CENTRAL ELECTRICITY REGULATORY COMMISSION

New Delhi

Petition No. 487/TT/2025

Coram:

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

Date of Order: 14.10.2026

In the matter of:

Approval under Section 62 read with Section 79(1)(d) of the Electricity Act, 2003 and under Regulation 15(1)(a) and Regulation 23 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 2023 for truing up of transmission tariff for the 2019-24 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 and the determination of the transmission tariff for the 2024-29 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024 for "315 MVA ICT-III at Nagarjunasagar Sub-station with associated bay equipment" in Southern Region.

And
In the matter of:

Power Grid Corporation of India Limited,
Registered Office: B-9, Qutab Institutional Area,
Katwaria Sarai, New Delhi-110016.
Corporate Centre: "Saudamini", Plot No. 2,
Sector-29, Gurgaon–122001 (Haryana) **…Petitioner**

Versus

1. **Tamil Nadu Generation and Distribution Corporation Limited,**
   NPKRR Maaligai, 800, Anna Salai,
   Chennai – 600 002.

2. **Kerala State Electricity Board Limited,**
   Vaidyuthi Bhavanam,
   Pattom, Thiruvananthapuram – 695 004.

3. **Electricity Department,**
   Government of Goa,
   Vidyuti Bhawan, Panaji - 403001, Goa.

4. **Electricity Department,**
   Government of Pondicherry,
   137, Netaji Subash Chandra Bose Salai
   Pondicherry – 605001.

5. **Eastern Power Distribution Company of Andhra Pradesh Limited,**
APEPDCL, P&T Colony,
Seethmmadhara, VISHAKHAPATNAM, Andhra Pradesh.

6. **Southern Power Distribution Company of Andhra Pradesh Limited,**
#19-13-65/A, Srinivasapuram, Tiruchanoor Road
Tirupati – 517503.

7. **Andhra Pradesh Central Power Distribution Company Limited,**
Corporate Office, Beside Polytechnic College, ITI Road
Vijayawada - 520 008, Krishna District, Andhra Pradesh.

8. **Southern Power Distribution Company of Telangana Limited,**
6-1-50, Corporate Office, Mint Compound,
HYDERABAD – 500 063, Telangana.

9. **Northern Power Distribution Company of Telangana Limited,**
H.No 2-5-3 1/2, Vidyut Bhawan, Corporate Office,
Nakkal Gutta, Hanamkonda, WARANGAL – 506 001, Telangana.

10. **Bangalore Electricity Supply Company Limited,**
Corporate Office, K.R.Circle
Bangalore – 560 001, Karanataka.

11. **Gulbarga Electricity Supply Company Limited,**
Corporate Office, Station Main Road, Opp. Parivar Hotel,
Gulbarga (Kalburgi) – 585102, KARNATAKA.

12. **Hubli Electricity Supply Company Limited,**
Navanagar, PB Road, HUBLI - 580025, Karnataka.

13. **Mangalore Electricity Supply Company Limited,**
Corporate Office,1st Floor, MESCOM Bhavan,
Kavoor Cross Road, Bejai, Mangalore – 575 004.

14. **Chamundeswari Electricity Supply Corporation Limited,**
Corporate Office, #29, Vijayanagara 2nd Stage,
Hinkal, Mysuru-570017, Karnataka. **…Respondents**

Parties Present : Shri Zafrul Hasan, PGCIL
Shri Ranjeet Pandey, PGCIL
Shri Ashish Alankar, PGCIL
Shri Angaru Naresh Kumar, PGCIL
Shri Arjun Malhotra, PGCIL
Ms. Kirti, PGCIL

ORDER

The instant Petition has been filed by Power Grid Corporation of India Limited

(PGCIL) for truing-up of the transmission tariff for the 2019-24 period, in terms of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as "the 2019 Tariff Regulations"), and for the determination of transmission tariff for the 2024-29 period, in terms of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024 (hereinafter referred to as "the 2024 Tariff Regulations"), for the following asset which has been implemented under "315 MVA ICT-III at Nagarjunasagar Sub-station with associated bay equipment" in the Southern Region:

Asset No	Asset Name	COD
Asset-I	315 MVA ICT-III at Nagarjunasagar Sub-station with associated bay equipment	1.8.1999

2. The Petitioner has made the following prayers in the instant Petition:

"a) Approve the trued-up Transmission Tariff for 2019-24 block and transmission tariff for 2024-29 block for the assets covered under this petition, as per para 14 and 15 above.

b) Admit the capital cost claimed including additional capitalization projected during 2024-29 tariff block.

c) Allow the petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission as provided in Tariff Regulations 2019 and Tariff Regulations, 2024 as per para 14 and 15 above for respective block.

Further it is submitted that deferred tax liability before 01.04.2009 shall be recoverable from the beneficiaries or long-term customers / DIC as the case may be, as and when the same is materialized as per regulation 67 of 2019 and regulation 89 of 2024 tariff regulation. The petitioner may be allowed to recover the deferred tax liability materialized directly without making any application before the commission as provided in the regulations.

d) Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on publishing of notices in newspapers in terms of Regulation 94 (1) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024, and other expenditure (if any) in relation to the filing of petition.

e) Allow the petitioner to bill and recover RLDC fees & charges and Licensee fee separately from the respondents in terms of Regulation 94 (3) and (4) Central

Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024.

f) Allow the petitioner to bill and adjust impact on Interest on Loan due to change in Interest rate on account of floating rate of interest applicable during 2024-29 period, if any, from the respondents.

g) Allow the petitioner to file a separate petition before Hon'ble Commission for claiming the overall security expenses and consequential IOWC on that security expenses as mentioned at para 21 above.

h) Allow the petitioner to file a separate petition before Hon'ble Commission for claiming the overall insurance expenses and consequential IOWC on that insurance expenses as mentioned at para 21 above.

i) Allow the petitioner to file a separate petition before Hon'ble Commission for claiming the overall capital spares at the end of tariff block as per actual as mentioned at Para 21 above.

j) Allow the petitioner to claim expenses of CTUIL borne by POWERGRID through a separate petition as mentioned at para 22 above.

k) *Allow the Petitioner to bill and recover GST on Transmission Charges separately from the respondents, if GST on transmission is levied at any rate in future. Further, any taxes including GST and duties including cess etc. imposed by any statutory/Govt./municipal authorities shall be allowed to be recovered from the beneficiaries.*

and pass such other relief as Hon'ble Commission deems fit and appropriate under the circumstances of the case and in the interest of justice."

Background

3. The brief facts of the case are as follows:

a) The Ministry of Power (MoP), vide letter dated 19.3.1998, conveyed approval to the Petitioner company for establishing, operating and maintaining the transmission asset. The transmission asset was put into commercial operation with effect from 1.8.1999 by taking the transformer on loan from APTRANSCO, which was subsequently returned to APTRANSCO. Further, MoP, vide letter dated 13.1.2000, accorded revised approval for the transmission asset at a cost of ₹881.00 lakh, including an IDC of ₹49.00 lakh.

b) The scope of work covered in the Petition is as follows:

Sub-station: 315 MVA, 400/220 kV transformer at Nagarjunasagar Sub-station.

c) The tariff of the transmission asset for the period from 1.4.2001 to 31.3.2004 was allowed by the Commission vide order dated 25.6.2003 in Petition No. 41/2002, which was revised on account of FERV adjustment vide order dated 8.2.2008 in Petition No. 41/2002. The Commission allowed the tariff of the transmission asset for the period from 1.4.2004 to 31.3.2009 vide order dated 4.1.2006 in Petition No. 133/2004, which it revised on account of FERV adjustment vide order dated 16.4.2008 in Petition No. 133/2004. The Commission revised the tariff of the transmission asset on account of Additional Capital Expenditure (ACE) incurred during 2006-07, vide order dated 1.7.2009 in Petition No. 47/2009, and further revised it vide order dated 23.10.2009 in Petition No. 47/2009. The Commission allowed the transmission tariff for the transmission asset for the period from 1.4.2009 to 31.3.2014 vide order dated 8.2.2011 in Petition No. 62/2010. The tariff of the transmission asset for the 2009-14 period was trued-up and tariff for 2014-19 period was determined by the Commission vide order dated 9.11.2015 in Petition No. 145/TT/2014. The true-up of the tariff for the 2014-19 Tariff Period and the tariff of the asset for the period 2019-24 was determined vide order dated 27.06.2021 in Petition No. 351/TT/2019.

d) The instant Tariff Petition is filed by the Petitioner for truing-up of tariff for the 2019-24 Tariff Period and determination of tariff for 2024-29 Tariff Period.

4. The Respondents include Distribution Licensees and Power Departments of respective states which are engaged in distribution of electricity in the Southern Region. The Respondents are also 'Designated Inter State Transmission Customers' (hereinafter referred to as 'DICS') in terms of the 2020 Sharing Regulations from the Southern Region, which receive transmission services from the Petitioner.

5. The Petitioner has served a copy of the Petition on the Respondents, and notice

regarding the filing of this Petition has also been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003 (the Act). However, the general public has not submitted any comments or suggestions in response to the aforesaid notices published in the newspapers. None of the Respondents has filed any reply to the Petition.

6. The hearings in the matter were held on 22.7.2025, 16.9.2025 and 20.11.2025. The order was reserved in the matter vide Record of Proceedings (RoP) for hearing dated 20.11.2025.

7. This order is being issued considering the submissions made by the Petitioner vide Affidavits dated 27.11.2024, 16.7.2025, 11.8.2025, and 25.9.2025.

8. Having heard the Petitioner's representatives and perused the material available on record, we proceed to dispose of the Petition in the succeeding paragraphs.

TRUING-UP OF ANNUAL FIXED CHARGES FOR THE 2019-24 TARIFF PERIOD

9. The transmission charges determined by the Commission for the transmission asset vide order dated 27.6.2021 in Petition No.351/TT/2019 were as under:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	19.85	19.85	19.85	19.85	19.85
Interest on Loan	1.14	0.35	0.00	0.00	0.00
Return on Equity	66.83	66.83	66.83	66.83	66.83
O&M Expenses	144.92	150.15	155.41	161.03	166.38
Interest on Working Capital	7.64	7.33	7.54	7.77	7.98
Total	**240.37**	**244.51**	**249.63**	**255.48**	**261.03**

10. It is noted that the Petitioner has added new equipment to the existing asset during the 2024-29 tariff period. Accordingly, the Petitioner has referred the transmission asset in two parts, i.e. Asset-1 (Part-A) for existing equipment during the 2019-24 and 2024-29 tariff periods and Asset-1 (Part-B) for new equipment during the 2024-29 tariff period. Accordingly, the Petitioner has submitted two sets of tariff forms and calculations for the 2024-29 tariff period.

11. The Petitioner has claimed the following trued-up transmission charges in respect of Asset-1 for the 2019-24 tariff period:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	19.86	19.85	19.86	19.85	19.86
Interest on Loan	1.02	0.19	0.00	0.00	0.00
Return on Equity	66.83	66.83	66.83	66.83	66.83
O&M Expenses	144.92	150.15	155.41	161.03	166.38
Interest on Working Capital	7.63	7.33	7.03	7.25	8.52
Total claimed	**240.26**	**244.35**	**249.13**	**254.96**	**261.59**

12. The details of the Interest on Working Capital (IWC) claimed by the Petitioner in respect of Asset-1 are as follows:

(₹ in lakh)

Sl. No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	O&M Expenses	12.08	12.51	12.95	13.42	13.87
B	Maintenance Spares	21.74	22.52	23.31	24.15	24.96
C	Receivables	29.54	30.13	30.72	31.43	32.16
D	Total Working Capital (A+B+C)	63.36	65.16	66.98	69.00	70.99
E	Rate of Interest for (in %)	12.05	11.25	10.50	10.50	12.00
F	**Interest on Working Capital (D*E)**	**7.63**	**7.33**	**7.03**	**7.25**	**8.52**

Capital Cost for the 2019-24 Tariff Period

13. The Commission, vide order dated 27.6.2021 in Petition No.351/TT/2019, has allowed the capital cost of ₹ 753.94 lakh for the 2019-24 tariff period.

14. The Petitioner in the instant true-up Petition has claimed the same capital cost of ₹ 753.94 lakh as was approved vide order dated 27.6.2021 in Petition No. 351/TT/2019. Accordingly, capital cost of ₹753.94 lakh is being considered as the opening capital cost as on 1.4.2019 in respect of the transmission asset for truing up of the transmission tariff for the 2019-24 tariff period.

Additional Capital Expenditure (ACE)

15. The Petitioner in the instant true-up Petition has not claimed any ACE for the 2019-24 tariff period.

16. Opening capital cost as on 1.4.2019 for the purpose of truing up the tariff for the period 2019-24 is as under:

(₹ in lakh)

Asset No.	Opening capital cost as on 1.4.2019	ACE allowed for 2019-24	Capital Cost as on 31.03.2024
Asset-1	753.94	0.00	753.94

Debt-Equity Ratio

17. The details of the debt-equity ratio considered and allowed under Regulation 18 of the 2019 Tariff Regulations for the computation of the tariff for the transmission asset for the 2019-24 tariff period are as follows:

Funding	Capital Cost as on 1.4.2019		ACE in 2019-24 (₹ in lakh)	Capital Cost as on 31.3.2024	
	(₹ in lakh)	(in %)	(₹ in lakh)	(₹ in lakh)	(in %)
Debt	398.13	52.81	0.00	398.13	52.81
Equity	355.81	47.19	0.00	355.81	47.19
Total	**753.94**	**100.00**	**0.00**	**753.94**	**100.00**

Depreciation

18. The depreciation has been worked out considering the admitted capital expenditure as on 1.4.2019 and thereafter, up to 31.3.2024. The Asset had already completed 12 years of its useful life before 1.4.2019. Therefore, in line with Regulation 33 of the 2019 Tariff Regulations, the remaining depreciable value of the Asset has been spread over the asset's remaining useful life. Accordingly, the depreciation allowed in respect of the transmission asset is as follows:

(₹ in lakh)

Sl. No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Gross Block	753.94	753.94	753.94	753.94	753.94
B	Addition during 2019-24 due to ACE	0.00	0.00	0.00	0.00	0.00
C	Closing Gross Block (A+B)	753.94	753.94	753.94	753.94	753.94
D	Average Gross Block (A+C)/2	753.94	753.94	753.94	753.94	753.94
E	Average Gross Block (90% depreciable assets)	753.94	753.94	753.94	753.94	753.94

F	Average Gross Block (100% depreciable assets)	0.00	0.00	0.00	0.00	0.00
G	Depreciable value (excluding IT equipment and software) (E*90%)	678.55	678.55	678.55	678.55	678.55
H	Depreciable value of IT equipment and software (F*100%)	0.00	0.00	0.00	0.00	0.00
I	Total Depreciable Value (G+H)	678.55	678.55	678.55	678.55	678.55
J	Weighted average rate of Depreciation (WAROD) (in %)	Spread-over depreciation				
K	Lapsed useful life at the beginning of the year (Year)	19	20	21	22	23
L	Balance useful life at the beginning of the year	6	5	4	3	2
M	**Depreciation during the year**	**19.86**	**19.86**	**19.86**	**19.86**	**19.86**
N	Cumulative Depreciation at the end of the year	579.25	599.11	618.97	638.83	658.69
O	Remaining Aggregate Depreciable Value at the end of the year	99.30	79.44	59.58	39.72	19.86

19. The details of depreciation allowed vide order dated 27.6.2021 in Petition No. 351/TT/2019 for Asset-1, depreciation claimed in the instant Petition, and trued-up depreciation approved in respect of the transmission asset in the instant order are as follows:

(₹ in lakh)

Depreciation	2019-20	2020-21	2021-22	2022-23	2023-24
Allowed vide order dated 27.6.2021 in Petition No.351/TT/2019	19.85	19.85	19.85	19.85	19.85
Claimed by the Petitioner in the instant Petition	19.86	19.85	19.86	19.85	19.86
Approved after truing-up in this order	19.86	19.86	19.86	19.86	19.86

Interest on Loan (IoL)

20. The Petitioner has claimed the Weighted Average Rate of Interest (WAROI) on loans based on its actual loan portfolio and prevailing interest rate.

21. We have considered the Petitioner's submission. IoL has been calculated based

on the actual interest rate submitted by the Petitioner in accordance with Regulation 32 of the 2019 Tariff Regulations. The trued-up IoL approved in respect of Asset-1 are as follows:

(₹ in lakh)

Sl. No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Gross Normative Loan	398.13	398.13	398.13	398.13	398.13
B	Cumulative Repayments up to the Previous Year	362.26	382.12	398.13	398.13	398.13
C	Net Loan-Opening (A-B)	35.87	16.01	0.00	0.00	0.00
D	Addition due to ACE	0.00	0.00	0.00	0.00	0.00
E	Repayment during the year	19.86	16.01	0.00	0.00	0.00
F	Net Loan-Closing (C+D-E)	16.01	0.00	0.00	0.00	0.00
G	Average Loan (C+F)/2	25.94	8.01	0.00	0.00	0.00
H	Weighted Average Rate of Interest on Loan (in %)	3.95	2.35	1.82	3.30	3.30
I	**Interest on Loan allowed(G*H)**	**1.02**	**0.19**	**0.00**	**0.00**	**0.00**

22. The details of IoL allowed vide order dated 27.6.2021 in Petition 351/TT/2019 for Asset-1, IoL claimed in the instant Petition, and trued-up IoL approved in respect of the transmission asset in the instant order are as follows:

(₹ in lakh)

IoL/Year	2019-20	2020-21	2021-22	2022-23	2023-24
Allowed vide order dated 27.6.2021 in Petition No. 351/TT/2019	1.14	0.35	0.00	0.00	0.00
Claimed by the Petitioner in the instant Petition	1.02	0.19	0.00	0.00	0.00
Approved after truing-up in this order	1.02	0.19	0.00	0.00	0.00

Return on Equity (RoE)

23. The Petitioner has submitted that its Income Tax assessment has been completed and the assessment orders have been issued by the Income Tax Department for FY 2019-20 and FY 2020-21; and that its income has been assessed under MAT [115JB of the Income Tax Act, 1961 (IT Act, 1961)]. The Petitioner has further submitted that it has filed the Income Tax Returns (ITRs) for FY 2021-22, FY 2022-23 and FY 2023-24 (submitted in Petition No. 401/TT/2024).

24. The Petitioner has further submitted that it has paid/liable to pay the income tax at MAT rates (17.472, i.e., 15% Income Tax + 12% Surcharge on Income Tax + 4% Health and Education Cess on Income Tax and Surcharge) and has claimed the following effective tax rates for the 2019-24 tariff period:

Year	Claimed effective tax rate (in %)	Grossed-up rate for RoE (in %) [(Base Rate)/(1-t)]
2019-20	17.472	18.782
2020-21	17.472	18.782
2021-22	17.472	18.782
2022-23	17.472	18.782
2023-24	17.472	18.782

25. We have considered the Petitioner's submissions and have also gone through the record. We note that the entities covered under the MAT regime pay income tax at the MAT rates notified for the respective financial year under the IT Act, 1961, which is levied on the entity's book profit computed under Section 115JB of the IT Act, 1961. Section 115 JB (2) defines book profit as net profit in the Statement of Profit and Loss prepared in accordance with Schedule III of the Companies Act, 2013, subject to some additions and deductions as mentioned in the IT Act, 1961. Since the Petitioner has been paying the MAT rates of the respective financial year, the notified MAT rates for the respective financial year shall be considered as an effective tax rate for the purpose of grossing up of the RoE for truing up of the 2019-24 tariff period in terms of the provisions of the 2019 Tariff Regulations. Interest imposed on any additional income tax demand as per the Assessment Order of the Income Tax Authorities shall be considered on the actual payment. However, the penalty (for default on the part of the Assessee), if any, imposed shall not be taken into account for the purpose of grossing up the rate of RoE. Any under-recovery or over-recovery of the grossed-up rates on the RoE after truing up shall be recovered or refunded to the beneficiaries or the long-term customers, as the case may be, on a year-to-year basis. Therefore, the following effective tax rates based on the notified MAT rates are considered for the purpose of

grossing up the rate of RoE:

Year	Notified MAT rates (in %) (inclusive of surcharge & cess)	Effective tax 't'(in %)	Base rate of RoE (in %)	Grossed-up rate for RoE [(Base Rate)/(1-t)] (in%)
2019-20	17.472	17.472	15.50	18.782
2020-21	17.472	17.472	15.50	18.782
2021-22	17.472	17.472	15.50	18.782
2022-23	17.472	17.472	15.50	18.782
2023-24	17.472	17.472	15.50	18.782

26. Accordingly, the trued-up RoE allowed in respect of the transmission asset for the 2019-24 tariff period is as follows:

(₹ in lakh)

Sl. No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Equity	355.81	355.81	355.81	355.81	355.81
B	Addition due to ACE	0.00	0.00	0.00	0.00	0.00
C	Closing Equity (A+B)	355.81	355.81	355.81	355.81	355.81
D	Average Equity (A+C)/2	355.81	355.81	355.81	355.81	355.81
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50	15.50
F	Tax Rate applicable (in %)	17.472	17.472	17.472	17.472	17.472
G	Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782	18.782
H	**Return on Equity allowed(D*G)**	**66.83**	**66.83**	**66.83**	**66.83**	**66.83**

27. The details of ROE allowed vide order dated 27.6.2021 in Petition No.351/TT/2019 for Asset- 1, ROE claimed in the instant Petition, and trued-up ROE approved in respect of the transmission asset in the instant order are as follows:

(₹ in lakh)

ROE/Year	2019-20	2020-21	2021-22	2022-23	2023-24
Allowed vide order dated 27.6.2021 in Petition No. 351/TT/2019	66.83	66.83	66.83	66.83	66.83
Claimed by the Petitioner in the instant Petition	66.83	66.83	66.83	66.83	66.83
Approved after truing-up in this order	66.83	66.83	66.83	66.83	66.83

Operation & Maintenance Expenses (O&M Expenses)

28. The Petitioner has claimed the following O&M Expenses for the 2019-24 tariff period in the instant truing up Petition:

(₹ in lakh)

O&M Expenses claimed	2019-20	2020-21	2021-22	2022-23	2023-24
	144.92	150.15	155.41	161.03	166.38

29. We have considered the Petitioner's submissions. It is observed that the O&M Expenses claimed by the Petitioner in the instant true-up Petition are as per Regulation 35(3) of the 2019 Tariff Regulations. The O&M Expenses allowed for the transmission asset, as per norms specified in the 2019 Tariff Regulations, are as follows:

(₹ in lakh)

O&M Expenses	2019-20	2020-21	2021-22	2022-23	2023-24
Substation bays-					
• Conventional 400 kV bays at Nagarjunasagar: 315 MVA ICT III along with associated bay equipment					
Norms as per Regulation (₹ lakh per bay)	32.15	33.28	34.45	35.66	36.91
No. of bays	1	1	1	1	1
O&M allowed (i)	32.15	33.28	34.45	35.66	36.91
400 kV Substation ICT					
• Nagarjunasagar: 315 MVA ICT III					
Norms as per Regulation (₹ lakh per MVA)	0.358	0.371	0.384	0.398	0.411
(1x315 MVA ICT) (Total capacity MVA)	315	315	315	315	315
O&M allowed (ii)	112.77	116.87	120.96	125.37	129.47
Total O&M allowed (i)+(ii)+	144.92	150.15	155.41	161.03	166.38

30. Accordingly, the details of O&M Expenses allowed vide order dated 27.6.2021 in Petition 351/TT/2019 for Asset-1, O&M claimed in the instant Petition, and trued-up O&M approved in respect of the transmission asset in the instant order are as follows:

(₹ in lakh)

O&M expenses/Year	2019-20	2020-21	2021-22	2022-23	2023-24
Allowed vide order dated 27.6.2021 in Petition No. 351/TT/2019	144.92	150.15	155.41	161.03	166.38
Claimed by the Petitioner in the instant Petition.	144.92	150.15	155.41	161.03	166.38
Approved after truing-up in this order	144.92	150.15	155.41	161.03	166.38

Interest on Working Capital (IWC)

31. The components of the working capital and interest allowed thereon for the transmission asset are as follows:

(₹ in lakh)

Sl. No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Working Capital for O&M Expenses (O&M Expenses for one month)	12.08	12.51	12.95	13.42	13.86
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	21.74	22.52	23.31	24.15	24.96
C	Working Capital for Receivables (Equivalent to 45 days of annual fixed cost /annual transmission charges)	29.54	30.13	30.71	31.43	32.16
D	**Total Working Capital (A+B+C)**	**63.36**	**65.16**	**66.98**	**69.01**	**70.98**
E	Rate of Interest for working capital (in %)	12.05	11.25	10.50	10.50	12.00
F	**Interest on Working Capital allowed (D*E)**	**7.63**	**7.33**	**7.03**	**7.25**	**8.52**

32. Accordingly, the details of IWC allowed vide order dated 27.6.2021 in Petition No. 351/TT/2019 for Asset-1, IWC claimed in the instant Petition, and trued-up IWC approved in respect of the transmission assets in the instant order are as follows:

(₹ in lakh)

IWC/Year	2019-20	2020-21	2021-22	2022-23	2023-24
Allowed vide order dated 27.6.2021 in Petition No. 351/TT/2019	7.64	7.33	7.54	7.77	7.98
Claimed by the Petitioner in the instant Petition.	7.63	7.33	7.03	7.25	8.52
Approved after truing-up in this order	7.63	7.33	7.03	7.25	8.52

Trued-up Annual Fixed Charges for the 2019-24 Tariff Period

33. Accordingly, the trued-up Annual Fixed Charges (AFC) allowed for the 2019-24 tariff period in respect of the transmission asset are as follows:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	19.86	19.86	19.86	19.86	19.86
Interest on Loan	1.02	0.19	0.00	0.00	0.00
Return on Equity	66.83	66.83	66.83	66.83	66.83
O&M Expenses	144.92	150.15	155.41	161.03	166.38
Interest on Working Capital	7.63	7.33	7.03	7.25	8.52
Total	**240.26**	**244.35**	**249.13**	**254.96**	**261.59**

34. The details of annual transmission charges allowed vide order dated 27.6.2021 in Petition No. 351/TT/2019 for Asset-1, transmission charges claimed in the instant Petition, and trued-up annual transmission charges approved in the instant order in respect of the transmission asset are as follows:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Allowed vide order dated 27.6.2021 in Petition No. 351/TT/2019	240.37	244.51	249.63	255.48	261.03
Claimed by the Petitioner in the instant Petition	240.26	244.35	249.13	254.96	261.59
Approved after truing-up in this order	240.26	244.35	249.13	254.96	261.59

DETERMINATION OF THE ANNUAL FIXED CHARGES FOR THE 2024-29 TARIFF PERIOD

35. The Petitioner has proposed new equipment/P&M to the existing asset during the 2024-29 tariff period. Accordingly, the Petitioner has referred the transmission asset in two parts; Asset-1 (Part-A) for existing equipment and Asset-1 (Part-B) for the proposed new equipment during the 2024-29 tariff period.

36. The Petitioner has claimed the following transmission charges in respect of the Asset-1 (Part-A) and Asset-1 (Part-B) for the 2024-29 tariff period:

Asset-1 (Part-A)

(₹ in lakh)

Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
Depreciation	19.85	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	66.83	42.48	42.42	42.11	39.04
O&M Expenses	112.06	118.02	124.06	130.51	137.66
Interest on Working Capital	6.12	5.72	5.97	6.24	6.51
Total	**204.86**	**166.22**	**172.45**	**178.86**	**183.21**

Asset-1 (Part-B)

(₹ in lakh)

Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
Depreciation	0.00	0.00	3.16	13.05	27.39
Interest on Loan	0.00	0.00	1.87	6.83	12.43
Return on Equity	0.00	0.00	1.98	7.55	14.73
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	0.00	0.00	0.10	0.41	0.81
Total	**0.00**	**0.00**	**7.11**	**27.84**	**55.36**

37. The details of IWC claimed by the Petitioner for the 2024-29 tariff period for Asset-1 (Part-A) and Asset-1 (Part-B) are as under:

Asset-1 (Part-A)

(₹ in lakh)

Sl. No.	IWC claimed	2024-25	2025-26	2026-27	2027-28	2028-29
A	O&M Expenses	9.34	9.84	10.34	10.88	11.47
B	Maintenance Spares	16.81	17.70	18.61	19.58	20.65
C	Receivables	25.26	20.49	21.26	21.99	22.59
D	Total Working Capital (A+B+C)	51.41	48.03	50.21	52.45	54.71
E	Rate of Interest for (in %)	11.90	11.90	11.90	11.90	11.90
F	**Interest on Working Capital claimed (D*E)**	**6.12**	**5.72**	**5.97**	**6.24**	**6.51**

Asset-1 (Part-B)

(₹ in lakh)

Sl. No.	IWC claimed	2026-27	2027-28	2028-29
A	O&M Expenses	0.00	0.00	0.00
B	Maintenance Spares	0.00	0.00	0.00
C	Receivables	0.88	3.42	6.83
D	Total Working Capital (A+B+C)	0.88	3.42	6.83
E	Rate of Interest (in %)	11.90	11.90	11.90
F	**Interest on Working Capital claimed (D*E)**	**0.10**	**0.41**	**0.81**

Capital Cost

38. Regulation 19 of the 2024 Tariff Regulations provides as follows:

> *"**19. Capital Cost**: (1) The Capital cost of the generating station or the transmission system, as the case may be, as determined by the Commission after prudence checks in accordance with these regulations shall form the basis for the determination of tariff for existing and new projects.*
>
> *(2) The Capital Cost of a new project shall include the following:*
> *(a) The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;*

(b) Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed and, in the event actual equity is in excess of 30% on a pari-passu basis, by treating the excess equity over and above 30% of the funds deployed as a normative loan, or (ii) being equal to the actual amount of the loan in the event of actual equity being less than 30% of the funds deployed;
(c) Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period;
(d) Interest during construction and incidental expenditure during construction as computed in accordance with these regulations;
(e) Capitalised initial spares subject to the ceiling rates in accordance with these regulations;
(f) Expenditure on account of additional capitalization and de-capitalisation determined in accordance with these regulations;
(g) Adjustment of revenue due to the sale of infirm power in excess of fuel cost prior to the date of commercial operation as specified under Regulation 6 of these regulations;
(h) Adjustment of revenue earned by the transmission licensee by using the assets before the date of commercial operation;
(i) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;
(j) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal up to the receiving end of the generating station but does not include the transportation cost and any other appurtenant cost paid to the railway;
(k) Capital expenditure on account of biomass handling equipment and facilities, for co-firing;
(l) Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;
(m) Expenditure on account of the fulfilment of any conditions for obtaining environment clearance for the project;
(n) Expenditure on account of change in law and force majeure events; and
(o) ……..
(p) ……..

(3) The Capital cost of an existing project shall include the following:
(a) Capital cost admitted by the Commission prior to 1.4.2024 duly trued up by excluding liability, if any, as on 1.4.2024;
(b) Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;
(c) Capital expenditure on account of renovation and modernisation as admitted by this Commission in accordance with these regulations;
(d) to (h) ……..
(i) Expenditure on account of change in law and force majeure events;

(4) ……..

(5) ……..

(6) The following shall be excluded from the capital cost of the existing and new projects:
(a) The assets forming part of the project but not in use, as declared in the tariff petition;
(b) De-capitalised Assets after the date of commercial operation on account of obsolescence;
(c) De-capitalised Assets on account of upgradation or shifting from one project to another project:

Provided that in case such an asset is recommended for further utilisation by the Regional Power Committee in consultation with CTU, such asset shall be de-capitalised from the original project only after its redeployment;

Provided further that unless shifting of an asset from one project to another is of a permanent nature, there shall be no de-capitalization of the concerned assets.
(d) ……..
(e) Proportionate cost of land of the existing generation or transmission project, as the case may be, which is being used for generating power from a generating station based on renewable energy as may be permitted by the Commission; and
(f) Any grant received from the Central or State Government or any statutory body or authority for the execution of the project that does not carry any liability of repayment."

39. The trued-up capital cost of ₹ 753.94 lakh has been allowed in the instant order for Asset-1 as on 31.3.2024. Accordingly, the opening capital cost of ₹753.94 lakh as on 1.4.2024 has been allowed for determination of transmission tariff for the 2024-29 tariff period in accordance with Regulation 19 of the 2024 Tariff Regulations.

Additional Capital Expenditure (ACE)

40. Regulation 25(2) of the 2024 Tariff Regulations reads as under:

"25(2) In case of replacement of assets deployed under the original scope of the existing project after the 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) Assets whose useful life 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 a change in law or Force Majeure conditions;
c) The replacement of such asset or equipment is necessary on account of obsolescence of technology;
d) and the replacement of such asset or equipment has otherwise been allowed by the Commission.
e) The additional expenditure, excluding recurring expenses covered in O&M expenses, involved in relation to the renewal of lease of lease hold land on case to case basis."

41. The Petitioner has projected the following Additional Capital Expenditure (ACE) for the 2024-29 tariff period:

(₹ in lakh)

Additional Capitalization (ACE) (2024-29)					
ACE / De-cap	**2024-25**	**2025-26**	**2026-27**	**2027-28**	**2028-29**
ACE	--	--	70.32	127.32	127.62
De-cap	--	--	(2.00)	(9.08)	(100.17)
Net ACE claimed	**--**	**--**	**68.32**	**118.24**	**27.45**

42. The details of the equipment/ parts proposed to be replaced, and justification on various counts submitted by the Petitioner for claiming projected expenditure, are discussed in the following paragraphs.

43. The Petitioner has submitted that the add-cap projected during 2024-29 is on account of the replacement of component/ equipment in the system, which have deteriorated due to ageing and may affect the stability and reliability of the Grid in case of sudden failure and is covered under Regulation 25(2) of the Tariff Regulations, 2024. The details of the same are as follows:

Replacement of 400 kV & 220 kV "BHEL/CGL" make Hydraullic/ Pneumatically operated circuit breakers at Nagarjunasagar (02 Nos.):

The Circuit breakers supplied under this project are of Hydraulic/pneumatic operated type. These CBs will complete 25 years of useful life in 2024-25. This technology has become obsolete, and BHEL has stopped producing this type of circuit breakers. Subsequently, BHEL has stopped providing service support**.** The spares and service support from CGL are very poor for this type of CB, and the cost of spares is exorbitantly high and takes much longer time. Circuit breakers are experiencing frequent maintenance problems such as Pneumatic drive/ Hydraulic assembly failures, air/oil leakages from various parts of the mechanisms, SF6 gas leakages, etc., leading to frequent breakdowns, prolonged outages and unreliable operation. In these CBs where controlled switching devices are installed, the issue has also been observed in CSD tuning and performance due to large scattering/variation in CBs in operating time, resulting in adverse effects on associated shunt reactors. In view of the above, the Petitioner has proposed replacing 01 Nos. BHEL make Hydraulic CBs and 01 No. CGL make Pneumatic CB at Nagarjunasagar.

i. **Replacement of old & obsolete 400 kV and 220 kV "ABB" make Porcelain CTs at Nagarjunasagar (03 Nos):** The proposed CT's are going to complete 25 years of useful life in FY 2024-25. Oil leakages from different points, such as secondary terminals, primary terminals, domes, oil sight glass, etc., have been noticed in many of these CTs. The oil leakages are beyond repair. As there is leakage in the current transformer, in the long run it may lead to low oil level, moisture ingress and subsequent failure. The current transformers are hermetically sealed equipment, and therefore major repairs on site are not recommended. Further, as there is ingress of moisture, complete replacement of the active insulation part is required at the manufacturer works, which will not be techno-economically viable. The manufacturer has also stopped manufacturing and repair works of these types of CTs. Failure of these CTs shall result in consequential damages to surrounding equipment and may cause unstable grid operations. In view of the above, the Petitioner has proposed to replace 03 nos. (400kV:02 & 220kV:01) CTs at NagarjunSagar Sub-station.

ii. ***Replacement of old & Obsolete 400 kV and 220 kV (Make: Hivelm/ S&S) Isolators at Nagarjunasagar (04 set):*** The proposed Isolators are going to complete 25 years of useful life by 2024-25. Due to ageing, there is a problem of frequent misalignment, jamming, improper closing/opening, and over-travelling. Due to ageing, wear and tear, and heavy current passing during fault and through-fault conditions, the Male-Female contact (Copper contacts) is deteriorating, leading to hotspots. Isolators are outdoor equipment and face different types of weather (Rainy, foggy, summer). After long service, many MOM boxes have rusted, leading to problems with the MOM boxes, and motorised operation of isolators is not possible. This leads to improper indication, control, interlock, and remote operation of isolators, which is not safe. Due to ageing, the TBs inside the

MOM boxes have become brittle, and terminals often come into contact with the boxes, creating a DC earth fault that is detrimental to the control and protection system. Due to poor isolator health, especially the interlock and drive mechanisms, the isolators sometimes fail to remain stable during storms and high winds and open in the ON-LOAD condition, which is dangerous to the system and operating personnel. The OEM is not providing Spares and service support. The OEM is not providing spares due to the old design; we are facing issues in maintaining the system. Existing spares have already been exhausted. In view of the above, the 04 sets of isolators at Nagarjunasagar may be replaced.

iii. **Replacement of old & obsolete 400kV Hitachi make Gapped/Porcelain type Surge arrestors at Nagarjunasagar (03Nos):** The 400 KV rated surge arrestors installed at Nagarjunasagar SS are of Hitachi make, gapped Porcelain type and are going to complete 25 years of service life by 2024-25.

Due to ageing, the LAs' performance has started deteriorating, resulting in a high number of failures and frequent preventive replacements based on THRC. LAs play a vital role in protecting the equipment against lightning/switching impulses, and their health is vital to protecting other costly equipment from high surge voltage. Non-functioning of LAs may cause consequential damage to Transformer/ Reactor and may result in unstable grid operation. In view of the above, the **03** nos. of LAs at Nagarjunasagar may be replaced.

iv. **Replacement of Old bushings in Transformer at Nagarjunasagar (07 Nos):** POWERGRID is operating and maintaining more than 3800 transformers and reactors. Many of these transformers/reactors have been in service for more than 25 years. One important failure mode in Transformers/Reactors is bushing failure. The following are the major inputs gathered from various CIGRE Technical Brochures (Extracts attached as Encl-2) as well as industry practices:

a) As per CIGRE TB642, globally Bushing failure is the third most common reason for transformer failure after winding and OLTC

failure. In India, bushing failures are even more prominent due to manufacturing issues observed in certain-make bushings.

b) CIGRE TB 887 (Life extension of oil-filled transformers and shunt reactors) recommends strategic replacement of bushings, which can have a positive impact on transformer reliability, thus potentially increasing the life of the transformer. It also provides a rule of thumb that bushings need to be replaced once during the life of a transformer.

c) CIGRE TB 755 (Transformer Bushing Reliability) mentions that an incipient bushing fault can quickly (1ms) or slowly (10 years) develop into failure, and no diagnostic method exists, on-line or off-line, which can prevent such fast-developing incipient failures.

d) From 2015 onwards, Resin Impregnated Paper/ Synthetic (RIP/RIS) bushings are being specified in POWERGRID instead of Oil Impregnated Paper (OIP) bushings. CEA has also mandated the use of RIP/ RIS bushings (HV & IV) for 400 kV transformers & Reactors and OIP/RIP/RIS bushings for LV. This is due to lower consequential damage in the event of failure of RIP/RIS bushings. Domestic manufacturing of RIP/RIS bushings has recently been started under the Make in India initiative.

44. In view of the above, the Petitioner has submitted that the older bushings which are in service for more than 25 years of life and are already approaching the end of useful life are a potential hazard to the transformer/ reactor. Besides, these bushings are all OIP type bushings, which can cause failure of transformer/ reactor. In the past, bushing failures at Kanpur, Gwalior, Kolar, etc. have also led to transformer failures. Therefore, it was advisable to take pre-emptive action to replace such bushings. In view of the above, it was proposed to replace 07 nos. of bushings at Nagarjunsagar, which were going to complete 25 years of useful life by 2024-25.

45. The Petitioner was directed to submit “Equipment-wise estimated cost against which the Additional Capital Expenditure (ACE) has been proposed for the 2024-29

tariff period". In response, the Petitioner has submitted the equipment-wise estimated cost for the proposed Additional Capital Expenditure (ACE) during the 2024–29 tariff period, and is as follows:

(₹ in lakh)

Sl.NO	Equipment to be replaced	Location	Quantity	Unit rate	Total Estimnated cost	2024-2025 Add cap	2025-2026 Add cap	2026-2027 Add cap	2027-2028 Add cap	2028-2029 Add cap
1	400kV Circuit Breaker	NAGARJUNA SAGAR	1	82.05	82.04	0	0	16.41	24.61	41.02
2	220kV Circuit Breaker	NAGARJUNA SAGAR	1	20.10	20.10	0	0		20.10	
3	400kV Current Transformers (CTs)	NAGARJUNA SAGAR	2	9.83	19.66	0	0	3.93	5.90	9.83
4	220kV Current Transformers (CTs)	NAGARJUNA SAGAR	1	6.02	6.02	0	0	0.00	6.02	0.00
5	400kV Isolators	NAGARJUNA SAGAR	2	18.20	36.39	0	0	7.28	10.92	18.20
6	220kV Isolators	NAGARJUNA SAGAR	2	8.19	16.38	0	0		16.38	
7	400KV Surge Arrestors	NAGARJUNA SAGAR	3	2.35	7.04	0	0	1.41	2.11	3.52
8	ICT/Reactor Bushings	NAGARJUNA SAGAR	7	19.66	137.63	0	0	41.29	41.29	55.05
Total					**325.26**	**0.00**	**0.00**	**70.32**	**127.33**	**127.62**

46. We have considered the justification as submitted by the Petitioner for claiming ACE on a projection basis. The ACE has been claimed under Regulation 25(2), which deals with projected/ actual expenditure incurred for replacement of equipment/ parts, that were initially installed under the original scope of works.

47. The Petitioner has claimed the ACE under the head of a "New Element." It is observed that in the present Petition, the Petitioner has proposed only the replacement of certain equipment of the existing transmission asset, not the replacement or creation of an entire transmission asset as a separate element. Therefore, the ACE claimed by the Petitioner cannot be classified as a "New Element." Accordingly, the said expenditure shall be regarded as ACE related to the existing transmission asset and will be examined in accordance with the applicable provisions of the 2024 Tariff Regulations governing ACE for Existing Assets. The Petitioner has claimed the estimated cost of each item, with the cost of individual items being less than ₹20 lakh. The Petitioner has claimed the ACE under Regulations 25(2)(a) and 25(2)(c) of the 2024 Tariff Regulations. Regulation 25(2) of the 2024 Tariff Regulations provides as

follows:

> *"(a) Assets whose useful life 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 a 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.*
>
> *(e) The additional expenditure, excluding recurring expenses covered in O&M expenses, involved in relation to the renewal of lease of lease hold land on case to case basis:*
>
> *Provided that any claim of additional capitalisation with respect to the replacement of assets under the original scope and on account of obsolescence of technology, less than Rs. 20 lakhs shall not be considered as part of Capital cost and shall be met through normative O&M expenses."*

48. The definition of O&M as per 2024 Tariff Regulations is as under:

> *(55) 'Operation and Maintenance Expenses' or 'O&M expenses' means the expenditure incurred for operation and maintenance of the project, or part thereof, and includes the expenditure on manpower, maintenance, repairs and maintenance spares, other spares of capital nature valuing up to Rs. 10 lakhs, additional capital expenditure of an individual asset costing less than Rs. 20 lakhs, consumables, insurance and overheads and fuel other than used for generation of electricity:*

49. In the instant case, the Petitioner has claimed Additional Capital Expenditure (ACE) towards 400 kV Current Transformers (CTs), 220 kV Current Transformers (CTs), 220 kV Isolators and 400 kV Surge Arrestors amounting to ₹19.66 lakh, ₹6.02 lakh, ₹16.38 lakh and ₹7.04 lakh, respectively. A conjoint reading of the proviso to Regulation 25 and the definition of Operation and Maintenance (O&M) Expenses under the 2024 Tariff Regulations indicates that expenditure incurred on an individual asset costing less than ₹20 lakh is intended to be covered under the normative O&M Expenses and is, therefore, not admissible as Additional Capital Expenditure. Since the cost of each of the aforesaid assets is below the prescribed threshold of ₹20 lakh, the ACE claimed for these assets is not admissible. Accordingly, the claim towards 400 kV Current Transformers (₹19.66 lakh), 220 kV Current Transformers (₹6.02 lakh),

220 kV Isolators (₹16.38 lakh) and 400 kV Surge Arrestors (₹7.04 lakh) is disallowed under ACE. The Petitioner is expected to meet the expenditure on these assets from the normative O&M Expenses.

50. The ACE claimed by the Petitioner is towards 1 no. 400 kV and 220 kV Circuit Breaker, 2 No. of 400 kV Isolators and 7 No. of ICT bushings at Nagarjun Sagar Substation. Considering the facts that the transmission asset as a whole has outlived its useful life of 25 years, that most of the equipment for which replacement expenditure has been claimed has become obsolete/ unserviceable and needs to be replaced with new State of the art equipment/ parts available, the projected additional capital expenditure is allowed under Regulation 25(2)(c) of the 2024 Tariff Regulations.

51. In view of the above, the projected ACE allowed/not allowed for the 2024-29 tariff period is as follows:

(₹ in lakh)

Equipment proposed to be replaced	ACE Claimed	ACE Allowed
400kV Circuit Breaker	82.05	82.05
220kV Circuit Breaker	20.10	20.10
400kV Current Transformers (CTs)	19.66	-
220kV Current Transformers (CTs)	6.02	-
400kV Isolators	36.40	36.40
220kV Isolators	16.38	-
400KV Surge Arrestors	7.04	-
ICT/Reactor Bushings	137.63	137.63
Total	**325.28**	**276.18**

De-Capitalisation

52. The Petitioner has also claimed de-capitalization of ₹111.25 lakh corresponding to the replacement of the aged and obsolete equipment. The details of the de-capitalization are as under:

(₹ in lakh)

S. No.	Year of Decapitalisation	Work/Equipment proposed to be de-capitalised	Year of capitalisation of asset/equipment being decapitalised	Original book value of asset being dc capitalised	Debt Equity ratio at the time of capitalisation	Cumulative Depreciation corresponding to decapitalisation	Cumulative Repayment of Loan corresponding to decapitalisation
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	2026-27	Substation	1999-2000	2.00	52.81:47.19	1.8	1.06
2	2027-28	Substation	1999-2000	9.08	52.81:47.19	8.17	4.80
3	2028-29	Substation	1999-2000	100.17	52.81:47.19	90.15	52.90

53. We have considered the Petitioner's submissions. The de-capitalization proposed by the Petitioner on account of the replacement of the old and obsolete equipment at Nagarjunasagar sub-station is hereby allowed for the 2024-29 tariff period, subject to truing up.

54. Accordingly, the details of the net ACE of the transmission asset for the 2024-29 tariff period are as follows:

(₹ in lakh)

Asset	Description	2026-27	2027-28	2028-29	Net ACE allowed for 2024-29
Transmission Asset	ACE allowed	64.98	96.92	114.28	276.18
	De-capitalization	-2.00	-9.08	-100.17	-111.25
	Net ACE allowed	**62.98**	**87.84**	**14.11**	**164.93**

55. Accordingly, the details of the capital cost and the ACE allowed in respect of the transmission asset for the 2024-29 tariff period are as follows:

(₹ in lakh)

Asset	Capital Cost as on 1.4.2024	ACE Allowed					Capital Cost allowed as on 31.3.2029
		2024-25	2025-26	2026-27	2027-28	2028-29	
Transmission Asset	753.94	-	-	62.98	87.84	14.11	918.87

Adjustment in Equity

56. The Commercial Operation Date (COD) of the transmission asset is 1.8.1999, and the debt-equity ratio as on the COD was 52.81:47.19. The Weighted Average Life (WAL) of the transmission asset was determined as 25 years. The transmission asset has completed its useful life on 31.3.2025. The first proviso to Regulation 18(3) of the 2024 Tariff Regulations states that, in the case of a transmission system, including communication systems, which has completed its useful life as on 1.4.2024 or is completing its useful life during the 2024-29 tariff period, if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall not be taken into account for tariff computation.

57. The debt-equity ratio as on 31.3.2025 is 52.81:47.19, meaning the equity deployed exceeds 30%. Therefore, under the proviso to Regulation 18(3) of the 2024 Tariff Regulations, the equity from 1.4.2025 onwards has been limited to 30%. Accordingly, the equity from 1.4.2025 onwards for the 2024-29 tariff period is permitted as follows:

(₹ in lakh)

Particulars	**Amount**
Closing equity as on 31.3.2025* (a)	355.81
Equity in excess of 30% (b) = ((a)/47.19%)*17.19%	129.63
Closing equity as on 1.4.2025**(c) = (a)-(b)	226.18

**Represents 47.19% of the gross block of ₹753.94 lakh.*
***Represents 30% of the gross block of ₹753.94 lakh.*

Debt-Equity Ratio

58. Regulation 18 of the 2024 Tariff Regulations provides as follows:

> *"**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 utilized 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 the approval of the competent authority in other cases regarding the 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 the case of the generating station and the transmission system, including the communication system declared under commercial operation prior to 1.4.2024, the debt-equity ratio allowed by the Commission for the determination of tariff for the period ending 31.3.2024 shall be considered:*

Provided that in the case of a generating station or a transmission system, including a communication system which has completed its useful life as on 1.4.2024 or is completing its useful life during the 2024-29 tariff period, if the equity actually deployed 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 96 of these regulations.

(4) In the case of the generating station and the transmission system, including communication system declared under commercial operation prior to 1.4.2024, but where debt: equity ratio has not been determined by the Commission for determination of tariff for the period ending 31.3.2024, 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 1.4.2024 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."

59. The debt-equity ratio for the 2024-29 tariff period is dealt with in line with Regulation 18 of the 2024 Tariff Regulations. Accordingly, the debt-equity ratio considered for the purpose of computation of tariff for the 2024-29 period in respect of the transmission asset is as follows:

Particulars	**Capital Cost as on 1.4.2024 (₹ in lakh)**	**(in %)**	**ACE during 2024-29 (₹ in lakh)**	**(in %)**	**Decapitalization during 2024-29 (₹ in lakh)**	**(in %)**	**Capital cost as on 31.3.2029 (₹ in lakh)**	**(in %)**
Debt	398.13	52.81	193.33	70.00	58.75	52.81	532.71	57.97
Equity	355.81	47.19	82.85	30.00	52.50	47.19	110.50*	12.03
							275.66**	30.00
Total	**753.94**	**100.00**	**276.18**	**100.00**	**111.25**	**100.00**	**918.87**	**100.00**

**Equity in excess of 30%*
***2025-26 onwards equity has been restricted to 30% as discussed above.*

Depreciation

60. Regulation 33 of the 2024 Tariff Regulations provides as follows:

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

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

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

(2) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission. In case of multiple units of a generating station or multiple elements of a transmission system, the weighted average life for the generating station or the transmission system shall be applied. Depreciation shall be chargeable from the first year of commercial operation. In the case of commercial operation of the asset for a part of the year, depreciation shall be charged on a pro rata basis.

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

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

…….

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

(4) …….
(5) Depreciation for Existing Projects shall be calculated annually based on the Straight-Line Method and at rates specified in Appendix-I to these regulations for the assets of the generating station and transmission system:

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

……

(6) Depreciation for New Projects shall be calculated annually based on the Straight-Line Method and at rates specified in Appendix-II to these regulations for the assets of the generating station and transmission system:

Provided that the remaining depreciable value as on 31st March of the year closing after a period of 15 years from the effective date of commercial operation of the generating station or the transmission system, as the case may be, shall be spread over the balance useful life of the assets.

……..

(7) In the case of the existing projects, the balance depreciable value as on 1.4.2024 shall be worked out by deducting the cumulative depreciation as admitted to by the

Commission up to 31.3.2024 from the gross depreciable value of the assets.

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

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

61. The depreciation for the existing asset has been worked out considering the admitted capital expenditure as on 1.4.2024 and, thereafter, up to 31.3.2029. The transmission asset completed its useful life on 31.3.2025.

62. As regards, projected ACE for 2024-29 tariff period, the Petitioner has submitted that it has proposed ACE from FY 2026-27 onwards, hence, the balance life of the subject asset is extended 10 years from FY 2026-27 as per Regulation 33(8) of Tariff Regulations 2024 and depreciation of proposed additional capital expenditure during 2024-29 tariff block, in the instant project, is being calculated equally spread, in 10 years from the first year of ACE of 2024-29 tariff block, i.e., FY 2026-27.

63. We have considered the submissions of the Petitioner. The original asset/ project has completed its useful life on 31.3.2025. In the instant Petition, the Petitioner has claimed depreciation in respect of the ACE proposed during the financial years 2026-27, 2027-28 and 2028-29 under Regulation 33(8) of the 2024 Tariff Regulations. The Petitioner has claimed depreciation under Regulation 33(8) of the Tariff Regulations, 2024 by spreading the depreciable value of ACE equally over 10 years. Regulation 33(8) provides that capital expenditure proposed during the last five years prior to the completion of the useful life must be submitted with proper justification and a proposed life extension. In the present case, although the ACE was proposed within the last five years prior to the completion of the useful life of the existing asset, the Petitioner has

neither furnished the requisite justification for the proposed ACE nor submitted any proposal to extend the useful life of the existing asset. Thus, the mere fact that the ACE has been proposed within the prescribed five-year period does not, by itself, satisfy the conditions stipulated under Regulation 33(8).

64. However, in the instant case, the asset has already completed its useful life as on 1.4.2025, and the Petitioner has proposed the ACE after the useful life of the transmission asset.

65. Having considered the ACE as discussed above, the issue that now arises for consideration is the manner in which depreciation on the admitted ACE is to be allowed. Since the conditions prescribed under Regulation 33(8) of the 2024 Tariff Regulations are not fulfilled in the present case, the depreciation on the ACE cannot be allowed under the said provision. We, therefore, proceed to examine the admissibility of depreciation on the admitted ACE under the applicable provisions of the 2024 Tariff Regulations.

66. The Commission has introduced the concept of operational life in respect of Thermal and Hydro Generating Stations during the 2024-29 Tariff period, keeping in view the fact that the majority of plants are operating efficiently well beyond the useful life. We further note that this concept of operational life applies only to thermal and hydro generating stations. Relevant extract of Regulation 3(87) of the Tariff Regulations, 2024 is reproduced below:

> *"Provided that in the case of coal/lignite based thermal generating stations and hydro generating stations, the Operational Life may be 35 years and 50 years, respectively."*

67. For the purpose of allowing depreciation in respect of thermal and hydro generating stations, Regulation 33(8) stipulates that the depreciable value shall be spread equally over the balance operational life of the generating station or unit thereof, or fifteen years, whichever is lower. In both cases, recovery of Depreciation is

extended by 10 years in addition to the remaining useful life. Thus, the Commission's approach is to allow depreciation over the balance useful life of the generating station, along with an additional period of 10 years corresponding to the extension of its useful life, to balance the recovery of the capital cost with the interest of the beneficiaries/ consumers.

68. Accordingly, we consider it appropriate to allow depreciation by considering an additional period of 10 years starting from the year 2026-27 in respect of the ACE approved above.

69. The depreciation allowed for the transmission asset for the 2024-29 tariff period is as under:

Existing Transmission Asset

(₹ in lakh)

	Particulars	**2024-25**	**2025-26**	**2026-27**	**2027-28**	**2028-29**
A	Opening Gross Block	753.94	753.94	753.94	751.94	742.86
B	Addition during 2024-29 due to ACE	0.00	0.00	(2.00)	(9.08)	(100.17)
C	Closing Gross Block (A+B)	753.94	753.94	751.94	742.86	642.69
D	Average Gross Block	753.94	753.94	752.94	747.40	692.78
E	Average Gross Block (90% depreciable assets)	753.94	753.94	752.94	747.40	692.78
F	Average Gross Block (100% depreciable assets)	0.00	0.00	0.00	0.00	0.00
G	Depreciable value (excluding IT equipment and software)	678.55	678.55	676.74	668.57	578.42
H	Depreciable value of IT equipment and software	0.00	0.00	0.00	0.00	0.00
I	Total Depreciable Value (G+H)	678.55	678.55	676.74	668.57	578.42
J	Weighted average rate of Depreciation (WAROD)	Spread-over depreciation				
K	Lapsed useful life at the beginning of the year (Year)	24.00	25.00	26.00	27.00	28.00
L	Balance useful life at the beginning of the year (Year)	1.00	0.00	0.00	0.00	0.00
M	**Depreciation allowed during the year**	**19.86**	**0.00**	**0.00**	**0.00**	**0.00**

N	Cumulative Depreciation at the beginning	658.69	678.55	678.55	676.74	668.57
	Dep adjustment on a/c of de-capitalisation	0.00	0.00	1.81	8.17	90.15
O	Cumulative Depreciation at the end of the year	678.55	678.55	676.74	668.57	578.42

New Additions

	Particulars	**2026-27**	**2027-28**	**2028-29**
A	Opening Gross Block	0.00	64.98	161.90
B	Addition during 2024-29 due to ACE	64.98	96.92	114.28
C	Closing Gross Block (A+B)	64.98	161.90	276.18
D	Average Gross Block	32.49	113.44	219.04
E	Average Gross Block (90% depreciable assets)	32.49	113.44	219.04
F	Average Gross Block (100% depreciable assets)	0.00	0.00	0.00
G	Depreciable value (excluding IT equipment and software)	29.24	102.10	197.14
H	Depreciable value of IT equipment and software	0.00	0.00	0.00
I	Total Depreciable Value (G+H)	29.24	102.10	197.14
J	Weighted average rate of Depreciation (WAROD)	Spread-over depreciation		
K	Lapsed useful life at the beginning of the year (Year)	0.00	1.00	2.00
L	Balance useful life at the beginning of the year (Year)	10.00	9.00	8.00
M	**Depreciation allowed during the year**	**2.92**	**11.02**	**22.90**
N	Cumulative depreciation at the end of year	2.92	13.94	36.84
O	Remaining Aggregate Depreciable Value at the end of the year	26.32	88.15	160.29

Total Depreciation allowed:

Particulars	**2024-25**	**2025-26**	**2026-27**	**2027-28**	**2028-29**
Existing Asset	19.86	0.00	0.00	0.00	0.00
New Additions	0.00	0.00	2.92	11.02	22.90
Total	**19.86**	**0.00**	**2.92**	**11.02**	**22.90**

Interest on Loan (IoL)

70. Regulation 32 of the 2024 Tariff Regulations provides as follows:

> *"**32. Interest on loan capital**: (1) The loans arrived at in the manner indicated in Regulation 18 of these regulations shall be considered gross normative loans for the calculation of interest on loans.*
>
> *(2) The normative loan outstanding as on 1.4.2024 shall be worked out by deducting*

the cumulative repayment as admitted by the Commission up to 31.3.2024 from the gross normative loan.

(3) The repayment for each of the years of the tariff period 2024-29 shall be deemed to be equal to the depreciation allowed for the corresponding year or period. In case of de-capitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis, and the adjustment should not exceed cumulative depreciation recovered up to the date of de-capitalisation of such asset.

(4) Notwithstanding any moratorium period availed of by the generating company or the transmission licensee, as the case may be, the repayment of the 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 or allocated loan portfolio;

Provided that if there is no actual loan outstanding for a particular year but the normative loan is still outstanding, the last available weighted average rate of interest of the loan portfolio for the project shall be considered;

Provided further that if the generating station or the transmission system, as the case may be, does not have any actual loan, then the weighted average rate of interest of the loan portfolio of the generating company or the transmission licensee as a whole shall be considered.

Provided that the rate of interest on the loan for the installation of the emission control system commissioned subsequent to date of commercial operation of the generating station or unit thereof, shall be the weighted average rate of interest of the actual loan portfolio of the emission control system, and in the absence of the actual loan portfolio, the weighted average rate of interest of the generating company as a whole shall be considered, subject to a ceiling of 14%;

Provided further that if the generating company or the transmission licensee, as the case may be, does not have any actual loan, then the rate of interest for a loan shall be considered as 1-year MCLR of the State Bank of India as applicable as on April 01, of the relevant financial year.

(6) The interest on the 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."

71. The Petitioner has claimed IoL in respect of new additions. The weighted average rate of interest has been based on the rate submitted in Form-9C. The Petitioner has requested that any change in the floating interest rate during the 2024-29 tariff period be adjusted. Therefore, any change in the floating interest rate will be considered at the time of true-up.

72. IoL allowed according to Regulation 32 of the 2024 Tariff Regulations for the

transmission asset is as follows:

(₹ in lakh)

	Particulars	2026-27	2027-28	2028-29
A	Gross Normative Loan	0.00	45.49	113.33
B	Cumulative Repayments up to Previous Year	0.00	2.92	13.94
C	Net Loan-Opening (A-B)	0.00	42.56	99.39
D	Addition due to ACE	45.49	67.84	80.00
E	Repayment during the year	2.92	11.02	22.90
F	Net Loan-Closing (C+D-E)	42.56	99.39	156.48
G	Average Loan (C+F)/2	21.28	70.97	127.94
H	Weighted Average Rate of Interest on Loan (in %)	8.12	8.12	8.12
I	**Interest on Loan (G*H)**	**1.73**	**5.76**	**10.39**

Return on Equity (RoE)

73. Regulations 30 and 31 of the 2024 Tariff Regulations provide as follows:

*"**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.*

Return on equity for existing project 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 storage type hydro generating stations, pumped storage hydro generating stations and run-of- river generating station with pondage;

(2) Return on equity for new project achieving COD on or after 01.04.2024 shall be computed at the base rate of 15.00% for the transmission system, including the communication system, at the base rate of 15.50% for Thermal generating station and run-of-river hydro generating station and at the base rate of 17.00% for storage type hydro generating stations, pumped storage hydro generating stations and run-of-river generating station with pondage;

Provided that return on equity in respect of additional capitalization beyond the original scope, including additional capitalization on account of the emission control system, Change in Law, and Force Majeure shall be computed at the base rate of one-year marginal cost of lending rate (MCLR) of the State Bank of India plus 350 basis points as on 1st April of the year, subject to a 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 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;

……."

***"31. Tax on Return on Equity.** (1) The 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. The effective tax rate 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 concerned generating company or the transmission licensee by excluding the income of non-generation or non-transmission business, as the case may be, and the corresponding tax thereon.

Provided that in case a generating company or transmission licensee is paying Minimum Alternate Tax (MAT) under Section 115JB of the Income Tax Act, 1961, the effective tax rate shall be the MAT rate, including surcharge and cess;

Provided further that in case a generating company or transmission licensee has opted for Section 115BAA, the effective tax rate shall be tax rate including surcharge and cess as specified under Section 115BAA of the Income Tax Act, 1961.

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

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

(3) The generating company or the transmission licensee, as the case may be, shall true up the effective tax rate for 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 2024-29 on actual gross income of any financial year. Further, any penalty arising on account of delay in deposit or short deposit of tax amount shall not be considered while computing the actual tax paid for the generating company or the transmission licensee, as the case may be.

Provided that in case a generating company or transmission licensee is paying Minimum Alternate Tax (MAT) under Section 115JB, 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 with the applicable MAT rate including surcharge and cess.

Provided that in case a generating company or transmission licensee is paying tax under Section 115BAA, 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 with the tax rate including surcharge and cess as specified under Section 115BAA.

Provided that 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 a year-to-year basis."

74. The Petitioner has submitted that the MAT rate applies to it. Accordingly, the applicable MAT rate has been considered for the purpose of RoE, which will be trued-up in accordance with the 2024 Tariff Regulations.

75. Equity from 2025-26 onwards has been restricted to 30% as per the first proviso to Regulation 18(3) of the 2024 Tariff Regulations. In the instant case, the useful life of the asset (25 years) is completed on 31.3.2025; accordingly, the equity for the rest

of the years of the tariff block, i.e. from 2025-26 to 2028-29, has been restricted to 30% of the capital base during these years.

76. Accordingly, the RoE allowed in respect of the transmission asset for the 2024-29 tariff period, in accordance with Regulation 31 of the 2024 Tariff Regulations, is as follows:

(₹ in lakh)

Sl. No.	Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
A	Opening Equity	355.81	355.81	226.18	245.08	271.43
A1	Less: Adjustment to equity in terms of 1st proviso to Regulation 18(3)	0.00	129.63	0.00	0.00	0.00
A2	Opening Equity (Net) (A-A1)	355.81	226.18	226.18	245.08	271.43
B	Addition due to ACE	0.00	0.00	18.89	26.35	4.23
C	Closing Equity (A2+B)	355.81	226.18	245.08	271.43	275.66
D	Average Equity (A2+C)/2	355.81	226.18	235.63	258.25	273.54
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50	15.50
F	Tax Rate applicable (in %)	17.472	17.472	17.472	17.472	17.472
G	Grossed up Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782	18.782
H	**Return on Equity (D*G)**	**66.83**	**42.48**	**44.26**	**48.50**	**51.38**

Operation and Maintenance Expenses (O&M Expenses)

77. The O&M Expenses claimed by the Petitioner in respect of the Combined Assets for the 2024-29 tariff period are as follows:

(₹ in lakh)

Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
Asset-1	112.06	118.02	124.06	130.51	137.66

78. Regulation 36(3) of the 2024 Tariff Regulations provides as follows:

> *"**36. Operation and Maintenance Expenses:***
> *……*
> ***(3) Transmission system:** (a) The following normative operation and maintenance expenses shall be admissible for the transmission system:*

Particulars	***2024-***	***2025-***	***2026-***	***2027-***	***2028-***
Norms for sub-station Bays (Rs Lakh per bay)					
765 kV	*41.34*	*43.51*	*45.79*	*48.20*	*50.73*
400 kV	*29.53*	*31.08*	*32.71*	*34.43*	*36.23*
220 kV	*20.67*	*21.75*	*22.90*	*24.10*	*25.36*
132 kV and below	*15.78*	*16.61*	*17.48*	*18.40*	*19.35*
Norms for Transformers/Reactors (Rs Lakh per MVA or MVAR)					
O&M expenditure per MVA or per MVAr (Rs Lakh per MVA or per MVAr)	*0.262*	*0.276*	*0.290*	*0.305*	*0.322*
Norms for AC and HVDC lines (Rs Lakh per km)					

Single Circuit (Bundled Conductor with six or more sub-conductors)	*0.861*	*0.906*	*0.953*	*1.003*	*1.056*
Single Circuit (Bundled conductor with four or more sub-conductors)	*0.738*	*0.776*	*0.817*	*0.860*	*0.905*
Single Circuit (Twin & Triple Conductor)	*0.492*	*0.518*	*0.545*	*0.573*	*0.603*
Single Circuit (Single Conductor)	*0.246*	*0.259*	*0.272*	*0.287*	*0.302*
Double Circuit (Bundled conductor with four or more sub-conductors)	*1.291*	*1.359*	*1.430*	*1.506*	*1.585*
Double Circuit (Twin & Triple Conductor)	*0.861*	*0.906*	*0.953*	*1.003*	*1.056*
Double Circuit (Single Conductor)	*0.369*	*0.388*	*0.409*	*0.430*	*0.453*
Multi Circuit (Bundled Conductor with four or more sub-conductor)	*2.266*	*2.385*	*2.510*	*2.642*	*2.781*
Multi Circuit (Twin & Triple Conductor)	*1.509*	*1.588*	*1.671*	*1.759*	*1.851*
Norms for HVDC stations					
HVDC Back-to-Back stations (Rs Lakh per MW)	*2.07*	*2.18*	*2.30*	*2.42*	*2.55*
Gazuwaka BTB (Rs Lakh/MW)	*1.83*	*1.92*	*2.03*	*2.13*	*2.24*
HVDC bipole scheme (Rs Lakh/MW)	*1.04*	*1.10*	*1.16*	*1.22*	*1.28*

Provided that the O&M expenses for the GIS bays shall be allowed as worked out by multiplying 0.70 of the O&M expenses of the normative O&M expenses for bays:

Provided that the O&M expense norms of Double Circuit quad AC line shall be applicable to for HVDC bi-pole line:

Provided that the O&M expenses of ±500 kV Mundra-Mohindergarh HVDC bipole scheme (2500 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for HVDC bipole scheme:

Provided further that the O&M expenses for Transmission Licensees whose transmission assets are located solely in NE Region (including Sikkim), States of Uttarakhand, Himachal Pradesh, the Union Territories of Jammu and Kashmir and Ladakh, district of Darjeeling of West Bengal shall be worked out by multiplying 1.50 to the normative O&M expenses prescribed above.

(b) The total allowable operation and maintenance expenses for the transmission system shall be calculated by multiplying the number of substation bays, transformer capacity of the transformer/reactor/Static Var Compensator/Static Synchronous Compensator (in MVA/MVAr) and km of line length with the applicable norms for the operation and maintenance expenses per bay, per MVA/MVAr and per km respectively..... "

79. We have considered the Petitioner's submissions. The O&M Expenses for the 2024-29 tariff period have been worked out as per the norms specified in the 2024 Tariff Regulations. The O&M Expenses approved in respect of the transmission assets for the 2024-29 tariff period as per Regulation 36 of the 2024 Tariff Regulations are as under:

(₹ in lakh)

O&M Expenses	2019-20	2020-21	2021-22	2022-23	2023-24
Substation -					
• Conventional 400 kV bays at Nagarjunasagar: 315 MVA ICT III along with associated bay equipment					
Norms as per Regulation (₹ lakh per bay)	29.53	31.08	32.71	34.43	36.23
No. of bays	1	1	1	1	1
O&M allowed (i)	**29.53**	**31.08**	**32.71**	**34.43**	**36.23**
400 kV Sub-station ICT					
Nagarjunasagar: 315 MVA ICT III					
Norms as per Regulation (₹ lakh per MVA)	0.262	0.276	0.29	0.305	0.322
(1x315 MVA ICT) (Total capacity MVA)	315	315	315	315	315
O&M allowed (ii)	**82.53**	**86.94**	**91.35**	**96.08**	**101.43**
Total O&M allowed (i)+(ii)	**112.06**	**118.02**	**124.06**	**130.51**	**137.66**

Interest on Working Capital (IWC)

80. Regulations 34(1)(d), 34(3) and 34(4) of the 2024 Tariff Regulations provide as follows:

*"**34. Interest on Working Capital**: (1) The working capital shall cover:*
……

(d) For Hydro generating station (including Pumped Storage Hydro generating station) and Transmission System:
(i) Receivables equivalent to 45 days of annual fixed cost;
(ii) Maintenance spares @ 15% of operation and maintenance expenses including security expenses; and
(iii) Operation and maintenance expenses, including security expenses for one month.

……

(3) Rate of interest on working capital shall be on a normative basis and shall be considered at the Reference Rate of Interest as on 1.4.2024 or as on 1st April of the year during the tariff period 2024- 29 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 Reference Rate of Interest as on 1st April of each of the financial year during the tariff period 2024-29.

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

81. The Petitioner has considered the rate of IWC as 11.90% as on 1.4.2024. IWC has been worked out in accordance with Regulation 34 of the 2024 Tariff Regulations. The Rate of Interest (RoI) considered is 11.90% (SBI 1-year MCLR applicable as on 1.4.2024 of 8.65% plus 325 basis points) for the FY 2024-25, 12.25% (SBI 1-year MCLR applicable as on 1.4.2025 of 9.00% plus 325 basis points) for the FY 2025-26 and 11.95% (SBI 1-year MCLR applicable as on 1.4.2026 of 8.70% plus 325 basis points) for FY 2026-27 to 2028-29. The components of the working capital and interest allowed thereon under Regulation 34 of the 2024 Tariff Regulations for the 2024-29 tariff period in respect of the transmission asset are as under:

(₹ in lakh)

Sl. No.	Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
A	Working Capital for O&M Expenses (O&M Expenses for one month)	9.34	9.84	10.34	10.88	11.47
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	16.81	17.70	18.61	19.58	20.65
C	Working Capital for Receivables (Equivalent to 45 days of annual fixed cost /annual transmission charges)	25.26	20.51	22.08	24.89	28.30
D	**Total Working Capital (A+B+C)**	**51.41**	**48.05**	**51.02**	**55.34**	**60.42**
E	Rate of Interest for working capital (in %)	11.90	12.25	11.95	11.95	11.95
F	**Interest on Working Capital (D*E)**	**6.12**	**5.89**	**6.10**	**6.61**	**7.22**

Annual Fixed Charges for the 2024-29 Tariff Period

82. The transmission charges allowed in respect of the transmission asset for the 2024-29 tariff period are as follows:

(₹ in lakh)

Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
Depreciation	19.86	0.00	2.92	11.02	22.90
Interest on Loan	0.00	0.00	1.73	5.76	10.39
Return on Equity	66.83	42.48	44.26	48.50	51.38
O&M Expenses	112.06	118.02	124.06	130.51	137.66
Interest on Working Capital	6.12	5.89	6.10	6.61	7.22
Total	**204.87**	**166.39**	**179.07**	**202.40**	**229.55**

Filing Fee and Publication Expenses

83. The Petitioner has sought reimbursement of the fee paid by it for filing the Petition and publication expenses. In this regard, the Petitioner has submitted that they are entitled to the reimbursement of the filing fee and the expenses incurred on publication of notices in the application for approval of tariff directly from the beneficiaries or the long-term customers, as the case may be, in accordance with Regulation 94(1) of the 2024 Tariff Regulations.

84. We have considered the Petitioner's submissions. The Petitioner is entitled to reimbursement of the fees paid for filing the Petition and publication expenses incurred on this count directly from the beneficiaries or long-term customers, as the case may be, in terms of Regulation 94(1) of the 2024 Tariff Regulations.

Fees and Charges of Central Transmission Utility of India Limited (CTUIL)

85. The Petitioner has submitted that as per Regulation 99 of the 2024 Tariff Regulations, the fees and charges of the CTUIL may be allowed separately through a separate regulation. The Petitioner has further submitted that in the absence of such regulation, the expenses of CTUIL will be borne by the Petitioner, which will be recovered by the Petitioner as additional O&M Expenses through a separate Petition at the end of the tariff period.

86. It is apt here to refer to Regulation 99 of the 2024 Tariff Regulations which provides as under:

> *"**99. Special Provisions relating to Central Transmission Utility of India Ltd. (CTUIL):** The fee and charges of CTUIL shall be allowed separately by the Commission through a separate regulation:*
>
> *Provided that until such regulation is issued by the Commission, the expenses of CTUIL shall be borne by Power Grid Corporation of India Ltd. (PGCIL) which shall be recovered by PGCIL as additional O&M expenses through a separate petition."*

87. We have considered the Petitioner's submissions and perused Regulation 99 of the 2024 Tariff Regulations. In view of the explicit provision under Regulation 99 of the

2024 Tariff Regulations, we permit the Petitioner, i.e., PGCIL, to bear the fees and charges expenses of CTUIL and recover the same as additional O&M Expenses through a separate Petition until the Commission notifies and issues such a regulation.

License Fee and RLDC Fees and Charges

88. The Petitioner has claimed reimbursement of the license fee, RLDC Fees and Charges. The Petitioner is allowed the reimbursement of the license fee in accordance with Regulation 94(4) of the 2024 Tariff Regulations for the 2024-29 tariff period. The Petitioner is also allowed to recover the RLDC fee and charges from the beneficiaries under Regulation 94(3) of the 2024 Tariff Regulations for the 2024-29 tariff period.

Goods and Services Tax

89. The Petitioner has submitted that the transmission charges claimed herein are exclusive of GST, and in case GST is levied in the future, the same shall be additionally paid by the Respondents, and the Petitioner be allowed to charge and bill it separately. The Petitioner further prays that, if any additional taxes are paid by the Petitioner on account of a demand from the Government/statutory authorities, the Commission may allow the same to be recovered from the beneficiaries.

90. We have considered the submissions of the Petitioner. Since GST is not levied on the transmission service at present, we are of the view that the Petitioner's prayer on this count is premature.

Security Expenses, Insurance and Capital Spares

91. The Petitioner has submitted that as per Regulation 36(3)(d) of the 2024 Tariff Regulations, the security expenses and capital spares of more than ₹10 lakh for the transmission system shall be allowed separately after a prudence check.

92. As regards the security expenses of the Combined Assets, the Petitioner has submitted that it will file a separate Petition for the truing up of security expenses from

1.4.2019 to 31.3.2024 under Regulation 35(3)(c) of the 2019 Tariff Regulations and recovery of security expenses from 1.4.2024 to 31.3.2029 under Regulation 36(3)(d) of the 2024 Tariff Regulations. According to the Petitioner, the security expenses regarding the Combined Assets are not claimed in the instant Petition.

93. The Petitioner has also submitted that it has not claimed insurance expenses in the instant Petition and has submitted that it will file a separate Petition for claiming the overall insurance expenses and consequential IWC on the same, considering the actual insurance expenses incurred by it for FY 2023-24 after escalating the same at 5.25% per annum to arrive at the estimated insurance expense for FYs 2024-25, 2025-26, 2026-27, 2027-28, and 2028-29.

94. The Petitioner has not claimed capital spares for the Combined Assets in the instant Petition for the 2024-29 tariff period. According to the Petitioner, it will file a separate Petition for the capital spares consumed and consequential IWC thereon on an actual basis for the 2024-29 tariff period as per the 2024 Tariff Regulations. The Petitioner has also submitted that it has filed Petition No. 45/MP/2024, claiming therein capital spares for the 2019-24 tariff period as per the 2019 Tariff Regulations.

95. We have considered the Petitioner's submissions and have perused the record. We deem it proper here to refer to Regulation 36(3)(d) of the 2024 Tariff Regulations, which provides as follows:

> *"36(3)*
> *(d) The Security Expenses, Capital Spares individually costing more than Rs. 10 lakh and Insurance expenses arrived through competitive bidding for the transmission system and associated communication system shall be allowed separately after prudence check:*
>
> *Provided that in case of self-insurance, the premium shall not exceed 0.12% of the GFA of the assets insured;*
>
> *Provided that the transmission licensee shall submit the along with estimated security expenses based on assessment of the security requirement, capital spares and insurance expenses, which shall be trued up based on details of the year-wise actuals along with appropriate justification for incurring the same and along with confirmation that the same is not claimed as a part of additional capitalisation or consumption of stores and spares and renovation and modernization."*

96. On perusal of Regulation 36(3)(d) of the 2024 Tariff Regulations and considering the Petitioner's submissions, the Petitioner is allowed to file a single consolidated Petition comprising of security expenses, capital spares individually costing more than ₹10 lakh and insurance expenses on an estimated basis in terms of the 2024 Tariff Regulations for the 2024-29 tariff period.

Sharing of Transmission Charges

97. The Petitioner has submitted that the truing-up of the tariff for the 2019-24 tariff period will be recovered on a monthly basis in accordance with Regulation 57 of the 2019 Tariff Regulations and shall be shared by the beneficiaries and long-term transmission customers. Further, the tariff for the 2024-29 tariff period will be recovered on a monthly basis in accordance with Regulation 78 of the 2024 Tariff Regulations and shared by the beneficiaries and long-term transmission customers under the 2020 Sharing Regulations.

98. The billing, collection and disbursement of the transmission charges in respect of the transmission assets shall be recovered in terms of the provisions of the 2020 Sharing Regulations as provided in Regulation 57 of the 2019 Tariff Regulations for the 2019-24 tariff period and Regulation 78 of the 2024 Tariff Regulations for the 2024-29 tariff period.

Recovery of Annuity Payments for Land Compensation

99. With respect to the prayer of the Petitioner that it may be allowed to continue with the recovery of annuity payments (Land Compensation) as allowed by the Hon'ble Commission vide order dated 08.02.2021 in Petition No. 84/TT/2020, it is once again held that the Petitioner is allowed to directly recover the annuity payments along with the proof of payments for the remaining period of the annuity payments for land compensation.

100. To summarise:

a) The trued-up Annual Fixed Charges (AFC) claimed and approved in respect of the transmission asset for the 2019-24 tariff period are as follows:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
AFC Claimed	240.26	244.35	249.13	254.96	261.59
AFC Approved	240.26	244.35	249.13	254.96	261.59

b) The AFC claimed and allowed in respect of the transmission asset for the 2024-29 tariff period are as follows:

(₹ in lakh)

Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
AFC Claimed	204.86	166.22	179.56	206.70	238.57
AFC Allowed	204.87	166.39	179.07	202.40	229.55

101. This order disposes of Petition No. 487/TT/2025 in terms of the above discussions and findings.

sd/-	**sd/-**	**sd/-**	**sd/-**
(Ravinder Singh Dhillon)	**(Harish Dudani)**	**(Ramesh Babu V.)**	**(Jishnu Barua)**
Member	**Member**	**Member**	**Chairperson**

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