system was operating on the Microsoft Windows XP platform, which has become obsolete and unsupported, thereby



exposing the plant to the risk of operational failures and cybersecurity vulnerabilities. We note that issues reported in existing HMIs, such as system hangs and automatic restarts, can adversely affect plant reliability and operational performance. In view of the above, it is held that modernisation of the control system through the upgradation of the operating system and HMIs is necessary not merely for efficiency gains but also to ensure operational continuity and mitigate risks arising from obsolete technology. Accordingly, the additional capital expenditure of ₹1079.22 lakh towards upgradation of the DCS and MACH-6 software is allowed under Regulation 25(2)(c) of the 2019 Tariff Regulations. The corresponding decapitalisation has been considered under the head “Decapitalisation”.

Rainwater Harvesting System

32. OTPCL has claimed additional capital expenditure of Rs. 307.54 lakh during 2019-20 towards implementation of a Rainwater Harvesting System (RWHS) under Regulation 25(1)(d) of the 2019 Tariff Regulations. In justification of the above claim, OTPCL has submitted that the order dated 11.1.2022, in Petition No. 109/GT/2020, approved additional capital expenditure of ₹307.54 lakh for the said work. OTPCL has successfully executed a Rainwater Harvesting System at the Palatana plant, which includes four RWHS pits and six tubewell pump houses, with a total cost of about Rs. 307.54 lakh. OTPCL has also submitted that although the majority of the work related to RWHS was completed before the cut-off date of the project, i.e., 31.3.2018, certain civil works associated with Pit-1 and Tubewell Pump Houses 1 and 3, amounting to Rs. 307.54 lakh, were capitalised during 2019-20. OTPCL has further submitted that the said expenditure corresponds to the additional capital expenditure claimed in Petition No.109/GT/2020 and subsequently approved by the Commission.



33. The submissions have been considered. It is observed that OTPCL has claimed actual additional capital expenditure of Rs. 307.54 lakh towards the Rainwater Harvesting System during 2019-20, under Regulation 25(1)(d) of the 2019 Tariff Regulations. Since the order dated 11.1.2022, in Petition No. 109/GT/2020, had allowed additional capital expenditure of Rs. 307.54 lakh for the Rainwater Harvesting System (RWHS), the same is also allowed for truing up of tariff under Regulation 25(1)(d) of the 2019 Tariff Regulations.

Refreshing of Data Centre and IT Infrastructure

34. OTPCL has claimed total additional capital expenditure of Rs. 1,700.85 Lakh (Rs. 84.39 Lakh in 2020-21, and Rs. 1616.45 Lakh in 2023-24) towards Refresh of the Data Centre and IT Infrastructure under Regulation 25(2)(c) read with Regulation 76 and Regulation 77 of the 2019 Tariff Regulations. In justification of the above claim, OTPCL has submitted that the existing IT systems, having surpassed their optimal lifecycle, are increasingly prone to technological obsolescence, resulting in higher failure rates, increased security vulnerabilities, and spiralling maintenance and support costs. OTPCL has also submitted that with rising incidents of cyber threats and the need for compliance with regulatory standards, it is imperative to upgrade the infrastructure to safeguard against potential risks and ensure uninterrupted service availability. OTPCL further submitted that the challenges faced in deploying updates for the SAP ERP system further highlight the need for a comprehensive overhaul of the existing IT infrastructure, and therefore, the claim for refresh is not only a strategic move to enhance system performance and security but also a critical requirement to align with industry standards and maintain the integrity of operations.

35. The matter has been examined. OTPCL has submitted supporting documents indicating that the Data Centre and IT infrastructure, commissioned in 2015, has completed



more than eight years of operation and has started facing issues of technological obsolescence, frequent failures, downtime, security vulnerabilities, non-availability of OEM support and increased maintenance costs. We observe that the upgradation was undertaken to comply with cybersecurity guidelines issued by agencies such as CERT-In, MOP, the Ministry of Electronics and Information Technology (MeitY) and the Central Electricity Authority (CEA), and to ensure seamless operation of critical applications such as SAP ERP. It is further noted that the Petitioner engaged M/s Ernst & Young as a consultant for the preparation of the IT refresh strategy, a Board-approved CAPEX plan was prepared and procurement was undertaken through a transparent open tendering process, and the upgraded system was commissioned on 30.3.2024.

36. We are of the considered view that the above expenditure incurred is prudent and necessary to maintain business continuity, cyber security, and reliable operation of the plant systems, and falls within the scope of Regulation 25(2)(c) of the 2019 Tariff Regulations relating to replacement of assets due to obsolescence of technology. Accordingly, the additional capital expenditure of ₹1700.85 lakh (₹84.39 lakh in FY 2020-21 and ₹1616.45 lakh in FY 2023-24) towards refresh of Data Centre & IT Infrastructure, is allowed for truing up of tariff, subject to de-capitalisation of ₹51.60 lakh in FY 2020-21 and ₹1041.98 lakh in FY 2023-24. The corresponding decapitalisation value of the replaced IT assets has been considered under the head “Decapitalisation and Assumed Deletions”.

CKA- Upgradation of Max station from XP to Windows

37. OTPCL has claimed an additional capital expenditure of Rs. 955.80 Lakh towards CKA- Upgradation Max station from XP to Windows in the year 2021-22 under Regulation 25(2)(c) read with Regulation 76 and Regulation 77 of the 2019 Tariff Regulations.



38. In justification, OTPCL has submitted that the control system plays a critical role in running the power plant and is essential for its proper functioning. OTPCL has further submitted that the existing MaxDNA control system of the Steam Turbine Generator (STG) and Balance of Plant (BOP) was operating on the Windows XP operating system, and Windows XP was declared obsolete in 2009, and Microsoft discontinued extended support in 2014, due to which no technical support or security updates are presently available. The Petitioner has further submitted that continued operation of the control system on an unsupported operating system could lead to system failures, prolonged unavailability of the control system and consequential generation loss. The Petitioner has also submitted that, although the plant has not experienced any forced outages due to control system unavailability since inception, the upgradation of the operating system to a newer platform, such as Windows 10, along with associated hardware upgrades, was necessary to ensure continued reliability and availability of the control system.

39. The matter has been considered. We observe that the control system is a critical component of plant operation, and that continued dependence on an obsolete operating system, such as Windows XP, exposes the system to operational and cybersecurity risks. Windows XP exposes the system to operational and cybersecurity risks. It is also noted that the MOP notification dated 9.10.2018 advised power sector utilities to upgrade obsolete operating systems to mitigate cybersecurity vulnerabilities. Considering the justification furnished by the Petitioner and the supporting documents placed on record, we are satisfied that the expenditure incurred towards the upgradation of the CKA MaxStation control system is necessary to ensure the reliable and secure operation of the plant. Accordingly, the additional capital expenditure of ₹955.80 lakh is allowed under Regulation 25(2)(c) of the 2019 Tariff Regulations. The corresponding decapitalisation



value of the replaced assets has been considered under the head “Decapitalisation”.

DAVR PC for Excitation System

40. OTPCL has claimed an additional capital expenditure of Rs. 59.71 lakh during 2022-23 towards the replacement of DAVR (Digital Automatic Voltage Regulator) PCs for the excitation system of the Gas Turbine and Steam Turbine Generators, under Regulation 25(2)(c) read with Regulations 76 and 77 of the 2019 Tariff Regulations. In justification, it has been submitted by OTPCL that the existing panel-mounted DAVR PCs were operating on Windows XP, an operating system declared obsolete in 2009 and unsupported since 2014, and continued use of such an outdated system not only increases the risk of failures and prolonged downtime but also exposes the station to potential cyber threats. OTPCL has further submitted that to avoid these risks and in line with GOI advisories on system upgrades, OTPCL procured two new PCs equipped with the latest MaxDNA software from the OEM, M/s BHEL EDN, and the associated upgradation was carried out.

41. The submissions have been considered. It is observed that continued reliance on unsupported operating systems such as Windows XP poses operational and cybersecurity risks to critical plant systems. We are satisfied that replacing the DAVR PCs for the excitation system was necessary to ensure reliable operation of the generators and maintain cybersecurity of the plant systems. The claimed expenditure has been examined and found reasonable and directly related to safe and reliable plant operation. Accordingly, the additional capital expenditure of ₹59.71 lakh during 2022–23 towards the replacement of DAVR PCs for the excitation system is allowed under Regulation 25(2)(c) of the 2019 Tariff Regulations. The corresponding decapitalisation has been considered under the head “Assumed Deletions”.



Upgradation of PLC HMI SCADA

42. OTPCL has claimed an additional capital expenditure of Rs. 27.05 lakh during FY 2023-24 towards upgradation of PLC HMI SCADA systems under Regulation 25(2)(c) read with Regulations 76 and 77 of the 2019 Tariff Regulations. In justification of this claim, OTPCL has submitted that the HMIs of the DM Plant, Hydrogen Plant and HVAC system were running on Windows 7, which became obsolete after Microsoft discontinued support on 14.1.2020. OTPCL has also submitted that with no further updates or security patches available, the system was increasingly vulnerable to cyber risks, downtime and incompatibility with newer industrial applications. OTPCL has further submitted that the OEMs, namely GE and BHEL, had also confirmed the obsolescence of Windows 7-based systems. OTPCL has explained that issues such as system hang-ups and auto-restarts were already affecting the existing HMIs, which could lead to non-availability of the PLC system and prolonged plant downtime, and accordingly, the system was upgraded to Windows 10, along with the latest versions of Cimplicity SCADA (v11.1), PME Logic Developer (v9.8), compatible PC hardware and antivirus software. OTPCL has also relied upon the orders dated 3.7.2023 in Petition No. 573/GT/2020 and 17.8.2023 in Petition No. 643/GT/2020, in which similar software upgradations on account of software obsolescence (Windows XP/Windows 7) were allowed.

43. The matter has been examined. We observe that HMIs operating on Windows 7 are obsolete and that continued reliance on unsupported systems poses operational and cybersecurity risks. The upgradation of the HMI-SCADA system to Windows 10 and compatible software versions was therefore necessary to ensure the reliability, availability and secure operation of the plant systems. We are of the view that the expenditure incurred is attributable to obsolescence of technology and squarely falls within the scope of



Regulation 25(2)(c) of the 2019 Tariff Regulations. Accordingly, the additional capital expenditure of ₹27.05 lakh during 2023–24 towards upgradation of PLC HMI SCADA systems is allowed under Regulation 25(2)(c) of the 2019 Tariff Regulations. The corresponding decapitalisation has been considered under the head “Assumed Deletions”.

Design, Engineering & Implementation of RGMO

44. OTPCL has claimed an additional capital expenditure of Rs. 183.25 lakh in the year 2023-24 towards design, engineering and implementation of RGMO (Restricted Governor Mode of Operation) under Regulation 26(1)(b) of the 2019 Tariff Regulations.

45. OTPCL has explained that grid stability requires generating units to respond automatically to frequency variations, and, while primary frequency response through the turbine governing system is instantaneous, it is not sustainable for the restoration of frequency to the nominal 50 Hz. OTPCL has submitted that to address this, Regulation 5.2(f)(ii)(c) of the IEGC Regulations, 2010, as well as corresponding provisions in the IEGC Regulations, 2023, have made implementation of RGMO mandatory for all gas-based thermal generating units of 50 MW and above.

46. OTPCL has submitted that its gas turbines were originally commissioned without RGMO functionality, and, subsequently, North Eastern Regional Load Despatch Centre (NERLDC), vide communication dated 20.12.2022, directed OTPCL to comply with RGMO requirements. Accordingly, OTPCL implemented RGMO on both gas turbines through limited tendering on an EPC/OEM basis. OTPCL has further submitted that the scope of work covered design, engineering and implementation of RGMO logics in line with CERC/IEGC guidelines, enabling the gas turbines to operate up to 102.5% of base load during frequency fall, as well as testing, commissioning and demonstration of the scheme under both on-load and off-load conditions. OTPCL has also submitted that it further



includes providing support during third-party testing and incorporating any observations, non-compliances or recommendations arising out of such testing. has further submitted that the order dated 29.8.2022 in Petition No. 279/GT/2020, had allowed additional capital expenditure towards implementation of RGMO control for gas turbines under Regulation 26(1)(b) of the 2019 Tariff Regulations.

47. The matter has been examined. It is observed that, as per 30(10)(d) of IEGC Regulations 2023, the generating stations and units thereof shall have electronically controlled governing systems or frequency controllers in accordance with the CEA Technical Standards for Connectivity and are mandated to provide Primary Response Ancillary Services (PRAS). The generating stations and their units with governors are required to operate under Free Governor Mode of Operation (FGMO). Accordingly, the generating stations are required to comply with the provisions of the IEGC Regulations, 2023. It is also observed that the order dated 29.8.2022 in Petition No. 279/GT/2020 had allowed additional capital expenditure towards the implementation of RGMO control for gas turbines under Regulation 26(1)(b) of the 2019 Tariff Regulations.

48. In the present case, it is also observed that the Petitioner has implemented RGMO in compliance with the directions issued by NERLDC and the requirements of the IEGC for ensuring grid stability. Considering that the implementation of RGMO is mandated for grid reliability and system security, the additional capital expenditure of ₹183.25 lakh incurred during 2023-24 towards design, engineering and implementation of RGMO is allowed under Regulation 26(1)(b) of the 2019 Tariff Regulations, subject to compliance with the FGMO requirements in terms of the IEGC Regulations, 2023.

Chlorination System Panel Upgradation

49. OTPCL has claimed an additional capital expenditure of Rs. 12.91 lakh during 2023-



24 towards Chlorination System Panel Upgradation under regulation 25(2)(c) of the 2019 Tariff Regulation. In justification, OTPCL has submitted that the Raw Water (RW) Chlorination System has been installed at OTPCL Palatana Plant, and the 2×115 KPH CW and 2×6 KPH RW Chlorination System have experienced several chlorine leakage incidents in the recent past. OTPCL has submitted that a feasibility study was conducted to explore options for upgrading the systems to enhance process safety, and a Purchase Order (1700002397) was issued to hire experts from the OEM of the CW and RW Chlorination System, M/s PerfectChloro. OTPCL has further submitted that based on the recommendation report submitted by the OEM expert following a site visit, it was advised new Auto Shut Off Valves (ASV) along with Vacuum Switches be installed in the system. These ASVs are controlled via a Local Control Panel powered by the Plant UPS System ACDB, ensuring continued operation even during power outages. OTPCL has submitted that the upgrade is implemented individually in both the CW and RW Chlorination Systems. OTPCL has also submitted that, in accordance with the recommendation report, M/s PerfectChloro was approached for a budgetary price offer for the supply, installation, and commissioning of the new system, as well as the integration of the newly installed ASVs with the existing Local Control Panel, given that additional equipment is commissioned for the CW and RW systems.

50. We observe that the expenditure has been incurred on the basis of an OEM expert recommendation, with the objective of enhancing safety, reliability, and compliance with good industry practice. The upgradation involves the addition of new safety equipment and integration with the existing system, which goes beyond routine O&M and therefore qualifies as a capital expenditure. Accordingly, the additional capital expenditure of ₹12.91 lakh in FY 2023-24 towards upgradation of the Chlorination System Panel is allowed under



Regulation 25(2)(c) of the 2019 Tariff Regulations. The corresponding decapitalization has been considered under the head “Assumed Deletions”.

60 kW Draw Out Module

51. OTPCL has claimed an additional capital expenditure of Rs 9.52 Lakh towards the 60 kW Draw Out Module for the period 2021-22 as per Regulation 25(2)(c) read with Regulation 76 & 77 of the 2019 Tariff Regulations. In justification of the claim, OTPCL has submitted that its Gas Turbines (GTs) are equipped with BT fans (GT compartment cooling fans), which are essential for cooling the GT compartment. OTPCL has further submitted that each unit operates with one fan running and one standby, and the GT cannot be started in the absence of these fans, as it has two BT motors in each unit, which are designed for 45 kW modules; however, the BT motors themselves are rated at 55 kW each. OTPCL has further submitted that this specification mismatch has led to several problems, such as flashing in bus bar droppers, melting of female contacts, flashovers in contactors and internal wiring burns, and, OTPCL had approached the Original Equipment Manufacturer (OEM), M/s L&T, and upon discussion, it was determined that the issues were arising due to the mismatch between the module and motor specifications. OTPCL has submitted that it was suggested upgrading to 60 kW modules, allowing a 5-kW margin due to the high starting current of the BT motors. A total of five modules are procured, including one spare.

52. The matter has been considered. As per OTPCL, the OEM (M/s L&T) confirmed that the root cause of the problem was the under-capacity of the existing modules vis-à-vis motor rating and recommended upgradation to 60 kW modules to accommodate the motor rating and high starting current. Five modules (including one spare) were accordingly procured and installed. We observe that the expenditure was incurred on the OEM's



recommendation to address a clear design mismatch and ensure operational safety and reliability of GT units. Such expenditure cannot be categorised as routine O&M, as it involves replacement with higher-rated equipment due to original inadequacy. The justification provided by OTPCL indicates that persistent issues such as flashing in busbar droppers, melting of female contacts, flashovers in contactors, and internal wiring burns arose due to a specification mismatch: the BT motors were rated at 55 kW, while the originally provided modules were only 45 kW. This clearly establishes that the deficiency stemmed from an inherent design and specification inadequacy at the time of original installation, and not from equipment obsolescence, ageing, or unforeseen deterioration as envisaged under Regulation 25(2)(c) of the 2019 Tariff Regulations. The proposed replacement, therefore, amounts to rectification of an original design defect, which is not admissible as additional capital expenditure under the said provision. Accordingly, the claim is disallowed. The corresponding decapitalisation value has also not been considered for the said expenditure.

H2 Plant Rectifier

53. OTPCL has claimed an additional capital expenditure of Rs 7.90 Lakh for the period 2023-24 towards the H2 Plant Rectifier under regulation 25(2)(c) of the 2019 Tariff Regulation. In justification of the claim, OTPCL has submitted that the Palatana plant relies on H2 gas for cooling the Gas Turbine Generator, which is critical for its optimal operation. OTPCL has submitted that the plant generates its own H2 gas in-house, utilising analog rectifiers as a key component of the hydrogen generation system. OTPCL has further submitted that currently, the plant operates with two analog rectifiers; however, the spare parts for these analog rectifiers have become obsolete, and the OEM support for analog cards is no longer available. OTPCL has submitted that any malfunction in the rectifier



cards could lead to a complete shutdown of the H₂ plant; accordingly, the analog rectifiers were replaced with digital rectifiers incorporating modern technology.

54. The matter has been examined. The replacement has been undertaken due to the technological obsolescence of the existing equipment and the unavailability of OEM support. Since failure of the rectifier could result in the non-availability of hydrogen required for generator cooling, the replacement is necessary to ensure operational safety and reliability of the generating station. Accordingly, the additional capital expenditure of ₹7.90 lakh incurred during 2023-24 towards replacement of the H₂ Plant Rectifier is allowed under Regulation 25(2)(c) of the 2019 Tariff Regulations. The corresponding decapitalisation has been considered under the head "Assumed Deletions".

IT System

55. OTPCL has claimed a total additional capital expenditure of Rs. 113.62 Lakh (Rs. 4.17 Lakh in 2019-20, Rs. 63.57 Lakh in 2020-21, Rs. 13.00 Lakh in 2021-22, and Rs. 31.78 Lakh in 2022-23 and Rs. 1.11 Lakh in 2023-24) towards IT Infrastructure under Regulation 25(2)(a) read with Regulation 76 and 77 of the 2019 Tariff Regulations. In justification of the claim, OTPCL has submitted that the rapid technological advancement in the present era of digitalization has compelled it to update the hardware and software continuously, which is further in consonance with OTPCL's IT Policy, which requires replacement after completion of four years of asset life to keep the hardware and software updated and ensure protection against cybersecurity threats. OTPCL has submitted that this additional capitalisation expenditure includes the procurement of new laptops, desktops, printers, and other essential office equipment. OTPCL has also submitted that these items are selected based on the specific technical requirements of various departments, ensuring that each unit has the appropriate tools to perform its functions effectively, and, with the rapid pace



of technological change, older hardware and software quickly become obsolete, which can lead to vulnerabilities and inefficiencies. OTPCL has submitted that by adhering to a structured update cycle, OTPCL ensures that its IT infrastructure is robust, secure, and capable of supporting modern applications and processes.

56. The submissions have been considered. It is observed that while an IT hardware/software refresh is necessary for administrative convenience, business continuity, and cyber security, such expenditure does not directly contribute to the generation, safety, reliability, or performance of the power plant. Under the scheme of the 2019 Tariff Regulations, additional capitalisation is admissible only if it falls within the scope of Regulation 25(2). The items under consideration, i.e., laptops, desktops, printers and other office IT equipment, are administrative in nature and not critical to plant operation or safety. They are therefore not covered under Regulation 25(2)(a) of the 2019 Tariff Regulations, as it applies to plant and machinery directly associated with generation.

57. We also note that the Petitioner has invoked Regulations 76 and 77 (Power to Relax and Power to Remove Difficulty). However, these provisions are intended to be exercised sparingly in extraordinary circumstances. In the present case, the IT expenditure pertains to routine administrative needs, which are expected to be met from the normative O&M expenses provided in the tariff, and not through capitalisation. In view of the above, the additional capital expenditure of Rs. 113.62 Lakh towards IT Infrastructure is not allowed under Regulation 25(2)(a) read with Regulation 76 and 77 of the 2019 Tariff Regulation. Given that the claim is not allowed, the corresponding decapitalisation value of the replaced assets has also not been considered.

Lab Equipment

58. OTPCL has claimed a total additional capital expenditure of Rs. 20.90 Lakh (Rs.



11.07 Lakh in 2019-20, Rs. 2.80 Lakh in 2020-21, Rs. 4.75 Lakh in 2022-23, and Rs. 2.28 Lakh in 2023-24) towards lab equipment in the period 2019-24 under Regulation 25(2)(a) read with Regulation 76 and 77 of the 2019 Tariff Regulations.

59. In justification of the claim, OTPCL has submitted that over the past decade, these instruments have been subjected to continuous and rigorous usage, leading to significant wear and tear. OTPCL has further submitted that the prolonged use of these instruments has rendered them increasingly prone to measurement errors and inaccuracies, which poses a substantial risk to the plant's operations. OTPCL has also submitted that accurate measurements are imperative not only for maintaining operational efficiency but also for ensuring safety standards, as inaccuracies can result in chemical hazards that jeopardize both personnel and plant infrastructure. Furthermore, the current state of the laboratory instruments highlights the challenges associated with ageing equipment. OTPCL has submitted that many of the instruments have reached a point where they are beyond economical repair, and, given these circumstances, the procurement of new laboratory instruments is necessary to sustain the plant's operational integrity. OTPCL has submitted that modern instruments will enhance measurement accuracy, ensure compliance with safety regulations, and support the continuous improvement of plant processes. The investment in new equipment will also mitigate the risks associated with chemical hazards, thereby safeguarding the well-being of plant personnel and the surrounding environment.

60. The submissions have been considered. Laboratory instruments play a critical role in monitoring water chemistry, fuel quality and other process parameters necessary for safe and efficient plant operation. Inaccurate measurements could lead to corrosion, scaling and chemical hazards, affecting plant reliability and personnel safety. OTPCL has submitted that the earlier instruments had reached the end of their useful life and



replacement was necessary to ensure continued operational safety and efficiency. Considering the same and noting that the 2019 Tariff Regulations do not specify a fixed useful life for laboratory instruments, the facts of the present case indicate genuine technological degradation and operational necessity. Accordingly, in exercise of the power to relax under Regulation 76 of the 2019 Tariff Regulations, the additional capital expenditure of ₹20.90 lakh towards laboratory equipment during the period 2019-24 is allowed under Regulation 25(2)(c) of the 2019 Tariff Regulations. The corresponding decapitalization has been considered under the head “Assumed Deletions”.

Additional Capital Expenditure Eligible for WAROI ROE:

61. Now, we deal with the additional capital expenditure incurred beyond the original scope of work, excluding additional capital expenditure due to a change in law, for the period 2019-24, which has been claimed to be serviced through Return on Equity (RoE) at the weighted average rate of interest, as detailed below:

<i>(in lakh)</i>						
Sl. No.	Head of Work /Equipment	2019-20	2020-21	2021-22	2022-23	2023-24
1	Vibration Monitoring System for Unit 1 and 2 CT Fan	7.88	-	-	-	-
2	VFD Panel for 30kW LPBFP	5.43	-	-	-	-
3	Online Moisture Removal System	-	20.94	-	-	-
4	Generator Flux Monitoring	-	-	-	63.84	-
5	Self-Propelled Diesel Articulated Boom Lift	-	-	-	0.63	72.57
6	Horizontal Pump Set - RWIS Pump House	-	-	-	-	5.47
7	Action Tracking Software	-	-	-	13.95	-
8	Billing Software	-	-	-	38.79	-
9	NAS Storage System	13.57	-	-	-	-
10	Furniture and Other Office		286.42	2.05	16.93	



	Equipment	-				-
11	Security Related Expense	7.25	-	5.36	10.53	17.67
12	Township and Common Area Development	7.53	-	23.54	12.75	13.39
13	Self-Contained Breathing Apparatus (SCBA)	4.55	-	-	-	-
14	Roof shade over CO2 tanks	-	4.19	-	-	-
15	Equipment for Ambient Air Quality Monitoring	-	8.37	-	-	-
16	SGA-Over ground ERW piping for spray & hydrant-	-	4.28	-	-	-
17	Construction of Chlorine Neutralization Pit	-	-	11.42	-	-
18	Compressor Enhancement Package	-	-	2,142.33	2,270.04	-
19	Online Condition Monitoring System	-	-	144.58	-	197.31
	Sub-Total	46.22	324.20	2,329.27	2,427.46	306.41

62. We have gone through the additional capital expenditure claimed by OTPCL beyond the original scope of work, as tabulated above. On careful consideration, we are of the view that the additional capital expenditures claimed by OTPCL under various heads such as Vibration Monitoring System for CT Fans, VFD Panel for Low Pressure Boiler Feed Pump, Online Moisture Removal System, Generator Flux Monitoring, Self-Propelled Diesel Articulated Boom Lift, Horizontal Pump Set for RWIS Pump House, Action Tracking Software, Billing Software, NAS with Endpoint Backup, Furniture and Office Equipment, Internal Security Risk Management, Township and Common Area Development, Self-Contained Breathing Apparatus (SCBA), Roof Shade over CO₂ Tanks, Ambient Air Quality Monitoring Equipment, and Over-ground ERW Piping for Spray & Hydrant, are essentially of the nature of repair and maintenance, tools and tackle, testing/ measurement instruments, and other minor works, IT/ administrative upgradation, and O&M facilitation which are generally in the nature of consumables or operational requirements. These items, while useful for plant reliability, compliance, and administrative efficiency, are



covered within the normative Operation and Maintenance (O&M) expenses allowed under the 2019 Tariff Regulations. These items do not fall within the permissible categories of additional capital expenditure under Regulations 25 and 26 of the 2019 Tariff Regulations. The contention of OTPCL to admit these under the residuary provisions of Regulation 26(1)(d) read with Regulation 76 and 77 is not acceptable, as the said provisions cannot be invoked for routine O&M-related expenditure or township-related facilities which are neither mandatory statutory capital works nor essential replacements of capital assets forming part of the generating plant. Accordingly, the expenditure claimed under serial numbers 1 to 17 of the table above has not been considered for capitalisation. Consequently, the corresponding de-capitalisation proposed by OTPCL against the said items has also not been considered.

Compressor Enhancement Package

63. OTPCL has claimed a total additional capital expenditure of Rs. 4412.37 lakh (Rs. 2142.33 lakh in 2021-22 and Rs. 2270.04 lakh in 2022-23) towards installation of Compressor Enhancement Package (CEP) for reliable and safe operation of the generating units, under Regulation 26(1)(d) of the Tariff Regulations, 2019 read with Regulations 76 and 77 of the Tariff Regulations, 2019 and Regulations 111, 112 and 113 of the CERC (Conduct of Business) Regulations, 1999.

64. It is observed that the order dated 11.1.2022 in Petition No. 109/GT/2020, had not allowed the claim for additional capital expenditure towards the CEP, while granting liberty to OTPCL to file a separate petition with detailed justification and an independent third-party inspection report. Accordingly, OTPCL filed Petition No.163/MP/2023 seeking approval for the additional capital expenditure incurred towards CEP. We, after detailed examination, have already dealt with the issue and vide order in Petition No.163/MP/2023



have allowed the total additional capital expenditure of Rs 2455.11 lakh (excluding the total decapitalization amount of Rs 1925.53 lakh during 2021-22 and 2022-23). The observation in our order dated 2.12.2024 in Petition No. 163/MP/2023 is extracted as under:

“24. In our considered view, the additional capital expenditure claimed by the OTPCL for implementing the Compressor Enhancement Package-4 (CEP-4) was necessary, as the risks associated with operating the gas turbines without this enhancement package could lead to severe damage. We have taken note of the submission of the OTPCL that it has claimed the said expenditure under Regulation 26, which provides for the expenditure beyond the original scope of work. However, this modification or replacement work on the existing compressor of the gas turbine can be considered under Regulation 25 of the 2019 Tariff Regulations. Regulation 25 of the 2019 Tariff Regulations provides for the additional capital expenditure within the original scope of work and after the cutoff date of the generating station. Further, regulation 25(2)(c) provides for the replacement of such assets or equipment, which is necessary on account of the obsolescence of technology. But in the instant case, the OTPCL is carrying out modification in the compressor not due to obsolescence of technology but as a preventive technology upgrade to maintain high reliability and availability of the plant. Accordingly, we, in the exercise of the powers conferred under Regulation 77 of the 2019 Tariff Regulations, relax the provisions of Regulation 25(2)(c) of the 2019 Tariff Regulations and approve the claim for additional capital expenditure for the Compressor Enhancement Package. However, considering the fact that several components of the existing system have been replaced with new components and the OTPCL has also submitted the details of modification/replacement along with the value of decapitalization of the replaced asset, we allow the additional capital expenditure towards compressor enhancement package after excluding the decapitalization amount. The OTPCL has submitted that the total decapitalization value for the Compressor enhancement package for Unit-1 during the year 2021-22 is Rs 896.24 lakh, which was for the asset part of the Capital cost. Further, the total decapitalization value for the Compressor enhancement package for Unit-2 during the year 2022-23 is Rs 1029.29 lakh, which was for the asset part of the Capital cost.

25. In light of the above, we approve the additional capital expenditure for the Compressor Enhancement Package of Rs 2455.11 lakh (excluding the total decapitalization amount of Rs. 1925.53 lakh during 2021-22 and 2022-23) to enhance the reliability of the generating station.”

65. It is observed that the OTPCL has claimed total additional capital expenditure of Rs 4380.64 lakh towards CEP in Petition No. 163/MP/2023, and the order dated 2.12.2024 had allowed the total additional capital expenditure of Rs 2455.11 lakh (excluding the total decapitalisation amount of Rs 1925.53 lakh during 2021-22 and 2022-23). However, in the instant truing up Petition, the OTPCL has claimed a total additional capital expenditure of Rs 4412.37 lakh towards CEP, and the corresponding decapitalisation considered by the OTPCL is Rs 1925.64 lakh. Since, at the time of filing the instant Petition by the OTPCL,



the order in Petition No. 163/MP/2023 was not disposed of and the OTPCL has installed the 9FA machines for enhancement of Compressor, we are of the considered view that, in line with the decision already given in Petition No.163/MP/2023, the net additional capital expenditure of Rs 2486.73 lakh after considering the decapitalisation of Rs 1925.64 lakh (i.e. Rs 896.24 lakh in 2021-22 and Rs 1029.39 lakh in 2022-23), is allowed under relaxing the Regulation 25(2)(c) under Regulation 77 of the 2019 Tariff Regulations. The corresponding decapitalisation has been considered under the head “Decapitalisation”.

Online Condition Monitoring System

66. OTPCL has claimed a total additional capital expenditure of Rs. 341.89 lakh (Rs. 144.58 lakh in 2021-22 and Rs. 197.31 lakh in 2023-24) towards Online Condition Monitoring of Transformers/ Reactors, under Regulation 26(1)(d) read with Regulations 76 and 77 of the 2019 Tariff Regulations.

67. In justification of the claim, OTPCL has submitted that the order dated 11.1.2022 in Petition No.109/GT/2020, had approved additional capital expenditure of Rs. 200.00 Lakh towards Online Condition Monitoring of Transformers/ Reactors in 2021-22 under Regulation 26(1)(d) read with Regulation 76 of the 2019 Tariff Regulations. OTPCL has submitted that Inter-Connecting Transformers (ICTs) are critical parts of the power evacuation system and, given the remoteness of the generating station, immediate repairs in case of any major fault are difficult due to a lack of infrastructure and machinery. OTPCL has further submitted that online condition monitoring facilitates real-time detection of incipient faults, provides early warnings for corrective actions, and thereby prevents potential transformer breakdowns. OTPCL has also stated that while the earlier claim was on an estimated basis, the actual expenditure is higher due to inflationary pressures, changes in specifications, the use of advanced technology, and the expansion of the scope



from 4 ICTs to 8 ICTs, as also highlighted in the Marsh Safety Audit report.

68. It is observed that the order dated 11.1.2022 in Petition No.109/GT/2020 had allowed the claim of Rs. 200.00 lakh towards the said works under Regulation 26(1)(d) read with Regulation 76 of the 2019 Tariff Regulations, and OTPCL has now claimed the actual additional capital expenditure of Rs 341.89 lakh. OTPCL, in justification, has submitted that the amount claimed by OTPCL was on an estimated basis and the reason for the variation is attributed to several factors, including inflationary pressures, changes in specifications, or the need for higher-quality materials and advanced technologies to meet project requirements. It is further noted that the actual scope of works has been enlarged, with installation being carried out for 8 ICTs instead of 4 , thereby justifying the increase in expenditure. The need for online gas detection and monitoring of other key parameters has also been substantiated by the Marsh Safety Audit report.

69. Considering the fact that the installation of the said asset will help OTPCL to avoid damage to the transformer and consequent outages in future and also help OTPCL to make timely decisions to improve the reliability/ availability of the plant, reduce maintenance expenses and proactively manage performance, the additional capital expenditure of Rs. 341.89 lakh (Rs. 144.58 lakh in 2021-22 and Rs. 197.31 lakh in 2023-24) towards Online Condition Monitoring of Transformers/Reactors is allowed under Regulation 26(1)(d) read with Regulations 76 and 77 of the 2019 Tariff Regulations. The corresponding decapitalisation has been considered under the head “Assumed Deletions”.

70. Based on the above discussion, the additional capital expenditure allowed for the 2019-24 tariff period is summarised as follows:

<i>(in lakhs)</i>		
Sl. No.	Head of Work /Equipment	ACE allowed



		2019-20	2020-21	2021-22	2022-23	2023-24	Total
1	2	3	4	5	6	7	
A.	Works under the Original scope, a Change in Law, etc., eligible for RoE at Normal Rate						
1	Palatana Township Civil Works	10,905.32	-	-	96.90	-	11,002.22
2	Change of Obsolete Relays at Plant OTPCL Switchyard	-	-	14.13	-	-	14.13
3	Replacement of Sodium Lights with LED Lights at Palatana Premises	-	-	-	-	-	-
4	Upgradation of DCS MARK-6 Software	-	-	1,079.22	-	-	1,079.22
5	Rainwater Harvesting System	307.54	-	-	-	-	307.54
6	Refresh of the Data Centre and Its Infrastructure	-	84.39	-	-	1,616.45	1,700.85
7	CKA- Upgradation_ Maxstation from XP to Windows	-	-	955.80	-	-	955.80
8	DAVR PC for Excitation System	-	-	-	59.71	-	59.71
9	Upgradation PLC HMI SCADA	-	-	-	-	27.05	27.05
10	Chlorination System Panel Upgradation	-	-	-	-	12.91	12.91
11	60kW Draw Out Module	-	-	-	-	-	-
12	H2 Plant Rectifier	-	-	-	-	7.90	7.90
13	IT System	-	-	-	-	-	-
14	Lab Equipment	11.07	2.80	-	4.75	2.28	20.90
	Sub Total (A)	11,223.93	87.19	2049.15	161.36	1,666.59	15188.21
B.	Works beyond the Original scope excluding add-cap due to a Change in Law, eligible for RoE at Wtd. Average rate of Interest						
1	Vibration Monitoring System for Units 1 and 2 CT Fan	-	-	-	-	-	-
2	Design, Engineering & Implementation of RGMO	-	-	-	-	183.25	183.25
3	VFD Panel for 30kW LPBFP	-	-	-	-	-	-
4	Online Moisture Removal System	-	-	-	-	-	-



5	Generator Flux Monitoring	-	-	-	-	-	-
6	Self-Propelled Diesel Articulated Boom Lift	-	-	-	-	-	-
7	Horizontal Pump Set - RWIS Pump House	-	-	-	-	-	-
8	Action Tracking Software	-	-	-	-	-	-
9	Billing Software	-	-	-	-	-	-
10	NAS Storage System	-	-	-	-	-	-
11	Furniture and Other Office Equipment	-	-	-	-	-	-
12	Security Related Expense	-	-	-	-	-	-
13	Township and Common Area Development	-	-	-	-	-	-
14	Self-Contained Breathing Apparatus (SCBA)	-	-	-	-	-	-
15	Roof shade over CO2 tanks	-	-	-	-	-	-
16	Equipment for Ambient Air Quality Monitoring	-	-	-	-	-	-
17	SGA-Overground ERW piping for spray & hydrant-	-	-	-	-	-	-
18	Construction of Chlorine Neutralisation Pit	-	-	-	-	-	-
19	Compressor Enhancement Package	-	-	2,142.33	2,270.04	-	4,412.37
20	Online Condition Monitoring System	-	-	144.58	-	197.31	341.89
	Sub-Total (B)	-	-	2,286.91	2,270.04	380.56	4,937.51
	Total Additional Capital Expenditure Allowed (A+B)	11,223.93	87.19	4336.06	2,431.40	2,047.15	20125.72

De-capitalisation

71. Regulation 26(2) of the 2019 Tariff Regulations states as follows:

“(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.”

72. OTPCL has claimed decapitalisation amounting to Rs. 4,841.44 lakh during the tariff



period 2019-24 (Rs 135.98 lakh in 2019-20, Rs 264.44 lakh in 2020-21, Rs 2043.04 lakh in 2021-22, Rs 1230.48 lakh in 2022-23, and Rs 1167.50 lakh in 2023-24) under Regulation 26(2) of the 2019 Tariff Regulations. In justification, OTPCL has submitted that during the 2019-24 period, several schemes were executed for additional capitalisation, including the procurement of capital spares, some of which are totally new schemes or upgradations without removal of any existing asset, and, hence, they do not require any decapitalization. However, some schemes require replacement/ removal of existing assets, which may or may not entail decapitalization. The details submitted by OTPCL are as follows:

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Decapitalisation	135.98	264.44	2,026.23	1,190.06	94.67
Assumed Deletion	-	-	16.81	40.41	1,072.83
Grand Total	135.98	264.44	2,043.04	1,230.48	1,167.50

73. OTPCL has claimed de-capitalisation against assets such as Refresh of Data Centre, Compressor Enhancement Package, Upgradation of DCS and Mark 6, CKA upgradation of Max station. The de-capitalisation claimed is as under:

(Rs. in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Decapitalisation	135.98	264.44	2,026.23	1,190.06	94.67

74. The above de-capitalisation corresponds to the replacement of existing assets with new assets for which additional capitalisation has been claimed during the respective years of the tariff period 2019–24, as well as assets which are no longer in use. Since such assets do not render any useful service in the operation of the generating station, and the corresponding additional capital expenditure has been allowed, the de-capitalisation of the said assets, as reflected in the books of accounts, has been allowed for the purpose of tariff. However, in cases where capitalisation has not been allowed (as discussed in the section on additional capital expenditure), the corresponding de-capitalisation has not been



considered. Accordingly, the de-capitalisation allowed for the purpose of tariff is as under:

<i>(Rs. in lakh)</i>					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Decapitalisation Claimed	135.98	264.44	2,026.23	1,190.06	94.67
Decapitalisation Allowed	135.98	264.44	2,026.23	1,190.06	94.67

Assumed Deletions

75. As per the consistent methodology adopted by the Commission, expenditure on the 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 original value of the old asset. However, in certain cases where de-capitalisation is effected in books during the following years to the year of capitalisation of the new asset, the de-capitalisation of the old asset for tariff purposes is shifted to the 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 “assumed deletion”. Further, in the absence of the gross value of the asset being de-capitalised, the same is calculated by de-escalating the gross value of the new asset at a rate of 5% per annum till the year of capitalisation of the old asset.

76. In the present Petition, OTPCL has claimed several assets/works under replacement during the period 2021-24. These include the change of obsolete relays at Plant OTPCL Switchyard in 2021-22 with assumed deletion of Rs.10.04 lakh, replacement of 60 kW Draw Out Module in 2021-22 with assumed deletion of Rs.6.76 lakh, installation of DAVR PC for Excitation System in 2022-23 with assumed deletion of Rs. 40.41 lakh, upgradation of PLC HMI SCADA in 2023-24 with assumed deletion of Rs.17.44 lakh, replacement of H2 Plant Rectifier in 2023-24 with assumed deletion of Rs.5.09 lakh, upgradation of Chlorination System Panel in 2023-24 with assumed deletion of Rs.8.32 lakh, and refresh of Data Centre and its infrastructure in 2023-24 with assumed deletion of Rs.1041.98 lakh.



However, OTPCL has not indicated the gross value of some of the old assets being replaced. Therefore, the methodology for determining the fair value of the decapitalised asset, i.e., the 5% per annum escalation rate from the COD, has been adopted to determine the gross value of the old asset relative to the cost of the new asset. Accordingly, the assumed deletions claimed and allowed for the purpose of tariff are detailed as under:

<i>(Rs. in lakh)</i>			
Additional Capital Expenditure claimed	Year	De-capitalisation claimed	De-capitalisation considered
Change of Obsolete Relays at Plant OTPCL Switchyard	2021-22	10.04	10.04
60 kW Draw Out Module	2021-22	6.77	0.00
DAVR PC for Excitation System	2022-23	40.41	40.41
Upgradation of PLC HMI SCADA	2023-24	17.44	17.44
Replacement of H2 Plant Rectifier	2023-24	5.09	5.09
Chlorination System Panel Upgradation	2023-24	8.32	8.32
Refresh of Data Centre and Its Infrastructure	2023-24	1041.98	1041.98
Online Condition Monitoring System	2021-22	0.00	102.75
Online Condition Monitoring System	2023-24	0.00	127.19
Lab Equipment	2019-20	0.00	8.67
Lab Equipment	2020-21	0.00	2.09
Lab Equipment	2022-23	0.00	3.21
Lab Equipment	2023-24	0.00	1.47
Total		1130.05	1368.67

Exclusions

77. OTPCL, vide affidavit dated 13.11.2025, has revised Form-9D (regarding the statement showing items/assets/works claimed under Exclusion). The detailed submissions qua the exclusions claimed by OTPCL are summarised hereinunder:

<i>(Rs. Lakh)</i>					
	2019-20	2020-21	2021-22	2022-23	2023-24
Overhauling	0.00	0.00	0.00	2822.06	0.00
Right of Use of Asset-Car	0.00	0.00	0.00	0.00	700.96
Right of Use of Asset- Office Premises	0.00	590.50	0.00	0.00	0.00



100KVA Transformer with distribution cabin	0.00	0.00	4.70	0.00	0.00
Spares Recommended by BHEL	0.00	0.00	2.76	0.00	0.00
Gas Turbine Generator Rotor	0.00	1397.70	0.00	0.00	0.00
Decap of MBOAs: Not Part of Capital Cost	0.00	0.00	0.00	40.67	6.32
Loan ERV	197.84	0.00	0.00	0.00	0.00
Total	197.84	1988.23	24.27	2903.14	707.28

78. **Overhauling:** OTPCL has claimed exclusion of Overhauling of Rs 1996.18 lakh during 2019-20, Rs 3056.14 lakh during 2021-22 and Rs 2822.06 lakh during 2022-23 on an accrual basis. It is further noted that, for the year 2022-23 only, OTPCL has claimed Rs 2822.06 lakh on a cash basis. In justification, OTPCL has submitted that this Capitalisation is on account of a change in accounting practice and has therefore been kept under exclusions. Since OTPCL has itself categorised the overhauling expenses as 'exclusions', and not as part of the capital cost. The Commission accepts OTPCL's claim for treating the overhauling expenditure as an exclusion. Accordingly, the said expenditure has not been considered for tariff computation and is allowed under exclusion.

79. **Right of Use of Asset- Car:** OTPCL has claimed exclusion of Right of Use of Asset (Car) amounting to Rs. 21.30 lakh during 2019-20 on a cash basis and Rs 27.22 lakh during 2021-22 on an accrual basis. In justification, OTPCL has submitted that the activities do not pertain to the generating station and, therefore, have not been claimed as part of the capital cost for tariff purposes and have been kept under exclusion. In view of the above, the exclusion of the said expenditure is allowed.

80. **Right of Use of Asset- Office Premises:** OTPCL has claimed exclusion of Right of Use of Asset (Office Premises) of Rs 590.50 lakh during 2020-21 on a cash basis and Rs



705.95 lakh on an accrual basis, and Rs 4.99 lakh on a cash basis during 2023-24. In justification, OTPCL has submitted that the assets do not pertain to the plant and, therefore, have not been claimed for tariff purposes. Considering the submission of OTPCL, the Commission allows the exclusion of the said expenditure, and it has not been considered for tariff computation.

81. Exclusion of Expenditure Towards Gas Turbine Generator Rotor, 100 kVA Transformer with Distribution Cabin, and Spares Recommended by BHEL: OTPCL, in its the revised affidavit dated 13.11.2025, has included expenditure towards Gas Turbine Generator Rotor amounting to Rs. 1397.73 lakh on a cash basis during 2020-21, 100 kVA Transformer with Distribution Cabin amounting to Rs. 4.70 lakh on cash basis during 2021-22, and Spares Recommended by BHEL amounting to Rs. 2.76 lakh on cash basis during 2021-22 under exclusions. In justification, OTPCL has submitted that these activities do not pertain to the plant and have not been claimed as part of the capital cost; they have therefore been placed under exclusions. Since OTPCL itself has not sought capitalisation of the said assets for tariff purposes, the Commission allows the claim for exclusion of the said expenditure.

82. De-capitalisation of MBOA (not part of the capital cost): OTPCL has claimed exclusion of decapitalisation of MBOA amounting to Rs. 40.67 lakh on a cash basis in 2022-23, and Rs. 6.32 lakh in 2023-24. In justification, it is submitted that since capitalisation of MBOAs is not allowed after the cut-off date under the 2019 Tariff Regulations, their decapitalisation has been kept under exclusions. Considering the fact that the capitalisation of MBOAs is not allowed for the purpose of tariff after the cut-off date of the station, the exclusion of the said amounts is allowed and not considered for the purpose of computation of tariff.



83. **Loan ERV/FERV:** OTPCL has submitted that, as per Regulations 69 of the 2019 Tariff Regulations, it can directly claim Exchange Rate Variation (ERV) on foreign currency loans directly from the beneficiaries. Accordingly, the said amount has been kept under exclusions. As per Regulation 69(2) of the 2019 Tariff Regulations, recovery of the cost of hedging or foreign exchange rate variation shall be made directly by OTPCL from the beneficiaries without making any application to the Commission. In view of the above, the said amount has been allowed under exclusion.

Discharge of Liabilities

84. OTPCL has claimed the following discharge of liabilities for the period 2019–24, as under:

<i>(Rs. In lakh)</i>				
2019-20	2020-21	2021-22	2022-23	2023-24
6899.89	146.34	46.78	1447.44	0.00

85. OTPCL has not claimed any addition of liabilities during the tariff period 2019-24, and accordingly, the same has been considered as “Nil”. In view of this, the discharge of liabilities during the period 2019-24 is allowed in terms of Form-S, as under:

	<i>(Rs. In lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Opening undischarged liabilities	8540.45	1640.56	1494.22	1447.44	0.00
Addition of liabilities	0.00	0.00	0.00	0.00	0.00
Discharges of liabilities during the year	6899.89	146.34	46.78	1447.44	0.00
Closing undischarged liabilities	1640.56	1494.22	1447.44	0.00	0.00

Liquidated Damages (LD) - Deemed discharge of liabilities

86. OTPCL has submitted that the order dated 11.1.2022 in Petition No.109/GT/2020, had erroneously deducted the LD settlement amount of Rs. 10700.00 Lakh on a pro rata



basis, considering the total time overrun of 1097 days, whereas the LD settlement pertains entirely against the time overrun not condoned by the Commission. Further, it was submitted that the EPC Contractor (BHEL) had agreed to the recovery of Rs. 10700.00 Lakh towards LD only to compensate OTPCL for the loss on account of delays not condoned by the Commission, in case of delays attributed to the teething problems under the EPC contracts. OTPCL has submitted the following in order to substantiate its claim:

- a. The Commission, vide order dated 11.1.2022 in petition no.109/GT/2020, observed as follows:

“53. It is observed that out of total time-over run of 1097 days, the Commission in its order dated 30.3.2017 in Petition No. 129/GT/2015 had allowed the time over-run of 584 days and disallowed time over-run of 513 days and, accordingly, allowed IEDC and IDC for the portion of time over-run which had been condoned. It is observed that the IDC corresponding to time over-run was already allowed to the Petitioner. Therefore, the LD recovered corresponding to time over-run allowed, which works out to Rs.5696.26 lakh $[(584/1097) \times 10700.00]$ is to be deducted from the capital cost, in 2019-20. The balance recovered LD of Rs.5003.74 lakh corresponding to the portion of time over-run of 513 days which had not been condoned, may be retained by the Petitioner. It is observed that the Petitioner has not furnished details as regards liabilities claimed to have been set off against BHEL towards the LD amount received, which the Petitioner has claimed as ‘deemed discharge’ of liabilities. The Petitioner is directed to provide the statement of reconciliation in respect of the un-discharged liabilities payable to M/s BHEL, which is claimed to have been adjusted against the LD amount received and the reconciliation thereof, along with the audited accounts for 2019-20, at the time truing up of tariff. Accordingly, no discharge of liabilities has been allowed during the 2019-24 tariff period.”

- b. As per the Commission’s direction in the above order, OTPC has submitted a letter of final settlement from BHEL and audited accounts for 2019-20 in support of the above. As per the said letter and audited accounts, LD of Rs.10700.00 lakh has been recovered by OTPCL for the delay in Commissioning Completion on account of rectification of various teething problems attributable to the EPC Contractor (BHEL) as per the terms of the EPC contract.

- c. The Commission, in an order dated 31.08.2015 in Petition No. 199/GT/2013, had



directed as follows:

“28. From the issues identified as above, it is evident that the insulation failure of cladding sheets in the inlet duct of HRSG was due to poor workmanship on the part of EPC contractor / sub-contractor. In our view, the delay on this count is not beyond the control of the petitioner and the consequential impact on IDC, IEDC etc. are attributable to the petitioner. According to us, the beneficiaries of the petitioner cannot be burdened on account of the impact of the delay caused under this head. Accordingly, the total delay of 69 days is attributable to the petitioner and is therefore covered by the principle in [(situation (i))] of the judgment of the Tribunal dated 27.4.2011. Based on this, the entire cost for time overrun is required to be borne by the petitioner. However, the LD/ Insurance proceeds recovered in such cases may be retained by the petitioner.”

d.The Commission, in an order dated 30.3.2017 in Petition No. 129/GT/2015, had directed as follows:

“33. Out of the total time overrun of 653 days in the commissioning of Block-II / Unit-II, the time overrun of 69 days has not been condoned (as disallowed in case of Block-I/Unit-I by order dated 31.8.2015) since the petitioner has submitted that defects in HRSG in Unit-II was also observed in Unit-I and were rectified in both the units simultaneously. However, the LD / Insurance proceeds recovered for the period of time overrun disallowed shall be retained by the petitioner. As the reasons for time overrun are common upto the COD of Block-I/ Unit-I (4.1.2014), the time overrun of 584 days has been allowed. However, the LD recovered from the contractor and the insurance claim proceeds, if any, shall be considered for reduction in the capital cost of the generating station.”

e.The Commission had already disallowed the delay, vide order dated 30.3.2017 in Petition no.129/GT/2015, as below:

“38. The petitioner, in response to the directions of the Commission vide ROP of the hearing dated 16.2.2016, has furnished the major teething problems faced by the petitioner during the commissioning of the activities of Block-II/ Unit-II of the project (as stated in para 21 above). It is noticed that these problems are common in nature for any gas-based power project and the OEM contractor is under an obligation to rectify such problems within a shorter duration. In case the OEM has taken an unduly long time for rectifying such teething problems, the petitioner is entitled to be compensated by recovery of L.D amount as per terms of the contract. Further, as gas was available for Unit-I, the petitioner should have undertaken trial run at an early stage in order that the teething problems, if any, associated with the project would have surfaced earlier and rectification could have been done accordingly in time. Based on the above discussions, we are not inclined to condone the time overrun of 165 days for the period from 11.10.2014 (Date of availability of gas) to 24.3.2015 (COD of Unit-II/station) on account of major teething problems. In these circumstances, we hold that the delay of 165 days is not beyond the control of the petitioner and the same is attributable to the petitioner. Accordingly, in terms of the principles laid down by the Tribunal in the judgment dated 27.4.2011 [(situation (i))], the delay of 165 days cannot be said to be beyond the control of petitioner and hence



not condoned. Therefore, the increase in cost on account of the said delay has to be borne by the petitioner. However, the Liquidated Damages (LD) and Insurance proceeds if any, received by the generating company, on account of the said delay, could be retained by the generating company.”

87. Based on the above submissions, OTPCL has contended that since the entire amount of ₹10700.00 lakh towards LD settlement with BHEL is attributable to time overrun not condoned, it should be allowed to retain this entire amount without any further deduction on a pro rata basis for the time overrun allowed/disallowed. Accordingly, OTPCL has prayed for allowing this amount of Rs. 10700.00 lakh as deemed discharge of liability for 2019-20, as the same has already been adjusted from the gross block in 2019-20.

88. We have considered the submissions. The order dated 30.3.2017 in Petition No. 129/GT/2015, had disallowed 513 days of time overrun out of the total 1097 days, and consequently, the IEDC and IDC corresponding to the period of time overrun not condoned were also disallowed. The Commission further held that LD and insurance proceeds, if any, received by OTPCL on account of delay not condoned may be retained by it.

89. Based on the submissions of OTPCL in Petition No. 109/GT/2020 filed for the determination of the 2019-24 tariff period, the Commission had disallowed the amount of Rs. 5696.26 lakh (on a pro rata basis) during 2019-20. As regards the balance amount (Rs. 5003.74 lakh), since OTPCL had not furnished the details of liabilities claimed to have been set off against BHEL towards the LD amount received, no discharge of liability was allowed during 2019-24 and it was directed to provide the statement of reconciliation in respect of the un-discharged liabilities payable to M/s BHEL, which is claimed to have been adjusted against the LD amount received and the reconciliation thereof, along with the audited accounts for 2019-20, at the time truing up of tariff.

90. OTPCL, in compliance with the Commission's direction dated 11.1.2022 in Petition no. 109/GT/2020 has submitted a copy of BHEL's letter dated 27.5.2020 in the instant



Petition and also furnished the audited accounts for the period 2019-20.

91. Upon perusal of BHEL's letter dated 27.5.2020, it is observed that BHEL has accepted the full and final settlement on account of LD of Rs. 107 crores recovered by OTPCL, which is towards the delay in the commissioning of the project due to rectification of various teething problems attributable to BHEL, as per the terms of the EPC Contract. OTPCL has also furnished the detailed information about the time overrun attributable to the EPC Contractor. Further, as per the audited accounts for FY 2019-20 submitted by OTPCL, the LD amounting to Rs. 10700.00 lakh appears to have been adjusted from the gross block during 2019-20. Accordingly, taking into consideration the fact that the amount of Rs. 10700.00 lakh, recovered towards full and final LD settlement by OTPCL from BHEL, is attributable entirely to the BHEL against which time overrun was not condoned by the Commission and corresponding IDC and IEDC was already disallowed, we are of the view that the OTPCL be allowed to retain the amount of LD recovered in terms of judgment of the Tribunal dated 27.4.2011 in Appeal No. 72 of 2010.

92. Accordingly, OTPCL is allowed to retain the amount of LD of Rs. 10700.00 lakh, and the same has been allowed as deemed discharge of liability during the period 2019-20.

Capital cost allowed for the 2019-24 tariff period

93. Based on the above discussions, the capital cost allowed for the purpose of determination of tariff for the period 2019-24 is as under:

	(Rs. in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Capital Cost	333337.85	362979.38	362946.38	365190.19	367835.34
Add: Additional capital expenditure	11223.93	87.19	4336.06	2431.40	2047.15



Less: De-capitalisation during the year/period	144.65	266.53	2139.03	1233.68	1296.16
Add: Discharge of Liabilities	17599.89	146.34	46.78	1447.44	0.00
Add: Normative IDC on Add Cap pertaining to Palatana Township Civil Works	962.36	0.00	0.00	0.00	0.00
Closing Capital Cost	362979.38	362946.38	365190.19	367835.34	368586.33

Debt-Equity Ratio

94. 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:

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

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

(iii) any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt: equity ratio.

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

(2) The generating company or the transmission licensee 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.”

95. The gross normative loan and equity amounting to Rs. 247536.69 lakh and Rs. 85801.16 lakh, respectively, as on 31.3.2019, as considered in the order dated 18.12.2021 in Petition No. 108/GT/2020, have been considered as the opening normative loan and equity as on 1.4.2019. The de-capitalisation of assets has been deducted from the corresponding loan and equity, in accordance with the debt–equity ratio applicable in the year in which the assets were originally capitalised.

96. Further, for the purpose of additional capitalisation during the 2019–24 tariff period, the debt–equity ratio of 70:30 has been considered in terms of the above Regulations, as under:

Asset	As of 1.4.2019		Additional Capital Expenditure during 2019-24		De-capitalisation during 2019-24		(Rs. in lakh) As on 31.3.2024	
	Amount	%	Amount	%	Amount	%	Amount	%
Debt	247536.69	74.26%	28229.98	70.00%	3772.43	74.26%	271994.21	73.79%



Equity	85801.16	25.74%	12098.56	30.00%	1307.61	25.74%	96592.12	26.21%
Total	333337.85	100.00%	40328.54	100.00%	5080.06	100.00%	368586.33	100.00%

Return on Equity (RoE)

97. Regulation 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:

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

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:

$$\text{Rate of pre-tax return on equity} = \text{Base rate} / (1-t)$$

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-

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 = $15.50 / (1 - 0.2155) = 19.758\%$

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."

98. In terms of the above regulations, the base rate of RoE has been considered towards equity corresponding to expenditure incurred up to 31.03.2019 and additional capital expenditure incurred within the original scope beyond the cut-off date. In respect of the expenditure incurred beyond the original scope and after the cut-off date, the weighted average rate of interest on the loan of the generating station has been considered as the base rate for the computation of RoE. OTPCL, in its affidavit dated 14.7.2025, has submitted the assessment order and ITR for the period 2019-24. Based on the submissions, it is observed that OTPCL's claim for the MAT rate is in accordance with the provisions of the 2019 Tariff Regulations. Accordingly, the base rate of RoE has been grossed up with the applicable MAT rate of the respective financial year for the period 2019-24. Hence, in terms of the above Regulations, RoE has been worked out as under:

	(Rs. in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Return on Equity on Add Cap within Original Scope					
Opening Equity (A)	85801.16	94699.78	94701.24	94779.43	94944.52
Net Additions due to additional capitalisation (B)	8898.62	1.45	78.19	165.09	166.35
Closing Equity (C)=(A)+(B)	94699.78	94701.24	94779.43	94944.52	95110.86
Average Equity (D)=(A+C)/2	90250.47	94700.51	94740.33	94861.97	95027.69
Base Rate (%) (E)	15.500%	15.500%	15.500%	15.500%	15.500%
Effective Tax Rate (%) (F)	17.472%	17.472%	17.472%	17.472%	17.472%
Effective ROE Rate (%) (G) = E/(1-F)	18.782%	18.782%	18.782%	18.782%	18.782%
Return on Equity (H)= (D)*(G)	16950.84	17786.65	17794.13	17816.98	17848.10



	2019-20	2020-21	2021-22	2022-23	2023-24
Return on Equity on Add Cap beyond Original Scope					
Opening Equity (A1)	0.00	0.00	0.00	686.07	1367.09
Net Additions due to additional capitalisation (B1)	0.00	0.00	686.07	681.01	114.17
Closing Equity (C1) =(A1)+(B1)	0.00	0.00	686.07	1367.09	1481.25
Average Equity (D1) =(A1+C1)/2	0.00	0.00	343.04	1026.58	1424.17
Base Rate (%) (E1)	8.55%	7.67%	6.94%	7.50%	8.33%
Effective Tax Rate (%) (F1)	17.472%	17.472%	17.472%	17.472%	17.472%
Effective ROE Rate (%) (G1) = E1/(1-F1)	10.360%	9.294%	8.409%	9.088%	10.094%
Return on Equity (H1) = (D1) *(G1)	0.00	0.00	28.85	93.30	143.76
Total Return on Equity (H+H1)	16950.84	17786.65	17822.98	17910.27	17991.86

Interest on Loan

99. 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; 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.

“(5a) 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.”

(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.

100. OTPCL has submitted that in order to reduce the rate of interest on loans, it has undertaken refinancing of loans in terms of Regulation 61(1) of the 2019 Tariff Regulations. It has also submitted that, under the said regulations, the benefit of refinancing is to be shared between the generating company and the beneficiaries in the ratio of 50:50. OTPCL has also stated that the refinancing charges are to be passed on to the beneficiaries on an actual basis. Further, OTPCL has clarified that the share of benefit accruing to OTPCL on account of refinancing shall be recovered over and above the annual fixed charges through separate bills after approval. In view of these submissions, the benefit of refinancing the loans shall be shared between the generating company and beneficiaries in the ratio of 50:50 as per Regulation 61(1) of the 2019 Tariff Regulations. In the event of any dispute in this regard, the parties are at liberty to approach the Commission by filing an appropriate application in terms of Regulation 61(2) of the 2019 Tariff Regulations.

101. Regulation 32(5) of the 2019 Tariff Regulations provides for the consideration of the actual loan portfolio for the computation of the weighted average rate of interest (WAROI). Accordingly, WAROI has been worked out on the basis of the actual loan portfolio for the respective year. The repayment for the period 2019-24 has been considered equal to the depreciation allowed for the respective years. Further, interest on loan has been calculated on the normative average loan of the year by applying the weighted average rate of



interest.

102. Accordingly, Interest on loan has been worked out as under:

	(Rs. in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative loan - Opening (A)	247536.69	268279.59	268245.14	269724.68	271523.74
Cumulative repayment of the Normative loan up to the previous year (B)	75960.15	93422.39	111509.46	129030.38	146930.05
Net Normative loan - Opening (C=A-B)	171576.54	174857.20	156735.68	140694.30	124593.69
Add: Net Addition due to additional capital expenditure (D)	20742.91	-34.45	1479.54	1799.05	470.48
Repayment during the year (E)	17497.43	18162.31	18227.54	18364.11	18506.44
Less: Cumulative repayment adjustment on a/c of decapitalization (F)	35.19	75.24	706.63	464.44	548.82
Net Repayment (G)=(E)-(F)	17462.25	18087.07	17520.92	17899.67	17957.61
Net Loan - Closing (H=C+D-G)	174857.20	156735.68	140694.30	124593.69	107106.55
Average Normative loan (I)=(A+H)/2	173216.87	165796.44	148714.99	132644.00	115850.12
Weighted average rate of interest (J)	8.550%	7.670%	6.940%	7.500%	8.330%
Interest on Loan (K) = (I)*(J)	14810.04	12716.59	10320.82	9948.30	9650.31

Depreciation

103. 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 case of the tariff of all the units of a generating station or all elements of a transmission system including communication system for which a single tariff needs to be determined the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission system taking into consideration the depreciation of individual units:

Provided that effective date of commercial operation shall be worked out by considering the actual date of commercial operation and installed capacity of all the units of the generating station or capital cost of all elements of the transmission system for which single tariff needs to be determined.

(2) The value base for the purpose of depreciation shall be the capital cost of the asset



admitted by the Commission. In case of multiple units of a generating station or multiple elements of a transmission system weighted average life for the generating station of the transmission system shall be applied. Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year depreciation shall be charged on pro rata basis.

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

Provided that 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 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 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 sale of electricity under long-term power purchase agreement at regulated tariff:

Provided also that any depreciation not allowed 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 or the extended life.

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

(5) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-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 station shall be spread over the balance useful life of the assets.

(6) In case of the existing projects the balance depreciable value as on 1.4.2019 shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to 31.3.2019 from the gross depreciable value of the assets.

(7) The generating company or the transmission licensee as the case may be shall submit the details of proposed capital expenditure five years before the completion of useful life of the project along with justification and proposed life extension. The Commission based on prudence check of such submissions shall approve the depreciation on capital expenditure.

(8) In case of de-capitalization of assets in respect of generating station or unit thereof or transmission system or element thereof the cumulative depreciation shall be adjusted by taking into account the depreciation recovered in tariff by the decapitalized asset during its useful services.”

(9) 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.

(10) Depreciation of the emission control system of an existing 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 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.”

104. Accordingly, the net cumulative depreciation amounting to Rs. 75960.15 lakh as on 31.3.2019 has been considered for the purpose of tariff. The effective COD of the generating station is 14.8.2014. Further, the cost of IT equipment & software amounting to Rs. 1634.89 lakh as on 31.3.2019, as considered in the order dated 18.12.2021 in Petition No. 108/GT/2020, has been retained as on 1.4.2019. The additional capital expenditure allowed in respect of IT equipment & software, if any, has been considered while calculating the depreciable value for tariff purposes. Accordingly, the weighted average rate of depreciation has been applied to determine depreciation for the year 2019-24, in line with Regulation 33(5) of the 2019 Tariff Regulations.

105. Accordingly, depreciation has been computed as under:

	(Rs. in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Capital Cost (A)	333337.85	362979.38	362946.38	365190.19	367835.34
Net Additional capital expenditure during year (B)	29641.52	-33.00	2243.81	2645.16	750.99
Closing Capital Cost (C=A+B)	362979.38	362946.38	365190.19	367835.34	368586.33
Average Capital Cost (D)=(A+C)/2	348158.61	362962.88	364068.28	366512.76	368210.84



Average Value of freehold land (E)	965.53	969.21	969.21	969.21	969.21
Average Value of IT equipment and Software (F)	1634.89	1651.27	2121.58	2585.16	2882.05
Rate of Depreciation (H)	5.026%	5.004%	5.007%	5.010%	5.026%
Total Depreciable Value (I=(D-E-F) *90%)) + F	312637.26	325959.43	327001.32	329247.71	330805.67
Remaining Depreciable Value at the beginning of the year (J=I- Cum Dep at 'O' at the end of previous year)	236677.12	232537.03	215491.86	200217.33	183875.62
Balance useful Life (K)	20.37	19.37	18.37	17.37	16.37
Depreciation (L=D*H)	17497.43	18162.31	18227.54	18364.11	18506.44
Cumulative Depreciation at the end of the year (M=L+Cum. Dep at 'O' at the end of previous year)	93457.58	111584.71	129737.01	147394.49	165436.49
Less: Depreciation adjustment on account of de-capitalisation (N)	35.19	75.24	706.63	464.44	548.82
Net Cumulative Depreciation at the end of the year (O)	93422.39	111509.46	129030.38	146930.05	164887.66

Operation & Maintenance expenses

106. Regulation 35(1)(3) of the 2019 Tariff Regulations provides for the normative Operation and Maintenance (O&M) expense for combined cycle gas turbine power generating stations equipped with Advanced F Class Machines as follows:

<i>(in Rs. lakh/MW)</i>				
2019-20	2020-21	2021-22	2022-23	2023-24
26.34	27.27	28.23	29.22	30.24

107. In terms of the above, the OTPCL has claimed the Normative O&M expenses for the period 2019-24, as under:

<i>(in Rs. lakh/MW)</i>				
2019-20	2020-21	2021-22	2022-23	2023-24
19138.64	19814.38	20511.92	21231.25	21972.38

108. We note that the normative O&M expenses claimed by the Petitioner are in line with those allowed by the order dated 11.1.2022 in Petition No. 109/GT/2020 and are also in accordance with Regulation 35(1)(3) of the 2019 Tariff Regulations. Accordingly, the same are allowed.



Water charges

109. Regulation 35(1)(6) of the 2019 Tariff Regulations provides for water charges, security expenses, and capital spares for thermal generating stations, subject to a prudence check. Regulation 35(1)(6), along with the first proviso, is reproduced below:

“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:

110. The water charges allowed while determining the tariff of the generating station for the 2019-24 tariff period in the order dated 11.1.2022 in Petition No. 109/GT/2020 are as follows:

<i>(Rs. in lakh)</i>				
2019-20	2020-21	2021-22	2022-23	2023-24
5.42	5.69	5.97	6.27	6.59

111. The above water charges for the period 2019-24 were allowed based on the actual water consumption for the year 2018-19, as allowed in order dated 18.12.2021 in Petition No. 108/GT/2020, with 5% escalation each year, subject to the truing up as per actual water charges paid during 2019-24. OTPCL was directed to furnish the details of the actual water consumption, the rate and power charges separately at the time of truing-up. Accordingly, OTPCL has submitted the auditor certificate for water charges and has claimed water charges for the period 2019-24 as under:

<i>(Rs. in lakh)</i>					
	2019-20	2020-21	2021-22	2022-23	2023-24
Water Charges Claimed	3.96	-1.06	10.04	3.71	5.14

112. We observed variation in the water charges claimed by OTPCL along with a negative value in the year 2020-21, and vide RoP dated 24.6.2025, directed OTPCL to furnish reasons for the variation in the claim of water charges (i.e., the negative value claimed for



water charges in 2020-21 and the significantly higher claim in 2021-22). In compliance, OTPCL, vide affidavit dated 15.7.2025, has submitted that the water charge bills raised by the Tripura State Pollution Control Board (TSPCB) are generally issued in August or November. However, budget provisions are required to be created at the beginning of the financial year, i.e., in March. The water charges were claimed based on net provisions created, reversal of earlier provisions, creation of new provisions, and rectification entries.

113. OTPCL has further submitted that, since the water charge bills are raised by the TSPCB and the difference between the provisions made and the actual bills is minimal, it is more appropriate to consider the actual year-wise water charge bills issued by TSPCB. Further, OTPCL, vide its additional submission dated 24.12.2025, has submitted that the water charges collected by the Ministry of Environment, Forest and Climate Change, GOI for the year 2019–20, amounting to Rs. 23,717/-, were subsequently refunded to OTPCL, and the said refunded amount has been duly adjusted in the claim for the year 2019–20. Accordingly, OTPCL revised its claim for water charges on the basis of the actual bills, as under:

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Water Charges Claimed	4.03	4.68	4.31	4.78	4.82

114. The matter has been reviewed and considered. In terms of the first proviso to Regulation 35(1)(6) of the 2019 Tariff Regulations, water charges shall be allowed separately based on water consumption, depending upon the type of generating station, type of cooling water system, etc., subject to a prudence check. OTPCL has submitted the details of water cess/ water charge payable during 2019-24 issued by TSPCB as per the State support agreement dated 15.1.2007 between the Government of Tripura and



OTPCL. Since the water charges claimed are based on the actual consumption and actual bills raised by TSPCB, which have also been furnished, the same is allowed. Accordingly, the water charges allowed for the period 2019-2024 are as follows:

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Water Charges Allowed	4.03	4.68	4.31	4.78	4.82

Security Expenses

115. The second proviso to Regulation 35(1)(6) of the 2019 Tariff Regulations provides 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 further that the generating station shall submit the assessment of the security requirement and estimated expenses;

....”

116. OTPCL, in Petition No. 109/GT/2020, had claimed security expenses based on estimated expenditure for the 2019–24 tariff period, with a provision for retrospective adjustment at the time of truing up, based on actual expenses. The order dated 11.1.2022 in Petition No. 109/GT/2020, while determining the tariff for the period 2019-24, observed that OTPCL had applied an escalation rate of 3.54% per annum to security expenses, but no justification or detailed assessment supporting such an estimate had been furnished. In the absence of adequate justification, and considering that security expenses for generating stations during the 2019–24 period are to be allowed separately upon prudence check based on actual requirements, the Commission did not approve OTPCL’s claim at that stage. However, liberty was granted to claim the actual security expenses at the time of truing up the tariff for the 2019–24 period.

117. In terms of the liberty granted in the said order, OTPCL, in the present Petition, has



now claimed security expenses based on the actual expenditure incurred during the 2019–24 tariff period. In support of its claim, OTPCL has also furnished an auditor’s certificate certifying the actual security expenses incurred during the said period.

118. The security expenses claimed by OTPCL in the instant Petition for the period 2019–24 are as under:

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Security Expenses	760.40	741.83	857.10	987.31	1156.18

119. In justification of the claim for security expenses, OTPCL has submitted that its generating plant is situated in very close proximity to the Bangladesh border. As the plant is a vital installation in the north-eastern region of India and supplies power to all seven north-eastern states, Central Government agencies conduct periodic vulnerability and threat assessments. Further, OTPCL has submitted that it has entered into an MoU with the Tripura State Rifles (TSR), a State Government agency under the Ministry of Home Affairs, for the security of the Palatana Project.

120. We have considered the submissions. OTPCL has submitted that the generating station is located in close proximity to the Bangladesh border and is a vital installation catering to the power requirements of all seven North Eastern States. Given its strategic importance, periodic vulnerability and threat assessments are carried out by the Central Government security agencies. Further, the OTPCL has entered into an MoU with the Tripura State Rifles (TSR) to provide security for the Palatana Project. The Government of Tripura has also declared the Palatana Project as a Protected Area in August 2012, underscoring its strategic importance to the region’s power infrastructure.

121. OTPCL has furnished the audited details of security expenses on an actual basis, reflecting the net amounts debited or credited in the books of accounts for the period 2019–



24, along with a copy of the MoU executed with the Tripura State Rifles (TSR). As the expenditure has been incurred in accordance with the terms of the said MoU, the Commission has considered the claim based on the audited records. Accordingly, the security expenses allowed for the period 2019–24 are as under:

					(Rs. in lakh)
	2019-20	2020-21	2021-22	2022-23	2023-24
Security Expenses	760.40	741.83	857.10	987.31	1156.18

Capital Spares

122. The last proviso to Regulation 35(1)(6), of the 2019 Tariff Regulations provides 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 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 part of additional capitalization or consumption of stores and spares and renovation and modernization.”

123. OTPCL, in Petition No. 109/GT/2020, had not claimed capital spares for the period 2019-2024. However, the OTPCL had stated that the capital spares will be claimed based on the actual consumption of spares during the time of truing-up, in accordance with the proviso to Regulation 35(1)(6) of the 2019 Tariff Regulations. Consequently, the OTPCL has included these claims in the current petition.

124. The capital spares claimed by OTPCL in the instant Petition for the period 2019-24 are as under:

					(Rs. in lakhs)
	2019-20	2020-21	2021-22	2022-23	2023-24
Capital Spares	295.48	1740.07	571.12	317.80	1588.63



125. We have examined the list of spares furnished by OTPCL in Form-17, along with the de-capitalisation details as submitted in Form-9Bi. The capital spares consumption claimed by OTPCL comprises two categories, which are as under:

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Capital spares (forming part of allowed capital cost)	0.00	0.00	0.00	0.00	0.00
Capital spares (not forming part of allowed capital cost)	295.48	1,740.07	571.12	317.80	1,588.63
Total capital spares consumed claimed	295.48	1,740.07	571.12	317.80	1,588.63

126. OTPCL, in Form 9B(i), has indicated the total decapitalization of assets that are not included in the capital cost. It is observed that the capital spares claimed in Form 17 correspond to the same assets that have been decapitalised and are not part of the capital cost. 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 OTPCL in Form-17 of 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 consumed claimed	295.48	1740.07	571.12	317.8	1588.63
Total capital spares consumed (not part of capital cost) (a)	295.48	1740.07	571.12	317.8	1588.63



Less: Value of capital spares below Rs.1.00 lakh disallowed on an individual basis (b)	51.45	18.1	46.23	30.17	56.15
Net total value of capital spares considered (a)-(b)	244.03	1721.97	524.89	287.63	1532.48

127. Also, considering the fact that the original value of capital spares taken out of service is neither available nor has been furnished by OTPCL for the period 2019-24, we are of the view that the salvage value of the capital spares being replaced is required to be deducted from the net total value of capital spares considered during the period 2019-24. In view of the above, the salvage value of 10% has been deducted from the net total value of capital spares considered for the period 2019-24. Accordingly, net capital spares allowed are summarised as under:

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Net total value of capital spares considered	244.03	1721.97	524.89	287.63	1532.48
Less: Salvage value @ 10%	24.40	172.20	52.49	28.76	153.25
Net capital spares allowed	219.63	1549.77	472.40	258.87	1379.23

128. The summary of the O&M expenses allowed as per provisions under Regulation 35 of the 2019 Tariff Regulations is as follows:

		<i>(Rs. in lakh)</i>				
Particulars		2019-20	2020-21	2021-22	2022-23	2023-24
Installed Capacity (MW) (A)		726.6	726.6	726.6	726.6	726.6
O&M expenses under Regulation 35(1) in Rs. lakh/MW (B)	Claimed	26.34	27.27	28.23	29.22	30.24
	Allowed	26.34	27.27	28.23	29.22	30.24
Total O&M expenses (C) = (A)*(B)	Claimed	19138.64	19814.4	20511.9	21231.3	21972.4
	Allowed	19138.64	19814.4	20511.9	21231.3	21972.4
Water Charges (D)	Claimed	4.03	4.68	4.31	4.78	4.82



	Allowed	4.03	4.68	4.31	4.78	4.82
Security Expenses (E)	Claimed	760.4	741.83	857.1	987.31	1156.18
	Allowed	760.4	741.83	857.1	987.31	1156.18
Capital Spares (F)	Claimed	295.48	1740.07	571.12	317.8	1588.63
	Allowed	219.63	1549.77	472.4	258.87	1379.23
Total O&M expenses (including Water charges and Capital Spares consumed) (G) = (C+D+E+F)	Claimed	20198.55	22300.96	21944.45	22541.14	24722.01
	Allowed	20122.70	22110.66	21845.73	22482.21	24512.61

Operational Norms

129. The operational norms claimed by OTPCL in Form-3 of the Petition, for the purpose of tariff is as follows:

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Normative Annual Plant Availability Factor (NAPAF) (%)	85	85	85	85	85
Heat Rate (kCal/kwh)	1757	1764	1801	1798	1831.09
Auxiliary Power Consumption (%)	3.87	3.86	4.20	3.85	4.18

Normative Annual Plant Availability Factor

130. Regulation 49(A)(a) 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%;

xxx.”

131. We observe that the NAPAF of 85% considered by OTPCL is in accordance with Regulation 49(A)(a) of the 2019 Tariff Regulations and is also consistent with the Commission’s order dated 11.1.2022 in Petition No. 109/GT/2020. Accordingly, the same is allowed for the purpose of tariff determination.

Gross Station Heat Rate (kCal/kWh)



132. Regulation 49(C)(c) of the 2019 Tariff Regulations provides as follows:

“(c) For Gas-based/ Liquid-based Thermal Generating Unit(s)/ Block(s) having COD on or after 1.4.2009:

For Natural Gas = 1.050 X Design Heat Rate of the unit/block (kCal/kWh)

For RLNG =1.071 X Design Heat Rate of the unit/block for Liquid Fuel (kCal/kWh)

Where the Design Heat Rate of a unit shall mean the guaranteed heat rate for a unit at 100% MCR and at site ambient conditions; and the Design Heat Rate of a block shall mean the guaranteed heat rate for a block at 100% MCR, site ambient conditions, zero percent make up, design cooling water temperature/back pressure”

133. OTPCL has submitted that, based on the guaranteed values furnished by the EPC contractor, the weighted-average Gross Heat Rate on a GCV basis works out to 1736.84 kCal/kWh. By applying the normative margin of 5% as stipulated under the regulations, the Gross Station Heat Rate has been computed at 1823.682 kCal/kWh. OTPCL has further pointed out that the said heat rate was approved by the Commission, in its earlier interim tariff order dated 17.6.2015 and the final tariff order for Unit-I of the project dated 31.8.2015. Accordingly, OTPCL has prayed that the same may be considered and allowed for the 2019–24 tariff period.

134. We have considered the submissions. It is observed that in Petition No. 109/GT/2020, OTPCL had raised a similar prayer, which was examined in detail. Vide order dated 18.12.2021 in Petition No. 108/GT/2020, the Commission had approved GSHR of 1754.24 kCal/kWh for this generating station, based on the guaranteed turbine cycle heat rate of 1505.7 kCal/kWh at 100% MCR and the guaranteed boiler efficiency of 90%, in terms of the provisions of Regulation 49(C)(c) of the 2019 Tariff Regulations. The same approach has consistently been followed in earlier orders, including the order dated 30.3.2017 in Petition No. 129/GT/2015.

135. Further, the order dated 11.1.2022 in Petition No. 109/GT/2020 observed that the



recommendations of the CEA, furnished during the formulation of the 2019 Tariff Regulations, pertain to compensation for SHR degradation on account of part loading due to reduced offtake by beneficiaries and are not specific to this generating station or to the determination of SHR for tariff purposes. Accordingly, the Commission has considered the Station Heat Rate (SHR) of 1754.24 kCal/kWh as already approved in its earlier orders dated 30.3.2017 in Petition No. 129/GT/2015 and 18.12.2021 in Petition No. 108/GT/2020, for the purpose of tariff determination for the 2019–24 period.

136. As per the data submitted in Form-2 to the Petition, OTPCL has furnished a Guaranteed Design Gross Turbine Cycle Heat Rate of 1505.7 kCal/kWh at 100% MCR and a Design/Guaranteed Boiler Efficiency of 90%. Accordingly, the SHR works out to 1756.65 kCal/kWh $[(1505.7 \times 1.05) \div 0.9]$. However, in Petition No. 109/GT/2020, the Commission had allowed an SHR of 1754.24 kCal/kWh.

137. Accordingly, in view of the above, we correct the earlier computation and approve the Gross Station Heat Rate of 1756.65 kCal/kWh for the purpose of truing-up the tariff for the 2019–24 tariff period.

Auxiliary Power Consumption

138. Regulation 49(E)(c) of the 2019 Tariff Regulations provides the normative Auxiliary Energy Consumption for gas turbine/combined cycle generating stations as under:

“49 (E) Auxiliary Energy Consumption

(c) For Gas Turbine /Combined Cycle generating stations:

(i) Combined Cycle: 2.75%

(ii) Open Cycle: 1.00%

Provided that where the gas based generating station is using electric motor driven Gas Booster Compressor, the Auxiliary Energy Consumption in case of Combine Cycle mode shall be 3.30% (including impact of air-cooled condensers for Steam Turbine Generators):



Provided further that an additional Auxiliary Energy Consumption of 0.35% shall be allowed for Combine Cycle Generating Stations having direct cooling air cooled condensers with mechanical draft fans:"

139. OTPCL has submitted that during the 2019–24 tariff period, the actual Auxiliary Energy Consumption (AEC) of the generating station has ranged from 3.9% to 4.2%. Accordingly, OTPCL has prayed for relaxation of the normative AEC of 3.30% specified under Regulation 49(E)(c)(i) of the 2019 Tariff Regulations, and for consideration of the actual AEC. It is further submitted that such relaxation is essential to mitigate recurring financial loss arising from higher auxiliary consumption, which is primarily attributable to the operation of electric motor-driven Gas Booster Compressors (GBCs) and the impact of part-loading of the station.

140. We have considered the submissions. The order dated 30.3.2017 in Petition No. 129/GT/2015, while determining the tariff of the generating station for the period 2014-19, granted a one-time relaxation by allowing an APC of 3.50% under Regulation 54 of the 2014 Tariff Regulations. The same cannot be extended again under the 2019 Regulations. Further, the order dated 11.1.2022 in Petition No. 109/GT/2020 had already examined this issue and decided that once the provisions of the 2019 Tariff Regulations prescribe an APC of 3.30% for combined cycle stations with electric motor-driven GBCs, reliance on CEA recommendations or consideration of actual AEC beyond 3.30% cannot be accepted.

141. In view of the above, the prayer for relaxation of APC during truing-up is not admissible. Accordingly, APC of 3.30% in terms of Regulation 49(E)(c)(i) of the 2019 Tariff Regulations has been considered for the purpose of tariff for the period 2019–24.

INTEREST ON WORKING CAPITAL (IWC)

142. Regulation 34(1)(b), Regulation 34(3) and Regulation 34(4) of the 2019 Tariff



Regulations provides as follows:

“34. Interest on Working Capital: (1) The working capital shall cover:

(a) xxx

(b) For Open-cycle Gas Turbine/Combined Cycle thermal generating stations:

(i) Fuel cost for 30 days corresponding to the normative annual plant availability factor, duly taking into account mode of operation of the generating station on gas fuel and liquid fuel;

(ii) Liquid fuel stock for 15 days corresponding to the normative annual plant availability factor, and in case of use of more than one liquid fuel, cost of main liquid fuel duly taking into account mode of operation of the generating stations of gas fuel and liquid fuel;

(iii) Maintenance spares @ 30% of operation and maintenance expenses including water charges and security expenses;

(iv) Receivables equivalent to 45 days of capacity charge and energy charge for sale of electricity calculated on normative plant availability factor, duly taking into account mode of operation of the generating station on gas fuel and liquid fuel; and

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

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.”

Fuel Cost and Energy Charges in Working Capital

143. Regulation 34(2) of the 2019 Tariff Regulations provides that the computation of the cost of fuel as part of IWC 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.

144. 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 x CVSF) x LPPF / CVPF + SFC x LPSFi + LC x LPL} x 100 / (100 – AUX)

(b) For gas and liquid fuel based stations:

ECR = SHR x LPPF x 100 / {(CVPF) x (100 – AUX)}

Where,

AUX = Normative auxiliary energy consumption in percentage.

CVPF = (a) Weighted Average Gross calorific value of coal as received, in kCal per kg for coal based stations 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.”

145. OTPCL has claimed Energy Charge Rate (ECR) of 143.317 paise/kWh for 2019-20, 169.304 paise/kWh for 2020-21, 186.611 paise/kWh for 2021-22, 192.956 paise/kWh for 2022-23, and 205.507 paise/kWh for 2023-24. The fuel component in working capital considered by OTPCL is as follows:

(Rs. in lakh)



	2019-20	2020-21	2021-22	2022-23	2023-24
Cost of Gas for 30 Days	6126.38	7237.99	7949.67	8250.00	8756.50
Energy Expenses for 45 days	9189.56	10856.99	11924.52	12375.01	13134.72

146. OTPCL has claimed the cost of fuel component in working capital and Energy Charge

Rate (ECR) based on the following:

- (a) Operational norms as per the 2019 Tariff Regulations;
- (b) Price and as-received GCV of coal procured for each third quarter of the preceding financial year during the period 2019-2024.
- (c) Price and GCV of secondary fuel oil for each third quarter of the preceding financial year during the period 2019-2024.

147. It is observed that OTPCL, in Form-15 of the Petition, for all the years during the period 2019-24, has considered the opening stock of gas as 'nil'. Accordingly, the weighted average landed cost and weighted average GCV of gas for working out the fuel component in working capital for the above-said three months for all the years during 2019-24, as claimed by OTPCL, have been considered as under:

For 2019-20		Oct-18	Nov-18	Dec-18
Price of Gas	Claimed	7235.96	7231.08	7238.68
	Allowed	7235.96	7231.08	7238.68
GCV of Gas (as received)	Claimed	9231.73	9225.99	9223.88
	Allowed	9231.73	9225.99	9223.88

For 2020-21		Oct-19	Nov-19	Dec-19
Price of Gas	Claimed	8506.39	8504.44	8498.38
	Allowed	8506.39	8504.44	8498.38
GCV of Gas (as received)	Claimed	9216.90	9214.90	9214.00
	Allowed	9216.90	9214.90	9214.00

For 2021-22		Oct-20	Nov-20	Dec-20
Price of Gas	Claimed	9155.76	9157.86	9131.65
	Allowed	9155.76	9157.86	9131.65
GCV of Gas (as received)	Claimed	9219.24	9211.70	9218.16
	Allowed	9219.24	9211.70	9218.16



For 2022-23		Oct-21	Nov-21	Dec-21
Price of Gas	Claimed	9540.67	9520.17	9508.95
	Allowed	9540.67	9520.17	9508.95
GCV of Gas (as received)	Claimed	9225.09	9225.98	9225.95
	Allowed	9225.09	9225.98	9225.95

For 2023-24		Oct-22	Nov-22	Dec-22
Price of Gas	Claimed	9930.50	9929.91	9929.22
	Allowed	9930.50	9929.91	9929.22
GCV of Gas (as received)	Claimed	9234.16	9233.62	9232.94
	Allowed	9234.16	9233.62	9232.94

Energy Charge Rate (ECR)

148. As stated above, OTPCL has claimed ECR based on the average price, GCV of gas procured and burnt for the above-specified months. ECR, as worked out, based on the operational norms specified under the 2019 Regulations and on “as received” GCV of gas, for the three months as stated above, considered for allowing energy charge in working capital is as follows:

	(in lakhs)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Capacity	726.60	726.60	726.60	726.60	726.60
Gross Station Heat Rate	1756.65	1756.65	1756.65	1756.65	1756.65
Aux. Energy Consumption	3.30%	3.30%	3.30%	3.30%	3.30%
Weighted average GCV of fuel	9227.16	9215.35	9216.47	9225.76	9233.55
Weighted average price of fuel	7235.25	8503.24	9148.57	9519.63	9929.86
ECR	1.424	1.676	1.803	1.874	1.954

149. It is observed that the variation between the ECR claimed by OTPCL and that allowed by the Commission is solely due to the difference in gross station heat rate and auxiliary power consumption claimed by OTPCL and allowed by the Commission as per the 2019 Tariff Regulations, as discussed in the preceding paragraphs.



150. Accordingly, the fuel cost for 30 days and energy charges for 45 days have been calculated based on the Gross Calorific Value (GCV) and the price of the gas as per the details submitted by OTPCL for Q3 of each year in the period 2019-24. Accordingly, the fuel cost and energy charges allowed are as under:

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Fuel cost for 30 days	6125.16	7207.83	7753.91	8060.27	8400.52
Energy charges for 45 days	9184.90	10810.32	11629.48	12087.43	12603.44

151. OTPCL shall compute and recover energy charges from the beneficiaries on a month-to-month basis, based on the formulae given under Regulation 43 of the 2019 Tariff Regulations.

Working Capital for O&M Expenses

152. The O&M expenses for 1 month, including water charges and security expenses, as claimed by OTPCL vide affidavit dated 24.12.2025 for the purpose of working capital, are as follows:

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
	1658.59	1713.41	1781.11	1851.95	1927.78

153. Regulation 34(1)(b)(v) of the 2019 Tariff Regulations provides for O&M expenses for one month, including water charges and security expenses. Accordingly, the O&M expenses for working capital are allowed as under:

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
	1658.59	1713.41	1781.11	1851.95	1927.78

Working Capital for Maintenance Spares:

154. Regulation 34(1)(b)(iii) of the 2019 Tariff Regulations provides for maintenance



spares @30% of the O&M expenses, including water charges and security expenses.

Accordingly, maintenance spares have been considered and allowed as under:

	(Rs. in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Claimed	5970.92	6168.27	6412.00	6667.00	6940.02
Allowed	5970.92	6168.27	6412.00	6667.00	6940.02

Working Capital for Receivables

155. Regulation 34(1)(b)(iv) of the 2019 Tariff Regulations provides for receivables equivalent to 45 days of capacity charge and energy charge. Accordingly, after considering the mode of operation of the generating station on secondary fuel, the receivable component of working capital is allowed as follows:

	(Rs. in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Variable Charges - for 45 days	9184.90	10810.32	11629.48	12087.43	12603.44
Fixed Charges - for 45 days	9003.71	9212.84	8882.29	8957.52	9265.29
Total	18188.61	20023.16	20511.77	21044.95	21868.73

156. OTPCL shall compute and recover energy charges from the beneficiaries on a month-to-month basis, in accordance with the formulae set out in Regulation 43 of the 2019 Tariff Regulations.

Rate of Interest on Working Capital

157. As regards the rate of interest on working capital, Regulation 34 (3) of the 2019 Tariff Regulations provides as under:

“34(3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 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”



158. In terms of the definition of 'Bank Rate' in the 2019 Tariff Regulations, it is the one-year marginal cost of lending rate (MCLR) of the State Bank of India plus 350 basis points. Accordingly, the interest on working capital is worked out and allowed as under:

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Fuel Cost for 30 Days	6125.16	7207.83	7753.91	8060.28	8400.53
Maintenance Spares (30% of O&M Exp.)	5970.92	6168.27	6412.00	6667.00	6940.02
Receivables- 45 Days variable and 45 Days Fixed	18188.61	20023.16	20511.77	21044.95	21868.73
O & M expenses (1 month)	1658.59	1713.41	1781.11	1851.95	1927.78
Total working capital	31943.29	35112.67	36458.79	37624.18	39137.05
Rate of Working Capital (%)	12.05%	11.25%	10.50%	10.50%	12.00%
Interest on Working Capital	3849.17	3950.18	3828.17	3950.54	4696.45

Annual Fixed Charges approved for the period 2019-24

159. Based on the above, the annual fixed charges approved for the generating station for the period 2019-24 are summarised below:

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	17497.43	18162.31	18227.54	18364.11	18506.44
Interest on Loan	14810.04	12716.59	10320.82	9948.30	9650.31
Return on Equity	16950.84	17786.65	17822.98	17910.27	17991.86
Interest on Working Capital	3849.17	3950.18	3828.17	3950.54	4696.45
O&M Expenses	20122.70	22110.66	21845.73	22482.21	24512.61
Total	73230.19	74726.39	72045.24	72655.44	75357.67

Note: All figures under each head have been rounded. The figure in the 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.

Application filing fee and Publication Expenses

160. OTPCL has sought reimbursement of the fees it paid for filing the tariff Petition for the 2019-24 tariff period and for publication expenses. OTPCL shall be entitled to



reimbursement of the filing fees and publication expenses in connection with the present Petition, directly from the beneficiaries, on a pro rata basis, in accordance with Regulation 70 of the 2019 Tariff Regulations.

161. Similarly, RLDC Fees & Charges paid by OTPCL under the Central Electricity Regulatory Commission (Fees and Charges of Regional Load Dispatch Centre and other related matters) Regulations, 2019, shall be recovered from the beneficiaries. In addition, OTPCL is entitled to recover statutory taxes, levies, duties, cesses, etc., levied by statutory authorities in accordance with the 2019 Tariff Regulations.

162. The difference between the annual fixed charges already recovered in terms of the order dated 11.1.2022 in Petition No. 109/GT/2020 and the annual fixed charges determined by this order shall be adjusted in terms of Regulation 13(4) of the 2019 Tariff Regulations. The annual fixed charges allowed vide order dated 11.1.2022 and allowed in the instant Petition for the period 2019-24, are as under:

	(Rs. in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Allowed in order dated 11.1.2022	69067.36	68416.28	67827.32	67269.22	66718.63
Allowed in this Petition	73230.19	74726.39	72045.24	72655.44	75357.67

163. Petition No. 628/GT/2025 is disposed of in terms of the above.

Sd/-
(Ravindra Singh Dhillon)
Member

sd/-
(Harish Dudani)
Member

sd/-
(Ramesh Babu V.)
Member

sd/-
(Jishnu Barua)
Chairperson