CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Petition No. 555/TT/2025

Coram:

Shri Ramesh Babu V., Member
Shri Harish Dudani, Member

Date of Order: 18.11.2026

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 the truing up of the transmission tariff for the 2019-24 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 and for 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 **Assets for Bihar Grid Strengthening Scheme in the Eastern Region.**

And in the matter of:

Power Grid Corporation of India Limited,
SAUDAMINI, Plot No-2,
Sector-29, Gurgaon-122001 (Haryana). **...Petitioner**

Versus

1. **Bihar State Power (Holding) Company Ltd.,**
   Vidyut Bhavan, Bailey Road,
   Patna – 800 001, Bihar

2. **West Bengal State Electricity Distribution Company Limited,**
   Bidyut Bhawan, Bidhan Nagar,
   Block DJ, Sector-II, Salt Lake City,
   Kolkata - 700 091, West Bengal.

3. **Grid Corporation of Orissa Ltd.,**
   Shahid Nagar, Bhubaneswar - 751 007, Odisha.

4. **Damodar Valley Corporation,**
   DVC Tower, Maniktala, Civic Centre, VIP Road,
   Kolkata - 700 054, West Bengal.

5. **Power Department,**
   Govt. of Sikkim, Gangtok – 737101, Sikkim.

6. **Jharkhand Bijli Vitran Nigam Ltd.,**
   Engineering Building, H.E.C., Dhurwa,
   Ranchi – 834 004, Jharkhand

…Respondent(s)

Parties Present: Shri Angaru Naresh Kumar, PGCIL
Shri Vivek Kumar Singh, PGCIL
Shri Vishal Sagar, PGCIL
Shri Ranjeet Kumar Pandey, PGCIL
Shri Piyush Avasthi, PGCIL
Ms. Suchitra, PGCIL
Shri Yatin Kalra, PGCIL

ORDER

The instant Petition has been filed by Power Grid Corporation of India Limited for truing up of the transmission tariff for the 2019-24 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as "the 2019 Tariff Regulations") and determination of the transmission tariff under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024 (hereinafter referred to as "the 2024 Tariff Regulations") for the 2024-29 tariff period in respect of the following transmission assets (hereinafter referred to as "transmission assets"/ "Combined Asset") Asset-I: 400 kV 315 MVA, ICT 3rd at Biharshariff along with associated bays and Asset-II: Bihar grid strengthening scheme excluding 315 MVA ICT at Biharshariff Sub-station in Eastern Region under **Assets for Bihar Grid Strengthening Scheme in the Eastern Region** (hereinafter referred to as the "transmission project") consisting of the following assets:

Asset-I:

Extension of Biharshariff Sub-station with 400/220 kV, 1 Number 315 MVA transformer with associated bays); and

Asset-II:

(a) Construction of Sasaram - Arrah - Khagaul 220 kV D/C line,

(b) LILO of Dehri - Sahupuri 220 kV S/C Line at Sasaram

(c) LILO of Dumraon- Arrah 132 kV S/C line at Arrah (New Sub-station)

(d) New Sub-station at Arrah with 2x100 MVA ICTs, 4 Numbers 220 kV line bays and 4 Numbers 132 kV line bays

(e) Extension of Sasaram Sub-station with 2x315 MVA ICT and 4 Numbers 220 kV line bays

(f) Extension of Khagaul Sub-station (BSEB) by 2 Numbers 220 kV line bays (BSEB).

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 15 and 16 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 15 and 16 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 allow 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 22 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 22 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 22 above.*

j) *Allow the petitioner to claim expenses of CTUIL borne by POWERGRID through a separate petition as mentioned at para 23 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. Investment Approval (the IA) in respect of the transmission project was accorded by the Board of Directors (BoD) of the Petitioner Company vide letter dated 22.8.2001 at an estimated cost of ₹16288 lakh, including IDC of ₹1627 lakh.

b. Asset-I was put into commercial operation on 1.4.2004 and Asset-II on 1.11.2004.

c. The Commission approved the transmission charges in respect of the transmission assets for 2004-09 tariff period vide order dated 23.5.2008 in Petition No. 31/2007, vide order dated 9.5.2006 in Petition No. 73/2005, vide order dated 23.5.2008 in Petition No. 31/2007 and tariff was revised on

account of Addition Capital Expenditure (ACE) incurred during 2006-07 and 2007-08 periods vide order dated 7.8.2009 in Petition No. 78/2009 and vide order dated 7.8.2009 in Petition No. 78/2009.

d. The Commission, vide order dated 23.5.2011 in Petition No. 124/2010, approved the tariff in respect of the Combined Asset (comprising of Asset-I and Asset-II) for 2009-14 tariff period and subsequently vide order dated 7.12.2015 in Petition No. 199/TT/2014 trued up the tariff allowed for 2009-14 tariff period. The transmission tariff for 2014-19 period in respect of the Combined Asset was allowed vide order dated 7.12.2015 in Petition No. 199/TT/2014.

e. The Petitioner had sought revision of transmission tariff allowed for 2004-09 tariff period on account of change in Interest on Loan (IoL) and Interest on Working Capital (IWC) to the extent of revision in IoL and in Maintenance Spares in terms of the judgments of the Appellate Tribunal for Electricity (APTEL) dated 22.1.2007 in Appeal No. 81 of 2005 and batch matters

f. The Commission, vide order dated 15.7.2022 in Petition No. 390/TT/2019 for Asset-I and Asset-II, revised the transmission tariff for 2004-09 tariff period, trued-up the transmission tariff for the 2014-19 tariff period and determined the transmission tariff for the 2019-24 tariff period.

4. The complete scope of the transmission project as per IA is covered in the instant Petition. The details of date of commercial operation (COD) in respect of the transmission assets are as follows:

Asset No	Asset Name	COD
Asset-I	400 kV 315 MVA, ICT 3rd at Biharshariff alongwith associated bays	1.4.2004
Asset-II	Bihar grid strengthening scheme excluding 315 MVA ICT at Biharshariff Sub-station	1.11.2004
Combined Asset: 1.11.2004 (Notional COD)		

5. The Respondents are distribution licensees, power departments and transmission licensees, who are procuring transmission services from the Petitioner, mainly beneficiaries of the Eastern Region.

6. The Petitioner has served the Petition on the Respondents and notice regarding filing of this Petition has also been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments or suggestions have been received from the public in response to the aforesaid notices published in the newspapers by the Petitioner.

7. The hearing in this matter was held on 21.1.2026 and the order was reserved.

8. This order is issued considering the submissions made by the Petitioner vide affidavits dated 26.11.2024, 13.10.2025 and 5.2.2026. None of the Respondent(s) filed reply in the matter despite given the opportunity.

9. Having heard the Petitioner and having perused the material on record, we proceed to dispose of the petition.

Truing up of Annual Fixed Charges for 2019-24 tariff period

10. The details of the trued-up transmission charges claimed by the Petitioner in respect of the transmission assets are as follows:

Combined Asset

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	190.11	190.11	183.92	177.20	177.20
Interest on Loan	153.13	136.47	116.15	96.34	80.81
Return on Equity	421.26	421.26	407.75	394.23	394.23
Interest on Working Capital	49.33	47.10	40.22	40.56	47.40
O&M Expenses	868.14	899.08	815.59	838.17	867.34
Total	**1681.97**	**1694.02**	**1563.63**	**1546.50**	**1566.98**

11. The details of the trued-up Interest on Working Capital (IWC) claimed by the Petitioner in respect of the transmission assets are as follows:

Combined Asset

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	72.35	74.92	67.97	69.85	72.28
Maintenance Spares	130.22	134.86	122.34	125.73	130.10
Receivables	206.80	208.85	192.78	190.66	192.66
Total Working Capital	**409.37**	**418.63**	**383.09**	**386.24**	**395.04**
Rate of Interest (in %)	12.05	11.25	10.50	10.50	12.00
Interest on Working Capital	**49.33**	**47.10**	**40.22**	**40.56**	**47.40**

Capital Cost for 2019-24 Tariff Period

12. The capital cost of the transmission project has been calculated in accordance with Regulation 19(1) and 19(3) of the 2019 Tariff Regulations.

13. The summary of capital cost as on 1.4.2019 as approved by the Commission vide Order dated 15.7.2022 in Petition No. 390/TT/2019 respectively are as follows:

Order dated 15.7.2022 in Petition no. 390/TT/2019				
Asset	Capital Cost allowed as on 1.4.2019	ACE/ De-Capitalization 2019-24		Capital Cost allowed as on 31.3.2024
		ACE	De-Capitalization	
Combined Asset	11429.14	0.00	0.00	11429.14

14. The Petitioner in the instant true-up Petition has claimed the following capital cost as on 1.4.2019 and actual ACE incurred for the 2019-24 tariff period:

(₹ in lakh)

Asset	Capital Cost claimed as on 1.4.2019	ACE/ De-Capitalization- 2019-24		Capital Cost claimed as on 31.3.2024
		ACE	De-Capitalization 2021-22	
Combined Asset	11429.14	0.00	(733.68)	10695.46

15. The Petitioner has claimed the same capital cost as on 1.4.2019 of ₹11429.14 lakh for Combined Asset as approved by the Commission vide order dated 15.7.2022 in Petition No. 390/TT/2019 for Combined Asset. Accordingly, the capital cost of ₹11429.14 lakh for Combined Asset has been considered as opening capital cost as on

1.4.2019 for the purpose of truing up of the transmission tariff for the 2019-24 period in accordance with Regulation 19(3)(a) of the 2019 Tariff Regulations.

Additional Capital Expenditure (ACE)/De-Capitalisation

16. The Commission vide Order dated 15.7.2022 in Petition No. 390/TT/2019 had approved nil ACE for the Combined Asset for 2019-24 tariff period.

17. The Petitioner, in the instant Petition has not claimed any ACE during 2019-24 in respect of Combined Asset.

De-capitalisation:

The Petitioner, in the instant Petition has proposed De-cap of ₹733.68 lakh on the account of diversion of 315 MVA ICT-II to Jeypore Sub-station under the ERSS XVII Part B project.

18. Based on the Auditor's Certificate dated 14.11.2024, the details of estimated ACE/ de-capitalisation during the 2019-24 tariff period for the transmission system as submitted and claimed (under Regulation 25(2) of the 2019 Tariff Regulations) by the Petitioner in this Petition are as follows:

(₹ in lakh)

Particulars	Amount
De-cap in 2021-22	(733.68)

19. As per the Auditor Certificate dated 14.10.2024, the 315 MVA ICT-II at Sasaram Sub-station was declared under commercial operation w.e.f. 1.11.2004 under the Bihar Grid Strengthening Scheme. Subsequently, it was replaced by a 500 MVA ICT-II on 18.01.2020 under the ERSS-12 project.

20. Thereafter, the 315 MVA ICT-II was diverted to Jeypore Sub-station under the ERSS-XVII-B project and was commissioned on 19.4.2021. In line with the applicable provisions of the CERC Tariff Regulations, the gross block amounting to ₹ 733.68 lakh

pertaining to the said asset has been de-capitalized from the original station during 2021-22, and the tariff has been computed accordingly. The Petitioner has submitted relevant Order and ERPC minutes.

21. The debt-equity ratio is 80.38:19.62 as on 31.3.2019 and the same debt-equity ratio has been considered for de-capitalization. The details submitted by the Petitioner in Form-10B are as under:

(₹ in lakh)

S. no	Year of De-Capitalization	Equipment to be Capitalized	Year of Capitalization	Original Book Value of Asset being De-Capitalized	Debt Equity ratio at the time of capitalization	Cumulative depreciation corresponding to the date of De-Capitalization	Cumulative repayment of loan corresponding to the date of De-Capitalization
1	18.4.2021	315 MVA ICT II	1.11.2004	733.68	80.38:19.62	499.18	499.18

22. We have considered the submissions of the Petitioner. The de-capitalisation claimed by the Petitioner in respect of the Combined Asset for the 2019-24 tariff period is hereby allowed and accordingly, the net Add-cap/De-cap for the 2019-24 tariff period is as follows:

(₹ in lakh)

Asset	ACE/ De-Capitalization allowed for 2019-24		Net ACE
	ACE	De-Capitalization 2021-22	
Combined Asset	0.00	(733.68)	(733.68)

23. Therefore, the details of capital cost and trued-up ACE approved in respect of the Combined Asset for the 2019-24 tariff period are as follows:

(₹ in lakh)

Asset	Capital Cost as on 01.04.2019	Net ACE allowed for 2019-24	Capital Cost as on 31.03.2024
		2021-22	
Combined Asset	11429.14	(733.68)	10695.46

Debt-Equity ratio

24. As per Regulation 18(3) of the 2019 Tariff Regulations, debt-equity ratio allowed by the Commission for determination of tariff for the period ending on 31.3.2019 shall be considered. Accordingly, the admitted debt-equity ratio for the period ending on 31.3.2019 has been considered as opening debt-equity ratio as on 1.4.2019 for the purpose of truing up of tariff of 2019-24 period in respect of Combined Asset. The details of the debt-equity ratio considered and allowed under Regulation 18 of the 2019 Tariff Regulations for computation of tariff of the transmission assets during the 2019-24 tariff period are as follows:

Combined Asset

Funding	Capital Cost as on 1.4.2019 (₹ in lakh)	(in %)	De-Cap in 2019-24 (₹ in lakh)	(in %)	Capital Cost as on 31.3.2024 (₹ in lakh)	(in %)
Debt	9186.23	80.38%	(589.73)	80.38%	8596.50	80.38%
Equity	2242.91	19.62%	(143.95)	19.62%	2098.96	19.62%
Total	**11429.14**	**100.00%**	**(733.68)**	**100.00%**	**10695.46**	**100.00%**

Depreciation

25. The depreciation has been worked out considering the admitted capital expenditure as on 1.4.2019 and, thereafter, up to 31.3.2024. The transmission asset has completed 12 years of life as on 31.3.2019 and the remaining depreciable value as on 31.3.2019 has been spread across the balance useful life in accordance with Regulation 33(5) of the 2019 Tariff Regulations.

26. The trued-up depreciation approved for the transmission assets for the 2019-24 tariff period is as follows:

(₹ in lakh)

	Combined Asset					
	Particulars	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
	Depreciation					
A	Opening Gross Block	11429.14	11429.14	11429.14	10695.46	10695.46
B	Addition during 2019-24 due to ACE	0.00	0.00	0.00	0.00	0.00
C	De-capitalisation during 2019-24	0.00	0.00	-733.68	0.00	0.00
D	Closing Gross Block (A+B-C)	11429.14	11429.14	10695.46	10695.46	10695.46
E	Average Gross Block (A+D)/2	11429.14	11429.14	11062.30	10695.46	10695.46
F	Average Capital Cost (90% depreciable assets) (E-K)	11343.17	11343.17	10976.33	10609.49	10609.49
G	Average Capital Cost (100% depreciable assets)	0.00	0.00	0.00	0.00	0.00
H	Depreciable Value (excluding IT equipment and software) (F*90%)	10208.85	10208.85	9878.70	9548.54	9548.54
I	Depreciable Value of IT equipment and software (G*100%)	0.00	0.00	0.00	0.00	0.00
J	Total Depreciable Value (H+I)	10208.85	10208.85	9878.70	9548.54	9548.54
K	Freehold Land	85.97	85.97	85.97	85.97	85.97
L	Weighted average rate of Depreciation (WAROD) (in %)	Spread-over depreciation				
M	Balance useful life of the asset	15	14	13	12	11
N	Lapsed life at the beginning of the year	14	15	16	17	18
O	**Combined Depreciation during the year**	**190.11**	**190.11**	**183.92**	**177.20**	**177.20**
P	Cumulative Depreciation at the end of the year	7547.27	7737.39	7422.12	7599.32	7776.52
Q	Remaining Aggregate Depreciable Value at the end of the year (J-P)	2661.58	2471.47	2456.58	1949.22	1772.02

27. The details of depreciation allowed vide order dated 15.7.2022 in Petition No. 390/TT/2019 for the Combined Asset; depreciation claimed by the Petitioner in the instant Petition and trued-up depreciation approved in the instant order are as follows:

(₹ in lakh)

Combined Asset	2019-20	2020-21	2021-22	2022-23	2023-24
Allowed vide order dated 15.7.2022 in Petition No. 390/TT/2019	191.16	191.16	191.16	191.16	191.16
Claimed by the Petitioner in the instant Petition	190.11	190.11	183.92	177.20	177.20
Approved after true-up in this order	190.11	190.11	183.92	177.20	177.20

Interest on Loan (IoL)

28. The Petitioner has claimed the Weighted Average Rate of IoL based on its actual loan portfolio and rate of interest. We have considered the submissions of the Petitioner. 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 Combined Asset is as follows:

(₹ in lakh)

	Particulars	Combined Asset				
		2019-20	2020-21	2021-22	2022-23	2023-24
	Interest on Loan					
A	Gross Normative Loan	9186.23	9186.23	9186.23	8596.50	8596.50
B	Cumulative Repayments up to Previous Year	7344.22	7534.33	7724.45	7409.18	7586.38
C	Net Loan-Opening (A-B)	1842.01	1651.90	1461.78	1187.32	1010.12
D	Additions	0.00	0.00	-589.73	0.00	0.00
E	Adjustment of gross loan pertaining to de-capitalized asset	0.00	0.00	499.18	0.00	0.00
F	Repayment during the year	190.11	190.11	183.92	177.20	177.20
G	Adjustment of cumulative repayment pertaining to de-capitalized asset	0.00	0.00	499.18	0.00	0.00
H	Net Loan-Closing (C+D-F+G	1651.90	1461.79	1187.32	1010.12	832.92
I	Average Loan (C+H)/2	1746.96	1556.85	1324.55	1098.72	921.52
J	Weighted Average Rate of Interest on Loan (in %)	8.7657	8.7658	8.7663	8.7663	8.7663
K	**Interest on Loan (I*J)**	**153.13**	**136.47**	**116.11**	**96.32**	**80.78**

29. The details of IoL allowed vide order dated 15.7.2022 in Petition No. 390/TT/2019 for the Combined Asset, RoE claimed by the Petitioner in the instant Petition and trued-up RoE approved in the instant order are as follows:

(₹ in lakh)

Combined Asset	2019-20	2020-21	2021-22	2022-23	2023-24
Allowed vide order dated 17.10.2021 in Petition No. 353/TT/2020	153.08	136.33	119.57	102.82	86.06
Claimed by the Petitioner in the instant Petition	153.13	136.47	116.15	96.34	80.81
Approved after true-up in this order	153.13	136.47	116.11	96.32	80.78

Return on Equity (RoE)

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

31. The Petitioner has further submitted that it is liable to pay the income tax at the 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 RoE [(Base Rate)/(1-t)] (in %)
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

32. We have considered the Petitioner's submissions and have also gone through the record. We have noted that the entities covered under the MAT regime are paying

Income Tax as per the MAT rates notified for the respective financial year under the IT Act, 1961, which is levied on the book profit of the entity computed as per Section 115 JB 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 the RoE for truing up 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 of 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 rate 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 (in %)	Base rate of RoE (in %)	Grossed-up RoE [(Base Rate)/(1-t)] (in %)
2019-20	17.472	17.472	15.500	18.782
2020-21	17.472	17.472	15.500	18.782
2021-22	17.472	17.472	15.500	18.782
2022-23	17.472	17.472	15.500	18.782
2023-24	17.472	17.472	15.500	18.782

33. Accordingly, the trued-up RoE approved in respect of the Combined Asset for the 2019-24 tariff period is as follows:

(₹ in lakh)

	Particulars	Combined Asset				
		2019-20	2020-21	2021-22	2022-23	2023-24
	Return on Equity					
A	Opening Equity	2242.91	2242.91	2242.91	2098.96	2098.96
B	Additions	0.00	0.00	-143.95	0.00	0.00
C	Closing Equity (A+B)	2242.91	2242.91	2098.96	2098.96	2098.96
D	Average Equity (A+C)/2	2242.91	2242.91	2170.94	2098.96	2098.96
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (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 (D*G)**	**421.26**	**421.26**	**407.75**	**394.23**	**394.23**

34. The details of RoE allowed vide order dated 15.7.2022 in Petition No. 390/TT/2019 for Combined Asset; RoE claimed by the Petitioner in the instant Petition and trued-up RoE approved in the instant order are as follows:

(₹ in lakh)

Combined Asset	2019-20	2020-21	2021-22	2022-23	2023-24
Allowed vide order dated 15.7.2022 in Petition No. 390/TT/2019	421.26	421.26	421.26	421.26	421.26
Claimed by the Petitioner in the instant Petition	421.26	421.26	407.75	394.23	394.23
Approved after true-up in this order	421.26	421.26	407.75	394.23	394.23

Operation & Maintenance Expenses (O&M Expenses)

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

Combined Asset

(₹ in lakh)

O&M Expenses	2019-20	2020-21	2021-22	2022-23	2023-24
	868.14	899.08	815.59	838.17	867.34

36. The Commission vide TV letter 18.9.2025 had directed to Petitioner for reconciliation in O&M Expenses claimed for 400Kv Sub-station ICT for FY 2021-22. The Petitioner vide affidavit 1.10.2025 reiterated its submissions made vide affidavit

26.11.2024 that the 315 MVA ICT-II at Sararam Sub-station started commercial operation on 1.11.2004, under the Bihar Grid Strengthening Scheme. It was replaced by a 500 MVA ICT-II on 18.1.2020, as part of the ERSS-12 project. Subsequently, the 315 MVA ICT-II was re-located from Sasaram Sub-station to Jeypore Sub-station under the ERSS-XVII-B Project and began operation on 19.4.2021. O&M expenses for 18 days are claimed for 400KV Sub-Station ICT, 315 MVA ICT-2 at Sasaram.

37. We have considered the submission of the Petitioner. The O&M Expenses approved for the Combined Asset as per norms specified in the 2019 Tariff Regulations are as follows:

(₹ in lakh)

Particulars	Combined Asset				
	2019-20	2020-21	2021-22	2022-23	2023-24
15 Number of 220 kV bays : **Ara: Khagul Bay I** **Ara: Khagul Bay II** **Ara: Sasaram Bay I** **Ara: Sasaram Bay II** **Ara: ICT I Bay** **Ara: ICT Ii Bay** **Pusauli: ICT I Bay** **Pusauli: ICT Ii Bay** **Pusauli: Dehri Bay** **Pusauli: Sahupuri Bay** **Pusauli: Ara Bay I** **Pusauli: Ara Bay II** **Khagaul: Ara Bay I** **Khagaul: Ara Bay II** **Biharshariff: ICT Iii Bay (Biharshariff of BSEB)**					
Norms (₹ lakh/Bay)	22.51	23.3	24.12	24.96	25.84
No. of Units (Bays)	15	15	15	15	15
Total	337.65	349.50	361.80	374.40	387.60
6 Number of 132 kV bays: **1 Ara: ICT I Bay** **1 Ara: ICT II Bay** **1 Ara: Dumraon Bay** **1 Ara: Ara Bay** **2 Ara: Bays For Integration with BSEB**					
Norms (₹ lakh/Bay)	16.08	16.64	17.23	17.83	18.46
No. of Units (Bays)	6	6	6	6	6
Total	96.48	99.84	103.38	106.98	110.76
3 Number of 400 kV Bays:					

Particulars	Combined Asset				
	2019-20	2020-21	2021-22	2022-23	2023-24
Pusauli: ICT I Bay Pusauli: ICT II Bay Biharsharif: ICT III Bay					
Norms (₹ lakh/Bay)	32.15	33.28	34.45	35.66	36.91
No. of Units (Bays)	3	3	3	3	3
Total	96.45	99.84	103.35	106.98	110.73
400 kV Pusauli:Pusauli:315 MVA ICT-1 AT SASARAM					
Norms (₹ lakh/MVA)	0.358	0.371	0.384	0.398	0.411
Total MVA capacity	315	315	315	315	315
No. of day for which taiff is calculated	365.00	365.00	365.00	365.00	365.00
Total	112.77	116.87	120.96	125.37	129.47
400KV Sub-Station ICT: 315 MVA ICT-2 at Sasaram					
Norms (₹ lakh/MVA)	0.358	0.371	0.384	0.398	0.411
Total MVA capacity	315	315	315	315	315
No. of day for which taiff is calculated	365.00	365.00	18	0.00	0.00
Total	112.77	116.87	5.97	0.00	0.00
220 kV Ara: ICTS					
Norms (₹ lakh/MVA)	0.245	0.254	0.263	0.272	0.282
Total MVA capacity	200	200	200	200	200
Total	49.00	50.80	52.60	54.40	56.40
Double Circuit (Single Conductor) Ara - Khagul Line: 48.440 Km Sasaram - Ara Line: 112.140 Km Lilo of Dehri Sahupuri at Sasaram: 4.880 Km Lilo of Dumaraon - Ara (BSEB) At: 1.700 Km					
Norms (₹ lakh/Km)	0.377	0.391	0.404	0.419	0.433
No. of Units: Length in (Km)	167.16	167.16	167.16	167.16	167.16
Total	63.02	65.36	67.53	70.04	72.38
Total O&M Expenses allowed (₹ in lakh)	**868.14**	**899.07**	**815.59**	**838.17**	**867.34**

38. Accordingly, the details of O&M Expenses allowed vide order dated 15.7.2022 in Petition No. 390/TT/2019 for the Combined Asset; O&M Expenses claimed by the Petitioner in the instant Petition and the trued-up O&M Expenses approved in the instant order are as follows:

(₹ in lakh)

Combined Asset	2019-20	2020-21	2021-22	2022-23	2023-24
Allowed vide order dated 15.7.2022 in Petition No. 390/TT/2019	868.14	899.07	930.58	963.54	996.80
Claimed by the Petitioner in the instant Petition	868.14	899.08	815.59	838.17	867.34
Approved after true-up in this order	868.14	899.07	815.59	838.17	867.34

Interest on Working Capital (IWC)

39. IWC has been worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The Rate of Interest (ROI) considered is 12.05% (SBI 1-year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for FY 2019-20, 11.25% (SBI 1-year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) for FY 2020-21, 10.50% (SBI 1-year MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points) for FY 2021-22 and 12.00% (SBI 1-year MCLR applicable as on 1.4.2023 of 8.50% plus 350 basis points) for FY 2023-24.

40. The components of the working capital and interest allowed thereon for the transmission assets for 2019-24 are as follows:

(₹ in lakh)

	Particulars	Combined Asset				
		2019-20	2020-21	2021-22	2022-23	2023-24
	Interest on Working Capital					
A	Working Capital for O&M Expenses (O&M Expenses for one month)	72.34	74.92	67.97	69.85	72.28
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	130.22	134.86	122.34	125.73	130.10
C	Working Capital for Receivables (Equivalent to 45 days of annual fixed cost /annual transmission charges)	206.80	208.85	192.77	190.66	192.66
D	**Total Working Capital (A+B+C)**	**409.37**	**418.63**	**383.08**	**386.23**	**395.04**
E	Rate of Interest for working capital (in %)	12.05	11.25	10.50	10.50	12.00
F	**Interest on working capital (D*E)**	**49.33**	**47.10**	**40.22**	**40.55**	**47.40**

41. The details of IWC allowed vide order dated 15.7.2022 in Petition No. 390/TT/2019 for the Combined Asset; IWC claimed by the Petitioner in the instant Petition and the trued-up IWC approved in the instant order are as follows:

(₹ in lakh)

Combined Asset	2019-20	2020-21	2021-22	2022-23	2023-24
Allowed vide order dated 15.7.2022 in Petition No. 390/TT/2019	49.34	47.11	44.90	45.93	46.91
Claimed by the Petitioner in the instant Petition	49.33	47.10	40.22	40.56	47.40
Approved after true-up in this order	49.33	47.10	40.22	40.55	47.40

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

42. Accordingly, the Annual Fixed Charges allowed after the truing-up for the 2019-24 tariff period in respect of the Combined Asset are as follows:

(₹ in lakh)

	Particulars	Combined Asset				
		2019-20	2020-21	2021-22	2022-23	2023-24
	Annual Transmission Charges					
A	Depreciation	190.11	190.11	183.92	177.20	177.20
B	Interest on Loan	153.13	136.47	116.11	96.32	80.78
C	Return on Equity	421.26	421.26	407.75	394.23	394.23
D	Interest on Working Capital	49.33	47.10	40.22	40.55	47.40
E	O & M Expenses	868.14	899.07	815.59	838.17	867.34
F	**Total (A+B+C+D+E)**	**1681.97**	**1694.01**	**1563.60**	**1546.47**	**1566.95**

43. The details of AFC allowed vide order dated 15.7.2022 in Petition No. 390/TT/2019 for the Combined Asset, AFC claimed by the Petitioner in the instant Petition and trued-up AFC approved in the instant order are as follows:

(₹ in lakh)

Combined Asset	2019-20	2020-21	2021-22	2022-23	2023-24
Allowed vide order dated 15.7.2022 in Petition No. 390/TT/2019	1682.99	1694.93	1707.48	1724.71	1742.20
Claimed by the Petitioner in the instant Petition	1681.97	1694.02	1563.63	1546.50	1566.98
Approved after true-up in this order	1681.97	1694.01	1563.60	1546.47	1566.95

Determination of Annual Fixed Charges for the 2024-29 Tariff Period

44. The Petitioner has claimed the following transmission charges in respect of the transmission assets for the 2024-29 tariff period:

(₹ in lakh)

Particulars	Combined Asset (Existing Asset)				
	2024-25	2025-26	2026-27	2027-28	2028-29
Depreciation	177.20	177.20	177.20	177.20	171.71
Interest on Loan	65.27	49.73	34.19	18.65	5.44
Return on Equity	394.23	394.23	394.23	394.23	392.67
Interest on Working Capital	39.20	40.52	41.93	43.36	44.95
O&M Expenses	689.93	726.14	764.24	804.15	846.74
Total	**1365.83**	**1387.82**	**1411.79**	**1437.59**	**1461.51**

(₹ in lakh)

Particulars	Combined Asset (New Equipment)				
	2024-25	2025-26	2026-27	2027-28	2028-29
Depreciation	0.00	0.00	0.00	0.00	15.57
Interest on Loan	0.00	0.00	0.00	0.00	9.20
Return on Equity	0.00	0.00	0.00	0.00	9.75
Interest on Working Capital	0.00	0.00	0.00	0.00	0.51
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**	**35.03**

45. The details of IWC claimed by the Petitioner for the 2024-29 tariff period for transmission assets are as under:

(₹ in lakh)

Particulars	Combined Asset (Existing Asset)				
	2024-25	2025-26	2026-27	2027-28	2028-29
O&M Expenses	57.49	60.51	63.69	67.01	70.56
Maintenance Spares	103.49	108.92	114.64	120.62	127.01
Receivables	168.39	171.10	174.06	176.75	180.19
Total Working Capital	**329.37**	**340.53**	**352.39**	**364.38**	**377.76**
Rate of Interest (in %)	11.90	11.90	11.90	11.90	11.90
Interest on Working Capital	**39.20**	**40.52**	**41.93**	**43.36**	**44.95**

(₹ in lakh)

Particulars	Combined Asset (New Equipment)				
	2024-25	2025-26	2026-27	2027-28	2028-29
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Maintenance Spares	0.00	0.00	0.00	0.00	0.00

Particulars	Combined Asset (New Equipment)				
	2024-25	2025-26	2026-27	2027-28	2028-29
Receivables	0.00	0.00	0.00	0.00	4.32
Total Working Capital	**0.00**	**0.00**	**0.00**	**0.00**	**4.32**
Rate of Interest (in %)	11.90	11.90	11.90	11.90	11.90
Interest on Working Capital	**0.00**	**0.00**	**0.00**	**0.00**	**0.51**

Capital Cost

46. 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 decapitalised 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."

47. The Petitioner has claimed the following capital cost and ACE/De-cap for the Combined Asset during 2024-29 tariff period:

(₹ in lakh)

Asset	Capital Cost claimed as on 31.3.2024	Particulars	ACE Claimed (+)/ De-Capitalization (-)				Estimated Completion Cost
			2025-26	2026-27	2027-28	2028-29	
Combined Asset	10695.46	ACE (New Equipment)	0.00	0.00	0.0	345.98	10956.82
		De-Capitalization (Existing Asset)	0.00	0.00	0.0	(84.62)	
		Net ACE	0.00	0.00	0.0	261.36	

48. We have considered the submissions of the Petitioner. The capital cost has been dealt in line with Regulation 19(3)(a) of the 2024 Tariff Regulations. The trued-up capital cost of ₹10695.46 lakh as on 31.03.2024 for Combined Asset as approved in the instant order is considered as opening capital cost as on 1.4.2024 for working out the tariff for 2024-29 tariff period.

Additional Capital Expenditure (ACE)

49. The Regulations 24 and 25 of the 2024 Tariff Regulations provides as follows:

"24. Additional Capitalisation within the original scope and upto the cut-off date:

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

- *(a) Undischarged liabilities recognized to be payable at a future date;*
- *(b) Works deferred for execution;*
- *(c) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 23of these regulations;*
- *(d) Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority or order or decree of any court of law;*
- *(e) Change in law or compliance of any existing law which is not provided for in the original scope of work;*
- *(f) For uninterrupted and timely development of Hydro projects, expenditure incurred towards developing local infrastructure in the vicinity of the power plant not exceeding Rs. 10 lakh/MW shall be considered as part of capital cost and in case the same work is covered under budgetary support provided by Government of India, the funding of such works shall be adjusted on receipt of such funds;*

  Provided that such expenditure shall be allowed only if the expenditure is incurred through Indian Governmental Instrumentality; and
- *(g) Force Majeure events:*

Provided that in case of any replacement of the assets, the additional capitalization shall be worked out after adjusting the gross fixed assets and cumulative depreciation of

the assets replaced on account of de-capitalization.

(2) The generating company or the transmission licensee, as the case may be shall submit the details of works asset wise/work wise included in the original scope of work along with estimates of expenditure, liabilities recognized to be payable at a future date and the works deferred for execution.

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

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

- *(a) Payment made against award of arbitration or for compliance with the directions or order of any statutory authority; or order or decree of any court of law;*
- *(b) Change in law or compliance of any existing law which is not provided for in the original scope of work;*
- *(c) Deferred works relating to ash pond or ash handling system or raising of ash dyke in the original scope of work;*
- *(d) Payment made towards liability admitted for works within the original scope executed prior to the cut-off date;*
- *(e) Force Majeure events;*
- *(f) Works within original scope executed after the cut-off date and admitted by the Commission, to the extent of actual payments made; and*

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

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

Provided that any claim of additional capitalization with respect to the replacement of assets under the original scope and on account of obsolescence of technology, less than ₹ 20 lakhs shall not be considered as part of Capital cost and shall be met through normative O&M expenses"

50. The Petitioner has claimed the following ACE/De-cap for Combined Asset in the 2024-29 tariff period under Regulation 25(2)(a) and Regulation 25(2)(c) of the 2024 Tariff Regulations:

(₹ in lakh)

Asset	Regulation	Particulars	ACE Claimed (+)/ De-Capitalization (-)			
			2025-26	2026-27	2027-28	2028-29
Combined Asset	25(2)(a) - Payment made against award of arbitration or for compliance with the directions or order of any statutory authority, or order or decree of any court of law 25(2)(c) - Deferred works relating to ash pond or ash handling system or raising of ash dyke in the original scope of work	ACE	0.00	0.00	0.0	345.98
		De-Capitalization	0.00	0.00	0.0	(84.62)
		Net ACE	0.00	0.00	0.0	261.36

ACE Justification

51. The Petitioner has proposed ACE during the tariff block 2024–29 on account of replacement of old and obsolete substation equipment which are completing/likely to complete 25 years of useful life. The proposed replacements are necessitated due to ageing, deterioration in performance, frequent failures, non-availability of spares, and obsolescence of technology, which may adversely impact grid security, reliability and safety. The asset-wise justification submitted by the Petitioner is as under:

For Combined Asset:

Replacement of 400kV ABB make Pneumatic Circuit Breakers (02 Nos.)

52. The existing circuit breakers are pneumatic-operated type and are completing 25 years of service during 2024–29. Due to ageing, frequent issues such as pneumatic drive failures and air leakages are being experienced, leading to prolonged outages and risk to stable grid operation. The OEM has discontinued production and stopped providing spare and service support. Considering that the breakers have outlived their useful life and are based on obsolete technology, replacement with modern spring-

operated circuit breakers is proposed to avoid sudden failure, consequential damage and ensure reliable grid operation.

Replacement of old & obsolete 400kV Isolators at Biharshariff (06 Sets)

53. The existing Horizontal Centre Break (HCB) type isolators are nearing completion of 25 years of useful life. Ageing has resulted in frequent misalignment, jamming, improper operation, deterioration of copper contacts causing hotspots, rusting of MOM boxes, brittle terminal blocks, DC earth faults, and unreliable interlocking/remote operation. Further, instances of isolators opening under on-load conditions during storms pose serious safety and system risks. The OEM (Siemens, earlier ELPRO) has advised replacement of the complete current path due to deterioration and obsolescence. In view of operational risks, safety concerns, and lack of adequate support, replacement of 06 sets of isolators is proposed to maintain secure and safe grid operation.

Replacement of old & obsolete 400kV "Make: ABB" Porcelain Dead Tank CTs at Biharshariff (09 Nos.)

54. The CTs are approaching 25 years of service life. Oil leakages have been observed from multiple locations such as terminals, domes and oil sight glasses, which are beyond repair. Continued leakage may result in low oil levels, moisture ingress and eventual catastrophic failure. As the CTs are hermetically sealed equipment, major repair at site is not recommended. Repairing at manufacturer works is not techno-economically viable and the OEM has discontinued manufacturing and repair support. Failure of CTs may cause consequential damage to adjacent equipment and grid instability. Hence, replacement is proposed in the interest of system reliability and safety.

Replacement of old and obsolete 400kV Porcelain Type Elpro make Surge arresters at Biharshariff (03 Nos.)

55. The surge arresters are nearing completion of 25 years of service. Due to ageing, deterioration in performance and increase in THRC values have been observed. Since surge arresters provide critical protection against lightning and switching surges, their failure may lead to consequential damage to transformers, reactors and line equipment, affecting grid stability. Considering their degraded condition and importance in system protection, replacement is proposed.

Replacement of Old Bushings in Transformer at Biharshariff Sub-station (01 No.)

56. The existing bushings are Oil Impregnated Paper (OIP) type and are completing 25 years of service. As per CIGRE Technical Brochures (TB 642, TB 755 and TB 887), bushing failure is a significant cause of transformer failure and may develop rapidly without effective diagnostic warning. CIGRE also recommends strategic replacement of bushings during transformer life. Further, since 2015, Resin Impregnated Paper/Synthetic (RIP/RIS) bushings are being specified by POWERGRID and mandated by CEA for 400kV transformers/reactors due to lower consequential damage in case of failure. Considering that ageing OIP bushings pose potential hazard to the transformer and grid reliability, pre-emptive replacement of 01 no. bushing in ICT-3 is proposed during 2024–29.

Supply and installation of Control Panel, Protection panels at Biharshariff Sub-station

The existing control and protection panels are nearing completion of 25 years of useful life. The relays are largely electromagnetic/static type and obsolete, with no OEM spares support. Auxiliary relays, wiring, terminal blocks and cables have deteriorated due to ageing, resulting in maloperation, DC earth faults and reliability issues.

Replacement of only cables would require prolonged substation outages and is not feasible. Therefore, replacement of conventional C&R panels with SAS-based control and protection system along with SCADA, SPR arrangement, associated cables and trench works is proposed as a techno-economical and reliable solution, ensuring:

- Reduced cabling requirements
- Compliance with latest technical standards
- Improved reliability and monitoring
- Reduced outage duration during implementation

The proposal was also deliberated in the 50th ERPC meeting held on 11.8.2023, wherein replacement of conventional C&R system with SAS-based system was approved. The Petitioner has demanded that the replacements are essential for maintaining secure, reliable and safe operation of the transmission system and preventing consequential failures of critical grid assets. Therefore, the proposed ACE may be considered in accordance with CERC provisions applicable to replacement of obsolete and unserviceable assets in the interest of system reliability and grid security.

57. Further, the Commission vide RoP dated 26.1.2026 directed the Petitioner to submit under which Regulation the Petitioner has proposed / projected the ACE in the 2024-29 tariff period along with the technical justification and a cost-benefit analysis. In response, the Petitioner vide affidavit dated 5.2.2026 has submitted that the assets forming part of the instant Petition were originally commissioned in the year 1997 and nearly 28 years have completed as on date. Further, the Petitioner has submitted the reasons in the succeeding paragraphs.

58. The ACE projected for Combined Asset during 2024–29 block pertains to the replacement of aged and deteriorated components/ equipment, which are vital to

ensuring system reliability and grid stability. The Petitioner submitted that the ACE projected during 2024-29 tariff period has been claimed under Regulations 25(2)(a) & 25(2)(c) of the 2024 Tariff Regulations, which specify as under:

Regulation 25(2)(a) & 25(2)(c)

"*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.
(c) The replacement of such asset or equipment is necessary on account of obsolescence of technology."

59. The Petitioner has submitted that the projected ACE for the 2024–29 tariff period has been estimated based on the latest Schedule of Rates (SOR) published by POWERGRID, which is updated quarterly and adopted for internal cost estimation. The estimated cost for the present proposal has been derived based on the applicable SOR for the quarter ending June 2023, prevailing at the time of formulation of the proposal, and has further been validated through a techno-commercial budgetary offer obtained from a vendor during a market survey.

60. The Petitioner has further submitted that the proposed replacement of assets covered under the original scope after the cut-off date is in accordance with Regulation 25(2)(a) and 25(2)(c) of the applicable Tariff Regulations. As per the said provisions, additional capitalisation may be admitted in case of replacement of assets after the cut-off date, subject to prudence check, where (a) the assets have been fully depreciated and their useful life is not commensurate with that of the project, and (c) replacement is necessitated due to technological obsolescence.

61. In this regard, the Petitioner has approached the Commission seeking approval for replacement/retro fitment of problematic and obsolete equipment under Regulation 25(2) during the tariff block 2024–29. The proposed works involve replacement of major

substation equipment such as surge arresters, current transformers (CTs), circuit breakers (CBs), isolators, and bushings, which are critical and integral components of the transmission system.

62. The Petitioner has submitted that the said equipment has completed its useful life and is proposed for replacement on account of technological obsolescence and deterioration in performance due to ageing. With advancing age, such equipment becomes unreliable and is prone to frequent failures, leakages, and operational issues. Further, legacy technologies such as electromechanical and static protection relays have become obsolete, and original equipment manufacturers have discontinued their production and spares support, rendering repair or refurbishment technically infeasible and economically unviable.

63. The Petitioner has been contended that continued operation of such obsolete and ageing assets poses serious risks to system reliability and grid security, as failure of equipment such as CTs, CVTs, bushings, surge arresters, and circuit breakers may result in mal-operation of protection systems, inaccurate metering, prolonged outages, and consequential damage to high-value assets including transformers and reactors. The proposed replacements are therefore in the nature of system strengthening measures essential for safe and reliable grid operation.

64. The Petitioner has clarified that the proposed works are not routine in nature and cannot be met from Operation and Maintenance (O&M) Expenses, which are meant for day-to-day maintenance, periodic overhauls, and minor repairs. The present scope involves complete replacement of aged and obsolete assets, which is capital in nature. It has also been submitted that replacement under O&M would lead to higher cumulative costs due to repeated failures, high maintenance requirements, and scarcity of spares, whereas capital replacement with modern technology would reduce forced outages,

improve system availability, and lower life-cycle costs, thereby constituting a prudent and cost-effective approach.

65. The Petitioner has further submitted that year-wise actual O&M Expenditure is separately furnished before the Hon'ble Commission for determination of O&M norms for the ensuing control period and does not include expenditure of capital nature such as the present proposal.

66. In view of the above, the Petitioner has prayed that the proposed works, involving installation of new equipment essential for safe, reliable, and secure operation of the transmission system, may be allowed under ACE for the tariff block 2024–29.

67. The Petitioner vide affidavit dated.05.02.2026 has also submitted the item-wise unit cost for the ACE proposed in 2024-29 period and the details of the same are as under:

Sl no.	**Sub-station name**	**Project Name**	**COD**	**Elements Name**	**Voltage**	**Qty.**	**Rate**	**Amount (₹ lakh)**
1	400/220 kV Biharshariff Sub-station	BGSD	28.11.2024	CB	400 kV	1	37.01	37.01
2		BGSD		CB	400 kV	1	37.01	37.01
3		BGSD		Isolator	400 kV	2	13.41	26.82
4		BGSD		Isolator	400 kV	4	13.41	53.64
5		BGSD		CT	400 kV	3	8.7	26.1
6		BGSD		CT	400 kV	6	8.7	52.2
7		BGSD		LA	220 kV	3	0.85	2.55
8		BGSD		Bushing	400 kV	1	3.38	3.38
9		BGSD		Construction of KIOSK along with new protection panel, cables etc.		LS	107.27	107.27
							Total	**345.98**

68. We have considered the Petitioner's submission. It is observed that the Petitioner has projected ACE for FY 2024-29 towards the replacement of substation components/equipment's in the system that have deteriorated due to ageing, which

could impact the stability and reliability of the grid in case of sudden failure. The details of ACE projected by the Petitioner for the 2024-29 period concerning the Combined Asset are as under:

(₹ in lakh)

Assets	Estimated ACE for 2024-29 period						Total ACE
	ACE/De-cap	2024-25	2025-26	2026-27	2027-28	2028-29	
New Equipment	ACE	0.00	0.00	0.00	0.0	345.98	345.98

69. The Petitioner has claimed the ACE under Regulations 25(2)(a) and 25(2)(C) of the 2024 Tariff Regulations which specify as under:

"(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; 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."

70. We would also like to refer to Regulation 3(24) and 3(62) of the 2024 Tariff Regulations, which specify as under:

Regulation 3(24) of the 2024 Tariff Regulations
"(24) 'Element' means an asset which has been distinctively defined under the scope of the transmission project in the Investment Approval, such as transmission lines, including line bays and line reactors, substations, bays, compensation devices, Interconnecting Transformers which can be put to use."

Regulation 3(62) of the 2024 Tariff Regulations
"62) 'Project' means:
i) in the case of a thermal generating station, all components of the thermal generating station and including an integrated coal mine, biomass pellet handling system, pollution control system, and effluent treatment plan, as may be required;
ii) in the case of a hydro generating station, all components of the hydro generating station including the dam, intake water conductor system, power generating station, as apportioned to power generation; and
iii) in case of transmission, all components of the transmission system, including the communication system.

71. As per proviso to Regulation 25(2) of the 2024 Tariff Regulations, any ACE with respect to the replacement of an asset under the original scope on the account of obsolescence of technology of less than ₹20.00 lakh shall not be considered as part of the capital cost. In the instant case, the Petitioner is replacing certain substation equipments and components on the account of obsolescence of technology.

72. Regulation 3(24) of the 2024 Tariff Regulations defines "element". The term element refers to a distinct and identifiable asset that is part of a transmission project and has been specifically recognised in the Investment Approval. Based on these provisions of the 2024 Tariff Regulations, we conclude that an asset is one that is distinctly defined within the scope of the transmission project in the IA.

73. The Petitioner has claimed the ACE under the head of a "New Equipment". However, as discussed above, it is observed that in the instant Petition, the Petitioner has only proposed replacing certain equipment of the existing combined asset rather than replacing or creating an entire transmission asset as a separate element. Therefore, the ACE claimed by the Petitioner cannot be categorised as "New equipment". Accordingly, the said expenditure shall be treated as ACE related to the

existing Combined Asset and will be examined in accordance with the applicable provisions of the Tariff Regulations governing ACE for the Existing Asset.

74. The question that arises for our consideration is whether the ACE claimed by the Petitioner is allowable under Regulation 25(2)(a) and 25(2)(C) of the 2024 Tariff Regulations or not? The Commission has examined the justification for each proposed item of ACE for the 2024–29 tariff period, as discussed in the succeeding paragraphs.

Replacement of 400 kV ABB Make Pneumatic Circuit Breakers (02 Nos.)

75. The Petitioner has proposed replacement of two (02) nos. of 400 kV pneumatic-operated circuit breakers, which are completing 25 years of useful life during the 2024–29 tariff period.

76. We have considered the submissions of Petitioner. It has been submitted that frequent pneumatic drive failures and air leakages are occurring due to aging, and that the OEM has discontinued spare parts supply and service support. Continued operation of these breakers poses a risk of prolonged outages and unstable grid conditions. The Commission observes that the equipment has completed its useful life, is technologically obsolete, and lacks OEM support. Considering the critical role of circuit breakers in grid operation and the potential for consequential damage in the event of failure, the replacement is justified on grounds of obsolescence and reliability. Accordingly, the replacement of 02 Nos. 400 kV circuit breakers and the consequential ACE of ₹ 74.02 lakhs is hereby allowed under Regulation 25(2)(c) of the 2024 Tariff Regulations, subject to truing-up on actual basis.

Replacement of 400 kV Isolators (06 Sets)

77. The Petitioner has sought approval for replacement of six sets of 400 kV Horizontal Centre Break type isolators, which are also completing 25 years of service.

78. The issues highlighted include frequent misalignment, jamming, improper operation, deterioration of copper contacts leading to hotspots, rusting of MOM boxes, and DC earth faults. Safety risks during storms and high wind conditions have also been reported. Further, the OEM has advised replacement of the current path, indicating obsolescence.

79. The Commission notes that isolators are critical for safe switching operations, and persistent mechanical and electrical defects, combined with aging-related deterioration and safety concerns, substantiate the need for replacement. In view of the above, the replacement of 06 sets of 400 kV isolators and the consequential ACE of ₹ 80.46 lakhs is hereby ACE towards replacement of is allowed under Regulation 25(2)(c) of the 2024 Tariff Regulations, subject to truing-up on actual basis.

Replacement of 400 kV Porcelain Dead Tank CTs (06/09 Nos.)

80. The Petitioner has proposed replacement of 400 kV ABB make porcelain dead tank current transformers (CTs), which are completing 25 years of service.

81. It has been submitted that oil leakages beyond repair have occurred, with associated risks of moisture ingress and insulation failure. Manufacturing and repair support are no longer available, and any failure could result in consequential damage to associated equipment and malfunction of protection systems. The Commission observes that CTs are critical to protection and metering functions, and their failure may lead to serious system disturbances. Considering the hermetically sealed design, obsolescence, and lack of OEM support, repair is not techno-economically viable. Accordingly, ACE of ₹ 78.3 lakhs towards the replacement of CTs, restricted to the actual number proposed for capitalisation, is allowed under Regulation 25(2)(c), subject to prudence check and truing-up on actual basis.

3. Replacement of 400 kV Surge Arresters (03 Nos.)

82. The Petitioner has proposed ACE of ₹ 2.55 lakh towards replacement of three (03) nos. of 400 kV surge arresters that are completing 25 years of life.

83. It has been reported that deterioration in performance parameters, including higher THRC values, has been observed. Since surge arresters provide protection to high-value equipment against switching and lightning surges, their failure may result in severe consequential damage. The Commission finds merit in the submission that continued operation of aged surge arresters poses reliability risks to the substation and associated equipment.

84. We have considered the submission of the Petitioner. We are of the view that, the ACE projected for replacement of three (03) nos. of Surge Arrester is less than ₹20.00 lakh. Therefore, we are not inclined to allow the ACE claimed for the same, and the Petitioner shall meet the said expenditure through normative O&M Expenses.

Replacement of Transformer Bushing (01 No., ICT-3)

85. The Petitioner has proposed pre-emptive replacement of one transformer bushing (ICT-3), relying on CIGRE Technical Brochures and prevailing industry practices.

86. It has been submitted that bushing failure is a major cause of transformer failures, that reliable diagnostic methods for detecting incipient failures are limited, and that there is a regulatory and industry shift towards RIP/RIS bushings in place of older OIP bushings. The risk of consequential transformer damage in case of bushing failure has also been highlighted.

87. We have considered the submissions of the Petitioner. We are of the view that, the ACE projected for replacement of 01 no. of Transformer bushing is less than ₹3.38 lakh. Therefore, we are not inclined to allow the ACE claimed for the same, and the

Petitioner shall meet the said expenditure through normative O&M Expenses.

Replacement of Control & Protection Panels with SAS-Based System

88. The Petitioner has proposed replacement of conventional Control and Protection (C&R) panels with a Substation Automation System (SAS)-based system, along with SCADA integration and associated cables and trench works. The justification includes obsolescence of electromagnetic and static relays, non-availability of spares, mal-operations due to aging components and brittle wiring, frequent DC earth faults, and approval from ERPC for migration to a SAS-based system.

89. The Commission observed that control and protection systems form the backbone of grid safety and system integrity. Obsolescence of relays, lack of spares, and systemic DC faults justify modernization. Migration to a SAS-based system aligns with current technical standards and enhances operational reliability while reducing system risks.

90. Accordingly, ACE of ₹107.27 lakh towards replacement of C&R panels with SAS-based system, including associated cables and trench work, is allowed under Regulation 25(2)(c) of the 2024 Tariff Regulations, subject to submission of detailed abstract cost estimates, substation-wise asset details, adjustment of decapitalised value of old panels and cables, and truing-up on actual basis.

91. The Commission notes that no ACE has been considered for the 2019–24 tariff period. The proposed ACE during the 2024–29 tariff period pertains to replacement of obsolete and life-expired critical substation equipment. The expenditure qualifies under Regulation 25(2)(c) of the 2024 Tariff Regulations. Depreciation shall be recovered in accordance with Regulation 33(8), by spreading the depreciable value over 10 years (being higher than the balance useful life) from the year of capitalisation. All approvals

granted herein are subject to prudence check, truing-up based on actual expenditure, and proper decapitalisation of the replaced assets.

92. Accordingly, based on the above, the projected ACE allowed/not allowed for the 2024-29 tariff period is summarized as follows:

(₹ in lakhs)

Sl. no	**Equipment proposed to be replaced**	**ACE claimed**	**ACE allowed**
1	Replacement of 400 kV ABB Make Pneumatic Circuit Breakers (02 Nos.)	74.02	74.02
2	Replacement of 400 kV Isolators (06 Sets)	80.46	80.46
3	Replacement of 400 kV Porcelain Dead Tank CTs (06/09 Nos.)	78.3	78.3
4	Replacement of 400 kV Surge Arresters (03 Nos.)	2.55	0.00
5	Replacement of Transformer Bushing (01 No., ICT-3)	3.38	0.00
6	Replacement of Control & Protection Panels with SAS-Based System	107.27	107.27
	Total	**345.98**	**340.05**

93. Therefore, in view of the above discussion, the details of ACE allowed in respect of the Combined Asset for the 2024-29 tariff period are as follows:

(₹ in lakh)

Asset	Regulation	Particulars	Allowed ACE for 2024-29			
			2025-26	2026-27	2027-28	2028-29
Combined Asset	25(2)(a) - Payment made against award of arbitration or for compliance with the directions or order of any statutory authority, or order or decree of any court of law 25(2)(c) - Deferred works relating to ash pond or ash handling system or raising of ash dyke in the original scope of work	ACE towards the replacement of equipment	0.00	0.00	0.0	340.05

De-capitalisation:

94. The Petitioner has claimed a De-Capitalization of ₹84.62 lakh towards the replacement of Circuit Breaker, Isolator, Current Transformer, Lightening Arrestor, Bushing in Biharshariff Sub-station. The details of the statement of De-capitalisation submitted by the Petitioner is as under:

Combined Asset

(₹ in lakh)

Sl. no	Year of De-Capitalization	Equipment to be Capitalized	Year of Capitalization	Original Book Value of Asset being De-Capitalized	Debt Equity ratio at the time of capitalization	Cumulative depreciation corresponding to the date of De-Capitalization	Cumulative repayment of loan corresponding to the date of De-Capitalization
1	2028-29	CB	1.11.2004	38.11	80.38:19.62	4.45	4.45
2	2028-29	Isolator	1.11.2004	17.37	80.38:19.62	2.43	2.43
3	2028-29	CT	1.11.2004	26.22	80.38:19.62	3.06	3.06
4	2028-29	LA	1.11.2004	2.58	80.38:19.62	0.30	0.30
5	2028-29	Bushing	1.11.2004	0.34	80.38:19.62	0.03	0.03
Total				84.62			

95. We have considered the Petitioner's submission. The de-capitalisation of ₹84.62 lakh claimed by the Petitioner in respect of the Combined Asset for the 2024-29 period is hereby approved subject to truing up.

96. Accordingly, the net ACE allowed is summarized as follows:

(₹ in lakh)

Asset	Regulation	Particulars	Allowed ACE (+)/ De-Capitalization (-)			
			2025-26	2026-27	2027-28	2028-29
Combined Asset	25(2)(a) - Payment made against award of arbitration or for compliance with the directions or order of any statutory authority, or order or decree of any court of law 25(2)(c) - Deferred works relating to ash pond or ash handling system or raising of ash dyke in the original scope of work	ACE	0.00	0.00	0.0	340.05
		De-Capitalization	0.00	0.00	0.0	(84.62)
		Net ACE	0.00	0.00	0.0	255.43

97. Accordingly, the details of the capital cost and ACE/De-cap allowed for the 2024-29 tariff period and the capital cost as on 31.3.2029, for the transmission asset is allowed as follows:

(₹ in lakh)

Asset	Capital Cost admitted as on 1.4.2024	Allowed ACE (+)/De-Capitalization (-)					Capital Cost allowed as on 31.3.2029
		2024-25	2025-26	2026-27	2027-28	2028-29	
Combined Asset (Existing Assets)	10695.46	0.00	0.00	0.00	0.00	(84.62)	10610.84
Combined Asset (New Equipments)	0.00	0.00	0.00	0.00	0.00	340.05	340.05
Total	**10695.46**	**0.00**	**0.00**	**0.00**	**0.00**	**255.43**	**10950.89**

Debt-Equity ratio

98. 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 utilised for meeting the capital expenditure of the generating station or the transmission system.*

(2) The generating company or the transmission licensee, as the case may be, shall submit the resolution of the Board of the company or approval of the competent authority in other cases regarding infusion of funds from internal resources in support of the utilization made or proposed to be made to meet the capital expenditure of the generating station or the transmission system including communication system, as the case may be.

(3) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2019, debt: equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2024 shall be considered:

Provided that in case of a generating station or a transmission system including communication system which has completed its useful life as on or after 1.4.2024, if the equity actually deployed as on 1.4.2024 is more than 30% of the capital cost, equity in excess of 30% shall not be taken into account for tariff computation;

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

(4) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2024, 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."

99. The debt-equity considered for the purpose of computation of tariff for the 2024-29 tariff period is allowed as per Regulation 18(3) of the 2024 Tariff Regulations. The debt-equity ratio considered for the purpose of computation of tariff for the transmission assets for the 2024-29 tariff period is as follows:

Combined Asset (Existing Assets):

Funding	Capital Cost as on 1.4.2024 (₹ in lakh)	(In %)	De-Capitalization in 2024-29 (₹ in lakh)	(In %)	Capital Cost as on 31.3.2029 (₹ in lakh)	(In %)
Debt	8596.49	80.38	(68.02)	80.38	8528.47	80.38
Equity	2098.97	19.62	(16.60)	19.62	2082.37	19.62
Total	**10695.46**	**100.00**	**(84.62)**	**100.00**	**10610.84**	**100.00**

Combined Asset (New Equipment):

Funding	Capital Cost as on 1.4.2028 (₹ in lakh)	Additions in 2028-29 (₹ in lakh)	(In %)	Capital Cost as on 31.3.2029 (₹ in lakh)	(In %)
Debt	0.00	238.04	70.00	238.04	70.00
Equity	0.00	102.02	30.00	102.02	30.00
Total	**0.00**	**340.05**	**100.00**	**340.05**	**100.00**

Depreciation

100. 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-capitalised asset during its useful service…….

(10) Xxxxx

(11) Xxxxx

(12) Xxxxx"

101. The Petitioner has submitted that the ACE for the Combined Asset (New Equipment) is proposed during FY 2028-29, and that the Combined Asset (Existing System) shall complete its useful life on 31.3.2034. Further, it has claimed depreciation on the new equipment under Regulation 33(8) of the 2024 Tariff Regulations by spreading the depreciable value equally over ten years from the first year of additional capitalisation, i.e., FY 2028-29.

102. The Petitioner has further submitted that, in order to recover the depreciation on ACE over a period of ten years, the tariff has been computed in two parts, namely, the tariff pertaining for the Existing System and tariff for the additional capitalization for the New Equipment. Further, the de-capitalization in the case of the Combined Asset is being covered in the first part, i.e., under the Existing System.

103. We have considered the submissions of the Petitioner. The useful life of the original asset/project is to be completed on 31.3.2034. In the instant Petition, the Petitioner has claimed depreciation in respect of the ACE proposed for the Combined Asset (New Equipment) during the financial year FY 2028-29 under Regulation 33(8) of the 2024 Tariff Regulations. The Petitioner has claimed the depreciation under Regulation 33(8) of the 2024 Tariff Regulations by equally spreading the depreciable value of ACE over a period of ten years.

104. Regulation 33(8) of the 2024 Tariff Regulations provides that, where the capital expenditure is proposed during the last five (5) years prior to the completion of the useful life, the same is required to be submitted along with proper justification and a proposal for extension of the useful life. In the present case, the ACE has not been proposed

within the last five (5) years prior to the completion of the useful life of the existing asset. Further, the Petitioner has neither furnished the requisite justification for the proposed ACE nor submitted any proposal for extension of the useful life of the existing asset. Accordingly, the conditions stipulated under Regulation 33(8) of the 2024 Tariff Regulations are not satisfied.

105. 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, have not been fulfilled in the present matter, 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.

106. The Commission has introduced the concept of operational life in respect of Thermal and Hydro Generating Stations during the period 2024-29, keeping in view the fact that the majority of the generating stations continue to operate efficiently even beyond the useful life. We further note that this concept of operational life is applicable only in respect of Thermal and Hydro Generating Stations. The relevant extract of the Regulation 3(87) of the 2024 Tariff Regulations, 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."

107. For the purpose of allowing depreciation in respect of Thermal and Hydro Generating Station, Regulation 33(8) 2024 Tariff Regulations stipulates that the depreciable value shall be spread equally over the balance operational life of the generating station or unit thereof, or fifteen (15) 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. Thus, the approach of the Commission is to allow depreciation over the balance useful life of the generating station, along with the additional period corresponding to the extension of its useful life, to balance recovery of the capital cost with the interests of the beneficiaries/consumers.

108. In order to maintain consistency and uniformity in the treatment of depreciation in respect of new transmission assets as well as transmission assets at fag end of their useful life, we consider it appropriate to allow depreciation by considering an additional period of ten (10) years over and above the remaining useful life of the Combined Transmission Asset.

109. In the present case, the balance weighted average useful life of the original Combined Asset at the beginning of FY 2028-29 (the year in which first ACE is brought) is 6 years. Accordingly, in line with the above decision, we allow depreciation on the admitted ACE for the Combined Asset (New Equipment) from FY 2028-29 over a period of sixteen (16) years, comprising the balance useful life of six years and an additional period of ten (10) years.

110. The Combined Asset (Existing System) has already completed 12 years of life before 31.3.2024, the remaining depreciable value has been spread over the balance useful life in accordance with Regulation 33(5) of the 2024 Tariff Regulations.

111. Hence, the depreciation has been allowed taking into consideration the useful life of the transmission assets as per 2024 Tariff Regulations. The depreciation allowed for the transmission assets under Regulation 33 of the 2024 Tariff Regulations for the 2024-29 tariff period is as follows:

(₹ in lakh)

	Combined Asset (Existing Assets)					
	Particulars	**2024-25**	**2025-26**	**2026-27**	**2027-28**	**2028-29**
	Depreciation					

	Combined Asset (Existing Assets)					
	Particulars	**2024-25**	**2025-26**	**2026-27**	**2027-28**	**2028-29**
A	Opening Gross Block	10695.46	10695.46	10695.46	10695.46	10695.46
B	Addition, during 2024-29 due to ACE	0.00	0.00	0.00	0.00	-84.62
C	Closing Gross Block (A+B)	10695.46	10695.46	10695.46	10695.46	10610.84
D	Average Gross Block (A+C)/2	10695.46	10695.46	10695.46	10695.46	10653.15
E	Average Capital Cost (90% depreciable assets) (D-J)	10609.49	10609.49	10609.49	10609.49	10567.18
F	Average Capital Cost (100% depreciable assets)	0.00	0.00	0.00	0.00	0.00
G	Depreciable Value (excluding IT equipment and software) (E*90%)	9548.54	9548.54	9548.54	9548.54	9510.46
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)	9548.54	9548.54	9548.54	9548.54	9510.46
J	Freehold Land	85.97	85.97	85.97	85.97	85.97
K	Weighted average rate of Depreciation (WAROD) (in %)					Spreading
L	Balance useful life of the asset	10	9	8	7	6
M	Lapsed life at the beginning of the year	19	20	21	22	23
N	Combined Depreciation during the year	177.20	177.20	177.20	177.20	171.71
O	Cumulative Depreciation at the end of the year	7953.73	8130.93	8308.13	8485.33	8646.76
P	Remaining Aggregate Depreciable Value at the end of the year (I-O)	1594.81	1417.61	1240.41	1063.21	863.70

(₹ in lakh)

	Combined Asset (New Equipment's)	
	Particulars	**2028-29**
	Depreciation	
A	Opening Gross Block	0.00
B	Addition during 2024-29 due to ACE	340.05
C	Closing Gross Block (A+B)	340.05
D	Average Gross Block (A+C)/2	170.03
E	Depreciable Value (D*90%)	153.02
F	Depreciable Value of IT equipment and software	0.00
G	Total Depreciable Value (E+F)	153.02
H	Weighted average rate of Depreciation (WAROD) (in %)	5.9991
I	Balance useful life of the asset	16
J	Lapsed life at the beginning of the year	0

	Combined Asset (New Equipment's)	
	Particulars	**2028-29**
K	**Combined Depreciation during the year**	**9.56**
L	Cumulative Depreciation at the end of the year	9.56
M	Remaining Aggregate Depreciable Value at the end of the year (G-L)	143.46

Interest on Loan (IoL)

112. 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 decapitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis, and the adjustment should not exceed cumulative depreciation recovered up to the date of de-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."

113. The Weighted Average Rate of IoL has been considered on the basis of the rate prevailing as on 1.4.2024. The Petitioner has prayed that the change in interest rate due to the floating rate of interest applicable, if any, during the 2024-29 tariff period may be adjusted. Accordingly, the floating rate of interest, if any, will be considered at the time of true-up. IoL has been allowed in accordance with Regulation 32 of the 2024 Tariff Regulations. IoL allowed for 2024-29 tariff period in respect of the transmission assets are as follows:

Combined Asset (Existing Assets):

(₹ in lakh)

	Particulars	Combined Asset				
		2024-25	**2025-26**	**2026-27**	**2027-28**	**2028-29**
	Interest on Loan					
A	Gross Normative Loan	8596.49	8596.49	8596.49	8596.49	8596.49
B	Cumulative Repayments up to Previous Year	7763.58	7940.79	8117.99	8295.19	8472.39
C	Net Loan-Opening (A-B)	832.91	655.70	478.50	301.30	124.10
D	Additions	0.00	0.00	0.00	0.00	-68.02
E	Adjustment of gross loan pertaining to de-capitalized asset	0.00	0.00	0.00	0.00	10.28
F	Repayment during the year	177.20	177.20	177.20	177.20	66.37
G	Adjustment of cumulative repayment pertaining to de-capitalized asset	0.00	0.00	0.00	0.00	10.28
H	Net Loan-Closing ((C+D-(F+G))	655.71	478.50	301.30	124.10	0.00
I	Average Loan (C+H)/2	744.31	567.10	389.90	212.70	62.05
J	Weighted Average Rate of Interest on Loan (in %)	8.7663	8.7663	8.7663	8.7663	8.7663
K	**Interest on Loan (I*J)**	**65.25**	**49.71**	**34.18**	**18.65**	**5.44**

Combined Asset (New Equipments):

(₹ in lakh)

	Combined Asset (New Equipment's)	
	Particulars	**2028-29**
	Interest on Loan	
A	Gross Normative Loan	0.00
B	Cumulative Repayments upto Previous Year	0.00
C	Net Loan-Opening (A-B)	0.00
D	Additions	238.04
E	Repayment during the year	9.56
F	Net Loan-Closing (C+D-E)	228.48
G	Average Loan (C+F)/2	114.24
H	Weighted Average Rate of Interest on Loan (in %)	8.1200
I	**Interest on Loan (G*H)**	**9.27**

Return on Equity (RoE)

114. 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.*

(2) 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;

(3) 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."

115. The Petitioner has submitted that the MAT rate applies to it. We have considered the Petitioner's submissions and have gone through the record.

116. We have considered the applicable MAT rate for the RoE, which will be trued-up in accordance with the 2024 Tariff Regulations. The RoE allowed for the transmission assets for the 2024-29 tariff period is as follows:

Combined Asset (Existing Assets):

(₹ in lakh)

	Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
	Return on Equity					
A	Opening Equity	2098.97	2098.97	2098.97	2098.97	2098.97
B	Additions	0.00	0.00	0.00	0.00	-16.60
C	Closing Equity (A+B)	2098.97	2098.97	2098.97	2098.97	2082.37
D	Average Equity (A+C)/2	2098.97	2098.97	2098.97	2098.97	2090.67
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (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 (D*G)**	**394.23**	**394.23**	**394.23**	**394.23**	**392.67**

Combined Asset (New Equipments):

(₹ in lakh)

	Combined Asset (New Equipments)	
	Particulars	**2028-29**
	Return on Equity	
A	Opening Equity	0.00
B	Additions	102.02
C	Closing Equity (A+B)	102.02
D	Average Equity (A+C)/2	51.01
E	Return on Equity (Base Rate) (in %)	15.500
F	MAT Rate for respective year (in %)	17.472
G	Rate of Return on Equity (in %)	18.782
H	**Return on Equity (D*G)**	**9.58**

Operation & Maintenance Expenses (O&M Expenses)

117. The Petitioner has not claimed O&M for the New Equipment in the Combined Asset. The O&M Expenses claimed by the Petitioner for the transmission assets (Existing Asset) for the 2024-29 period are as follows:

Combined Asset (Existing Assets):

(₹ in lakh)

Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
O&M Expenses	689.93	726.15	764.23	804.14	846.74

118. The O&M norms specified under Regulation 36(3)(a) of the 2024 Tariff Regulations are 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	**2024-25**	**2025-26**	**2026-27**	**2027-28**	**2028-29**
Norms for sub-station Bays (₹ 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 (₹ Lakh per MVA or MVAR)					
O&M expenditure per MVA or per MVAr ((₹ Lakh per MVA or MVAR)	*0.262*	*0.276*	*0.290*	*0.305*	*0.322*
Norms for AC and HVDC lines (₹ 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 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)	*0.346*	*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 (₹ Lakh per MW) (Except Gazuwaka BTB)	*2.07*	*2.18*	*2.30*	*2.42*	*2.55*
Gazuwaka HVDC Back-to-Back station (₹ Lakh per MW)	*1.83*	*1.92*	*2.03*	*2.13*	*2.24*
HVDC bipole scheme (₹ Lakh per 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.

……."

119. We have considered the Petitioner's submissions. The O&M Expenses have been worked out in accordance with Regulation 36 of the 2024 Tariff Regulations and the same are as follows:

(₹ in lakh)

Particulars	**Combined Asset**				
	2024-25	**2025-26**	**2026-27**	**2027-28**	**2028-29**
15 Number of 220 kV bays **Ara: Khagul Bay I** **Ara: Khagul Bay II** **Ara: Sasaram Bay I** **Ara: Sasaram Bay II** **Ara: ICT I Bay** **Ara: ICT Ii Bay** **Pusauli: ICT I Bay** **Pusauli: ICT Ii Bay** **Pusauli: Dehri Bay** **Pusauli: Sahupuri Bay** **Pusauli: Ara Bay I** **Pusauli: Ara Bay II** **Khagaul: Ara Bay I** **Khagaul: Ara Bay II** **Biharsharif: ICT Iii Bay (Biharshariff of BSEB)**					
Norms (₹ lakh/Bay)	20.67	21.75	22.90	24.10	25.36
No. of Units (Bays)	15	15	15	15	15
Total	310.05	326.25	343.50	361.50	380.40

Particulars	Combined Asset				
	2024-25	2025-26	2026-27	2027-28	2028-29
6 Number of 132 kV bays 1 Ara: ICT I Bay 1 Ara: ICT II Bay 1 Ara: Dumraon Bay 1 Ara: Ara Bay 2 Ara: Bays For Integration with BSEB					
Norms (₹ lakh/Bay)	15.78	16.61	17.48	18.40	19.35
No. of Units (Bays)	6	6	6	6	6
Total	94.68	99.66	104.88	110.40	116.10
3 Number of 400 kV Bays Pusauli: ICT I Bay Pusauli: ICT II Bay Biharsharif: ICT III Bay					
Norms (₹ lakh/Bay)	29.53	31.08	32.71	34.43	36.23
No. of Units (Bays)	3	3	3	3	3
Total	88.59	93.24	98.13	103.29	108.69
400 kV Pasauli: ICTS Sararam					
Norms (₹ lakh/MVA)	0.26	0.28	0.29	0.31	0.32
No. of Units (MVA)	630	630	630	630	630
Total	82.53	86.94	91.35	96.08	101.43
220 kV Ara: ICTS					
Norms (₹ lakh/MVA)	0.26	0.28	0.29	0.31	0.32
No. of Units (MVA)	200	200	200	200	200
Total	52.40	55.20	58.00	61.00	64.40
Double Circuit (Single Conductor) Ara - Khagul Line: 48.440 Km Sasaram - Ara Line: 112.140 Km Lilo of Dehri Sahupuri at Sasaram: 4.880 Km Lilo of Dumaraon - Ara (BSEB) At: 1.700 Km					
Norms (₹ lakh/Km)	0.37	0.39	0.41	0.43	0.45
No. of Units (Km)	167.16	167.16	167.16	167.16	167.16
Total	61.68	64.86	68.37	71.88	75.72
Total O&M Expenses allowed (₹ in lakh)	**689.93**	**726.15**	**764.23**	**804.14**	**846.74**

Interest on Working Capital (IWC)

120. Regulations 34(1)(d), 34(3) and 34(4) of the 2024 Tariff Regulations specify as under:

> ***"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.

(2) ……

(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."

121. The Petitioner has considered the rate of IWC as 11.90% as on 1.4.2024. IWC is worked out in accordance with Regulation 34 of the 2024 Tariff Regulations. The ROI considered is 11.90% for FY 2024-25 (SBI 1-year MCLR applicable as on 1.4.2024 of 8.65% plus 325 basis points), 12.25% for FY 2025-26 (SBI 1-year MCLR applicable as on 1.4.2025 of 9.00% plus 325 basis points), and 11.95% for FY 2026-27 to FY 2028-29 (SBI 1-year MCLR applicable as on 1.4.2026 of 8.70% plus 325 basis points).

122. 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 assets are as follows:

Combined Asset (Existing Assets):

(₹ in lakh)

	Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
A	Working Capital for O&M Expenses (O&M Expenses for one month)	57.49	60.51	63.69	67.01	70.56
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	103.49	108.92	114.63	120.62	127.01

	Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
C	Working Capital for Receivables (Equivalent to 45 days of annual fixed cost /annual transmission charges)	168.39	171.25	174.08	176.77	180.21
D	**Total Working Capital (A+B+C)**	**329.37**	**340.68**	**352.40**	**364.41**	**377.78**
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)**	**39.20**	**41.73**	**42.11**	**43.55**	**45.15**

Combined Asset (New Equipments):

(₹ in lakh)

	Combined Asset (New Equipments)	
	Particulars	**2028-29**
	Interest on Working Capital	
A	Working Capital for O&M Expenses (O&M Expenses for one month)	0.00
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	0.00
C	Working Capital for Receivables (Equivalent to 45 days of annual fixed cost /annual transmission charges)	3.56
D	**Total Working Capital (A+B+C)**	**3.56**
E	Rate of Interest for working capital (in %)	11.95%
F	**Interest on Working Capital (D*E)**	0.42

Annual Fixed Charges of the 2024-29 Tariff Period

123. The Annual Fixed Charges allowed for the 2024-29 tariff period are summarized as follows:

Combined Asset (Existing Assets):

(₹ in lakh)

Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
Depreciation	177.20	177.20	177.20	177.20	171.71
Interest on Loan	65.25	49.71	34.18	18.65	5.44
Return on Equity	394.23	394.23	394.23	394.23	392.67
Interest on Working Capital	39.20	41.73	42.11	43.55	45.15
O&M Expenses	689.93	726.15	764.23	804.14	846.74
Total	**1365.81**	**1389.03**	**1411.95**	**1437.77**	**1461.71**

Combined Asset (New Equipments):

(₹ in lakh)

Particulars	2028-29
Depreciation	9.56
Interest on Loan	9.28

Particulars	2028-29
Return on Equity	9.58
Interest on Working Capital	0.42
O&M Expenses	0.00
Total	**28.84**

Filing Fee and Publication Expenses

124. The Petitioner has claimed reimbursement of the fee paid by it for filing the Petition and publication expenses. T

125. We have considered the Petitioner's submissions. The Petitioner is entitled to reimbursement of the fee 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)

126. 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.

127. The Regulation 99 of the 2024 Tariff Regulations 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."*

128. We have considered the Petitioner's submissions and perused Regulation 99 of the 2024 Tariff Regulations. In view of the explicit provision made 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 such regulation is notified and issued by the Commission.

License Fee and RLDC Fees and Charges

129. 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 in terms of Regulation 94(3) of the 2024 Tariff Regulations for the 2024-29 tariff period.

Goods and Services Tax

130. 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 will be additionally paid by the Respondents and be charged and billed separately by the Petitioner. It is also prayed that additional taxes, if any, are paid by the Petitioner on account of the demand from the Government/ statutory authorities, and the Commission may allow the same to be recovered from the beneficiaries.

131. We have considered the Petitioner's submissions. 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

132. The Petitioner has submitted that a separate Petition will be filed for 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 transmission assets are not claimed in the instant Petition.

133. 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 the FY 2023-24 after escalating the same at 5.25% per annum to arrive at the estimated Insurance Expense for the FY 2024-25, FY 2025-26, FY 2026-27, FY 2027-28, and FY 2028-29.

134. The Petitioner has not claimed Capital Spares for the transmission assets in the instant Petition for 2024-29 tariff period. Accordingly, the Petitioner has submitted that 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 Capital Spares for the 2019-24 tariff period as per the 2019 Tariff Regulations.

135. 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."*

136. 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 security expenses, capital spares individually costing more than ₹10 lakh and insurance expenses on the estimated basis as per the 2024 Tariff Regulations for the 2024-29 tariff period.

Sharing of Transmission Charges

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

138. We have considered the Petitioner's submissions. The billing, collection, and disbursement of the transmission charges for the transmission assets shall be recovered in terms of 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.

139. To summarise:

a) The details of AFC claimed by the Petitioner in the instant Petition and trued-up AFC approved in the instant order for the Combined Asset are as follows:

Combined Asset

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
AFC Claimed	1681.97	1694.02	1563.63	1546.50	1566.98
AFC Allowed	1681.97	1694.01	1563.60	1546.47	1566.95

b) Annual Fixed Charges allowed for the 2024-29 tariff period for the transmission assets/Combined Asset in this order are follows:

Combined Asset (Existing Assets):

(₹ in lakh)

Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
AFC Claimed	1365.83	1387.82	1411.79	1437.59	1461.51
AFC Allowed	1365.81	1389.03	1411.95	1437.77	1461.71

Combined Asset (New Equipments):

(₹ in lakh)

Particulars	2028-29
AFC Claimed	35.03
AFC Allowed	**28.84**

140. This order disposes of Petition no. 555/TT/2025, in terms of the above discussions and findings.

Sd/-
(Harish Dudani)
Member

Sd/-
(Ramesh Babu V.)
Member