CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Petition No. 530/TT/2025

Coram:

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

Date of Order: 26.10.2026

In the matter of:

Approval under Section 62 read with Section 79 (1) (d) of the Electricity Act, 2003 and under Regulation 15 (1) (a) and Regulation 23 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 2023 for truing up of the transmission tariff for the 2019-24 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 and determination of the transmission tariff for the 2024-29 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024 for Assets under "400 kV Jeypore - Talcher Transmission System" 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 – 737 101, Sikkim

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

...Respondent(s)

Parties Present: Shri Zafrul Hasan, PGCIL
Shri Angaru Naresh Kumar, PGCIL
Shri Vijay G., PGCIL
Shri Vivek Kumar Singh, PGCIL
Shri Amit Yadav, PGCIL
Shri Mukesh Bhakar, PGCIL
Ms. Supriya Singh, PGCIL
Ms. Anshul Garg, PGCIL
Shri Arjun Malhotra, PGCIL
Ms. Kirti, 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 the "Combined Asset"/transmission asset) forming part of Assets under "400 kV Jeypore - Talcher Transmission System" in the Eastern Region.

Asset 1: Assets under 400 kV Jeypore - Talcher Transmission System.

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 21 and 22 above.

b) Approve the Additional capitalization and De-capitalization claimed for 2019-24 block and proposed for 2024-29 for the assets covered under this petition.

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 Regulation 2019 and Tariff regulations 2024 as per para 21 & 22 above for respective block.

d) 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.

e) 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.

f) Allow the petitioner to bill and recover Licensee fee and RLDC fees & charges, separately from the respondents in terms of Regulation 94 (3) and (4) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024.

g) 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.

h) 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 28 above.

i) 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 28 above.

j) 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 28 above.

k) Allow the petitioner to claim expenses of CTUIL borne by POWERGRID through a separate petition as mentioned at para 28 above.

l) Allow the Petitioner to bill and recover GST on Transmission Charges separately from the respondents, if GST on transmission is levied at any rate in future. Further, any taxes including GST and duties including cess etc. imposed

by any statutory/Govt./municipal authorities shall be allowed to be recovered from the beneficiaries.

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

Background

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

a. The implementation of the transmission system was undertaken by NHPC Limited as a part of strengthening the evacuation of power in the Eastern Region, which was subsequently taken over by the Petitioner and the transmission system was approved by the Central Government vide letter dated 5.5.1992 at a cost of ₹12040.00 lakh, including IDC of ₹1720.00 lakh with the scope of work as follows:

i. 400 kV Jeypore-Indravati S/C line; and

ii. 400 kV Indravati-Rengali S/C line.

b. The date of commercial operation (COD) of the transmission system was 1.12.1990. Prior to 1.4.1992, the transmission charges for the afore-mentioned lines were billed by NHPC Limited and from 1.4.1992 by the Petitioner.

c. The transmission tariff for the period from 1.4.1995 to 31.3.1997 and from 1.4.1997 to 31.3.2001 was notified by the Ministry of Power (Government of India) vide notifications dated 14.6.1996 and 4.12.1998, respectively.

d. Based on the terms and conditions of tariff contained in the Commission's Notification dated 26.3.2001, the transmission tariff of the transmission system for the period from 1.4.2001 to 31.3.2004 was allowed vide order dated 22.10.2003 in Petition No. 23/2002.

e. A Review Petition No. 100/2003 filed against order dated 22.10.2003 in Petition No. 23/2002 was dismissed (vide order dated 11.5.2004) at the

admission stage itself. The facts and findings related thereto have not been reproduced herein for the sake of brevity of this order.

f. The transmission tariff of the transmission system for the period from 1.4.2004 to 31.3.2009 was allowed vide order dated 14.9.2005 in Petition No. 122/2004 which was revised vide order dated 31.3.2008 in Petition No. 122/2004 in the process of implementation of the judgment of the Appellate Tribunal for Electricity (APTEL) dated 16.5.2007 in Appeal No. 121/2005.

g. The transmission tariff of the transmission system for the period from 1.4.2009 to 31.3.2014 was allowed vide order dated 8.3.2011 in Petition No. 195/2010. The same was trued-up and tariff for the 2014-19 tariff period was allowed vide order dated 25.1.2016 in Petition No. 538/TT/2014.

h. The Commission subsequently approved the trued-up transmission tariff for the 2014-19 period and transmission tariff for the 2019-24 period for the assets vide order dated 20.12.2021 in Petition No. 448/TT/2020.

i. As per the directions given in the aforesaid Petition No. 448/TT/2020, the Petitioner vide order dated 20.7.2023 in Petition No. 242/MP/2022 sought for an 'in-principle' approval for incurring ACE during 2019-24 tariff period towards replacement of transformers/Reactors concerning 2 transmission assets in the instant Petition as per the RPC approvals.

j. The entire scope of work is complete and is covered in the instant Petition.

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

5. The Petitioner has served a copy of the Petition on the Respondents and notice regarding the filing of this Petition has been published in the newspapers in accordance

with Section 64 of the Electricity Act, 2003 (in short 'the Act') . No comments or suggestions have been received from the general public in response to the aforesaid notices published in the newspapers by the Petitioner.

6. None of the Respondents have filed their reply in the matter.

7. The hearing in this matter was held on 23.12.2025 and the order was reserved. This order is being passed considering the submissions made by the Petitioner vide affidavits dated 26.11.2024, 16.7.2025, and 2.1.2026. Having heard the representatives of the Petitioner and perused the material on record, we proceed to dispose of the Petition.

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

8. The details of the trued-up transmission charges claimed by the Petitioner in respect of the Asset-I(A) (Original Asset) and Asset-I(B)(New Asset) are as follows:

Asset-I(A) (Original Asset)

(₹ in lakh)

Particulars	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Depreciation	322.40	322.44	322.39	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	1144.73	1144.71	1144.69	686.89	680.65
Interest on Working Capital	57.37	54.78	52.19	43.14	50.57
O&M Expenses	810.29	839.32	868.63	899.66	930.50
Total	**2334.79**	**2361.25**	**2387.90**	**1629.69**	**1661.72**

Asset-I(B)(New Asset)

(₹ in lakh)

Particulars	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Depreciation	0.00	0.44	1.58	14.35	29.41
Interest on Loan	0.00	0.27	0.90	9.55	19.00
Return on Equity	0.00	0.39	1.31	10.90	21.28
Interest on Working Capital	0.00	0.02	0.05	0.48	1.04
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Total	**0.00**	**1.12**	**3.84**	**35.28**	**70.73**

9. The details of the trued-up Interest on Working Capital (IWC) claimed by the Petitioner in respect of the Asset-I(A)(Original Asset) and Asset-I(B)(New Equipment) are as follows:

Asset-I(A)(Original Asset)

(₹ in lakh)

Particulars	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
O&M Expenses	67.52	69.94	72.39	74.97	77.54
Maintenance Spares	121.54	125.9	130.29	134.95	139.58
Receivables	287.06	291.11	294.4	200.92	204.31
Total Working Capital	476.12	486.95	497.08	410.84	421.43
Rate of Interest (in %)	12.05	11.25	10.5	10.5	12.00
Interest on Working Capital	**57.37**	**54.78**	**52.19**	**43.14**	**50.57**

(Asset-I(B)(New Asset)

(₹ in lakh)

Particulars	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
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
Receivables	0.00	0.14	0.47	4.35	8.70
Total Working Capital	0.00	0.14	0.47	4.35	8.70
Rate of Interest (in %)	12.05	11.25	10.5	10.5	12.00
Interest on Working Capital	**0.00**	**0.02**	**0.05**	**0.46**	**1.04**

Capital Cost for 2019-24 Tariff Period

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

11. The Commission, vide order dated 20.12.2021 in Petition No. 448/TT/2020, allowed capital cost as on COD for the Asset-I(A)(Original Asset) and Asset-I(B)(New Asset) and Additional Capital Expenditure (ACE) and De-cap for the 2019-24 tariff period. The details of the capital cost as allowed by the Commission in the aforesaid order are as follows:

(₹ in lakh)

Assets	**Capital Cost allowed as on 1.4.2019**	**ACE approved in order dated 20.12.2021 in Petition No. 448/TT/2020**						**Capital Cost allowed as on 31.3.2024**
		ACE/De-cap	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**	
Asset-I(A)(Original Asset) and	12289.33	ACE	14.15	45.44	326.11	202.96	0.00	12439.39
		De-cap	(23.6)	(29.5)	(136.17)	0.00	0.00	

Assets	Capital Cost allowed as on 1.4.2019	ACE approved in order dated 20.12.2021 in Petition No. 448/TT/2020						Capital Cost allowed as on 31.3.2024
		ACE/De-cap	2019-20	2020-21	2021-22	2022-23	2023-24	
Asset-I(b)(New Asset)		Net	(9.45)	15.94	189.94	202.96	0.00	

12. The Petitioner in the instant true-up Petition has claimed the following capital cost and actual ACE and De-cap incurred as per Auditor's Certificate dated 26.11.2024 for the 2019-24 tariff period:

(₹ in lakh)

Assets	Capital Cost claimed as on 1.4.2019	ACE claimed for 2019-24						Capital Cost as on 31.3.2024
		ACE/De-cap	2019-20	2020-21	2021-22	2022-23	2023-24	
Asset-I(A)(Original Asset) and Asset-I(b)(New Asset)	12289.33	ACE	0.00	13.70	19.15	321.17	47.28	12468.90
		De-cap	0.00	(0.42)	0.00	(196.79)	(24.52)	
		Net	0.00	13.28	19.15	124.38	22.76	

13. The capital cost of ₹12289.33 lakh was approved by the Commission as on 31.3.2019 vide order dated 20.12.2021 in Petition No. 448/TT/2020. Accordingly, the same is considered as opening capital cost as on 1.4.2019 for the purpose of truing up of transmission tariff for the 2019-24 period in accordance with Regulation 19 (3) (a) of the 2019 Tariff Regulations.

Additional Capital Expenditure (ACE):

14. The Commission, vide order dated 20.12.2021 in Petition No. 448/TT/2020, allowed the following Additional Capital Expenditure (ACE) for the Asset-I(A)(Original Asset) and Asset-I(B)(New Asset) for the 2019-24 tariff period:

(₹ in lakh)

Asset	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Asset-I(A)(Original Asset) and Asset-I(b)(New Asset)	ACE	14.15	45.44	326.11	202.96	0.00

15. The Petitioner, in the instant Petition has claimed the following ACE in respect of the Asset-I(A)(Original Asset) and Asset-I(B)(New Asset) based on the actual expenditure for 2019-24 period.

(₹ in lakh)

Asset	Particulars	ACE claimed for 2019-24				
		2019-20	2020-21	2021-22	2022-23	2023-24
Asset-I(A)(Original Asset) and Asset-I(b)(New Asset)	ACE	0.00	13.70	19.15	321.17	47.28

16. The Petitioner has submitted that the additional capitalisation proposed and claimed for the tariff block 2019–24 were made on account of the following various heads:

i. Retrofitting of ACDB at Jeypore, Indravati and Rengali Sub-stations.
ii. Replacement of old and obsolete static/Electromechanical type, Protection relays at Jeypore, Indravati and Rengali.
iii. Replacement of 400 kV and 220 kV “BHEL” make dead tank type Porcelain CTs at Jeypore, Indravati and Rengali.
iv. Replacement of 400 kV and 220 kV CVTs at Jeypore, Indravati and Rengali.
v. Replacement of 48 V Battery bank-I at Jeypore Substation.
vi. Insulator replacement, rectification of rusted legs, strengthing of earthing etc. in 400 kV Jeypore-Indravati line.
vii. Replacement of WSI make 336 kV and 245 kV Surge Arrester at Indravati Substation.
viii. Replacement of 250 kVA DG set at Indravati Substation.
ix. Replacement of firefighting system at Indravati and Rengali Substation.
x. Replacement of 220 kV CGL make Pneumatically operated circuit breakers at Rengali.
xi. Replacement of 11/0.433 kV 630 kVA, 3 ph Aux Transformer at Rengali.

xii. Replacement of 400 kV 1ph BHEL make 3x105 MVA ICT-I at Jeypore Substation.

xiii. Replacement of 400 kV 3 ph BHEL make 315 MVA ICT-II at Rengali Substation.

17. With regards to the ACE claimed against the replacement of ICT-I and II at Jeypore and Rengali Substations respectively, the Petitioner has submitted that in compliance to the directions of the Commission, after obtaining due approval of RPC and consent from the beneficiaries, Petition No. 242/MP/2022 was filed by the Petitioner for approval of proposed replacement of ICTs & reactors. Subsequently, the Commission, vide order dated 20.7.2023 in Petition No. 242/MP/2022 accorded 'in-principle' approval for the replacement of above-mentioned ICTs at Jeypore & Rengali Substations along with direction for submission of third-party report.

18. The Petitioner has further submitted that replacement of 400 kV 3x105 MVA BHEL make ICT at Jeypore Sub-station with new ICT of 500 MVA transformation capacity was approved in the 45th TCC & ERPC held on 26.3.2022. Subsequently, the 'in-principle' approval was accorded by the Commission vide order dated 20.7.2023 in Petition No. 242/MP/2022. However, there were severe transportation constraints in supply of 500 MVA OCT at Jeypore Substation and out of 06 proposed routes, none was found feasible for transportation. Considering the difficulties, the 315 MVA transformation capacity ICT to Jeypore Substation was considered. Thereafter, after detailed deliberation, it was agreed in 217th OCC meeting held on 24.7.2024 and in the 52nd TCC & ERPC held on 6.9.2024 to modify the transportation capacity for existing 03x105 MVA ICT at Jeypore to 01 no. 315 MVA instead of earlier approved 500 MVA capacity.

19. Accordingly, the ACE for replacement of 400 kV 1-phase 03x105 MVA BHEL make ICT-I at Jeypore Substation and 400 kV 3 phase 315 MVA BHEL make ICT-II at

Rengali Substation has been spilled-over to next tariff period, i.e., 2024-29 and is being claimed in the instant Petition in FY 2024-25.

20. The Petitioner, vide affidavit dated 26.11.2024, has submitted that variation in ACE and De-cap as approved in Petition No. 448/TT/2020 and claimed spilled-over to subsequent financial years.

21. The Petitioner has further submitted that against the approved ACE of ₹588.66 lakh vide order in Petition No. 448/TT/2020, the actual expenditure incurred in the tariff period 2019-24 is ₹401.30 lakh (FY 2020-21, 2021-22, and 2022-23), and the balanced proposed to incur ₹4742.78 lakh has been spilled-over to F.Y. 2024-25.

22. The Petitioner has also submitted that while projecting the estimated ACE, contracts were not closed and liabilities had not been finalized. However, in the instant true up Petition, ACE is being claimed on the basis of actual payment made to the contractor after receipt of invoices from the contractor and incorporating the amendments till the end of 2019-24. With regards to the De-cap, the Petitioner has submitted that the De-cap claimed for the instant asset is within the original scope of work.

23. The item-wise detailed cost break-up in respect of ACE for the 2019-24 tariff period as submitted by the Petitioner is as under:

Description	Head	Estimated Add cap as per Submission in Petition No. 448/TT/2020	Additional Liability Recognized & Discharged					
			2019-20	2020-21	2021-22	2022-23	2023-24	Total (19-24)
JEYPORE Sub-station								
400 kV MLDB (Along with 2 Nos 100 KVA Lighting Transformer)	SS	1444771	0.00	0.00	0.00	0.00	0.00	0.00

LBB Protection Relays of 02 Nos 400 kV Bays (Indravati Main & Tie Bay) & 06 Nos 220 KV Bays(Jeynagar-I & II, ICT-I & II, Bus Coupler & TBC) with numerical LBB Relays.	SS	1301540				1301540.00		1301540.00
Replacement of 245 KV,1600A,40 KA CT-120 % Rating	SS	1112800				1112800.00		1112800.00
Replacement of 420 KV, 4400 PF,1-PH CVT	SS	647820				634538.00		634538.00
Replacement of 48V , 300 Ah Battery Bank-I	SS	230400		230400.00				230400.00
Dismantling and dragging of 105 MVA, 400/220/33KV ICT-1 Unit-2 (BHELMake) to a suitable location at POWERGRID Jeypore Sub-station. (UnderJTTS ADD-CAP 2019-24)".	SS	541620			0.00		495720.00	495720.00
Demolishing two nos. of Existing firewalls betweenICT-1 Unit-I, Unit-II <(>&<)> Unit-III and disposal of malba/unserviceable waste at POWERGRID, Jeypore Sub-Station	SS	114979					105235.00	105235.00
400KV S/C JEYPORE-INDRAVATI TL LINE								0.00
Insulator string replacement work agaist PID defects	TL	306454				298285.00		298285.00
Chimney Extension work at Towers due to water lock at farming fields Strengthening of existing spike earthing	TL	322876				298093.00	24782.96	322875.96
Replacement of all old rusted number plates & Danger plates (Supply & Service Portion)	TL	318144			308599.40			308599.40
Letter of Award for "Strengthening of existing Spike Earthing of Tower with both Shield Wires at towers of 400KV S/C Jeypore-Indravati Line"	TL	428260			428260.00			428260.00
Purchase Order for "Supply of Earthing materials for strengthening of existing Spike Earthing of Towers with Shield Wires at 400KV S/C Jeypore-Indravati Line under Jeypore TLM Jurisdiction	TL	638533			638532.90			638532.90
Indravati Sub-station	SS							0.00
400 kV MLDB (Alongwith 2 Nos 100 KVA Lighting Transformer)	SS	2726900						0.00
Retrofitting of Electromechanical/Electromagnetic LBB relays	SS	749300				746350.00	2950.00	749300.00
Replacement of400KV,2000A,40 KA CT	SS	2322720				1710720.00	612000.00	2322720.00
Replacement of 420 KV, 8800 PF,1-PH CVT	SS	630120				621298.00		621298.00
Replacement of 336kv Surge Arrester	SS	781176				756548.32		756548.32
Supply & Replacement of 250KVA DG Set	SS	3348240				3116827.14	130613.00	3247440.14
Renovation of Fire Fighting System at Indravati S/S	SS	4182281		1139252.60	540398.60	2230670.00	271960.00	4182281.20
Renovation of Firefighting System (Replacement of Diesel Engine, Jockey pump, control panels, smoke	SS					0.00	0.00	0.00

detection panel, FF annunciation panels etc)								
Rengali Sub-station								0.00
400 kV Emergency LDB (Alongwith 1 No 100 KVA Lighting Transformer)	SS	2549162				2484077.00		2484077.00
LBB Protection Relays of 07 Nos 400 kV Bays (Indravati Main & Tie Bay, Keonjhar line main & tie bays, ICT dia) & 06 Nos 220 KV Bays(OPTCL-1&2, ICT-1&2, Bus Coupler & TBC bays) with numerical LBB Relays.	SS	1948180				1948180.00		1948180.00
Main-II Distance protection relay of Keonjhar/Kolaghat Line.	SS	699032					681260.00	681260.00
Rettrofitting of Fire fighting system	SS	5701557				5432747.75	268809.03	5701556.78
Replacement of 420 & 245 KV CT	SS	5062765				5062764.54		5062764.54
Replacement of 420 & 245KV CVT	SS	1845520				1677240.00		1677240.00
Replacement of 33kV Voltage Transformers	SS	257328				250512.00		250512.00
Retrofitting of 220kV CB	SS	2515760					1857960.00	1857960.00
Replacement of 245 kV LA	SS	147886				147886.16		147886.16
Replacement of 11/0.433kV, 630kVA, 3-ph Aux. Transformers	SS	2563785				2287172.00	276613.00	2563785.00
			-	**1369652.60**	**1915790.90**	**32118248.91**	**4727902.99**	**40131595.40**

24. In compliance with queries raised vide TV letter dated 1.7.2025, the Petitioner vide affidavit dated 16.7.2025 has submitted the desired information as under:

Sr. No.	**Information sought vide TV letter**	**Information submitted by the Petitioner**
1	Provide the exact regulation under 25(2) of the 2019 Tariff Regulations for which the Additional Capital Expenditure (ACE) proposed is claimed in the 2019-24 Tariff period.	The Petitioner has submitted that he Add-Cap incurred during 2019-24 tariff block has been claimed under Regulation 25(2)(a) & 25(2)(c) of the CERC (Terms and Conditions of Tariff) Regulations, 2019. the equipment had been in service for over 25 years and, due to ageing, technological upgradation, and lack of/limited availability of maintenance support, began exhibiting operational issues that posed a risk to grid stability. In order to mitigate these operational risks and ensure reliable grid operation, replacement and/or retrofitting of the equipment/items was undertaken. With regard to equipment obsolescence, it may be submitted that the Original Equipment Manufacturers (OEMs), of some critical components such as circuit breakers and relays, have expressed their inability to continue providing maintenance support and have recommended replacement of similar equipment. Furthermore, for problematic Current
2	For Additional Capital Expenditure (ACE) proposed under 25(2)(c) of 2019 Tariff regulation, provide Certificate of obsolescence for Asset-I(A)(Original Asset) by the OEM or in absence of the same, Certificate from the competent authority regarding the obsolescence of the equipment.	

		Transformers (CTs) and Circuit Breakers (CBs), repairs are not advisable due to their hermetically sealed construction. Any attempt to replace active components in such equipment would require intervention at the manufacturer's facility, a process that is not deemed techno economically viable. Consequently, complete replacement of these units is proposed in such cases. Additionally, the replacement of AC Distribution Boards (ACDBs), DC Distribution Boards (DCDBs), fire-fighting systems, and rectification works on transmission lines is necessitated by age-related deterioration. This deterioration manifests as rusting of panels, brittleness in cabling, and degradation of associated components. Such ageing effects significantly compromise operational reliability and safety, thereby warranting timely replacement and refurbishment to ensure continued effective performance
3	Confirm whether there is no further additional information required to be submitted by the Petitioner	The petitioner has submitted the existing ICT (specifically, the 03x105 MVA ICT-I) at the Jeypore Substation was initially expected to be augmented or replaced with a new 315 MVA ICT by 15.01.2025. Now, the revised anticipated completion date for this replacement is 31.08.2025

25. The Asset-wise/party-wise Liability Flow Statement as submitted by the Petitioner vide affidavit dated 16.7.2025 is as under:

(₹ in lakh)

Asset No.	**Party**		**Particular's (TL/SS)**	**Additional Liability Recognized & Discharged**					
				2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**Total (19-24)**
	JEYPORE Sub-station								
JEYPORE TALCHER TRANSMISSION SYSTEM	RAHSAN ENGINEERING	400 kV MLDB (Along with 2 Nos 100 KVA Lighting Transformer)	SS						-
	GE Vernova T&D india Limited	LBB Protection Relays of 02 Nos 400 kV Bays (Indravati Main & Tie Bay) & 06 Nos 220 KV Bays(Jeynagar-I & II, ICT-I & II, Bus Coupler & TBC) with numerical LBB Relays.	SS				13.02		13.02
	CG POWER AND INDUSTRIAL SOLUTIONS	Replacement of 245 KV,1600A,40 KA CT-120 % Rating	SS				11.12		11.12
	GE Vernova T&D India Limited	Replacement of 420 KV, 4400 PF,1-PH CVT	SS				6.35		6.35
	Industrial power System	Replacement of 48V , 300 Ah Battery Bank-I	SS		2.30				2.30

	SAI TESLA POWERTECH	Dismantling and dragging of 105 MVA, 400/220/33KV ICT-1 Unit-2 (BHELMake) to a suitable location at POWERGRID Jeypore Sub-station. (UnderJTTS ADD-CAP 2019-24)".	SS					4.96	4.96
	Prasanta Kumar Padhi	Demolishing two nos. of Existing firewalls betweenICT-1 Unit-I, Unit-II <(>&<)> Unit-III and disposal of malba/unserviceable waste at POWERGRID, Jeypore Sub-Station	SS					1.05	1.05
	400KV S/C JEYPORE-INDRAVATI TL LINE								
	SELIM CONSTRUCTION	Insulator string replacement work agaist PID defects	TL				2.97		2.97
	santosh kumar Nahak	Chimney Extension work at Towers due to water lock at farming fields Strengthening of existing spike earthing	TL				2.98	0.25	3.23
	Dambaru Dhar Nahak	Replacement of all old rusted number plates & Danger plates (Supply & Service Portion)	TL			3.09			3.09
	santosh kumar Nahak	Letter of Award for "Strengthening of existing Spike Earthing of Tower with both Shield Wires at towers of 400KV S/C Jeypore-Indravati Line"	TL			4.28			4.28
	JYOTI METAL INDUSTRIES	Purchase Order for "Supply of Earthing materials for strengthening of existing Spike Earthing of Towers with Shield Wires at 400KV S/C Jeypore-Indravati Line under Jeypore TLM Jurisdiction	TL			6.38			6.38
	Indravati Sub-station		SS						
	L S POWER CONTROL PVT LTD	400 kV MLDB (Alongwith 2 Nos 100 KVA Lighting Transformer)	SS						-
	GE Vernova T&D india Limited	Retrofitting of Electromechanical/Electromagnetic LBB relays	SS				7.46	0.03	7.49
	CG POWER AND INDUSTRIAL SOLUTIONS	Replacement of400KV,2000A,40 KA CT	SS				17.11	6.12	23.23
	GE Vernova T&D India Limited	Replacement of 420 KV, 8800 PF,1-PH CVT	SS				6.22		6.22
	LAMCO INDUSTRIES PVT. LTD	Replacement of 336kv Surge Arrester	SS				7.57		7.57
	ELECTRO EQUIPMENTS	Supply & Replacement of 250KVA DG Set	SS				31.17	1.31	32.48
	FIRE GUARD SYNDICATE	Renovation of Fire Fighting System at Indravati S/S	SS		11.40	5.40			16.80
	3D FIRE & SAFETY PVT. LTD.	Renovation of Firefighting System (Replacement of Diesel Engine, Jockey pump, control panels, smoke detection panel, FF annunciation panels etc)	SS				22.31	2.72	25.03
	Rengali Sub-station								
	Mika Engineers	400 kV Emergency LDB (Alongwith 1 No 100 KVA Lighting Transformer)	SS				24.84		24.84

	GE Vernova T&D india Limited	LBB Protection Relays of 07 Nos 400 kV Bays (Indravati Main & Tie Bay, Keonjhar line main & tie bays, ICT dia) & 06 Nos 220 KV Bays(OPTCL-1&2, ICT-1&2, Bus Coupler & TBC bays) with numerical LBB Relays.	SS				19.48		19.48
	Hitachi Energy India Limited	Main-II Distance protection relay of Keonjhar/Kolaghat Line.	SS					6.81	6.81
	3D FIRE & SAFETY PVT. LTD.	Rettrofitting of Fire fighting system	SS				54.32	2.69	57.01
	CG POWER AND INDUSTRIAL SOLUTIONS	Replacement of 420 & 245 KV CT	SS				50.63		50.63
	GE Vernova T&D India Limited	Replacement of 420 & 245KV CVT	SS				16.77		16.77
	MEHRU Electricals and Mechanical En	Replacement of 33kV Voltage Transformers	SS				2.51		2.51
	INDUSTRIAL SOLUTIONS	Retrofitting of 220kV CB	SS					18.57	18.57
	LAMCO INDUSTRIES PVT. LTD	Replacement of 245 kV LA	SS				1.48		1.48
	Telawne Power Equipments Pvt. Ltd.	Replacement of 11/0.433kV, 630kVA, 3-ph Aux. Transformers	SS				22.86	2.77	25.63
	Total			**-**	**13.70**	**19.15**	**321.17**	**47.28**	**401.30**

26. We have considered the submissions of the Petitioner. It is observed that the Petitioner in the instant Petition has claimed the ACE on account of actual expenditure incurred on replacement of substation equipment's during 2019-24 Tariff Period. The details of ACE claimed by the Petitioner are as under:

Description	**Substation**	**Head**	**2019 -20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**Total (19-24)**
Retrofitting of ACDB	Jeypore	SS	0.00	0.00	0.00	0.00	0.00	**0.00**
	Indravati	SS	0.00	0.00	0.00	0.00	0.00	**0.00**
	Rengali	SS	0.00	0.00	0.00	2484077.00	0.00	**2484077.00**
Replacement of Electro mechanical Protection Relay	Jeypore	SS	0.00	0.00	0.00	1301540.00	0.00	**1301540.00**
	Indravati	SS	0.00	0.00	0.00	746350.00	2950.00	**749300.00**
	Rengali	SS	0.00	0.00	0.00	1948180.00	681260.00	**2629440.00**
Replacement of 400 kV and 220 KV CTs	Jeypore	SS	0.00	0.00	0.00	1112800.00	0.00	**1112800.00**
	Indravati	SS	0.00	0.00	0.00	1710720.00	612000.00	**2322720.00**
	Rengali	SS	0.00	0.00	0.00	5062764.54	0.00	**5062764.54**
Replacement of 400 kV and 220 KV CVTs	Jeypore	SS	0.00	0.00	0.00	634538.00	0.00	**634538.00**
	Indravati	SS	0.00	0.00	0.00	621298.00	0.00	**621298.00**
	Rengali	SS	0.00	0.00	0.00	1677240.00	0.00	**1677240.00**
Replacement of 48 V Battery Bank	Jeypore	SS	0.00	230400.00	0.00	0.00	0.00	**230400.00**
Replacement of 336 kV And 245 kV Surge Arrestors	Indravati	SS	0.00	0.00	0.00	756548.32	0.00	**756548.32**
Replacement of 250 KVA DG set	Indravati	SS	0.00	0.00	0.00	3116827.14	130613.00	**3247440.14**
	Indravati	SS	0.00	1139252.60	540398.60	2230670.00	271960.00	**4182281.20**

Replacement of Firefighting system	Rengali	SS	0.00	0.00	0.00	5432747.75	268809.03	**5701556.78**
Replacement of 220 kV CBs	Rengali	SS	0.00	0.00	0.00	0.00	1857960.00	**1857960.00**
Replacement of 11/0.433 kV 630 KVA 3-Phase Aux. Transformer	Rengali	SS	0.00	0.00	0.00	2287172.00	276613.00	**2563785.00**
Replacement of 33 KV Voltage Transformer	Rengali	SS	0.00	0.00	0.00	250512.00	0.00	**250512.00**
Dismantling and dragging of 105 MVA ICT & demolishing of two nos of fire protection wall at Jeypore substation	Jeypore	SS	0.00	0.00	0.00	0.00	600955.00	**600955.00**
Replacement of LAs	Rengali	SS	0.00	0.00	0.00	147886.16	0.00	**147886.16**
Insulator Replacement, rectification of rusted legs, strengthening of earthing etc in 400 kV Jeypore -Indravati Line	-	TL	0.00	0.00	1375392.30	596378.00	24782.96	**1996553.26**
Total			**0.00**	**1369652.60**	**1915790.90**	**32118248.91**	**4727902.99**	**40131595.40**

27. The Commission, vide order dated 20.12.2021 in Petition No. 448/TT/2020, has observed that these items are critical in nature and their failure may affect the stability and reliability of the grid and consequently approved the ACE on account of replacement of isolators, CTs, CVTs, DG set, Fire-fighting System, Surge arrestors, control and relay panels, CBs, insulators, rectification of rusted legs and strengthening of earthing etc. due to obsolescence of technology. The relevant extract of order dated 20.12.2021 is as follows:

> *"44. We have considered the submissions of the Petitioner and observe that the Petitioner has proposed ACE at the fag end of the useful life of the transmission system and has proposed five years extension of life for the transmission system. The Petitioner has neither submitted the consent of beneficiaries/ Respondents nor has placed any material(s) on record to show that the projected ACE has the consent of beneficiaries/ Respondents. The proposed ACE is towards replacement of isolators, CTs, CVTs, DG set, Firefighting system, ICTs, surge arrestors, control and relay panels, CB, insulator replacement, rectification of rusted legs and strengthening of earthing etc. due to obsolescence of technology. These items are of critical nature and their failure may affect the stability and reliability of the grid. As such, the replacement of these equipment and consequential ACE is approved, subject to true-up on actual basis. We direct the Petitioner to submit the details of abstract cost estimates and the actual cost of the replaced equipment sub-station wise at the time of truing up."*

28. Therefore, in line with the discussion and decision held in the order dated 20.12.2021 in Petition No. 448/TT/2020, the actual ACE claimed by the Petitioner on account of replacement of ACDB, Electro-mechanical protection relays, CTs, CVTs, 48 V Battery Bank, Surge arrestors, 250 KVA DG Set, Firefighting system, CBs, 11/0.433 kV 633 KVA, 3-phase Aux Transformers, 33 kV Voltage Transformer, LAs, insulators, rectification of rusted legs and strengthening of earthing and Dismantling of ICT along with demolishing of 02 nos of fire protection wall at Jeypore, Indravati and Rengali substations, is hereby admitted and allowed under Regulation 25(2)(c) of 2019 Tariff Regulations. The details of the ACE allowed are as follows:

(₹ in lakh)

Particulars	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**Total (19-24)**
Replacement of Substation equipment's	0.00	13.70	19.15	321.17	47.28	401.30

De-capitalisation

29. The Petitioner in the instant trued-up Petition has proposed the de-capitalisation in respect of replacement of substation equipment's during 2019-24 Tariff period. The detailed statement of proposed de-capitalisation submitted by the Petitioner is as follows:

(₹ in lakh)

Year of De-capitalisation	**Work/Equipment proposed to be de-capitalised**	**Year of capitalisation**	**Original Book Value**	**Debt Equity ratio**	**Cumulative Depreciation corresponding to de-capitalisation**	**Cumulative repayment of loan corresponding to de-capitalisation**
2020-21	Substation	1990-91	0.42	50:50	0.38	0.21
2022-23	Substation	1990-91	196.79	50:50	177.11	98.40
2023-24	Substation	1990-91	24.52	50:50	22.07	12.27
Total	Substation		221.73		199.56	110.88

30. We have considered the submissions of the Petitioner. The de-capitalisation proposed by the Petitioner against replacement of substation equipment's at Jeypore,

Indravati and Rengali Substations is hereby admitted and allowed in respect of instant transmission asset for 2019-24 tariff period as under:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24	Total
De-capitalisation	0.00	0.42	0.00	196.79	24.52	221.73

31. Accordingly, the details of net ACE allowed in respect of instant transmission asset for 2019-24 tariff period is as follows:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24	Total
Add-cap	0.00	13.70	19.15	321.17	47.28	401.30
De-capitalisation	0.00	(0.42)	0.00	(196.79)	(24.52)	(221.73)
Net ACE	0.00	13.28	19.15	124.38	22.76	179.57

32. Accordingly, the details of capital cost and ACE allowed in respect of instant transmission assets for the 2019-24 tariff period are as follows:

(₹ in lakh)

Assets	Capital Cost as on 1.4.2019	Net ACE allowed					Capital Cost as on 31.3.2024
		2019-20	2020-21	2021-22	2022-23	2023-24	
Asset-I	12289.33	0.00	13.28	19.15	124.38	22.76	12468.90

Adjustment in Equity

33. The transmission system was put under commercial operation on 1.12.1990 and the debt-equity ratio as on COD was 50:50. Since the Weighted Average Life for the transmission system was determined as 31 years, the transmission system shall complete its useful life on 30.11.2021. First proviso to Regulation 18(3) of the 2019 Tariff Regulations provides that in case of a transmission system including communication system, which has completed its useful life on or after 1.4.2019 and if the actual equity actually deployed as on 1.4.2019 is more than 30% of the capital cost, then the equity shall be restricted to 30% of the total equity deployed as per Regulation 18(3) of the 2019 Tariff Regulations.

34. The debt-equity ratio as on 31.3.2019 is 50.41:49.59, i.e., the equity deployed is more than 30%. Therefore, as per proviso to Regulation 18(3) of the 2019 Tariff

Regulations, equity from 1.12.2021 onwards has been restricted to 30%. Accordingly, the capital cost for the 2019-24 tariff period is approved as follows:

(₹ in lakh)

Particulars	***Amount***
Closing equity as on 31.3.2021(a)	*6094.59*
Closing equity as on 30.11.2021(b)	*6094.59**
Equity in excess of 30%(c)	*2407.92#*
Equity admissible as on 1.12.2021 (b-c)	*3686.67*

**Represents 49.59% of Gross Block of ₹12288.91 lakh as on 30.11.2021.*
#Represents 30% of Gross Block of ₹12288.91 lakh as on 1.12.2021.

Debt-Equity ratio

35. The details of the debt-equity ratio considered and allowed under Regulation 18 of the 2019 Tariff Regulations for computation of tariff of the Asset-I(A)(Original Asset) and Asset-I(b)(New Asset) during the 2019-24 tariff period are as follows:

Asset-I(A)(Original Asset)

Funding	Capital Cost as on 1.4.2019 (₹ in lakh)	(in %)	De-cap in 2019-20 (₹ in lakh)	(in %)	Capital Cost as on 31.3.2020 (₹ in lakh)	(in %)
Debt	6194.53	50.41	0.00	50.41	6194.53	50.41
Equity	6094.80	49.59	0.00	49.59	6094.80	49.59
Total	**12289.33**	100.00	**0.00**	100.00	**12289.33**	100.00

Funding	Capital Cost as on 1.4.2020 (₹ in lakh)	(In %)	De-cap in 2020-21 (₹ in lakh)	Capital Cost as on 31.3.2021 (₹ in lakh)	(In %)
Debt	6194.53	50.41	-0.21	6194.32	50.41
Equity	6094.80	49.59	-0.21	6094.59	49.59
Total	**12289.33**	**100.00**	**-0.42**	**12288.91**	**100.00**

Funding	Capital Cost as on 1.4.2021 (₹ in lakh)	(In %)	De-cap in 2021-22 (₹ in lakh)	Capital Cost as on 30.11.2021 (₹ in lakh)	(In %)
Debt	6194.32	50.41	0.00	6194.32	50.41
Equity	6094.59	49.59	0.00	6094.59	49.59
Total	**12288.91**	**100.00**	**0.00**	**12288.91**	**100.00**

Funding	Capital Cost as on 1.12.2021 (₹ in lakh)	(In %)	De-cap in 2021-22 (₹ in lakh)	Capital Cost as on 31.3.2022 (₹ in lakh)	(In %)
Debt	6194.32	50.41	0.00	6194.32	50.41
Restricted Equity @30%	3686.67	30.00	0.00	3686.67	30.00
Excess Equity	2407.92	19.59	0.00	2407.92	19.59
Total	**12288.91**	**100.00**	**0.00**	**12288.91**	**100.00**

**Equity has been restricted to 30% from 1.12.2021 onwards due to completion of useful life of the Asset-I(A)(Original Asset) for the Computation of ROE*
*** The opening equity as on 1.12.2021 has been adjusted to Rs.3686.67 lakh (Rs.6094.59 lakh-Rs.2407.92 lakh i.e.Equity in excess of 30% reduced as discussed above) (being 30% of Gross Block of ₹12288.91 lakh)*

Funding	Capital Cost as on 1.4.2022 (₹ in lakh)	(In %)	De-cap in 2022-23 (₹ in lakh)	Capital Cost as on 31.3.2023 (₹ in lakh)	(In %)
Debt	6194.32	50.41	-98.40	6095.92	50.41
Restricted Equity @30%	3686.67	30.00	-59.04	3627.63	30.00
Excess Equity	2407.92	19.59	-39.35	2368.57	19.59
Total	**12288.91**	**100.00**	**-196.79**	**12092.12**	**100.00**

Funding	Capital Cost as on 1.4.2023 (₹ in lakh)	(In %)	Decap in 2023-24 (₹ in lakh)	Capital Cost as on 31.3.2024 (₹ in lakh)	(In %)
Debt	6095.92	50.41	-12.26	6083.66	50.41
Restricted Equity @30%	3627.63	30.00	-7.36	3620.28	30.00
Excess Equity	2368.57	19.59	-4.90	2363.66	19.59
Total	**12092.12**	**100.00**	**-24.52**	**12067.60**	**100.00**

(Asset-I(B)(New Asset):

Funding	ACE in 2020-21 (₹ in lakh)	(in %)	ACE in 2021-22 (₹ in lakh)	(in %)	ACE in 2022-23 (₹ in lakh)	(in %)	ACE in 2023-24 (₹ in lakh)	(in %)	Capital Cost as on 31.3.2024 (₹ in lakh)	(in %)
Debt	9.59	70.00	13.41	70.00	224.82	70.00	33.10	70.00	280.91	70.00
Equity	4.11	30.00	5.75	30.00	96.35	30.00	14.18	30.00	120.39	30.00
Total	**13.70**	**100.00**	**19.15**	**100.00**	**321.17**	**100.00**	**47.28**	**100.00**	**401.30**	**100.00**

Depreciation

36. The Asset-I(A)(Original Asset) has already completed more than 12 years before 1.4.2019. Accordingly, depreciation has been allowed based on the remaining depreciable value upto 31.3.2021 (as the life of Asset-I(A)(Original Asset) expires on 30.11.2021) and thereafter no depreciation is allowed.

37. The Petitioner, has further submitted that the ACE for the Combined Asset (Asset-I(B)(New Asset) is proposed during tariff period 2019-24 and the Petitioner has claimed depreciation on the Asset-I(B)(New Asset) under Regulation 33(8) of the 2024 Tariff Regulations by spreading the depreciable value equally over fourteen years from the first year of additional capitalisation, i.e., FY 2020-21.

38. We have considered the submissions of the Petitioner. As the Regulation 33(8) of the 2024 Tariff Regulations is not applicable in 2019-24 tariff period, the depreciation for Asset-I(B)(New Asset) has been allowed on normative basis (i.e. @5.28%).

39. The depreciation approved for the Combined Asset for the 2019-24 tariff period is as follows:

Asset-I(A)(Original Asset)

(₹ in lakh)

	Particulars	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
	Depreciation					
A	Opening Gross Block	12289.33	12289.33	12288.91	12288.91	12092.12
B	De-cap during 2019-24 due to ACE	0.00	-0.42	0.00	-196.79	-24.52
C	Closing Gross Block (A+B)	12289.33	12288.91	12288.91	12092.12	12067.60
D	Average Gross Block (A+C)/2 / Closing Gross block*	12289.33	12289.12	12288.91	12092.12*	12067.60*
E	Average Capital Cost (90% depreciable assets)(D-F-J)	12269.97	12269.76	12269.55	12072.76	12048.24
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%)	11042.97	11042.78	11042.60	10865.48	10843.42
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)	11042.97	11042.78	11042.60	10865.48	10843.42
J	Freehold Land	19.36	19.36	19.36	19.36	19.36
K	Weighted average rate of Depreciation (WAROD) (in %)	Spread-over depreciation				

	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
L	Balance useful life of the asset	3	2	1	0	0
M	Lapsed life at the beginning of the year	28	29	30	31	32
N	**Combined Depreciation during the year**	**322.42**	**322.42**	**322.42**	**0.00**	**0.00**
O	Cumulative Depreciation at the end of the year	10398.14	10720.18	11042.60	10865.48	10843.42
P	Remaining Aggregate Depreciable Value at the end of the year(I-O)	644.83	322.61	0.00	0.00	0.00

Asset-I(B)(New Asset)

(₹ in lakh)

	Particulars	2020-21	2021-22	2022-23	2023-24
A	Opening Gross Block	0.00	13.70	32.85	354.02
B	Addition during 2019-24 due to ACE	13.70	19.15	321.17	47.28
C	Closing Gross Block (A+B)	13.70	32.85	354.02	401.30
D	Average Gross Block (A+C)/2	6.85	23.28	193.44	377.66
E	Average Capital Cost (90% depreciable assets)	6.85	23.28	193.44	377.66
F	Average Capital Cost (100% depreciable assets)	0.00	0.00	0.00	0.00
G	Depreciable Value (excluding IT equipment and software) (E*90%)	6.17	20.95	174.09	339.89
H	Depreciable Value of IT equipment and software (F*100%)	0.00	0.00	0.00	0.00
I	Total Depreciable Value (G+H)	6.17	20.95	174.09	339.89
J	Weighted average rate of Depreciation (WAROD) (in %)	5.26	5.28	5.28	5.28
K	**Combined Depreciation during the year (D*J)**	0.36	1.23	10.21	19.94
L	Cumulative Depreciation at the end of the year	0.36	1.59	11.80	31.74
M	Remaining Aggregate Depreciable Value at the end of the year(I-L)	5.81	19.36	162.29	308.15

40. The details of depreciation allowed vide order dated 20.12.2021 in Petition No. 448/TT/2020 in respect of the Asset-I(A)(Original Asset) and Asset-I(B)(New Asset); depreciation claimed by the Petitioner in the instant Petition, and trued-up depreciation approved in the instant order are as follows:

(₹ in lakh)

Asset-I(A)(Original Asset)	2019-20	2020-21	2021-22	2022-23	2023-24
Allowed vide order dated 20.12.2021 in Petition No. 448/TT/2020	318.88	317.55	330.82	0.00	0.00
Claimed by the Petitioner in the instant Petition	322.40	322.44	322.39	0.00	0.00
Approved after true-up in this order	322.42	322.42	322.42	0.00	0.00
Asset-I(B)(New Asset)	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Allowed vide order dated 20.12.2021 in Petition No. 448/TT/2020	0.37	1.95	11.76	25.72	31.08
Claimed by the Petitioner in the instant Petition	0.00	0.44	1.58	14.35	29.41
Approved after true-up in this order	0.00	0.36	1.23	10.21	19.94

Interest on Loan (IoL)

41. The Petitioner has not claimed any IoL in respect of the Combined Asset (Existing System) during 2019-24 tariff period. However, the Petitioner has claimed IoL for the Combined Asset {Asset-I(B)(New Asset}.

42. 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 the Asset-I(B)(New Asset) is as follows:

Asset-I(B)(New Asset)

(₹ in lakh)

	Particulars	Asset-I(B)(New Asset)			
		2020-21	2021-22	2022-23	2023-24
	Interest on Loan				
A	Gross Normative Loan	0.00	9.59	23.00	247.81
B	Cumulative Repayments upto Previous Year	0.00	0.36	1.59	11.80
C	Net Loan-Opening (A-B)	0.00	9.23	21.41	236.01
D	Additions	9.59	13.41	224.82	33.10
E	Repayment during the year	0.36	1.23	10.21	19.94
F	Net Loan-Closing (C+D-E)	9.23	21.41	236.01	249.17

	Particulars	Asset-I(B)(New Asset)			
		2020-21	2021-22	2022-23	2023-24
G	Average Loan (C+F)/2	4.62	15.32	128.71	242.59
H	Weighted Average Rate of Interest on Loan (in %)	5.9595	5.9494	7.5692	8.1428
I	**Interest on Loan (G*H)**	**0.28**	**0.91**	**9.74**	**19.75**

43. The details of IoL allowed vide order dated 20.12.2021 in Petition No. 448/TT/2020 for Asset-I(B)(New Asset); IoL claimed by the Petitioner in the instant Petition, and trued-up IoL approved in the instant order are as follows:

(₹ in lakh)

Asset-I(B)(New Asset)	2019-20	2020-21	2021-22	2022-23	2023-24
Allowed vide order dated 20.12.2021 in Petition No. 448/TT/2020	0.36	1.83	11.06	23.53	26.72
Claimed by the Petitioner in the instant Petition	0.00	0.27	0.90	9.55	19.00
Approved after true-up in this order	0.00	0.28	0.91	9.74	19.75

Return on Equity (RoE)

44. 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). The Petitioner has 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 [(BaseRate)/(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

45. 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-II 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 [(BaseRate)/(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

46. Accordingly, the trued-up RoE approved in respect of the Asset-I(A)(Original Asset) and Asset-I(B)(New Asset) for the 2019-24 tariff period is as follows:

Asset-I(A)(Original Asset)

(₹ in lakh)

	Particulars	Asset-I(A)(Original Asset)					
		2019-20	2020-21	2021-22 (pro-rata 1.4.2021 to 30.11.2021)	2021-22 (1.12.2021-31.3.2022)	2022-23	2023-24
Return on Equity							
A	Opening Equity	6094.80	6094.80	6094.59	3686.67	3686.67	3627.64
B	Additions	0.00	(0.21)	0.00	0.00	(59.04)	(7.36)
C	Closing Equity (A+B)	6094.80	6094.59	6094.59	3686.67	3627.64	3620.28
D	Average Equity (A+C)/2	6094.80	6094.70	6094.59	3686.67	3657.15	3623.96
E	Return on Equity (Base Rate) (in %)	15.500	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	17.472
G	Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782	18.782	18.782
H	Return on Equity (D*G)	1144.73	1144.71	1144.69	692.43	686.89	680.65
I	Pro-rata Return on Equity	1144.73	1144.71	765.21	229.55	686.89	680.65

Asset-I(B)(New Asset)

(₹ in lakh)

	Particulars	Asset-I(B)(New Asset)			
		2020-21	2021-22	2022-23	2023-24
	Return on Equity				
A	Opening Equity	0.00	4.11	9.86	106.21
B	Additions	4.11	5.75	96.35	14.18
C	Closing Equity (A+B)	4.11	9.86	106.21	120.39
D	Average Equity (A+C)/2	2.06	6.98	58.03	113.30
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472
G	Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782
H	**Return on Equity (D*G)**	**0.39**	**1.31**	**10.90**	**21.28**

47. The details of RoE allowed vide order dated 20.12.2021 in Petition No. 448/TT/2020 for the Asset-I(A)(Original Asset) and Asset-I(B)(New Asset), RoE claimed by the Petitioner in the instant Petition, and trued-up RoE approved in the instant order are as follows:

(₹ in lakh)

Asset-I(A)(Original Asset)	2019-20	2020-21	2021-22 (pro-rata 1.4.2021 to 30.11.2021)	2021-22 (1.12.2021-31.3.2022)	2022-23	2023-24
Allowed vide order dated dated 20.12.2021 in Petition No. 448/TT/2020	1143.62	1141.12	755.56	301.46	681.79	681.79
Claimed by the Petitioner in the instant Petition	1144.73	1144.71	1144.69		686.89	680.65
Approved after true-up in this order	1144.73	1144.71	765.21	229.55	686.89	680.65

(₹ in lakh)

Asset-I(B)(New Asset)	2019-20	2020-21	2021-22	2022-23	2023-24
Allowed vide order dated dated 20.12.2021 in Petition No. 448/TT/2020	0.40	2.08	12.55	27.45	33.17
Claimed by the Petitioner in the instant Petition	0.00	0.39	1.31	10.90	21.28
Approved after true-up in this order	0.00	0.39	1.31	10.90	21.28

Operation & Maintenance Expenses (O&M Expenses)

48. The Petitioner in the instant true-up Petition has claimed the following O&M Expenses for Asset-I(A)(Original Asset) and no O&M Expenses is claimed for Asset-I(B)(New Asset):

Asset-I(A)(Original Asset)

(₹ in lakh)

O&M Expenses	2019-20	2020-21	2021-22	2022-23	2023-24
	810.29	839.32	868.63	899.66	930.50

49. We have considered the submissions of the Petitioner. The O&M Expenses allowed for the Asset-I(A)(Original Asset) as per norms specified in the 2019 Tariff Regulations are as follows:

(₹ in lakh)

Particulars	Substation				
	2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**
400 kV Bays **Jeypore substation** • **1 No. ICT bay for 400/220 KV 315 MVA ICT** • **1 No. Line bay for 400 KV S/C Jeypore -Indravati Transmission line** **Indravati substation** • **1 No. Line bay for 400 KV S/C Jeypore -Indravati Transmission line.** • **1 No. Line bay for 400 KV S/C Rengali -Indravati Transmission line** **Rengali substation** • **1 No. Line bay for 400 KV S/C Rengali -Indravati Transmission line.** • **2 No's. ICT bay for 400/220 KV 315 MVA ICT-I & II.** • **1 No. Reactor bay for 50 MVAR bus reactor.**					
Norms as per regulation (₹ lakh per Bay)	32.15	33.28	34.45	35.66	36.91
O & M Expenses allowed	**257.2**	**266.24**	**275.6**	**285.28**	**295.28**
400 kV ICT **Jeypore substation** • **1 No. 400/220 KV 315 MVA ICT** **Rengali substation** • **2 No's. 400/220 KV 315 MVA ICT-I & II.**					
Norms as per regulation (₹ lakh per MVA)	0.358	0.371	0.384	0.398	0.411
O & M Expenses allowed	**338.31**	**350.60**	**362.88**	**376.11**	**388.40**
Total O&M Expenses allowed	**595.51**	**616.84**	**638.48**	**661.39**	**683.68**

(₹ in lakh)

Particulars	Transmission line				
	2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Single Circuit (Twin Conductor) • **400 KV S/C Jeypore -Indravati Transmission line (Total length of line : 356 Km).** • **400 KV S/C Rengali -Indravati Transmission line (Total length of line : 71 Km).**					
Norms as per regulation (₹ lakh per Km)	0.503	0.521	0.539	0.558	0.578
O & M Expenses allowed	**214.78**	**222.47**	**230.15**	**238.27**	**246.81**

(₹ in lakh)

Particulars	Asset-I				
	2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**
O&M expenses allowed for substation	595.51	616.84	638.48	661.39	683.67
O&M expenses allowed for Transmission line	214.78	222.47	230.15	238.27	246.81

Particulars	Asset-I				
	2019-20	2020-21	2021-22	2022-23	2023-24
Total O&M Expenses allowed	**810.29**	**839.30**	**868.63**	**899.66**	**930.48**

50. Accordingly, the details of O&M Expenses allowed vide order dated 20.12.2021 in Petition No. 448/TT/2020; O&M claimed by the Petitioner in the instant Petition and trued-up O&M Expenses approved in the instant order are as follows:

(₹ in lakh)

Asset-I(A)(Original Asset)	2019-20	2020-21	2021-22	2022-23	2023-24
Allowed vide order dated 18.1.2022 in Petition No. 448/TT/2020	810.29	839.30	868.63	899.66	930.48
Claimed by the Petitioner in the instant Petition	810.29	839.32	868.63	899.66	930.50
Approved after true-up in this order	**810.29**	**839.30**	**868.63**	**899.66**	**930.48**

Interest on Working Capital (IWC)

51. 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 & FY 2022-23 12.00% (SBI 1-year MCLR applicable as on 1.4.2023 of 8.50% plus 350 basis points) for FY 2023-24.

52. The components of the working capital and interest allowed thereon for the Asset-I(A)(Original Asset) and Asset-I(B)(New Asset) for 2019-24 are as follows:

Asset-I(A)(Original Asset)

(₹ in lakh)

	Particulars	Asset-I(A)(Original 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)	67.52	69.94	72.39	74.97	77.54

	Particulars	Asset-I(A)(Original Asset)				
		2019-20	2020-21	2021-22	2022-23	2023-24
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	121.54	125.90	130.29	134.95	139.57
C	Working Capital for Receivables (Equivalent to 45 days of annual fixed cost /annual transmission charges)	287.07	291.11	275.57	200.92	204.31
D	**Total Working Capital (A+B+C)**	**476.14**	**486.95**	**478.25**	**410.84**	**421.42**
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)**	**57.37**	**54.78**	**50.22**	**43.14**	**50.57**

Asset-I(B)(New Asset)

(₹ in lakh)

	Particulars	Asset-I(B)(New Asset)			
		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)	0.00	0.00	0.00	0.00
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	0.00	0.00	0.00	0.00
C	Working Capital for Receivables (Equivalent to 45 days of annual fixed cost /annual transmission charges)	0.13	0.43	3.85	7.61
D	**Total Working Capital (A+B+C)**	**0.13**	**0.43**	**3.85**	**7.61**
E	Rate of Interest for working capital (in %)	11.25	10.50	10.50	12.00
F	**Interest on working capital (D*E)**	**0.01**	**0.05**	**0.40**	**0.91**

53. The details of IWC allowed vide order dated 20.12.2021 in Petition No. 448/TT/2020 for the Asset-I(A)(Original Asset) and Asset-I(B)(New Asset); IWC claimed by the Petitioner in the instant Petition and trued-up IWC allowed in the instant order are as follows:

(₹ in lakh)

Asset-I(A)(Original Asset)	2019-20	2020-21	2021-22	2022-23	2023-24
Allowed vide order dated 18.1.2022 in Petition No. 481/TT/2020 for Asset-I(A)(Original Asset)	57.32	54.74	51.62	44.08	45.37
Claimed by the Petitioner in the instant Petition	57.37	54.78	52.19	43.14	50.57

Asset-I(A)(Original Asset)	2019-20	2020-21	2021-22	2022-23	2023-24
Allowed vide order dated 18.1.2022 in Petition No. 481/TT/2020 for Asset-I(A)(Original Asset)	57.32	54.74	51.62	44.08	45.37
Approved after true-up in this order	57.37	54.78	50.22	43.14	50.57

(₹ in lakh)

Asset-I(B)(New Asset)	2019-20	2020-21	2021-22	2022-23	2023-24
Claimed by the Petitioner in the instant Petition	0.00	0.02	0.05	0.48	1.04
Approved after true-up in this order	0.00	0.01	0.05	0.40	0.91

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

54. Accordingly, the Annual Fixed Charges approved after the truing-up for the 2019-24 tariff period in respect of the Asset-I(A)(Original Asset) and Asset-I(B)(New Asset) are as follows:

Asset-I(A)(Original Asset)

(₹ in lakh)

	Particulars	Asset-I(A)(Original Asset)				
		2019-20	2020-21	2021-22	2022-23	2023-24
A	Depreciation	322.42	322.42	322.41	0.00	0.00
B	Interest on Loan	0.00	0.00	0.00	0.00	0.00
C	Return on Equity	1144.73	1144.71	994.76	686.89	680.65
D	O & M Expenses	810.29	839.30	868.63	899.66	930.48
E	Interest on Working Capital	57.37	54.78	50.23	43.14	50.57
F	**Total (A+B+C+D+E)**	**2334.82**	**2361.21**	**2236.03**	**1629.68**	**1661.70**

Asset-I(B)(New Asset)

(₹ in lakh)

	Particulars	Asset-I(B)(New Asset)				
		2019-20	2020-21	2021-22	2022-23	2023-24
A	Depreciation	0.00	0.36	1.23	10.21	19.94
B	Interest on Loan	0.00	0.28	0.91	9.74	19.75
C	Return on Equity	0.00	0.39	1.31	10.90	21.28
D	O & M Expenses	0.00	0.00	0.00	0.00	0.00
E	Interest on Working Capital	0.00	0.01	0.05	0.40	0.91
F	**Total (A+B+C+D+E)**	**0.00**	**1.04**	**3.50**	**31.26**	**61.89**

55. The details of AFC allowed vide order dated 20.12.2021 in Petition No. 448/TT/2020 for Asset-I(A)(Original Asset) and Asset-I(B)(New Asset), AFC claimed by

the Petitioner in the instant Petition, and trued-up AFC approved in the instant order are as follows:

Asset-I(A)(Original Asset)

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Allowed vide order dated 20.12.2021 in Petition No. 448/TT/2020 for Asset-I(A)(Original Asset) and for Asset-I(B)(New Asset)	2331.24	2358.58	2343.45	1702.22	1748.61
Claimed by the Petitioner in the instant Petition	2334.79	2361.25	2387.90	1629.69	1661.72
Approved after true-up in this order	2334.82	2361.22	2236.03	1629.69	1661.72

Asset-I(B)(New Asset)

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Claimed by the Petitioner in the instant Petition	0.00	1.12	3.84	35.28	70.73
Approved after true-up in this order	0.00	1.04	3.50	31.26	61.89

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

56. The Petitioner has claimed the following transmission charges in respect of the Asset-I(A)(Original Asset) and Asset-I(B)(New Asset) for the 2024-29 tariff period:

Asset-I(A)(Original Asset)

(₹ in lakh)

	2024-25	2025-26	2026-27	2027-28	2028-29
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	655.53	631.10	631.10	617.44	603.79
Interest on Working Capital	41.74	44.25	46.05	47.69	49.62
O&M Expenses	742.55	809.31	851.10	895.27	943.38
Total	**1439.82**	**1484.66**	**1528.25**	**1560.40**	**1596.79**

Asset-I(B)(New Asset)

(₹ in lakh)

	2024-25	2025-26	2026-27	2027-28	2028-29
Depreciation	244.97	485.55	577.60	739.10	809.95
Interest on Loan	144.48	251.93	254.85	272.14	235.66
Return on Equity	156.23	291.78	337.47	407.56	433.89
Interest on Working Capital	8.13	15.33	17.42	21.07	22.03
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Total	**553.81**	**1044.59**	**1187.34**	**1439.87**	**1501.53**

57. The details of IWC claimed by the Petitioner for the 2024-29 tariff period for the Asset-I(A)(Original Asset) and Asset-I(B)(New Asset) are as under:

Asset-I(A)(Original Asset)

(₹ in lakh)

Particulars	Asset-I(A)(Original Asset)				
	2024-25	**2025-26**	**2026-27**	**2027-28**	**2028-29**
O&M Expenses	61.88	67.44	70.93	74.61	78.62
Maintenance Spares	111.38	121.40	127.67	134.29	141.51
Receivables	177.51	183.04	188.41	191.85	196.87
Total Working Capital	**350.77**	**371.88**	**387.01**	**400.75**	**417.00**
Rate of Interest (in %)	11.90	11.90	11.90	11.90	11.90
Interest on Working Capital	**41.74**	**44.25**	**46.05**	**47.69**	**49.62**

Asset-I(B)(New Asset)

(₹ in lakh)

Particulars	Asset-I(B)(New Asset)				
	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
Receivables	68.28	128.79	146.38	177.03	185.12
Total Working Capital	68.28	128.79	146.38	177.03	185.12
Rate of Interest (in %)	11.90	11.90	11.90	11.90	11.90
Interest on Working Capital	**8.13**	**15.33**	**17.42**	**21.07**	**22.03**

Capital Cost

58. 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."

59. The Petitioner has claimed the following capital cost of the Asset-I(A)(Original Asset) and Asset-I(B)(New Asset) during 2024-29 tariff period:

(₹ in lakh)

Asset	Capital Cost claimed as on 31.3.2024	ACE/De-cap claimed						Capital Cost allowed as on 31.3.2029
		ACE/De-cap	2024-25	2025-26	2026-27	2027-28	2028-29	
Asset-I(A)(Original Asset) and Asset-I(B)(New Asset)	12468.90	ACE	4742.78	68.71	1553.08	934.69	0.00	18416.38
		De-cap	(867.19)	0.00	0.00	(484.59)	0.00	
		Net	3875.59	68.71	1553.08	450.10	0.00	

60. We have considered the submissions of the Petitioner. It is observed that the Petitioner has claimed the transmission tariff in two parts, i.e., for the Asset-I(A)(Original Asset) and for Asset-I(B)(New Asset) for the 2024-29 tariff period.

61. In this regard, we would also like to refer to Regulation 3(24) and 3(62) of the 2024 Tariff Regulations, which provide 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."

62. Regulation 3(24) of the 2024 Tariff Regulations defines 'element'. Based on the above provisions of the Tariff Regulations, we conclude that element means an asset which has been distinctively defined under the scope of the transmission project in the Investment Approval.

63. It is observed that in the instant Petition, the Petitioner has proposed only the replacement of certain equipment of the existing transmission asset and not the replacement or creation of an entire transmission asset as a separate element. Therefore, the same cannot be treated as New element and shall be examined along with the exiting asset. Therefore, the transmission tariff claimed by the Petitioner separately as "Asset-I(b)(New Asset)'s" shall be treated as part of Asset-I(A)(Original Asset) and is not being determined separately.

64. Accordingly, in line with Regulation 19(3) (a) of the 2024 Tariff Regulations, the total trued-up capital cost of ₹12468.90 lakh as on 31.3.2024 approved in instant order is being considered as opening capital cost as on 1.4.2024 for determination of tariff for 2024-29 tariff period.

Additional Capital Expenditure (ACE)

65. The Regulations 24 and 25 of the 2024 Tariff Regulations provide as under:

"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"

66. The Petitioner in the instant Petition has claimed the ACE in respect of instant transmission asset for 2024-29 tariff period as under:

(₹ in lakh)

Assets	ACE					Total ACE
	2024-25	2025-26	2026-27	2027-28	2028-29	
Asset-I(A)(Original Asset) and Asset-I(b)(New Asset)	4742.78	68.71	1553.08	934.69	0.00	7299.26

67. The Petitioner has submitted that the ACE during the 2024-29 is on account of the replacement of component/equipment in the system which are deteriorated due to ageing and may affect the stability and reliability of the Grid in case if sudden failure and covered under Regulation 25(2) of Tariff Regulation, 2024. The detailed justification of ACE as submitted by the Petitioner is as under:

Replacement of 400kV Pneumatic operated circuit breakers at Jeypore, Indravati and Rengali Substations (05 Nos.):

68. The Petitioner has submitted that Circuit breakers of CGL make under this project are of pneumatic operated type. These CBs have completed 25 years of useful life. Due to aging, these circuit breakers have frequent maintenance problems such as Pneumatic drive failures, air leakages from the various parts of the mechanism leading to prolonged outages of the breakers causing unstable grid operation. The OEM is taking longer time for supply of spares and for deputing service engineer due to old and

obsolete model, causing extended outage (Communication from OEM in this regard attached). As these breakers are outlived their useful life, it is prudent to replace these old circuit breakers with new technologically advanced and simple spring-operated circuit breakers well in time so that failure of these old circuit breakers (in-service) causing consequential damages to the system can be avoided. Hence, it is proposed by the Petitioner to replace these old CGL circuit breakers to ensure efficient and secure operation of the grid. In view of that, it is proposed by the Petitioner to replace 05 Nos. CBs at Jeypore(01), Indravati(03) and Rengali(01) Substations.

Replacement of old & obsolete 400KV, 220kV & 33kV Porcelain CTs at Rengali and Jeypore Substations (14 Nos):

69. The Petitioner has submitted that the proposed CTs have completed 25 years of useful life. Oil leakages from different points such as secondary terminals, primary terminals, domes, oil sight glass etc. have been noticed in many of these CT's. The oil leakages are beyond repairs. As there is leakage in the current transformer, in the long run, it may lead to low oil level, moisture ingress and subsequent failure. The current transformers are hermetically sealed equipment and, therefore, major repair at site is not recommended. As there is ingress of moisture, complete replacement of active insulation part is required at manufacturer works, which will not be techno-economically viable. Manufacturer also stopped manufacturing and repair works of these types of CTs. Failure of these CTs shall result in consequential damages to surrounding equipments and may cause of instable grid operations. In view of that, it is proposed by the Petitioner to replace 14 Nos. CTs at Jeypore (400kV:02,220kV:03) and Rengali (400kV:05,220kV:03,33kV:01) Substations.

Replacement of old & obsolete 400KV, 220kV & 33kV CVTs at Jeypore, Indravati and Rengali SS (15 Nos):

70. The Petitioner has submitted that the proposed CVTS have completed 25 years of useful life. CVTs are used for protection and metering purpose. Due to ageing,

leakage/ seepage from multiple points such as EMU tank, oil level glass, secondary terminal boxes are observed and capacitance of the CVTs have changed due to internal failure of capacitor elements, resulting into drift in secondary voltage. Since CVT secondary output is used for metering and protection system, its accuracy has prime importance. The variation in secondary voltage may result into inaccurate metering and wrong operation of protection relays of transmission elements. The CVTs are hermetically sealed equipment Further as there is ingress of moisture, complete replacement of active insulation part is required at manufacturer works, which will not be techno-economically viable. Hence, these aged CVT's are not reliable for intended performance and prone to failure at any time causing forced outage of the critically loaded feeders. Failure of these CVTs shall results in consequential damages to surrounding equipment and may cause of instable grid operations. In view of that it is proposed by the Petitioner to replace 15 Nos. CVTs at Jeypore (400kV:05,220kV:02), Indravati(400kV:03) and Rengali(220kV:04,33kV:01) SS.

Replacement of old & obsolete 400kV WSI make Porcelain type Surge arrestors at Jeypore and Rengali Substations (21 Nos):

71. The Petitioner has submitted that the proposed surge arrestors have completed 25 years of useful life. Due to aging the performance of the LAs has started deteriorating resulting into higher THRC values. LA plays a vital role in protecting the equipment against lightning/ switching impulses and healthiness of LAs is vital for protection of other costly equipment from high surge voltage protection. Non-functioning of LAs may cause consequential damage to Transformer/ Reactor and may result in instable grid operation. Accordingly, the Petitioner has proposed to replace 21 Nos. of LAs at Jeypore(400kV:06,220kV:09) and Rengali(400kV:04,220kV:02) Substation.

Replacement of old & Obsolete 400kV & 220kV (Make: S&S/AMEIL) Isolators at Indravati and Rengali Substations (15 Sets):

72. The Petitioner has submitted that the proposed Isolators of S&S/AMEIL make have completed 25 years of useful life. Due to aging, there is problem of frequent misalignment, jamming, improper closing/opening and over travelling. Due to ageing, wear tear and heavy current passing during fault and through fault, Strength of Male-female contact (Copper contacts) have been deteriorated and leading to frequent of hotspot. Isolators are outdoor equipment and facing different type of weather (Rainy, foggy, summer). After a long service, Many MOM boxes got rusted and leading to problem of MOM boxes and motorised operation of isolators are not possible. This leads to problem of improper indication, control, interlock and remote operation of isolators, which is not due to ageing the TBs inside the MOM boxes has become brittle and many times terminals come in contact with boxes and creates DC earth fault, which is detrimental to the control and protection system. Due to improper health of isolator specially interlock mechanism, drive mechanism, etc., the isolators are unable to maintain the stable condition specially during storms and high wind conditions and sometimes getting opened in 'ON LOAD' condition which is dangerous to system as well as to the operating personnel. OEM are not providing Spares and service support due to old and obsolete model (OEM Communication attached). Existing spares have already been exhausted. In view of that, it is proposed to replace 15 sets of isolators at Indravati (400 kV:09) and Rengali(33KV:06) SS.

Replacement of Old bushings in Transformer at Indravati and Rengali Substations (27 Nos):

73. The Petitioner has submitted that it is operating and maintaining more than 3800 transformers and reactors. Many of these transformers/ reactors are in service for more than 25 years. One of the important failures modes in Transformer/Reactor is the failure

of Bushings. The following are the major inputs gathered from various CIGRE Technical Brochures as well as industry practices:

a. As per CIGRE TB642, globally Bushing failure is the third most common reason for failure of transformer after Winding & OLTC failure. In Indian scenario failure due to Bushing is even more prominent due to manufacturing issues observed in certain make bushings.

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

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

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

74. In view of the above, the Petitioner has submitted that since the older bushings which are in service for more than 25 years of life and are already approaching the end

of useful life are a potential hazard to the transformer/ reactor. Besides, these bushings are all OIP type bushing which can cause failure of transformer/ reactor. In the past failure of bushings have led to failure of transformers at many substations. Therefore, it is advisable to take pre-emptive action for replacement of such bushings. Hence, in view of above, it is proposed to replace 27 nos. of transformer bushings at Indravati (04) and Rengali (23) SS which have already completed their useful life.

Replacement of Conventional C&R Panel to SAS based C&R panel at Jeypore, Indravati and Rengali Substations:

75. The Petitioner has submitted that these control and protection systems have completed 25 years of useful life. Most of these relays are of electromagnetic/ static type and obsolete. The OEMs have themselves phased out these models of relays and there are no spares'. In case of non-availability of healthy spares, the relays are to be kept out of service to avoid mal operation and the only option is replacement. Due to ageing, problem of mal operation/non-operation occurs because of stuck up of contacts and problem in the coils. These relays are not IEC 61850 compliant and also does not have built-in DR facility resulting in difficulties in fault analysis. The Cable, Wiring & Terminal Blocks inside both Control & protection panels and Equipment MBs have become brittle leading to DC leakages and other circuit failures. TBs of suitable sizes are also not available in market for replacement and also It is not feasible to replace the TBs and wiring inside these panels. Due to ageing, the cables laid in the sub-station have been damaged, causing frequent DC earth fault and sometimes maloperation of system. Presently control & power cables are laid between central control room and switchyard equipment. Replacement of the cables may require long outage of the sub-station, which may not be feasible. Replacement of old C&R panels along with power & control cables with SAS based C&R panels along with SCADA shall be the most feasible & techno-economical solution. It will also comply with latest technical requirement.

76. In view of above, it is proposed by the Petitioner to replace line protection panel, CB A/R protection panels at Jeypore, Indravati and Rengali Sub-stations with SAS based C&R panel along with SCADA as per recent practice.

Online dry out system in Baripada and Indravati line Reactors at Rengali SS (03 Nos):

77. The Petitioner has submitted that it is operating and maintaining more than 3800 transformers and reactors. Many of these transformers/ reactors are in service for more than 25 years. Online dry out system has been designed to remove moisture from the winding and insulating medium of power transformers and reactors while they remain in service (i.e., without taking them offline). By reducing moisture content, the life of the transformer or reactor is extended, which increases its reliability and efficiency. The unit continuously removes moisture from the transformer oil and insulation paper while the transformer is in operation. This prevents the need for costly downtime. For enhancing the life of these equipment drying out is required on continuous bases. As per current practice all the new transformers and reactors are coming with online dry unit system. Accordingly, the Petitioner has proposed to install Online dry unit in Baripada line reactor, Indravati line reactor and ICT-I at Rengali SS.

Retrofitment of Auxiliary System ACDB, DCDB, MDB and LDB at Jeypore, Indravati and Rengali Substations:

78. The Petitioner has submitted that the station auxiliary supply system includes LT switch gear such as ACDBs, DCDBs, and MLDBs, LT transformers, lighting transformers, etc. The LT system provides reliable auxiliary power supply to all the switchyard equipment/Relays/Battery Chargers/PLCC system etc., in the substation. Due to ageing, the insulators/ supports, TBs in ACDB/ DCDB/ELDB panels have become brittle and are breaking during tightening / maintenance. Further due to continuous operation for more than 25 years moving parts of SFUs are also failing frequently and causing un-reliable auxiliary supply to the switch yard equipment/

Relays/ Battery/ PLCC system, etc. As the model of these ACDBs & DCDBs are obsolete, spares of components used in the ACDB/ DCDB etc. are also not available in the market. It is essential to replace this equipment for efficient and reliable operation of the system. Hence it is proposed to replace the old ACDB, MDB, MSB, ELDB. Auxiliary transformers are the main source to LT supply of substation. Further, the Lighting transformers are commonly used in low-voltage lighting systems to provide isolation between the primary (input) and secondary (output) circuits, adding an extra layer of safety. These transformers are in service since commissioning and completed its useful life. It is essential to replace this equipment for efficient and reliable operation of the system. Accordingly, the Petitioner has proposed for replacement of the above equipment at Jeypore, Indravati and Rengali Sub-station.

PCC with gravel spreading in Switchyard at Rengali Substation:

79. The Petitioner has submitted that these bays were commissioned during the year 1990 and no PCC were provided. Gravels were spreaded without PCC due to which the gravels got mixed with soil & silt and converted into small pieces at various locations. Due to this wild vegetation, grasses etc. are growing continuously which becomes breeding ground for reptiles & other animals, apart from risk of increase in Step & Touch Potential. This is dangerous for safety point of view for both equipment and humans. The frequent growth of grass is causing operational and safety issues. In view of that it is proposed to carry out PCC in the switchyard along with spreading of additional gravel by removing damaged gravel.

Supply and installation of Numerical protection relays at Indravati and Rengali Substations (04Nos.):

80. The Petitioner has submitted that these relays are not IEC 61850 compliant and do not have built-in DR & time synch facility resulting in difficulties in fault analysis. These relays do not have remote accessing facility causing difficulty in remote

operation. Apart of that Nos of binary input and output is very less. In view of above, it is proposed by the Petitioner to replace differential & REF relay of Rengali line reactor at Indrawati and Indrawati line reactor at Rengali with numerical relays.

Replacement of Single suspension I-Insulators to Double string and Hardware fitting nut and bolt in 400kV Jeypore Indravati and Rengali Indravati S/c line:

81. The Petitioner has submitted that the 400 kV Jeypore-Indravati-Rengali line is going to complete useful life in ACE 2024-29. Due to aging, lot of operation issues are being observed. Hardware fitting like vibration damper, arcing horn, Nut and bolts, etc. are old and frequent failure is observed. Line is passing through many major crossings like railway, power, river etc. and any failure of hardware at these crossing will result not only in long outage but casualty also. To avoid this, it is required to replace the I-insulators string at crossings with double string along with associated fitting and defective insulators.

Replacement of 220V Battery Bank at Jeypore Substation (1 Nos.):

82. The Petitioner has submitted that the proposed battery bank is in service since 1990. During preventive maintenance of battery discharge test, it has been observed that the capacity of existing batteries has been degraded. 220V battery system is used for control & protection. The Petitioner has further submitted that since the 48V is used for PLCC system, both play a vital role for the protection system. Due to low backup of batteries, protection systems always remain at risk during outage of auxiliary power. For proper working of protection system, healthiness of battery system is very much required. In view of above, it is proposed to replace battery sets with new one latest battery sets at Jeypore Substation.

Replacement 400 kV 1ph BHEL make 03x105 MVA ICT-I at Jeypore Substation & Replacement of 400 kV 3ph BHEL make 315 MVA ICT-II at Rengali Sub-station:

83. The Petitioner has submitted that the replacement on this account was earlier proposed to Tariff Block 2019-24. However, the same was disallowed vide order dated.20.12.2021 in the Petition no. 448/TT/2020. Further, the replacement of 03x105 MVA ICT-I at Jeypore Sub-station and 315 MVA ICT-II at Rengali SUB-STATION was approved by the Commission vide order dated 20.7.2023 in 242/MP/2022 & in the 45th and 52nd TCC & ERPC, however, the same has spilled over into the tariff block 2024-29.

84. The details of ACE claimed by the Petitioner during the 2024-29 tariff period is as under:

Particulars	Head	Spill over of ACE 2019-24 projected to be incur un F.Y. 2024-25
		2024-25
JEYPORE Sub-station		
400 kV MLDB (Along with 2 Nos 100 KVA Lighting Transformer)	SS	1444771.42
Replacement of 420 KV, 4400 PF,1-PH CVT	SS	13282.00
Dismantling and dragging of 105 MVA, 400/220/33KV ICT-1 Unit-2 (BHELMake) to a suitable location at POWERGRID Jeypore Sub-station. (UnderJTTS ADD-CAP 2019-24)".	SS	45900
Demolishing two nos. of Existing firewalls betweenICT-1 Unit-I, Unit-II <(>&<)> Unit-III and disposal of malba/unserviceable waste at POWERGRID, Jeypore Sub-Station	ss	9744
Demolishing Existing Foundations, Excavation, and construction of New 500 MVA Transformer & other required equipment Foundation, and disposal of malba/unserviceable waste at POWERGRID, Jeypore Sub-Station (Under ADD-CAP 2019-24)"	SS	8747905.22
Supply of Outdoor cable termination kits suitable for 66kV, 1CX185 Sq.mm XLPE armoured Al cable at POWERGRID, Rengali & Jeypore Substation	SS	330400
Supply of 66kV, 1CX185 sq. mm XLPE armoured Al cable for 500 MVA 400/220/33kV ICT (Toshiba Make) at POWERGRID, Rengali & Jeypore Substation		3028320
Replacement of 105MVA, 400/220/33kV, 1-ph auto transformer with 315 MVA ICT including insulating oil and associated civil works		185161385
400KV S/C JEYPORE-INDRAVATI TL LINE		
Insulator string replacement work against PID defects	TL	9169.00
Replacement of all old rusted number plates & Danger plates (Supply & Service Portion)	TL	9544.30
Indravati Sub-station	SS	
400 kV MLDB (Along with 2 Nos 100 KVA Lighting Transformer)	SS	2726900
Replacement of 420 KV, 8800 PF,1-PH CVT	SS	8822.00
Replacement of 336kv Surge Arrester	SS	24628.00

Supply & Replacement of 250KVA DG Set	SS	100800.00
Rengali Sub-station		
400 kV Emergency LDB (Along with 1 No 100 KVA Lighting Transformer)	SS	65085.00
Main-II Distance protection relay of Keonjhar/Kolaghat Line.	SS	17772.00
Replacement of 420 & 245KV CVT	SS	168280.00
Replacement of 33kV Voltage Transformers	SS	6816.00
Retrofitting of 220kV CB	SS	657800.00
Letter of Award for "Dismantling and dragging of 315 MVA, 400/220/33KV ICT-2 (BHEL Make) to a suitable location at POWERGRID, Rengali Sub-station	SS	855500.00
Supply of Outdoor cable termination kits suitable for 66kV, 1CX185 Sq.mm XLPE armoured Al cable at POWERGRID, Rengali & Jeypore Substation	SS	327096.00
Supply of Outdoor cable termination kits suitable for 66kV, 1CX185 Sq.mm XLPE armoured Al cable for 500 MVA 400/220/33 kV ICT (Toshiba Make) at POWERGRID, Rengali & Jeypore Substation	SS	1261799.96
Supply & Replacement of 315MVA, 400/220/33kV ICT-2 including insulating oil along with associated civil works	SS	269256161.00
Total amount		**474277880.90**
Say (in Lakh)		4742.78

(₹ in lakh)

		2025-26	2026-27	2027-28	Total (24-29)
JEYPORE Sub-station					
420KV,3150A,63kA CB WITHOUT CLOSING RESISTOR(with support structure)	SS		25.76	17.18	42.94
420KV, 3150A, 63kA CT WITH 120% EXTENDED CURRENT RATING	SS		12.14	8.09	20.23
220KV,1600A,40kA CT WITH 150% EXTENDED CURRENT RATING	SS		10.71	7.14	17.85
420KV , 4400pF CVT	SS		12.85	8.57	21.42
245KV, 4400pF CVT	SS		3.39	2.26	5.65
400KV LA (Surge Arrester 1-ph 336kV)	SS		9.10	6.07	15.17
220KV LA (Surge Arrester 1-ph 216kV)	SS		5.62	3.75	9.37
Supply , Installation & Commissioning of 220V, 400 AH Battery Bank	BATTERIES	5.56	3.70		9.26
Retrofitting of Old ACDB System ,as the present system does not have separate MSB & ACDB	SS				-
415 V Main Switch Board (MSB)	SS		11.40	7.60	19.00
415 V AC Distribution Board (ACDB) as per TS	SS		12.17	8.11	20.28
Retrofitting of Switchyard & Colony Lighting Distribution Boxes	SS		-	-	-
415 V MLDB (Extn)	SS		1.76	1.17	2.93
Lighting Panel Type ACP-1 (Indoor) as per TS	SS		1.49	1.00	2.49
Lighting Panel Type ACP-2 as per TS	SS		3.23	2.15	5.38
Lighting Panel Type ACP-3 as per TS	SS		2.32	1.55	3.87
Upgradation of Existing Control & Protection System with SAS based System			-	-	-
Complete Sub-Station Automation System for 400 kV Main bay as per TS	IT		7.10	4.73	11.83

Complete Sub-Station Automation System for 400 kV Tie bay as per TS	IT		7.04	4.69	11.73
Complete Sub-Station Automation System for 220 kV Bay as per TS	IT		8.37	5.58	13.95
Complete Sub-Station Automation System for 220 kV Liner bays (For Integration of Relay Panel Signals) with Existing SAS	IT		5.58	3.72	9.30
Interfacing of Relays under Present Scope with the Existing SAS & upgradation of hardware & software	IT		4.09	2.73	6.82
Complete Sub-Station Automation System for controllling & monitoring of Auxilliary system including BCUs as per TS	IT		4.52	3.01	7.53
400 kV Circuit breaker relay panel with Auto reclose & Automation	SS		17.04	11.36	28.40
400 kV Circuit breaker relay panel with Automation	SS		12.27	8.18	20.45
220 kV Circuit breaker relay panel with Auto reclose & Automation	SS		18.92	12.61	31.53
220 kV Circuit breaker relay panel with Automation	SS		16.80	11.20	28.00
400kV Jeypore-Indravati TL					-
Replacement of 66 sets of Single Suspension I String by Double Suspension I string in Major crossing spans in 400kV Jeypore-Indravati S/C line under Jeypore TLM .	TL		17.09	11.40	28.49
Replaceent of Hardware of Tower material, Hexa nut & bolts etc in 400kV Jeypore-Indravati S/C line under Jeypore TLM	TL		9.24	6.16	15.40
Replacement of 66 sets of Single Suspension I String by Double Suspension I string in Major crossing spans in 400kV Rengali-Indravati S/C line under Bhawanipatna TLM .	TL		14.77	9.85	24.62
Replaceent of Hardware of Tower material, Hexa nut & bolts etc in 400kV Rengali-Indravati S/C line under Bhawanipatna TLM.	TL		6.08	4.06	10.14
Indravati Sub-station					-
Supply & Replacement of 420 KV, 8800 PF,1-PH CVT	SS		8.41	5.61	14.02
Supply & Replacement of 420KV,63kA,3150A Circuit Breaker(3-Phase) without closing resistor along with Support Structure.	SS		25.76	17.18	42.94
Supply & Replacement of 420KV,3150A Circuit Breaker(3-Phase) with closing resistor along with Support Structure	SS		99.15	66.10	165.25
Supply & Replacement of 420KV,2000A,40KA Isolator(3-Phase)(Double Brake) with one E/S	SS		65.05	43.37	108.42
Supply & Replacement of 420KV,2000A,40KA Isolator(3-Phase)(Double Brake) with Double E/S	SS		20.96	13.97	34.93
415V Main Switchboard	SS		12.48	8.32	20.80
415V AC Distribution Board (ACDB) as per Technical Specification.	SS		8.23	5.49	13.72
Repacement of OIP bushings with RIP bushing for operational improvenets and preveting failure of old OIP bushings	SS				-
Supply & replacement of OIP bushings with 400kV,800A RIP bushings for Rengali L/R	SS		61.17	40.78	101.95
Supply & replacement of OIP bushings with 145kV,800A RIP bushings for or Rengali L/R	SS		5.13	3.42	8.55
Upgradation of Existing Control & Protection System with SAS based System			-	-	-
Complete Sub-Station Automation System for 400 kV Main bay as per TS	IT		10.65	7.10	17.75
Complete Sub-Station Automation System for 400 kV Tie bay as per TS	IT		7.04	4.69	11.73
Interfacing of Relays under Present Scope with the Existing SAS & upgradation of hardware & software	IT		4.09	2.73	6.82

Complete Sub-Station Automation System for controllling & monitoring of Auxilliary system including BCUs as per TS	IT		4.52	3.01	7.53
400 kV Circuit breaker relay panel with Auto reclose & Automation	SS		42.59	28.39	70.98
Supply & Replacement of electromechanical relay	SS		-	-	-
Differential Relay of 50MVAR Rengali Line reactor	SS		8.09	5.39	13.48
REF Relay of 50MVAR Rengali Line reactor	SS		2.63	1.75	4.38
RENGALI Sub-station					-
Replacement of Colony Main supply distribution board (415V, 400A, Township DP Panel along with 02 Nos of Lighting transformer)	SS		25.68	17.12	42.80
Supply & Replacement of CB's	SS				-
Supply & Replacement of 400kV CGL Make CB without closing resistor	SS		36.20	24.14	60.34
Supply & Replacement of 33kV Isolator	SS		-	-	-
Retrofitting of 33kV Isolator (36 kV, 1250A, 25 KA, 3-Phase Double Break Isolator with one E/S)	SS		4.23	2.82	7.05
Retrofitting of 33kV Isolator (36 kV, 1250A, 25 KA, 3-Phase Double Break Isolator without E/S)	SS		0.80	0.53	1.33
Supply & Replacement of CT's	SS		-	-	-
Repalcement of 420kV CT (420 KV, 3000A, 63 KA, 1-PHASE CURRENT TRANSFORMER WITH 120% EXTENDED RATING)	SS		30.24	20.16	50.40
Repalcement of 245kV CT (245KV, 1600A, 40 KA, 1-PHASE CURRENT TRANSFORMER WITH 120% EXTENDED RATING)	SS		9.71	6.47	16.18
Repalcement of 33kV CT (36 KV, 2000A, 25 KA, 1-PHASE CURRENT TRANSFORMER WITH 120% EXTENDED RATING)	SS		0.85	0.57	1.42
Supply & Replacement of CVT	SS		-	-	-
Repalcement of 245kV CVT (245kV, 4400pF CVT 1 Phase)	SS		6.79	4.53	11.32
Repalcement of 33kV CVT (36kV Voltage Transformer 1 Phase)	SS		0.63	0.42	1.05
Supply & Replacement of Surge Arrester	SS		-	-	-
Supply & Replacement of 336kV Surge Arrester	SS		5.79	3.86	9.65
Supply & Replacement of 245kV Surge Arrester	SS		1.22	0.81	2.03
Supply & Replacement of electromechanical relay	SS		-	-	-
Differential Relay	SS		8.09	5.39	13.48
REF Relay	SS		2.63	1.75	4.38
Supply and Replacement of LT System	SS		-	-	-
Supply & replacement of MSB System	SS		11.40	7.60	19.00
Supply & replacement of ACDB System along with extension	SS		18.24	12.16	30.40
Supply & Replacement of 250kVA LT Transformer by 315kVA LT Transformer	SS		15.33	10.22	25.55
Upgradation of Existing Control & Protection System with SAS based System	IT		-	-	-
Complete Sub-Station Automation System for 400 kV Main bay as per TS	IT		14.19	9.46	23.65
Complete Sub-Station Automation System for 400 kV Tie bay as per TS	IT		10.56	7.05	17.61
Complete Sub-Station Automation System for 400 kV Line/Xmer/ Reactor bays (For Integration of Relay Panel Signals) with Existing SAS	IT		14.08	9.39	23.47

Complete Sub-Station Automation System for 220 kV Bay as per TS	IT		16.74	11.16	27.90
Complete Sub-Station Automation System for 220 kV Line bays (For Integration of Relay Panel Signals) with Existing SAS	IT		5.58	3.72	9.30
Interfacing of Relays under Present Scope with the Existing SAS & upgradation of hardware & software	IT		4.09	2.73	6.82
Complete Sub-Station Automation System for controllling & monitoring of Auxilliary system including BCUs as per TS	IT		4.52	3.01	7.53
400 kV Circuit breaker relay panel with Auto reclose & Automation	SS		34.07	22.71	56.78
400 kV Circuit breaker relay panel with Automation	SS		42.93	28.62	71.55
220 kV Circuit breaker relay panel with Auto reclose & Automation	SS		18.92	12.61	31.53
220 kV Circuit breaker relay panel with Automation	SS		33.60	22.39	55.99
Supply & Installation of Online insulating oil drying system for Baripada (KJR) L/R & Indravati L/R and ICT-1	SS		20.83	13.88	34.71
Repacement of OIP bushings with RIP bushing for operational improvenets and preveting failure of old OIP bushings	SS		-	-	-
Supply & replacement of OIP bushings with 400kV,1250A RIP bushings for ICT-I	SS		50.73	33.82	84.55
Supply & replacement of OIP bushings 245kV,2000A RIP bushings for ICT-1	SS		36.39	24.26	60.65
Supply & replacement of OIP bushings with 52kV,3150A RIP bushings for ICT-1	SS		7.72	5.15	12.87
Supply & replacement of OIP bushings with 400kV,800A RIP bushings for Indrvati & Baripda L/R and Keonjhar L/R presently located at Baripada	SS		183.51	122.34	305.85
Supply & replacement of OIP bushings with 145kV,800A RIP bushings for Indrvati & Baripda L/R	SS		25.65	17.10	42.75
PCC work of 400 & 220kV Switchyard	CIVIL	63.15	147.34		210.49
					-
400kV Renagli-Indravati TL					-
Replacement of 36 sets of Single Suspension I String by Double Suspension I string and Replacement of CLR Ploymer Insulators both 120 KN & 160 KN in Major crossing spans in 400kV Rengali-Indravati S/C line under Bolangir TLM .	TL		30.45	20.30	50.75
Supply & installation of pipe earthing and Replaceent of Hardware of Tower material, Hexa nut & bolts etc in 400kV Rengali-Indravati S/C line under Bolangir TLM	TL		22.85	15.22	38.07
Total		**68.71**	**1553.08**	**934.69**	**2556.48**

85. In compliance with the quires vide TV letter dated 1.7.2025, the Petitioner vide affidavit dated 16.7.2025 has submitted the desired information and the same are as under:

Sr. No.	Information sought vide TV letter	Information submitted by the petitioner
1	Provide the exact regulation under 25(2) of the 2024 Tariff Regulations for which the Additional Capital Expenditure	The Petitioner has submitted that he Add-Cap projected during 2024-29 tariff block has been claimed under Regulation 25(2)(a) & 25(2)(c) of the CERC (Terms and Conditions of Tariff)

	(ACE) proposed is claimed in the 2024-29 Tariff period.	Regulations, 2024. the equipment had been in service for over 25 years and, due to ageing, technological upgradation, and lack of/limited availability of maintenance support, began exhibiting operational issues that posed a risk to grid stability. In order to mitigate these operational risks and ensure reliable grid operation, replacement and/or retrofitting of the equipment/items was undertaken. Further, certain equipment has also become technologically obsolete. In this context, OEMs of equipment like Isolators i.e. M/s Minel has stopped their operation and non-existent as on date. Further deterioration in performance of equipment/system has been observed due to ageing effects like violations in testing parameters, leakages, rusting in panels, brittleness of cables etc. Therefore, retrofitting of equipment's like C&R Panels, Bushings, PLCC, insulators, surge arrestors, Cables, etc. need to be taken up to address issues due to ageing and ensure reliability. Further to above, in regard to replacement of Interconnecting Transformers (ICTs), Reactors, based on the compliance with the directions issued by the Hon'ble Commission, necessary approvals were obtained from the Regional Power Committee (RPC) for the same. Pursuant to these approvals, the Hon'ble Commission subsequently accorded approval for the proposed/ executed works in Miscellaneous Petition No. 242/MP/2022
2	For Additional Capital Expenditure (ACE) proposed under 25(2)(c) of 2024 Tariff regulation, provide Certificate of obsolescence for Asset-I(A)(Original Asset) by the OEM or in absence of the same, Certificate from the competent authority regarding the obsolescence of the equipment.	

86. The Asset-wise/party-wise Liability Flow Statement as submitted by the Petitioner vide affidavit dated 16.7.2025 is as under:

(₹ in lakh)

Asset	**Party**		**Particulars (TL/SS)**	**Additional Liability Reconized & Discharged**
				2024-25
JEYPORE TALCHER TRANSMISSION SYSTEM		**JEYPORE Sub-station**		
	RAHSAN ENGINEERING	400 kV MLDB (Alongwith 2 Nos 100 KVA Lighting Transformer)	SS	14.45
	CG POWER AND INDUSTRIAL SOLUTIONS	Replacement of 245 KV,1600A,40 KA CT-120 % Rating	SS	
	GE Vernova T&D India Limited	Replacement of 420 KV, 4400 PF,1-PH CVT	SS	0.13
	SAI TESLA POWERTECH	Dismantling and dragging of 105 MVA, 400/220/33KV ICT-1 Unit-2 (BHELMake) to a suitable location at POWERGRID Jeypore Sub-station. (UnderJTTS ADD-CAP 2019-24)".	SS	0.46
	Prasanta Kumar Padhi	Demolishing two nos. of Existing firewalls betweenICT-1 Unit-I, Unit-II <(>&<)> Unit-III and disposal of malba/unserviceable waste at POWERGRID, Jeypore Sub-Station	SS	0.10

	Aakar Infra Engineers Pvt Ltd	Demolishing Existing Foundations, Excavation, and construction of New 500 MVA Transformer & other required equipment Foundation, and disposal of malba/unserviceable waste at POWERGRID, Jeypore Sub-Station (Under ADD-CAP 2019-24)"	SS	87.48
	YAMUNA CABLEACCESSORIES PRIVATE LTD	Supply of Outdoor cable termination kits suitable for 66kV, 1CX185 Sq.mm XLPE armored Al cable at POWERGRID, Rengali & Jeypore Substation	SS	3.30
	Shree Ganesh Power Tech	Laying & Termination of 66kV XLPE Power Cable for 315 MVA ICT	ss	3.54
	UNIVERSAL CABLES LTD	Supply of 66kV, 1CX185 sq. mm XLPE armoured Al cable for 500 MVA 400/220/33kV ICT (Toshiba Make) at POWERGRID, Rengali & Jeypore Substation	SS	30.28
	Toshiba T & D Systems (Ind) Pvt.	Replacement of 105MVA, 400/220/33kV, 1-ph auto transformer with 315 MVA ICT including insulating oil and associated civil works	SS	1,848.07
		400KV S/C JEYPORE-INDRAVATI TL LINE		
	SELIM CONSTRUCTION	Insulator string replacement work against PID defects	TL	0.09
	Dambaru Dhar Nahak	Replacement of all old rusted number plates & Danger plates (Supply & Service Portion)	TL	0.10
		Indravati Sub-station	SS	
	L S POWER CONTROL PVT LTD	400 kV MLDB (Along with 2 Nos 100 KVA Lighting Transformer)	SS	27.27
	GE Vernova T&D India Limited	Replacement of 420 KV, 8800 PF,1-PH CVT	SS	0.09
	LAMCO INDUSTRIES PVT. LTD	Replacement of 336kv Surge Arrester	SS	0.25
	ELECTRO EQUIPMENTS	Supply & Replacement of 250KVA DG Set	SS	1.01
		Rengali Sub-station		
	Mika Engineers	400 kV Emergency LDB (Alongwith 1 No 100 KVA Lighting Transformer)	SS	0.65
	Hitachi Energy India Limited	Main-II Distance protection relay of Keonjhar/Kolaghat Line.	SS	0.18
	GE Vernova T&D India Limited	Replacement of 420 & 245KV CVT	SS	1.68
	MEHRU Electricals and Mechanical En	Replacement of 33kV Voltage Transformers	SS	0.07
	INDUSTRIAL SOLUTIONS	Retrofitting of 220kV CB	SS	6.58
	VMS SERVICES	Letter of Award for "Dismantling and dragging of 315 MVA, 400/220/33KV ICT-2 (BHEL Make) to a suitable location at POWERGRID, Rengali Sub-station	SS	8.56
	YAMUNA CABLEACCESSORIES PRIVATE LTD	Supply of Outdoor cable termination kits suitable for 66kV, 1CX185 Sq.mm XLPE armoured Al cable at POWERGRID, Rengali & Jeypore Substation	SS	3.27
	UNIVERSAL CABLES LTD	Supply of 66kV, 1CX185 sq. mm XLPE armoured Al cable for 500 MVA 400/220/33kV ICT (Toshiba Make) at POWERGRID, Rengali & Jeypore Substation	SS	12.62
	Shree Ganesh Power Tech	cable laying and termination works for 315MVA ICT	SS	1.77
	Toshiba T & D Systems (Ind) Pvt.	Supply & Replacement of 315MVA, 400/220/33kV ICT-2 including insulating oil alongwith associated civil works	SS	2,626.07
	HIND ENGINEERING	Civil works for replacement of 315 MVA 400/220/33 KV BHEL make ICT-II with new 500 MVA 440/220/33 KV Toshiba Make ICT at POWERGRID, Rengali Sub-station in Odisha	SS	57.63
	3D FIRE & SAFETY PVT. LTD.	Modification & Commissioning of existing HVW Spray System of 315MVA, 400/220kV ICT (BHEL make) to make it suitable for 500MVA 400/220kV ICT (Toshiba make) at 400/220kV Rengali substation (Under Add CAP 2019-24)	SS	7.08
	Total			4,742.78

(₹ in lakh)

Party name	Asset Detail		2025-26	2026-27	2027-28	Total (24-29)
	JEYPORE Sub-station					
Not Awarded	420KV,3150A,63kA CB WITHOUT CLOSING RESISTOR(with support structure)	SS		25.76	17.18	42.94
Not Awarded	420KV, 3150A, 63kA CT WITH 120% EXTENDED CURRENT RATING	SS		12.14	8.09	20.23
Not Awarded	220KV,1600A,40kA CT WITH 150% EXTENDED CURRENT RATING	SS		10.71	7.14	17.85
Not Awarded	420KV , 4400pF CVT	SS		12.85	8.57	21.42
Not Awarded	245KV, 4400pF CVT	SS		3.39	2.26	5.65
Not Awarded	400KV LA (Surge Arrester 1-ph 336kV)	SS		9.10	6.07	15.17
Not Awarded	220KV LA (Surge Arrester 1-ph 216kV)	SS		5.62	3.75	9.37
Not Awarded	Supply , Installation & Commissioning of 220V, 400 AH Battery Bank	BATTERIES	5.56	3.70		9.26
Not Awarded	Retrofitting of Old ACDB System ,as the present system does not have separate MSB & ACDB	SS				-
Not Awarded	415 V Main Switch Board (MSB)	SS		11.40	7.60	19.00
Not Awarded	415 V AC Distribution Board (ACDB) as per TS	SS		12.17	8.11	20.28
Not Awarded	Retrofitting of Switchyard & Colony Lighting Distribution Boxes	SS		-	-	-
Not Awarded	415 V MLDB (Extn)	SS		1.76	1.17	2.93
Not Awarded	Lighting Panel Type ACP-1 (Indoor) as per TS	SS		1.49	1.00	2.49
Not Awarded	Lighting Panel Type ACP-2 as per TS	SS		3.23	2.15	5.38
Not Awarded	Lighting Panel Type ACP-3 as per TS	SS		2.32	1.55	3.87
Not Awarded	Upgradation of Existing Control & Protection System with SAS based System			-	-	-
Not Awarded	Complete Sub-Station Automation System for 400 kV Main bay as per TS	IT		7.10	4.73	11.83
Not Awarded	Complete Sub-Station Automation System for 400 kV Tie bay as per TS	IT		7.04	4.69	11.73
Not Awarded	Complete Sub-Station Automation System for 220 kV Bay as per TS	IT		8.37	5.58	13.95
Not Awarded	Complete Sub-Station Automation System for 220 kV Liner bays (For Integration of Relay Panel Signals) with Existing SAS	IT		5.58	3.72	9.30
Not Awarded	Interfacing of Relays under Present Scope with the Existing SAS & upgradation of hardware & software	IT		4.09	2.73	6.82
Not Awarded	Complete Sub-Station Automation System for controllling & monitoring of Auxilliary system including BCUs as per TS	IT		4.52	3.01	7.53
Not Awarded	400 kV Circuit breaker relay panel with Auto reclose & Automation	SS		17.04	11.36	28.40
Not Awarded	400 kV Circuit breaker relay panel with Automation	SS		12.27	8.18	20.45
Not Awarded	220 kV Circuit breaker relay panel with Auto reclose & Automation	SS		18.92	12.61	31.53
Not Awarded	220 kV Circuit breaker relay panel with Automation	SS		16.80	11.20	28.00
	400kV Jeypore-Indravati TL					-
Not Awarded	Replacement of 66 sets of Single Suspension I String by Double Suspension I string in Major crossing spans in 400kV Jeypore-Indravati S/C line under Jeypore TLM .	TL		17.09	11.40	28.49

Not Awarded	Replaceent of Hardware of Tower material, Hexa nut & bolts etc in 400kV Jeypore-Indravati S/C line under Jeypore TLM	TL		9.24	6.16	15.40
Not Awarded	Replacement of 66 sets of Single Suspension I String by Double Suspension I string in Major crossing spans in 400kV Rengali-Indravati S/C line under Bhawanipatna TLM .	TL		14.77	9.85	24.62
Not Awarded	Replaceent of Hardware of Tower material, Hexa nut & bolts etc in 400kV Rengali-Indravati S/C line under Bhawanipatna TLM.	TL		6.08	4.06	10.14
	Indravati Sub-station					-
Not Awarded	Supply & Replacement of 420 KV, 8800 PF,1-PH CVT	SS		8.41	5.61	14.02
Not Awarded	Supply & Replacement of 420KV,63kA,3150A Circuit Breaker(3-Phase) without closing resistor along with Support Structure.	SS		25.76	17.18	42.94
Not Awarded	Supply & Replacement of 420KV,3150A Circuit Breaker(3-Phase) with closing resistor along with Support Structure	SS		99.15	66.10	165.25
Not Awarded	Supply & Replacement of 420KV,2000A,40KA Isolator(3-Phase)(Double Brake) with one E/S	SS		65.05	43.37	108.42
Not Awarded	Supply & Replacement of 420KV,2000A,40KA Isolator(3-Phase)(Double Brake) with Double E/S	SS		20.96	13.97	34.93
Not Awarded	415V Main Switchboard	SS		12.48	8.32	20.80
Not Awarded	415V AC Distribution Board (ACDB) as per Technical Specification.	SS		8.23	5.49	13.72
Not Awarded	Repacement of OIP bushings with RIP bushing for operational improvenets and preveting failure of old OIP bushings	SS				-
Not Awarded	Supply & replacement of OIP bushings with 400kV,800A RIP bushings for Rengali L/R	SS		61.17	40.78	101.95
Not Awarded	Supply & replacement of OIP bushings with 145kV,800A RIP bushings for or Rengali L/R	SS		5.13	3.42	8.55
Not Awarded	Upgradation of Existing Control & Protection System with SAS based System			-	-	-
Not Awarded	Complete Sub-Station Automation System for 400 kV Main bay as per TS	IT		10.65	7.10	17.75
Not Awarded	Complete Sub-Station Automation System for 400 kV Tie bay as per TS	IT		7.04	4.69	11.73
Not Awarded	Interfacing of Relays under Present Scope with the Existing SAS & upgradation of hardware & software	IT		4.09	2.73	6.82
Not Awarded	Complete Sub-Station Automation System for controllling & monitoring of Auxilliary system including BCUs as per TS	IT		4.52	3.01	7.53
Not Awarded	400 kV Circuit breaker relay panel with Auto reclose & Automation	SS		42.59	28.39	70.98
Not Awarded	Supply & Replacement of electromechanical relay	SS		-	-	-
Not Awarded	Differential Relay of 50MVAR Rengali Line reactor	SS		8.09	5.39	13.48
Not Awarded	REF Relay of 50MVAR Rengali Line reactor	SS		2.63	1.75	4.38
	RENGALI Sub-station					-
Not Awarded	Replacement of Colony Main supply distribution board (415V, 400A, Township DP Panel along with 02 Nos of Lighting transformer)	SS		25.68	17.12	42.80
Not Awarded	Supply & Replacement of CB's	SS				-
Not Awarded	Supply & Replacement of 400kV CGL Make CB without closing resistor	SS		36.20	24.14	60.34
Not Awarded	Supply & Replacement of 33kV Isolator	SS		-	-	-

Not Awarded	Retrofitting of 33kV Isolator (36 kV, 1250A, 25 KA, 3-Phase Double Break Isolator with one E/S)	SS		4.23	2.82	7.05
Not Awarded	Retrofitting of 33kV Isolator (36 kV, 1250A, 25 KA, 3-Phase Double Break Isolator without E/S)	SS		0.80	0.53	1.33
Not Awarded	Supply & Replacement of CT's	SS		-	-	-
Not Awarded	Repalcement of 420kV CT (420 KV, 3000A, 63 KA, 1-PHASE CURRENT TRANSFORMER WITH 120% EXTENDED RATING)	SS		30.24	20.16	50.40
Not Awarded	Repalcement of 245kV CT (245KV, 1600A, 40 KA, 1-PHASE CURRENT TRANSFORMER WITH 120% EXTENDED RATING)	SS		9.71	6.47	16.18
Not Awarded	Repalcement of 33kV CT (36 KV, 2000A, 25 KA, 1-PHASE CURRENT TRANSFORMER WITH 120% EXTENDED RATING)	SS		0.85	0.57	1.42
Not Awarded	Supply & Replacement of CVT	SS		-	-	-
Not Awarded	Repalcement of 245kV CVT (245kV, 4400pF CVT 1 Phase)	SS		6.79	4.53	11.32
Not Awarded	Repalcement of 33kV CVT (36kV Voltage Transformer 1 Phase)	SS		0.63	0.42	1.05
Not Awarded	Supply & Replacement of Surge Arrester	SS		-	-	-
Not Awarded	Supply & Replacement of 336kV Surge Arrester	SS		5.79	3.86	9.65
Not Awarded	Supply & Replacement of 245kV Surge Arrester	SS		1.22	0.81	2.03
Not Awarded	Supply & Replacement of electromechanical relay	SS		-	-	-
Not Awarded	Differential Relay	SS		8.09	5.39	13.48
Not Awarded	REF Relay	SS		2.63	1.75	4.38
Not Awarded	Supply and Replacement of LT System	SS		-	-	-
Not Awarded	Supply & replacement of MSB System	SS		11.40	7.60	19.00
Not Awarded	Supply & replacement of ACDB System along with extension	SS		18.24	12.16	30.40
Not Awarded	Supply & Replacement of 250kVA LT Transformer by 315kVA LT Transformer	SS		15.33	10.22	25.55
Not Awarded	Upgradation of Existing Control & Protection System with SAS based System	IT		-	-	-
Not Awarded	Complete Sub-Station Automation System for 400 kV Main bay as per TS	IT		14.19	9.46	23.65
Not Awarded	Complete Sub-Station Automation System for 400 kV Tie bay as per TS	IT		10.56	7.05	17.61
Not Awarded	Complete Sub-Station Automation System for 400 kV Line/Xmer/ Reactor bays (For Integration of Relay Panel Signals) with Existing SAS	IT		14.08	9.39	23.47
Not Awarded	Complete Sub-Station Automation System for 220 kV Bay as per TS	IT		16.74	11.16	27.90
Not Awarded	Complete Sub-Station Automation System for 220 kV Line bays (For Integration of Relay Panel Signals) with Existing SAS	IT		5.58	3.72	9.30
Not Awarded	Interfacing of Relays under Present Scope with the Existing SAS & upgradation of hardware & software	IT		4.09	2.73	6.82
Not Awarded	Complete Sub-Station Automation System for controllling & monitoring of Auxilliary system including BCUs as per TS	IT		4.52	3.01	7.53
Not Awarded	400 kV Circuit breaker relay panel with Auto reclose & Automation	SS		34.07	22.71	56.78
Not Awarded	400 kV Circuit breaker relay panel with Automation	SS		42.93	28.62	71.55
Not Awarded	220 kV Circuit breaker relay panel with Auto reclose & Automation	SS		18.92	12.61	31.53

Not Awarded	220 kV Circuit breaker relay panel with Automation	SS		33.60	22.39	55.99
Not Awarded	Supply & Installation of Online insulating oil drying system for Baripada (KJR) L/R & Indravati L/R and ICT-1	SS		20.83	13.88	34.71
Not Awarded	Repacement of OIP bushings with RIP bushing for operational improvenets and preveting failure of old OIP bushings	SS		-	-	-
Not Awarded	Supply & replacement of OIP bushings with 400kV,1250A RIP bushings for ICT-I	SS		50.73	33.82	84.55
Not Awarded	Supply & replacement of OIP bushings 245kV,2000A RIP bushings for ICT-1	SS		36.39	24.26	60.65
Not Awarded	Supply & replacement of OIP bushings with 52kV,3150A RIP bushings for ICT-1	SS		7.72	5.15	12.87
Not Awarded	Supply & replacement of OIP bushings with 400kV,800A RIP bushings for Indrvati & Baripda L/R and Keonjhar L/R presently located at Baripada	SS		183.51	122.34	305.85
Not Awarded	Supply & replacement of OIP bushings with 145kV,800A RIP bushings for Indrvati & Baripda L/R	SS		25.65	17.10	42.75
Not Awarded	PCC work of 400 & 220kV Switchyard	CIVIL	63.15	147.34		210.49
Not Awarded						-
	400kV Renagli-Indravati TL					-
Not Awarded	Replacement of 36 sets of Single Suspension I String by Double Suspension I string and Replacement of CLR Ploymer Insulators both 120 KN & 160 KN in Major crossing spans in 400kV Rengali-Indravati S/C line under Bolangir TLM .	TL		30.45	20.30	50.75
Not Awarded	Supply & installation of pipe earthing and Replaceent of Hardware of Tower material, Hexa nut & bolts etc in 400kV Rengali-Indravati S/C line under Bolangir TLM	TL		22.85	15.22	38.07
Total			**68.71**	**1553.08**	**934.69**	**2556.48**

87. We have considered the submissions of the Petitioner. The Petitioner has claimed the ACE for the 2024-29 tariff period on account of (i) Spill-over of ACE allowed during 2019-24 Tariff Period, and (ii) Replacement of equipment at Jeypore , Indravati and Rengali Substations. The head-wise detailed analysis is as follows:

A. *Spillover of ACE allowed during 2019-24 Tariff Period*,

88. The Petitioner has submitted that the actual cost incurred against replacement of equipment during the 2019-24 tariff period is ₹401.30 lakh and the balance proposed to incur ₹4742.78 lakh has been spilled over to the next tariff period in FY 2024-25.

89. We have considered the submissions of the Petitioner. It is observed that the Petitioner has claimed the spill-over of ACE against (i) replacement of substation equipment, and (ii) Replacement of ICTs at Jeypore and Rengali Substations.

(i) Against Replacement of equipment.

90. After pursuance, it is observed that, out of total ACE ₹4742.78 lakh, the ACE ₹198.60 lakh has been claimed by the Petitioner as spill-over of ACE against replacement of substation equipment at Jeypore, Rengali, and Indravati substations. Further, it is observed that the Petitioner has claimed the total ACE ₹330400.00 & ₹3028320.00 and ₹327096.00 & ₹1261799.96 on account of outdoor termination kit for 66 kV 1x185 Sq. mm XLPE Armored AL Cable & replacement of 66 kV 1x185 Sq. mm XLPE Armored AL Cable at Jeypore and Rengali substations respectively.

91. With regards to above claim, we are of view that the 66-kV supply system forms the part of downstream distribution system, and accordingly, the cost of replacement of any equipment/cable associated with such system should be recovered by the Petitioner from the concerned beneficiaries, and should not to be part of instant transmission tariff.

92. Therefore, in view of above, the spill-over of ACE claimed by the Petitioner on account of outdoor termination kit for 66 kV 1x185 Sq. mm XLPE Armored AL Cable & replacement of 66 kV 1x185 Sq. mm XLPE Armored AL Cable at Jeypore and Rengali substations during F.Y. 2024-25 cannot be allowed and hence rejected. The Petitioner is directed to submit the detailed justification for claiming the ACE against 66 kV Supply system at the time of truing up and the same shall be reviewed in accordance with law.

93. Further, it is noted that the Petitioner has claimed the ACE of ₹8747905.22 against "*Demolishing Existing Foundations, Excavation, and construction of New 500 MVA Transformer & other required equipment Foundation, and disposal of malba/unserviceable waste at POWERGRID, Jeypore Sub-Station*", in F.Y. 2024-25. It is noticed that the Petitioner has not proposed any such type of expenditure during determination of transmission tariff for 2019-24 tariff period through Petition No.

448/TT/2020. The Petitioner has also not submitted any detailed justification for the aforesaid expenditure in instant true-up Petition. Therefore, the ACE of ₹8747905.22 lakh claimed by the Petitioner against "*Demolishing Existing Foundations, Excavation, and construction of New 500 MVA Transformer & other required equipment Foundation, and disposal of malba/unserviceable waste at POWERGRID, Jeypore Sub-Station*", in F.Y. 2024-25 cannot be allowed at this stage. Hence, the Petitioner is directed to submit the detailed justification and technical requirement for the said work during truing up and the same shall be reviewed accordingly.

94. In view of the above, the details of ACE claimed by the Petitioner on account of Spill-over of ACE against replacement of equipments as allowed/not allowed is as follows:

Description	**Head**	**Spill over of ACE 2019-24 projected to be incur against replacement of equipment's**	**ACE allowed**	**Ace Not allowed**
		2024-25	**2024-25**	**2024-25**
JEYPORE Sub-station				
400 kV MLDB (Along with 2 Nos 100 KVA Lighting Transformer)	SS	1444771.42	1444771.42	-
Replacement of 420 KV, 4400 PF,1-PH CVT	SS	13282.00	13282.00	-
Dismantling and dragging of 105 MVA, 400/220/33KV ICT-1 Unit-2 (BHEL Make) to a suitable location at POWERGRID Jeypore Sub-station. (Under JTTS ADD-CAP 2019-24)".	ss	45900	45900	-
Demolishing two nos. of Existing firewalls betweenICT-1 Unit-I, Unit-II <(>&<)> Unit-III and disposal of malba/unserviceable waste at POWERGRID, Jeypore Sub-Station	ss	9744	9744	-
Demolishing Existing Foundations, Excavation, and construction of New 500 MVA Transformer & other required equipment Foundation, and disposal of malba/unserviceable waste at POWERGRID, Jeypore Sub-Station (Under ADD-CAP 2019-24)"	SS	8747905.22	-	8747905.22
Supply of Outdoor cable termination kits suitable for 66kV, 1CX185 Sq.mm XLPE armoured Al cable at POWERGRID, Rengali & Jeypore Substation	SS	330400	-	330400
Supply of 66kV, 1CX185 sq. mm XLPE armoured Al cable for 500 MVA 400/220/33kV		3028320	-	3028320

ICT (Toshiba Make) at POWERGRID, Rengali & Jeypore Substation				
400KV S/C JEYPORE-INDRAVATI TL LINE				
Insulator string replacement work against PID defects	TL	9169.00	9169.00	-
Replacement of all old rusted number plates & Danger plates (Supply & Service Portion)	TL	9544.30	9544.30	-
Indravati Sub-station	SS			-
400 kV MLDB (Along with 2 Nos 100 KVA Lighting Transformer)	SS	2726900	2726900	-
Replacement of 420 KV, 8800 PF,1-PH CVT	SS	8822.00	8822.00	-
Replacement of 336kv Surge Arrester	SS	24628.00	24628.00	-
Supply & Replacement of 250KVA DG Set	SS	100800.00	100800.00	-
Rengali Sub-station				
400 kV Emergency LDB (Along with 1 No 100 KVA Lighting Transformer)	SS	65085.00	65085.00	-
Main-II Distance protection relay of Keonjhar/Kolaghat Line.	SS	17772.00	17772.00	-
Replacement of 420 & 245KV CVT	SS	168280.00	168280.00	-
Replacement of 33kV Voltage Transformers	SS	6816.00	6816.00	-
Retrofitting of 220kV CB	SS	657800.00	657800.00	-
Letter of Award for "Dismantling and dragging of 315 MVA, 400/220/33KV ICT-2 (BHEL Make) to a suitable location at POWERGRID, Rengali Sub-station	SS	855500.00	855500.00	-
Supply of Outdoor cable termination kits suitable for 66kV, 1CX185 Sq.mm XLPE armoured Al cable at POWERGRID, Rengali & Jeypore Substation	SS	327096.00	-	327096.00
Supply of Outdoor cable termination kits suitable for 66kV, 1CX185 Sq.mm XLPE armoured Al cable for 500 MVA 400/220/33 kV ICT (Toshiba Make) at POWERGRID, Rengali & Jeypore Substation	SS	1261799.96	-	1261799.96
Total amount		**19860334.90**	**6164813.72**	**13695521.18**
Say (in Lakh)		**198.60**	**61.65**	**136.96**

(ii) Against replacement of 400 kV 1-Phase BHEL make 03x105 MVA ICT-I at Jeypore Substation, and replacement of 400 kV 3-Phase BHEL make 03x105 MVA ICT-I at Jeypore Substation

95. It is observed that out of total ACE ₹4742.78 lakh, the ACE ₹4544.18 lakh has been claimed by the Petitioner against replacement of 400 kV 1-Phase BHEL make 03x105 MVA ICT-I at Jeypore Substation, and replacement of 400 kV 3-Phase BHEL make 03x105 MVA ICT-I at Jeypore Substation. The Petitioner has submitted that the ACE against replacement of ICTs has been spilled-over to the 2024-29 tariff period. The Petitioner has further contended that due to transportation issues, the 315 MVA transformation capacity ICT to Jeypore was considered and after detailed deliberation in the 217th OCC and 52nd TCC & ERPC meeting held on 24.7.2024 and 6.9.2024

respectively, it was agreed to modify the transportation capacity for existing 03x105 MVA ICT at Jeypore to 01 nos. 315 MVA instead of earlier approved 500 MVA Capacity in 242/MP/2022.

96. We have considered the submissions of the Petitioner and perused the documents placed on record. The Commission, vide order dated 20.12.2021 in Petition No. 448/TT/2020, had not allowed the ACE proposed on account of replacement of 105 MVA ICT-1 at Jeypore and 315 MVA ICT-II at Rengali Substation and directed the Petitioner to seek approval from RPC for the said proposed replacement and file a separate Petition for ACE, for consideration by the Commission. The relevant extract of order is as follows:

> *"45. Further, the Petitioner has also proposed to replace 105 MVA ICT-1 at Jeypore and 315 MVA ICT-II at Rengali sub-stations and has claimed ACE of ₹460.90 lakh and ₹1147.35 lakh during 2022-23 and 2023-24 respectively. We observe that these ICTs are major elements of the transmission system which are critical and high value elements. So, we are of the view that if such items are to be replaced, it is prudent to discuss in RPC and the concerned beneficiaries. Accordingly, the projected ACE towards ICT is not allowed at this stage and the Petitioner is directed to seek approval from RPC for the said proposed replacements and file a separate petition for ACE towards "ICTs and Reactors" for consideration by the Commission."*

97. In compliance with the directions, the Petitioner filed the Petition No. 242/MP/2022 for 'In-Principle' approval for incurring ACE during the 2019-24 tariff period against replacement of transformers/reactors. The Commission, vide order dated 20.7.2023 in Petition No. 242/MP/2022, has accorded the 'In-Principle' approval for the cost of replacement of the said line reactors at Kanpur Substation during the 2019-24 tariff period under Regulation 25(2)(c) of the 2019 Tariff Regulations. The Commission had also directed to submit the report of third party at the time of truing up along with actual ACE for further consideration. The relevant extract of order is as follows:

> *"17. We have carefully perused the list of the ICTs/Reactors that are sought to be replaced by the Petitioner and the recommendations of the concerned RPCs for their replacement, who have based their recommendations on the test results of CPRI. It is*

observed that the RPCs have recommended replacement of the ICTs/Reactors, which have outlived their useful lives.

*18. Taking into consideration the critical nature of the components that are sought to be replaced, the fact that these components have completed their useful lives and the recommendations of the RPCs, we hereby **accord in-principle** approval of the cost of replacement of the following 27 components as ACE during the 2019-24 tariff period under Regulation 25(2)(c) of the 2019 Tariff Regulations.*

Sl No.	*Project*	*Asset as approved by RPC*	*RPC Meeting*	*Remarks*
1	*400 kV Jeypore Talcher TS in ER*	*Replacement of 315 MVA ICT-II at Rengali Substation with 500 MVA ICT*	*45th ERPC meeting held on 26.3.2022*	
2	*400 kV Jeypore Talcher TS in ER*	*Replacement of 3x105 MVA ICT-I at Jeypore Substation with 500 MVA ICT*		
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19. It is observed that the Petitioner has not submitted the third-party inspection report in the case of the above-mentioned elements. The Petitioner is directed to submit the report of the third party in the case of all the above-mentioned elements at the time of truing up along with the actual ACE for further consideration by the Commission."

98. Further, after perusal of 217th OCC meeting held on 24.7.2024 and 52nd TCC & ERPC meeting held on 6.9.2024, it is observed that the matter regarding "modification in the capacity of proposed 500 MVA ICT to 315 MVA ICT at Jeypore Substation" was placed by the Petitioner before the forum and apprised that due to non-feasibility of transportation of 500 MVA ICT to Jeypore Substation , the spare 315 MVA spare ICT which was under transportation from M/s Toshiba factory Hyderabad to Rourkela Sub-station , was shifted to Jeypore Substation. The Petitioner has also apprised to the forum that after completion of necessary foundation works, the said ICT was ready for commissioning by the end of August 2024. Accordingly, after detailed discussions, the OCC referred the matter to TCC for information, and subsequently, TCC referred the matter to ERPC for according post facto approval. Thereafter, ERPC accorded the post facto approval for installation of 315 MVA ICT at Jeypore Substation instead of earlier approved capacity of 500 MVA ICT. The relevant extracts of meeting(s) are as follows:

"52nd TCC & ERPC meeting held on 6.9.2024

B.1.14 Modification in the capacity of proposed 500MVA ICT (to be installed in place of 3x105 MVA ICT at Jeypore SUB-STATION under ADD-CAP 2019-24 block) to 315 MVA ICT

- *Replacement with upgradation of 400/220kV, 3x105 MVA BHEL make ICT-1 with 500MVA ICT under the JTTS ADD-CAP 2019-24 block was approved in the 45th ERPC meeting. Subsequently LOA have been issued to M/s Toshiba dtd. 17.03.2023 for manufacture and supply of the new ICT.*
- *M/s Toshiba has informed vide their mail dtd: 08/03/2024 that they carried out route survey of six different routes for transportation, but no feasible route has been identified by the transporter for the smooth transportation of 500MVA ICT to Jeypore S/S. However, they mentioned that transportation of 315 MVA ICT is partially feasible at Site. Copy of mail communication and route survey reports are attached herewith for reference (Annex B.2.2).*
- *Meanwhile, it is pertinent here to mention that another spare 315 MVA ICT is under transit from M/s Toshiba factory, Hyderabad to Rourkela S/S.*
- *In view of above difficulties in transportation and as the proposed ICT at Jeypore S/S is to be commissioned under ADD-CAP 2019-24 block, the only possibility is to install a 315 MVA ICT in place of earlier approved 500MVA ICT at Jeypore S/S. This can be done by interchanging the procured 500MVA ICT for Jeypore & 315 MVA ICT for Rourkela SS.*
- *Therefore, it is requested to accord approval for reduction of capacity of 500MVA ICT to 315MVA ICT at Jeypore S/S for commissioning under ADD-CAP 2019-24 block.*

As per deliberation in the 217th OCC meeting:

- *The Representative of Powergrid Odisha apprised the forum:*
  - *Non-feasibility of transportation of 500MVA ICT which was supposed to be installed in place of 3*105MVA ICT at Jeypore S/S. Several constraints were highlighted in the detailed route survey carried out in six different routes.*
  - *On the other hand, transportation of 315 MVA ICT was found feasible as per the route survey.*
  - *Accordingly, 315 MVA ICT has been transported to Jeypore S/S. Now the ICT is ready* ***for commissioning after completion of necessary foundation works by end of August 2024.***

OCC Decision*:*

- *OCC took serious view on transportation of the said 315 MVA ICT by PowerGrid Odisha without prior consent of OCC Forum & advised Powergrid to refrain from such practices in future.*

ERLDC may issue FTC as and when requested by Powergrid Odisha.

- *OCC referred the matter to TCC for information.*

The modification in capacity of ICT from 500 MVA to 315 MVA is put before TCC for post-facto approval.

Deliberation in 52nd TCC meeting

In view of practical difficulties in transportation, TCC agreed to the modification in capacity of Jeypore ICT from earlier approved capacity of 500 MVA to 315 MVA.

TCC referred to ERPC for according post-facto approval.

ERPC may approve.

Deliberation in 52nd ERPC meeting

ERPC accorded post-facto approval for installation of 315 MVA ICT at Jeypore S/S instead of earlier approved capacity of 500 MVA."

99. The Petitioner has also submitted the Condition Assessment Report issued by CPRI dated 4.7.2019 in respect of 105 MVA 1-Phase ICT-I and 315 MVA 3 Phase ICT-II at Jeypore and Rengali Substation respectively. After perusal, it is noted that the Central Power Research Institute (CPRI) vide said reports has also recommended replacement of aforesaid ICTs at Jeypore and Rengali Substations on account of ageing effect, non-availability of spares and for high power system stability. Therefore, in line with the 'In-Principle' approval accorded by the Commission, vide order dated 20.7.2023 in Petition No. 242/MP/2022, the assessment report issued by the CPRI and considering further decision and decision held in 52nd TCC & ERPC meeting held on 6.9.2024 , the ACE ₹1851.61 Lakh and ₹2692.57 lakh claimed by the Petitioner against replacement of 3x105 MVA ICT with 1x315 MVA 3 Phase ICT at Jeypore substation and 1x315 MVA 3 Phase ICT with 500 MVA ICT at Rengali substation respectively is hereby provisionally allowed under Regulation 25(2)(c) of 2024 Tariff Regulations for 2024-29 Tariff Period, subject to submission of actual expenditure along with supporting

documents like Letter of Award , completion certificate, etc. to review the same at the time of truing up. The detail of allowed ACE is as follows:

Description	Head	Spill over of ACE 2019-24 projected to be incur against replacement of equipment's	ACE allowed
		2024-25	2024-25
JEYPORE Sub-station			
Replacement of 105MVA, 400/220/33kV, 1-ph auto transformer with 315 MVA ICT including insulating oil and associated civil works	SS	1851616385	1851616385
Rengali Sub-station			
Supply & Replacement of 315MVA, 400/220/33kV ICT-2 including insulating oil along with associated civil works	SS	269256161	269256161
Total amount		**454417546.00**	**454417546.00**
Say (in Lakh)		**4544.18**	**4544.18**

B. Against replacement of substation equipments

100. The Petitioner has proposed the Additional Capital Expenditure (ACE) towards replacement various sub-station equipment, i.e., Circuit Breakers (CBs 05 Nos), Isolators (15 Sets), Porcelain CTs (14 No's), 400 kV & 220 kV CVTs (15 Nos.), Old bushings (27 Nos.), 400kV WSI make Porcelain type Surge arrestors (21 Nos.), Conventional C&R Panel to SAS based C&R panel, Online dry out system, retro fitment of Auxiliary System, Gravel spreading, relays, replacement of Single suspension I-Insulators to Double string and hardware fitting and 220V Battery Bank on account of obsolescence of equipment and deterioration in performance due to ageing. The Petitioner has proposed an ACE of ₹2556.48 lakh under Regulations 25(2) of the 2024 Tariff Regulations towards replacement of the above-mentioned sub-station equipment. The details of ACE claimed by the Petitioner are as follows:

(₹ in lakh)

Description	Substation	Head	2025-26	2026-27	2027-28	Total
CB's	Jeypore	SS	0	2576481	1717654	4294135
	Indravati	SS	0	12491781	8327854	20819635
	Rengali	SS	0	3620264	2413510	6033774

CT	Jeypore	SS	0	2284593	1523062	3807655
	Rengali	SS	0	4079430	2719621	6799051
CVT	Jeypore	SS	0	1624435	1082957	2707392
	Indravati	SS	0	840908	560605	1401513
	Rengali	SS	0	741530	494353	1235883
LA	Jeypore	SS	0	1472269	981514	2453783
	Rengali	SS	0	701294	467529	1168823
220 V Battery Bank	Jeypore	SS	555995	370664	0	926659
ACDB/MSB/ACP	Jeypore	SS	0	3237371	2158248	5395619
	Rengali	SS	0	7064836	4709891	11774727
	Indravati	SS	0	2070491	1380327	3450818
Control and protection system/Automation system	Jeypore	SS	0	10171983	6781322	16953305
	Indravati	SS	0	6888635	4592424	11481059
	Rengali	SS	0	19928406	13285604	33214010
Isolator	Indravati	SS	0	8601362	5734241	14335603
	Rengali	SS	0	503043	335363	838406
Bushings	Rengali	SS	0	30400001	20266667	50666668
	Indravati	SS	0	6629942	4419961	11049903
Relays	Indravati	SS	0	1071864	714576	1786440
	Rengali	SS	0	1071864	714576	1786440
Online drying system for LR	Rengali	SS	0	2082352	1388235	3470587
PCC Work	Rengali	SS	6314591	14734046	0	21048637
Rengali-Indravati TKL						
Insulators		TL	0	4521690	3014459	7536149
Tower Material		TL	0	2892882	1928588	4821470
Jeypore-Indravati TKL						
Insulators		TL	0	1709716	1139811	2849527
Tower Material		TL	0	923866	615911	1539777
Total			**6870586**	**155307999**	**93468863**	**255647448**
Say in Lakh			**₹68.71**	**₹1553.08**	**₹934.69**	**₹2556.48**

101. We have considered the submissions of the Petitioner. The Petitioner has claimed the ACE during 2024-29 tariff period under Regulation 25(2)(a) and 25(2)(c) of the 2024 Tariff Regulations. It is observed that the Petitioner has claimed estimated cost of each item, wherein cost of some individual items is less than ₹20 lakh.

102. We would like to refer Regulations 25(2)(a) and 25(2)(c) of the 2024 Tariff Regulations, which provide as follows:

> *"(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.".

103. As per the proviso under Regulation 25(2) of the 2024 Tariff Regulations, any ACE with respect to replacement of assets under the original scope on account of obsolescence of technology of less than ₹20 lakh shall not be considered as part of capital cost. In the instant case, the Petitioner is replacing certain sub-station equipment and components on account of obsolescence of technology.

104. The issue arises for our consideration is whether ACE claimed by the Petitioner is allowable under Regulation 25 (2) (a) and 25(2) (c) of the 2024 Tariff Regulations or not?

105. It is noted that the COD of the instant transmission asset is 1.12.1990 and the useful life of the asset is '30' years. The useful life of 30 years will be completed on 1.12.2021. The Petitioner has proposed ACE in the 2024-29 tariff period to replace aged components/ equipment to enhance system reliability and stability. The item-wise ACE allowed/ not allowed is analyzed in subsequent paragraphs and the same is as follows:

(A) Replacement of 400 kV Pneumatic Operated Circuit Breakers (CBs):

106. The Petitioner has proposed to replace 5 no. of 400 kV Pneumatic operated Circuit Breakers (CBs) at Jeypore (01 No.), Indravati (03 No's) and Rengali (01 No.) Sub-station.

107. We have considered the submissions of the Petitioner. It is noted that these CBs have completed useful life of 25 years and these equipment's are aged and replacement of these equipment's are critical and their failure may affect the stability and reliability of the grid. Therefore, the replacement of these obsolete equipment and consequential ACE of 5 no. of CBs ₹3,11,47,544.00 is allowed under Regulation 25(2)(c) of the 2024 Tariff Regulations, subject to true-up on actual basis.

(B) Replacement of old & obsolete 400 kV, 220 kV & 33 kV Porcelain CTs

108. The Petitioner has proposed to replace 14 no. of 400KV, 220kV & 33kV Porcelain CTs at Jeypore (400 kV: 02, 220 kV: 03), and Rengali (400 kV: 05, 220 kV : 03, 33 kV : 01) substation.

109. We have considered the submission of the Petitioner. It is noted that these CTs have completed useful life of 25 years and these equipment's are aged and replacement of these equipment are critical, and their failure may affect the stability and reliability of the grid. The replacement of this obsolete equipment and consequential ACE of 14 no. of CTs is ₹1,06,06,706.00 is allowed under Regulation 25(2)(c) of the 2024 Tariff Regulations, subject to true-up on actual basis.

(C) Replacement of old & obsolete 400 kV, 220 kV & 33 kV CVTs

110. The Petitioner has proposed to replace 15 no. of old and obsolete 400 kV, 220 kV and 33kV CVTs at Jeypore (400 kV : 05 , 220 kV : 02), Indravati (400 kV : 03), and Rengali (220 kV : 04 , 33 kV : 01), substation.

111. We have considered the submission of the Petitioner. It is noted that these CVTs have completed useful life of 25 years and these equipment's are aged and replacement of these equipment's are critical, and their failure may affect the stability and reliability of the grid. The replacement of this obsolete equipment and consequential ACE of 15 no. of 400 kV, 220 kV and 33kV CVTs ₹53,44,788.00 is allowed under Regulation 25(2)(c) of the 2024 Tariff Regulations, subject to true-up on actual basis.

(D) Replacement of old & obsolete 400 kV & 220 kV WSI make Porcelain Type surge arrestors

112. The Petitioner has proposed to replace 21 no. of old and obsolete 400 kV WSI make Porcelain type Surge arrestors at Jeypore (400 kV: 06, 220 kV : 09), and Rengali (400 kV : 04 , 220 kV : 02) substation.

113. We have considered the submission of the Petitioner. It is noted that these Surge arrestors have completed useful life of 25 years and these equipment's are aged and replacement of these equipment's are critical, and their failure may affect the stability and reliability of the grid. The replacement of this obsolete equipment and consequential ACE of 21 no. of 400 kV, and 220 kV Surge Arrestors ₹36,22,606.00 is allowed under Regulation 25(2)(c) of the 2024 Tariff Regulations, subject to true-up on actual basis.

(E) Replacement of old & obsolete 400 kV & 33 kV (Make ; S&S /AMEIL) Isolators

114. The Petitioner has proposed to replace 15 sets old and obsolete 400 kV & 220 kV Isolators at Indravati (400 kV : 09) and Rengali (33 kV : 06) Sub-station.

115. We have considered the submission of the Petitioner. It is noted that these Isolators have completed useful life of 25 years and these equipment's are aged and

replacement of these equipment's are critical, and their failure may affect the stability and reliability of the grid. The replacement of this obsolete equipment and consequential ACE of 21 no. of 400 kV, and 33 kV Isolators ₹1,51,74,009.00 is allowed under Regulation 25(2)(c) of the 2024 Tariff Regulations, subject to true-up on actual basis.

(F) Replacement of Old bushings in Transformer

116. The Petitioner has proposed replacing 27 no. of transformer bushings at Indravati (04 Nos) and Rengali (23 Nos) Sub-station. It is noted that these transformer bushings have completed useful life of 30 years. We are of the view that the transformer bushings are aged and replacement of these transformer bushings are critical and their failure may affect the stability and reliability of the grid.

117. The Petitioner has proposed to replace 27 no. of transformer bushings and consequential ACE ₹6,17,16,571.00 has been allowed under Regulation 25(2)(c) of the 2024 Tariff Regulations, subject to true-up on actual basis.

(G) Replacement of Conventional C&R Panel to SAS based C&R panel at Jeypore, Indravati and Rengali Sub-stations

118. The Petitioner has claimed expenditure towards replacement of line protection panel, CB A/R protection panels with SAS-based C&R panels along with SCADA and implementation of associated Sub-Station Automation works at Jeypore, Indravati and Rengali Sub-stations. The scope of work includes Complete sub-Station Automation System for 400 kV Main bay, 400 kV Tie bay, 400 kV Line/Xmer/Reactor bays, 220 kV bays, 220 kV Line bays for integration of relay panel signals with the existing SAS, interfacing of relays under the present scope with the existing SAS along with upgradation of hardware and software, automation for controlling and monitoring of auxiliary systems including BCUs, and provision of 400 kV and 220 kV circuit breaker relay panels with auto-reclose and automation.

119. We have considered the submissions of the Petitioner. The works claimed are in the nature of system upgradation and augmentation of protection, control and automation infrastructure of the sub-stations, which are essential for reliable, secure and efficient operation of the transmission system. The expenditure incurred towards these assets is capital in nature and forms an integral part of the sub-station system. Accordingly, the expenditure of ₹6,16,48,374.00 claimed by the Petitioner towards the above works is admissible and the same is allowed under ACE.

(H) Online dry out system in Baripada and Indravati line Reactors at Rengali Substation (03 Nos)

120. The Petitioner has claimed expenditure towards supply and installation of 3 nos. Online Insulating Oil Drying System for Baripada (U/R) L/R, Indravati L/R and ICT-1 at Rengali Substation under Regulations 25(2)(a) and 25(2)(c) of the 2024 Tariff Regulations.

121. We have considered the submissions of the Petitioner. It is observed that an online insulating oil drying system is primarily deployed for filtration, dehydration and maintenance of transformer/reactor insulating oil with a view to preserving dielectric strength, reducing moisture content and improving operational health of the equipment. Such a system is in the nature of a maintenance and condition-improvement facility intended to restore or sustain the performance of Asset-I(A)(Original Asset)s and does not result in creation of a distinct transmission asset or enhancement of the original project scope. It is further observed that the said system is not exclusive to the instant transmission asset/project and is essentially a common maintenance arrangement for upkeep of existing equipment.

122. Therefore, in view of above deliberation, we are of view that the expenditure towards the aforesaid procurement does not qualify as capital expenditure as ACE under Regulation 25(2)(a) and 25(2)(c) of the 2024 Tariff Regulations.

123. Accordingly, the ACE ₹34,70,587.00 claimed by the Petitioner on account of supply and installation of 3 nos. Online Insulating Oil Drying System for Baripada (U/R) L/R, Indravati L/R and ICT-1 at Rengali substation, is not allowed for 2024-29 Tariff Period and the Petitioner shall meet the expenditure through normative O&M expenses.

(I) Retrofitment of Auxiliary System ACDB, DCDB, MDB and LDB at Jeypore, Indravati and Rengali Sub-stations

124. The Petitioner has claimed expenditure towards Retrofitment/replacement of auxiliary system ACDB, DCDB, MDB and LDB equipment at Jeypore, Indravati and Rengali Sub-stations.

125. We have considered the submissions of the Petitioner. The works involved are in the nature of replacement/upgradation of essential auxiliary power distribution infrastructure required for reliable operation, control and maintenance of the sub-station systems. We are of the view that the expenditure towards these items is capital in nature and forms an integral part of the sub-station auxiliary system. Accordingly, the expenditure ₹2,06,21,164.00 claimed by the Petitioner is admissible and the same is allowed under ACE.

(J) PCC with gravel spreading in Switchyard at Rengali Sub-station

126. The Petitioner has claimed expenditure towards PCC with gravel spreading in the Switchyard at Rengali Sub-station under Regulation 25(2)(a) and 25(2)(c) of 2024 Tariff Regulations.

127. We have considered the submissions of the Petitioner. It is observed that PCC and gravel spreading in the switchyard are generally undertaken to avoid growing of

wild vegetation, grasses, etc. during operation stage, for improvement of housekeeping, drainage, weed control, and safe movement/access within the sub-station premises. Such works are of a routine upkeep and maintenance nature intended to preserve the existing condition and operational usability of the switchyard and do not result in creation of a new transmission asset or enhancement in the capacity of the Asset-I(A)(Original Asset). The said expenditure is also not attributable to any exclusive asset addition for the instant project, but is in the nature of general civil maintenance of the sub-station.

128. Therefore, in view of above deliberation, we are of view that the expenditure towards the aforesaid PCC work with gravels spreading in Switchyard at Rengali Substation does not qualify as capital expenditure as ACE under Regulation 25(2)(a) and 25(2)(c) of the 2024 Tariff Regulations. Accordingly, the expenditure of ₹2,10,48,637.00 claimed by the Petitioner as ACE on account of PCC work with gravels spreading in Switchyard at Rengali Substation is not allowed under ACE, and the Petitioner shall meet the expenditure through normative O&M Expenses.

(K) Supply and installation of Numerical protection relays at Indravati and Rengali Substations (04Nos.)

129. The Petitioner has claimed expenditure towards supply and installation/replacement of protection relays with numerical relays at Indravati and Rengali Substation.

130. We have considered the submissions of the Petitioner. It is observed that protection relays form an essential part of the protection, control and monitoring system of a sub-station/transmission asset, and timely replacement of old and obsolete relays with numerical relays is necessary for ensuring reliability, selectivity, speed and accuracy in fault detection and isolation. Numerical relays also provide improved

protection coordination, event recording, disturbance monitoring and communication capabilities, thereby enhancing the safe and efficient operation of the system.

131. We are of the view that replacement of obsolete protection relays with numerical relays is essential for reliable operation of the transmission system and accordingly, the consequential ACE ₹35,72,880.00 is allowed under Regulation 25(2)(c) of the 2024 Tariff Regulations, subject to true-up on actual basis.

(L) Replacement of Single suspension I-Insulators to Double string and Hardware fitting nut and bolt in 400kV Jeypore Indravati and Rengali Indravati S/c line

132. The Petitioner has claimed expenditure towards replacement of single suspension I-string insulators by double suspension I-string insulators in major crossing spans, and replacement of tower hardware including hexa nuts and bolts, in the 400 kV Jeypore–Indravati S/C line and 400 kV Rengali–Indravati S/C line.

133. We have considered the submissions of the Petitioner. It is observed that replacement of single suspension I-string insulators by double suspension I-string insulators in major crossing spans, are undertaken for strengthening of critical line spans, improvement of insulation performance, and ensuring safe and reliable operation of the transmission lines. These works contribute to improved mechanical strength, electrical safety and operational reliability of the transmission asset and accordingly the ACE ₹are, therefore, admissible under ACE ₹75,36,149.00 and ₹28,49,527.00 lakh claimed by the Petitioner against replacement of insulators in 400 kV Rengali–Indravati S/C line and 400 kV Jeypore–Indravati S/C line respectively, is hereby allowed under Regulation 25(2)(c) of the 2024 Tariff Regulations, subject to true-up on actual basis.

134. Further, with regards the expenditure claimed as ACE on account of replacement of hardware of tower material, hexa nuts and bolts, etc. in 400 kV Jeypore–Indravati S/C line and 400 kV Rengali–Indravati S/C line, we are of view that such

replacement is in the nature of routine maintenance and upkeep of existing tower components to address normal wear and tear, tightening, corrosion and deterioration over the life of the line. These activities do not result in system upgradation, or enhancement in the capacity of the transmission asset beyond ordinary maintenance requirements. Accordingly, the expenditure of ₹48,21,470.00 and ₹15,39,777.00 claimed by the Petitioner against replacement of hardware tower material including nuts bolts etc. in 400 kV Rengali–Indravati S/C line and 400 kV Jeypore–Indravati S/C line respectively, is not allowed as ACE for 2024-29 tariff period.

(M) Replacement of 220V Battery Bank at Jeypore Substation (1 Nos):

135. The Petitioner has claimed ACE ₹9,26,659.00 towards replacement of 220V, Battery Bank at Jeypore Sub-station.

136. We are of view that the existing 220V Battery banks are the part of common auxiliary 220V DC supply system at Jeypore Substation and to maintain the regular DC supply, the replacement of batteries is required as and when they get deteriorated/leakage. The replacement of batteries is not depending upon the completion of their life, it will be required as per the physical condition of batteries. The replacement of batteries is the common phenomena/practice which is attended/done during regular O&M works at substations. Therefore, we are of view that the Petitioner shall meet the said expenditure through normative O&M Expenses and thus, the ACE ₹9,26,659.00 claimed against replacement of 220 V Battery Bank at Jeypore Substation is not allowed.

137. Based on the above discussions, the projected ACE allowed/not allowed for 2024-29 Period is as follows:

Sr. No.	Equipment proposed to be replaced	ACE claimed	ACE allowed	ACE not Allowed
1	Circuit Breaker (6 no's)	₹ 3,11,47,544.00	₹ 3,11,47,544.00	-
2	Porcelain CTs	₹ 1,06,06,706.00	₹ 1,06,06,706.00	-
3	Capacitive Voltage Transformer (CVT)	₹ 53,44,788.00	₹ 53,44,788.00	-
4	Porcelain type Surge arrestors	₹ 36,22,606.00	₹ 36,22,606.00	-
5	Isolators	₹ 1,51,74,009.00	₹ 1,51,74,009.00	-
6	Bushings	₹ 6,17,16,571.00	₹ 6,17,16,571.00	-
7	Replacement of Conventional C&R Panel to SAS based C&R panel	₹ 6,16,48,374.00	₹ 6,16,48,374.00	-
8	Online dry out system in Baripada and Indravati line Reactors	₹ 34,70,587.00	-	₹ 34,70,587.00
9	Retrofitment of Auxiliary System ACDB, DCDB, MDB and LDB	₹ 2,06,21,164.00	₹ 2,06,21,164.00	-
10	PCC with gravel spreading in switchyard	₹ 2,10,48,637.00	-	₹ 2,10,48,637.00
11	Supply and installation of Numerical protection relays at Indravati and Rengali	₹ 35,72,880.00	₹ 35,72,880.00	-
12	Replacement of Single suspension I-Insulators to Double string insulators in Rengali -Indravati Transmission line	₹ 75,36,149.00	₹ 75,36,149.00	-
13	Replacement of Hardware fitting nut and bolt in Rengali - Indravati Transmission line	₹ 48,21,470.00	-	₹ 48,21,470.00
14	Replacement of Single suspension I-Insulators to Double string insulators in Jeypore -Indravati Transmission line	₹ 28,49,527.00	₹ 28,49,527.00	-
15	Replacement of Hardware fitting nut and bolt in Jeypore - Indravati Transmission line	₹ 15,39,777.00	-	₹ 15,39,777.00
16	Replacement of 220V Battery Bank at Jeypore SS	₹ 9,26,659.00	-	₹ 9,26,659.00
	Total	**₹ 25,56,47,448.00**	**₹ 22,38,40,318.00**	**₹ 3,18,07,130.00**
	Say in Lakh	**₹2556.48**	**₹2238.41**	**₹318.07**

138. The financial year-wise detail of ACE allowed in respect of replacement of equipments is as follows:

Sr. No.	Equipment proposed to be replaced	2025-26	2026-27	2027-28	Total
1	Circuit Breaker (6 no's)	0.00	₹ 1,86,88,526.00	₹ 1,24,59,018.00	₹ 3,11,47,544.00
2	Porcelain CTs	0.00	₹ 63,64,023.00	₹ 42,42,683.00	₹ 1,06,06,706.00
3	Capacitive Voltage Transformer (CVT)	0.00	₹ 32,06,873.00	₹ 21,37,915.00	₹ 53,44,788.00
4	Porcelain type Surge arrestors/LAs	0.00	₹ 21,73,563.00	₹ 14,49,043.00	₹ 36,22,606.00

5	Isolators	0.00	₹ 91,04,405.00	₹ 60,69,604.00	₹ 1,51,74,009.00
6	Bushings	0.00	₹ 3,70,29,943.00	₹ 2,46,86,628.00	₹ 6,17,16,571.00
7	Replacement of Conventional C&R Panel to SAS based C&R panel	0.00	₹ 3,69,89,024.00	₹ 2,46,59,350.00	₹ 6,16,48,374.00
9	Retrofitment of Auxiliary System ACDB, DCDB, MDB and LDB	0.00	₹ 1,23,72,698.00	₹ 82,48,466.00	₹ 2,06,21,164.00
11	Supply and installation of Numerical protection relays at Indravati and Rengali	0.00	₹ 21,43,728.00	₹ 14,29,152.00	₹ 35,72,880.00
12	Replacement of Single suspension I-Insulators to Double string insulators in Rengali -Indravati Transmission line	0.00	₹ 45,21,690.00	₹ 30,14,459.00	₹ 75,36,149.00
14	Replacement of Single suspension I-Insulators to Double string insulators in Jeypore -Indravati Transmission line	0.00	₹ 17,09,716.00	₹ 11,39,811.00	₹ 28,49,527.00
	Total	**0.00**	**₹ 13,43,04,189.00**	**₹ 8,95,36,129.00**	**₹ 22,38,40,318.00**
	Say in Lakh	**0.00**	**₹1343.04**	**₹895.36**	**₹2238.41**

139. Accordingly, the detail of total ACE allowed in respect of instant transmission asset for the 2024-29 tariff period is as follows:

(₹ in lakh)

Sr. No	Description	2024-25	2025-26	2026-27	2027-28	2028-29	Total
1	Replacement of equipments*	61.65	0.00	0.00	0.00	0.00	61.65
2	Replacement of ICTs at Jeypore and Rengali Substations*	4544.18	0.00	0.00	0.00	0.00	4544.18
3	Replacement of equipments	0.00	0.00	1343.04	895.37	0.00	2238.41
Total		**4605.83**	**0.00**	**1343.04**	**895.37**	**0.00**	**6844.24**

(* Against the Spill-over of ACE of 2019-24.)

De-Capitalisation

140. The Petitioner has proposed the decapitalization of ₹1315.78 lakh corresponding to the replacement of aged and obsolete equipment. The details of the decapitalization are as under:

(₹ in lakh)

Equipment/ Sub-station/ TL	Year of capitalisation of asset being de-capitalised	Original Book Value of the asset being de-capitalised (*₹ in Lakhs)*	Debt – Equity ratio at the time of capitalisation	Year of de-capitalisation	Cumulative depreciation corresponding to de-capitalisation (*₹ in Lakhs)*	Cumulative repayment of Loan corresponding to de-capitalisation (*₹ in Lakhs)*
(FY 2024-25): SUB-STATION equipment : SPILL – OVER FROM TARIFF BLOCK 2019-24						
(Jeypore & Rengali)	1990-91 (01.12.1990)	867.19	50.00:50.00	2024-25	780.47	433.60
(FY 2027-28): T/L equipment						
(Rengali – Indravati TL)	1990-91 (01.12.1990)	16.75	50.00:50.00	2027-28	15.08	8.38
(FY 2027-28): SUB-STATION equipment						
(Jeypore, Rengali & Indravati)	1990-91 (01.12.1990)	467.84	50.00:50.00	2027-28	421.06	233.92

141. We have considered the submissions of the Petitioner. The de-capitalisation proposed by the Petitioner on account of spill-over of ACE of the 2019-24, replacement of substation & transmission line equipments is hereby allowed for the 2024-29 tariff period subject to truing up.

142. The detail of de-capitalisation allowed in respect of instant transmission asset for 2024-29 tariff period is as follows:

(₹ in lakh)

Sr. No	Particulars	2024-25	2025-26	2026-27	2027-28	2028-29	Total
1	De-capitalisation	867.19	0.00	0.00	484.59	0.00	1351.78

143. Accordingly, the details of the Net ACE after considering the de-capitalisation proposed in respect of instant asset for 2024-29 tariff Period are as follows:

(₹ in lakh)

Particular	Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
Combined Assets	ACE allowed	**4605.83**	**0.00**	**1343.04**	**895.37**	**0.00**
	De-Capitalisation	(867.19)	0.00	0.00	(484.59)	0.00
	Net ACE allowed	**3738.64**	**0.00**	**1343.04**	**410.78**	**0.00**

144. Accordingly, the detail of capital cost and ACE allowed in respect of instant transmission asset for the 2024-29 tariff period is as follows:

(₹ in lakh)

Assets	Capital Cost as on 1.4.2024	Net ACE allowed					Capital Cost as on 31.3.2029
		2024-25	2025-26	2026-27	2027-28	2028-29	
Asset-I	**12468.90**	**3738.64**	**0.00**	**1343.04**	**410.78**	**0.00**	**17961.36**

Debt-Equity ratio

145. 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 1.4.2024, 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 96 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."

146. 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 Asset-I(A)(Original Asset) and Asset-I(B)(New Asset) for the 2024-29 tariff period is as follows:

Asset-I(A)(Original Asset)

Funding	**Capital Cost as on 1.4.2024 (₹ in lakh)**	**(In %)**	**Decap in 2024-25 (₹ in lakh)**	**Capital Cost as on 1.4.2025 (₹ in lakh)**	**(In %)**	**Decap in 2027-28 (₹ in lakh)**	**(In %)**	**Capital Cost as on 1.4.2028 (₹ in lakh)**	**Capital Cost as on 31.3.2029 (₹ in lakh)**	**(In %)**
Debt	6083.66	50.41	-433.595	5650.065	50.41	-242.295	50.41	5407.77	5407.77	50.41
Restricted Equity @30%	3620.28	30.00	-260.157	3360.123	30.00	-145.377	30.00	3214.75	3214.75	30.00
Excess Equity	2363.66	19.59	-173.438	2190.22	19.59	-96.918	19.59	2093.30	2093.30	19.59
Total	**12067.60**	**100.00**	**-867.19**	**11200.41**	**100.00**	**-484.59**	**100.00**	**10715.82**	**10715.82**	**100.00**

(Asset-I(B)(New Asset):

Funding	Capital Cost as on 1.4.2024 (₹ in lakh)	(In %)	ACE in 2024-29 (₹ in lakh)	(In %)	Capital Cost as on 31.3.2029 (₹ in lakh)	(In %)
Debt	280.91	70.00	4790.97	70.00	5071.88	70.00
Equity	120.39	30.00	2053.27	30.00	2173.66	30.00
Total	**401.30**	**100.00**	**6844.24**	**100.00**	**7245.54**	**100.00**

Depreciation

147. 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"

148. The depreciation has been worked out considering the admitted capital expenditure as on 1.4.2024 and thereafter up to 31.3.2029. The WAROD has been worked out for the transmission assets as per the rates of depreciation specified in the 2024 Tariff Regulations. Asset-I(A)(Original Asset) has been fully depreciated in the 2019-24 tariff period.

149. As discussed above while truing up of the depreciation for the period 2019-24, Asset-I(A)(Original Asset) has already completed its useful life as on 30.11.2021 and full depreciable value has already been allowed till 31.3.2021 and thereafter, no further depreciation is required to be allowed. Further, the Petitioner has also not claimed any depreciation for the Asset-I(A)(Original Asset).

150. For ACE allowed during 2024-29 tariff period for Combined Asset (Asset-I(B)(New Asset), the Petitioner has claimed the depreciation by equally spreading the depreciable value over ten years in line with Regulation 33(8) of 2024 Tariff Regulations.

151. The Petitioner, has submitted that the ACE for the Combined Asset (Asset-I(B)(New Asset) is proposed during tariff period 2024-29, and that the useful life of the Combined Asset has been completed on 30.11.2021.

152. 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 Asset-I(B)(New Asset). Further, the de-capitalization in the case of the Combined Asset is being done in the first part, i.e., under the Existing System.

153. We have considered the submissions of the Petitioner. The useful life of the Combined Asset (Existing System) has already been completed on 30.11.2021.

154. 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 Asset-I(A)(Original Asset) during tariff period 2024-29, the Petitioner has neither furnished the requisite justification for the proposed ACE nor submitted any proposal for extension of the useful life of the Asset-I(A)(Original Asset).

155. 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 specified 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.

156. The Commission has introduced the concept of operational life in respect of Thermal and Hydro Generating Stations during the tariff 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 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."*

157. 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. 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.

158. 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.

159. In the present case, the balance weighted average useful life of the original Combined Asset i.e. Asset-I(A)(Original Asset) at the beginning of FY 2024-25 (The year in which ACE is brought in 2024-29 tariff period) is 0 (zero) year. Accordingly, in line with the above decision, we allow depreciation on the admitted ACE along with opening remaining depreciable value for the Combined Asset (Asset-I(B)(New Asset) from FY 2024-25 over a period of ten (10) years, comprising the balance useful life of zero year and an additional period of ten (10) years.

160. The depreciation allowed for the transmission assets under Regulation 33 of the 2024 Tariff Regulations for the 2024-29 tariff period is as under:

Asset-I(A)(Original Asset)

(₹ in lakh)

	Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
	Depreciation					
A	Opening Gross Block	12067.60	11200.41	11200.41	11200.41	10715.82
B	De-cap during 2024-29 due to ACE	-867.19	0.00	0.00	-484.59	0.00
C	Closing Gross Block	11200.41	11200.41	11200.41	10715.82	10715.82
D	Average Gross Block/ Closing gross block*	11200.41	11200.41	11200.41	10715.82	10715.82
E	Average Capital Cost (90% depreciable assets) (D-J)	11181.05	11181.05	11181.05	10696.46	10696.46
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%)	10062.95	10062.95	10062.95	9626.81	9626.81

H	Depreciable Value of IT equipment and software	0.00	0.00	0.00	0.00	0.00
I	Total Depreciable Value	10062.95	10062.95	10062.95	9626.81	9626.81
J	Freehold Land	19.36	19.36	19.36	19.36	19.36
K	Weighted average rate of Depreciation (WAROD) (%)	0.00	0.00	0.00	0.00	0.00
L	Balance useful life of the asset	0	0	0	0	0
M	Lapsed life at the beginning of the year	33	34	35	36	37
N	**Combined Depreciation during the year**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
O	Aggregate Cumulative Depreciation	10062.95	10062.95	10062.95	9626.81	9626.81
P	Remaining Aggregate Depreciable Value at the end of the year(I-O)	0.00	0.00	0.00	0.00	0.00

Asset-I(B)(New Asset)

(₹ in lakh)

	Particulars	**2024-25**	**2025-26**	**2026-27**	**2027-28**	**2028-29**
	Depreciation					
A	Opening Gross Block	401.30	5007.13	5007.13	6350.17	7245.54
B	Addition during 2024-29 due to ACE	4605.83	0.00	1343.04	895.37	0.00
C	Closing Gross Block (A+B)	5007.13	5007.13	6350.17	7245.54	7245.54
D	Average Gross Block (A+C)/2	2704.22	5007.13	5678.65	6797.86	7245.54
E	Average Capital Cost (90% depreciable assets)	2704.22	5007.13	5612.27	6620.84	7024.27
F	Average Capital Cost (100% depreciable assets)	0.00	0.00	66.38	177.02	221.27
G	Depreciable Value (excluding IT equipment and software) (E*90%)	2433.79	4506.42	5051.04	5958.75	6321.84
H	Depreciable Value of IT equipment and software (F*100%)	0.00	0.00	66.38	177.02	221.27
I	Total Depreciable Value (G+H)	2433.79	4506.42	5117.42	6135.77	6543.11
J	Weighted average rate of Depreciation (WAROD) (%)	Spread over				
K	Balance useful life of the asset	10	9	8	7	6
L	Lapsed life at the beginning of the year	0	1	2	3	4
M	**Combined Depreciation during the year**	240.21	470.50	546.87	692.35	760.24

	Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
N	Aggregate Cumulative Depreciation	271.95	742.45	1289.32	1981.67	2741.91
O	Remaining Aggregate Depreciable Value at the end of the year(I-N)	2161.84	3763.97	3828.10	4154.10	3801.20

Interest on Loan (IoL)

161. 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."

162. The Petitioner has not claimed any IOL for the Asset-I(A)(Original Asset) as the gross normative loan has been entirely repaid. For the (Asset-I(B)(New Asset), 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 (Asset-I(B)(New Asset) is as follows:

(Asset-I(B)(New Asset):

(₹ in lakh)

	Particulars	**2024-25**	**2025-26**	**2026-27**	**2027-28**	**2028-29**
	Interest on Loan					
A	Gross Normative Loan	280.91	3504.99	3504.99	4445.12	5071.88
B	Cumulative Repayments up to Previous Year	31.74	271.95	742.45	1289.32	1981.67
C	Net Loan-Opening (A-B)	249.17	3233.04	2762.54	3155.80	3090.21
D	Additions	3224.08	0.00	940.13	626.76	0.00
E	Repayment during the year	240.21	470.50	546.87	692.35	760.24
F	Net Loan-Closing (C+D-E)	3233.04	2762.54	3155.80	3090.21	2329.97

	Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
G	Average Loan (C+F)/2	1741.11	2997.79	2959.17	3123.00	2710.09
H	Weighted Average Rate of Interest on Loan (in %)	8.1504	8.1496	8.1489	8.1483	8.1476
I	**Interest on Loan (G*H)**	141.91	244.31	241.14	254.47	220.81

Return on Equity (RoE)

163. 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."

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

165. 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 Asset-I(A)(Original Asset) and Asset-I(b)(New Asset) for the 2024-29 tariff period is as follows:

Asset-I(A)(Original Asset)

(₹ in lakh)

Asset-I(A)(Original Asset)						
	Particulars	**2024-25**	**2025-26**	**2026-27**	**2027-28**	**2028-29**
	Return on Equity					
A	Opening Equity	3620.28	3360.12	3360.12	3360.12	3214.75
B	Additions	(260.16)	0.00	0.00	(145.38)	0.00
C	Closing Equity (A+B)	3360.12	3360.12	3360.12	3214.75	3214.75
D	Average Equity (A+C)/2	3490.20	3360.12	3360.12	3287.43	3214.75
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)**	**655.53**	**631.10**	**631.10**	**617.45**	**603.79**

(Asset-I(B)(New Asset)

(₹ in lakh)

Asset-I(B)(New Asset)						
	Particulars	**2024-25**	**2025-26**	**2026-27**	**2027-28**	**2028-29**
	Return on Equity					
A	Opening Equity	120.39	1502.14	1502.14	1905.05	2173.66
B	Additions	1381.75	0.00	402.91	268.61	0.00
C	Closing Equity (A+B)	1502.14	1502.14	1905.05	2173.66	2173.66
D	Average Equity (A+C)/2	811.26	1502.14	1703.60	2039.36	2173.66
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)**	**152.37**	**282.13**	**319.97**	**383.03**	**408.26**

Operation & Maintenance Expenses (O&M Expenses)

166. The O&M Expenses claimed by the Petitioner for the Asset-I(A)(Original Asset) for the 2024-29 period are as follows:

(₹ in lakh)

Particulars	**2024-25**	**2025-26**	**2026-27**	**2027-28**	**2028-29**
O&M Expenses	742.55	809.31	851.10	895.27	943.38

167. The Petitioner, vide affidavit dated 02.01.2026 has submitted that the anticipated date of replacement of 3x105 MVA ICT-I with the new 315 MVA ICT is 31.1.2026.

168. The norms specified under Regulation 36(3)(a) of the 2024 Tariff Regulations provide 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.

……."

169. 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	**Substation**				
	2024-25	**2025-26**	**2026-27**	**2027-28**	**2028-29**
400 kV Bays **Jeypore substation** • **1 No. ICT bay for 400/220 KV 315 MVA ICT** • **1 No. Line bay for 400 KV S/C Jeypore -Indravati Transmission line** **Indravati substation** • **1 No. Line bay for 400 KV S/C Jeypore -Indravati Transmission line.** • **1 No. Line bay for 400 KV S/C Rengali -Indravati Transmission line** **Rengali substation** • **1 No. Line bay for 400 KV S/C Rengali -Indravati Transmission line.** • **2 No's. ICT bay for 400/220 KV 315 MVA ICT-I & II.** • **1 No. Reactor bay for 50 MVAR bus reactor.**					
Norms as per regulation (₹ lakh per Bay)	29.53	31.08	32.71	34.43	36.23
O & M Expenses allowed	**236.24**	**248.64**	**261.68**	**275.44**	**289.84**
400 kV ICT **Jeypore substation** • **1 No. 400/220 KV 315 MVA ICT** **Rengali substation**					

Particulars	Substation				
	2024-25	2025-26	2026-27	2027-28	2028-29
• **2 No's. 400/220 KV 315 MVA ICT-I & II.** • **1 No. 400/220 kV 500 MVA ICT***					
Norms as per regulation (₹ lakh per MVA)	*0.262*	*0.276*	*0.290*	*0.305*	*0.322*
O & M Expenses allowed	**269.97**	**311.88**	**327.70**	**344.65**	**363.86**
400 kV Sub-station Reactor Indravati: 50 MVAR LR for Rengali Rengali: 50 MVAR LR for Indravati					
Norms as per regulation (₹ lakh per MVAr)	*0.262*	*0.276*	*0.290*	*0.305*	*0.322*
O & M Expenses allowed	**26.20**	**27.60**	**29.00**	**30.50**	**32.20**
Total O&M Expenses allowed	**532.41**	**588.12**	**618.38**	**650.59**	**685.90**

**** 315 MVA ICT-II is replaced with 500 MVA ICT and thus, O&M expenses for 315 MVA ICT-II is being dis-continued w.e.f. 14.10.2024 and O&M expenses for 500 MVA ICT is being allowed w.e.f. 14.10.2024.***

(₹ in lakh)

Particulars	Transmission Line				
	2024-25	2025-26	2026-27	2027-28	2028-29
Single Circuit (Twin Conductor) • **400 KV S/C Jeypore -Indravati Transmission line (Total length of line : 356 Km).** • **400 KV S/C Rengali -Indravati Transmission line (Total length of line : 71 Km).**					
Norms as per regulation (₹ lakh per Km)	*0.492*	*0.518*	*0.545*	*0.573*	*0.603*
O & M Expenses allowed	**210.08**	**221.19**	**232.72**	**244.67**	**257.48**

(₹ in lakh)

Particulars	Asset-I				
	2024-25	2025-26	2026-27	2027-28	2028-29
O&M expenses allowed for substation	532.41	588.12	618.38	650.59	685.90
O&M expenses allowed for Transmission line	210.08	221.19	232.72	244.67	257.48
Total O&M Expenses allowed	**742.49**	**809.31**	**851.10**	**895.26**	**943.38**

Interest on Working Capital (IWC)

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

> ***"34. Interest on Working Capital****: (1) The working capital shall cover:*
> *……*
> *(d) For Hydro generating station (including Pumped Storage Hydro generating station) and Transmission System:*
> *(i) Receivables equivalent to 45 days of annual fixed cost;*
> *(ii)Maintenance spares @ 15% of operation and maintenance expenses including security expenses; and*

(iii)Operation and maintenance expenses, including security expenses for one month.

(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."

171. 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).

172. 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 Asset-I(A)(Original Asset) and Asset-I(B)(New Asset) are as under:

Asset-I(A)(Original Asset)

(₹ in lakh)

Asset-I(A)(Original Asset)						
	Particulars	**2024-25**	**2025-26**	**2026-27**	**2027-28**	**2028-29**
A	Working Capital for O&M Expenses (O&M Expenses for one month)	61.87	67.44	70.93	74.61	78.62
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	111.37	121.40	127.67	134.29	141.51

Asset-I(A)(Original Asset)						
	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)	177.50	183.20	188.44	191.88	196.89
D	**Total Working Capital (A+B+C)**	**350.75**	**372.04**	**387.03**	**400.77**	**417.01**
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)**	**41.74**	**45.58**	**46.25**	**47.89**	**49.83**

(Asset-I(B)(New Asset)

(₹ in lakh)

Asset-I(B)(New Asset)						
	Particulars	**2024-25**	**2025-26**	**2026-27**	**2027-28**	**2028-29**
A	Working Capital for O&M Expenses (O&M Expenses for one month)	0.00	0.00	0.00	0.00	0.00
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	0.00	0.00	0.00	0.00	0.00
C	Working Capital for Receivables (Equivalent to 45 days of annual fixed cost /annual transmission charges)	66.88	124.79	138.64	165.95	173.85
D	**Total Working Capital (A+B+C)**	**66.88**	**124.79**	**138.64**	**165.95**	**173.85**
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)**	**7.96**	**15.29**	**16.57**	**19.83**	**20.77**

Annual Fixed Charges of the 2024-29 Tariff Period

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

Asset-I(A)(Original Asset)

(₹ in lakh)

Asset-I(A)(Original Asset)					
Particulars	**2024-25**	**2025-26**	**2026-27**	**2027-28**	**2028-29**
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	655.53	631.10	631.10	617.45	603.79
O & M Expenses	742.49	809.31	851.10	895.26	943.38
Interest on Working Capital	41.74	45.58	46.25	47.89	49.83
Total	**1439.76**	**1485.99**	**1528.45**	**1560.60**	**1597.00**

(Asset-I(B)(New Asset)

(₹ in lakh)

Asset-I(B)(New Asset)					
Particulars	**2024-25**	**2025-26**	**2026-27**	**2027-28**	**2028-29**
Depreciation	240.21	470.50	546.87	692.35	760.24
Interest on Loan	141.91	244.31	241.14	254.47	220.81
Return on Equity	152.37	282.13	319.97	383.03	408.26
O & M Expenses	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	7.96	15.29	16.57	19.83	20.77
Total	**542.45**	**1012.22**	**1124.54**	**1349.69**	**1410.08**

Filing Fee and Publication Expenses

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

175. 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 accordance with Regulation 94(1) of the 2024 Tariff Regulations.

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

176. 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.

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

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

178. We have considered the submission of the Petitioner 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

179. The Petitioner has claimed reimbursement of the license fee, RLDC Fees and Charges.

180. We have considered the submission of the Petitioner. 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

181. The Petitioner has submitted that the transmission charges claimed herein are exclusive of GST, and in case GST is levied in the future, the same shall be additionally

paid by the Respondents and 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.

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

Security Expenses, Insurance and Capital Spares

183. 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 Asset-I(A)(Original Asset) and Asset-I(B)(New Asset) are not claimed in the instant Petition.

184. 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.

185. The Petitioner has not claimed Capital Spares for the Asset-I(A)(Original Asset) and Asset-I(B)(New Asset) 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 therein Capital Spares for the 2019-24 tariff period as per the 2019 Tariff Regulations.

186. We have considered the submission of the Petitioner 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."*

187. 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

188. The Petitioner has submitted that the truing-up of the tariff for the 2019-24 tariff period will be recovered on a monthly basis in accordance with Regulation 57 of the 2019 Tariff Regulations and 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.

189. We have considered the Petitioner's submissions. The billing, collection, and disbursement of the transmission charges for the Asset-I(A)(Original Asset) and Asset-I(B)(New Asset) 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.

190. 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 Asset-I(A)(Original Asset) and Asset-I(B)(New Asset) are as follows:

(₹ in lakh)

Asset-I(A)(Original Asset)	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Claimed by the Petitioner in the instant Petition	2334.79	2361.25	2387.90	1629.69	1661.72
Approved after true-up in this order	2334.82	2361.22	2236.03	1629.69	1661.72

(₹ in lakh)

Asset-I(B)(New Asset)	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Claimed by the Petitioner in the instant Petition	1.12	3.84	35.28	70.73
Approved after true-up in this order	1.04	3.50	31.26	61.89

b. Annual Fixed Charges allowed for the 2024-29 tariff period for the Asset-I(A)(Original Asset) and Asset-I(B)(New Asset) in this order are follows:

(₹ in lakh)

Asset-I(A)(Original Asset)	**2024-25**	**2025-26**	**2026-27**	**2027-28**	**2028-29**
Claimed by the Petitioner	1439.82	1484.66	1528.25	1560.40	1596.79
Allowed in this order	1439.76	1485.99	1528.45	1560.60	1597.00

(₹ in lakh)

Asset-I(B)(New Asset)	**2024-25**	**2025-26**	**2026-27**	**2027-28**	**2028-29**
Claimed by the Petitioner	553.81	1044.59	1187.34	1439.87	1501.53
Allowed in this order	542.45	1012.22	1124.54	1349.69	1410.08

191. This order disposes of Petition No. 530/TT/2025, in terms of the above discussions and findings.

sd/-	**sd/-**
(Harish Dudani)	**(Ramesh Babu V.)**
Member	**Member**

CERC Website S. No. 536/2026