

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 184/TT/2024

Coram:

**Shri Jishnu Barua, Chairperson
Shri Ramesh Babu V., Member
Shri Harish Dudani, Member**

Date of Order: 3.10.2025

In the matter of:

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, and the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019, for the determination of the transmission tariff from the COD to 31.3.2024 for Asset-1: 1x500 MVA, 400/220 kV ICT along with associated bays at Kurukshetra (PG) Substation, and Asset-2: 1x500 MVA, 400/220 kV ICT along with 400 kV and 220 kV bays at Patiala (PG) Substation under “Augmentation of Transformation Capacity at 400/220 kV Kurukshetra (PG) and Patiala (PG) Substation”.

And

In the matter of:

**Power Grid Corporation of India Limited,
“Saudamini”, Plot No. 2,
Sector 29, Gurgaon-122001, Haryana.**

...Petitioner

Versus

- 1. Ajmer Vidyut Vitran Nigam Limited,**
Corporate Office, Vidyut Bhawan, Panchsheel Nagar,
Makarwali Road, Ajmer-305004, Rajasthan.
- 2. Jaipur Vidyut Vitran Nigam Limited,**
132 kV, GSS RVPNL Sub-station Building,
Caligiri Road, Malviya Nagar, Jaipur-302017, Rajasthan.
- 3. Jodhpur Vidyut Vitran Nigam Limited,**
New Power House, Industrial Area,
Jodhpur-342003, Rajasthan.
- 4. Himachal Pradesh State Electricity Board Limited,**
Vidyut Bhawan, Kumar House Complex Building II,
Shimla-171004.
- 5. Uttar Pradesh Power Corporation Limited,**
Shakti Bhawan, 14, Ashok Marg, Lucknow-226001.



6. **Haryana Power Purchase Centre,**
Shakti Bhawan, Sector-6,
Panchkula-134109, Haryana.
7. **Jammu Kashmir Power Corporation Limited,**
220/66/33 kV Gladni SS SLDC Building,
Narwal, Jammu.
8. **Punjab State Power Corporation Limited,**
The Mall, PSEB Head Office, Patiala-147001.
9. **BSES Yamuna Power Limited,**
B-Block, Shakti Kiran Building (Near Karkardooma Court),
Karkardooma, 2nd Floor, New Delhi-110092.
10. **BSES Rajdhani Power Limited,**
BSES Bhawan, Nehru Place, New Delhi.
11. **Tata Power Delhi Distribution Limited,**
33 kV Substation Building, Hudson Lane,
Kingsway Camp, North Delhi-110009.
12. **Uttarakhand Power Corporation Limited,**
Urja Bhawan, Kanwali Road, Dehradun.
13. **North Central Railway,**
Allahabad.
14. **New Delhi Municipal Council,**
Palika Kendra, Sansad Marg,
New Delhi-110002.
15. **Chandigarh Electricity Department,**
UT-Chandigarh, Div-11, Opposite Transport Nagar,
Industrial Area Phase - I, Chandigarh.

.....Respondents

For Petitioner : Shri V.C. Sekhar, PGCIL
Shri Amit Garg, PGCIL
Shri Ranjeet Kumar Pandey, PGCIL

For Respondents : None

ORDER

The Petitioner, Power Grid Corporation of India Limited (PGCIL), has filed the instant Petition for the determination of the transmission tariff from the 'Date of Commercial



Operation' (COD) to 31.3.2024 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as "the 2019 Tariff Regulations") concerning Asset-1: 1x500 MVA, 400/220 kV ICT along with associated bays at Kurukshetra (PG) Substation and Asset-2: 1x500 MVA, 400/220 kV ICT along with 400 kV and 220 kV bays at Patiala (PG) Substation (hereinafter referred to as "the transmission assets") under "Augmentation of Transformation Capacity at 400/220 kV Kurukshetra (PG) and Patiala (PG) Substation" (hereinafter referred to as "the transmission scheme").

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

- "1) Admit the capital cost as claimed in the Petition and approve the Additional Capitalisation incurred / projected to be incurred.*
 - 2) Approve the Transmission Tariff for the tariff block 2019-24 block for the asset covered under this petition, as per para –8.3 above.*
 - 3) Condoned the Time overrun in commissioning of the instant assets.*
 - 4) Allow the petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to a 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 as per para 8 above for respective block.*
 - 5) Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on the publishing of notices in newspapers in terms of Regulation 70 (1) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019, and other expenditure (if any) in relation to the filing of the petition.*
 - 6) Allow the petitioner to bill and recover Licensee fees and RLDC fees and charges, separately from the respondents in terms of Regulation 70 (3) and (4) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019.*
 - 7) Allow the Petitioner to claim the overall security expenses and consequential IOWC on that security expenses separately.*
 - 8) Allow the petitioner to claim the capital spares at the end of tariff block as per actual.*
 - 9) 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 the 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.*
 - 10) Allow interim tariff in accordance with Regulation 10(3) of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for the purpose of inclusion in the PoC charges.*
- 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 Investment Approval (IA) for the transmission scheme was accorded by the Chairman and Managing Director (CMD) of the Petitioner on 27.3.2022, and the memorandum was issued on 28.3.2022, with an estimated cost of ₹10699.00 lakh including an Interest During Construction (IDC) of ₹290.00 lakh based on December 2021 price level with a completion schedule of February 2023 (i.e., 15.2.2023) for Asset-1 and May 2023 for Asset-2.
- b. The scope of work covered under the transmission scheme is as follows:

Substation

- a) 1x500 MVA, 400/220 kV ICT along with associated bays at Kurukshetra (PG) Substation.
- 400 kV**
- Transformer Bays (GIS): 1 No.
 - 500 MVA, 400/220 kV ICT: 1 No.
 - GIS Bus Duct: 500 meters
- 220 kV**
- Transformer Bays (GIS): 1 No.
 - GIS Bus Duct: 70 meters
- b) 1x500 MVA, 400/220 kV ICT along with associated bays at Patiala (PG) Substation.
- 400 kV**
- Transformer Bays: 1 No.
 - 500 MVA, 400/220 kV ICT: 1 No.
- 220 kV**
- Transformer Bays: 1 No.

Note: The 315 MVA spare ICT at Patiala (PG) Substation may be used as a Regional Spare.

- c. The scope of the transmission scheme was discussed and agreed in the 4th meeting of the Northern Regional Power Committee (Transmission Planning) (NRPCTP) held on 5.10.2021 and 12.10.2021, as well as at the 50th Northern Regional Power Committee (NRPC) meeting on 28.1.2022. Subsequently, in accordance with the Ministry of Power's (MoP) Office Order dated 28.10.2021, CTUIL, through Office Memorandum (OM) dated 16.11.2021, allocated the



transmission scheme to the Petitioner for implementation under the Regulated Tariff Mechanism (RTM), with an estimated total cost of ₹5400.00 lakh and an implementation period of 15 months from the date of OM for Asset-1 (i.e., 15.2.2023) and May 2023 for Asset-2.

- d. The Petitioner has submitted that, as per the OM dated 16.11.2021 issued by CTUIL and the IA dated 27.3.2022, the 'Scheduled Date of Commercial Operation' (SCOD) for Assets-1 and 2 was February 2023 (15.2.2023) and May 2023 respectively, against which they were put into commercial operation on 23.11.2023 and 12.07.2023, with delays of 280 days and 41 days respectively.

4. In respect of the IA cost exceeding ₹100 crore or the variation in IA cost being 10% beyond the CTUIL's estimation, the Commission has, by its order dated 1.11.2024 in Petition No. 351/TT/2023, held as under:

"5. The Commission observes that a number of transmission schemes with estimated costs up to Rs. 100 Crore are being approved by the CTUIL to be implemented through the RTM route. These transmission schemes are being awarded to the existing Transmission Licensees (POWERGRID as well as other TBCB Licensees) along with the estimated cost and implementation timeframe. After the award, the licensees obtain investment approval from their board. It is desirable that the variation in the investment approval cost as compared to the estimated cost by CTUIL, which should be a minimum. In the instant case, there is a variation of 18.8% in the IA cost of PGCIL as compared to the cost estimated by CTUIL. This cost variation may be due to some additional scope of work and/or on account of the estimated cost of the items under the scope of work.

6. Accordingly, the commission directs CTUIL to put in place a procedure in consultation with NCT for ratification/approval of the schemes in case of the following (1) variation of IA cost beyond 10% of CTUIL's estimated cost, (2) Where the IA cost arrived at by the implementing agency exceeds 100 cr for a transmission scheme awarded by CTUIL.

5. In view of the above direction from the Commission, CTUIL, through a letter dated 14.5.2025, communicated the procedure for ratification/approval of the schemes in cases where (i) there is a variation in the IA cost exceeding 10% of CTUIL's estimated cost; and (ii) where the IA cost arrived at by the implementing agency exceeds ₹100 crore for a transmission scheme awarded by CTUIL. The procedure is as follows:



“4.4 CERC observation on variation in the Investment Approval (IA) cost as compared to the estimated cost by CTUIL for the transmission schemes awarded to the existing Transmission Licensees.

4.4.1 Transmission schemes with estimated cost of less than ₹100 Crores are awarded by CTUIL to the existing Transmission Licensees (POWERGRID as well as other TBCB Licensees) along with estimated cost and implementation timeframe.

4.4.2 Representative from CTUIL stated that POWERGRID vide letter dt 04.12.2024 has informed CTUIL that they are in receipt of tariff order dated 01.11.2024 issued by the Hon'ble CERC in the petition Nos. 351/TT/2023 regarding approval of transmission tariff for the tariff period 2019-24 for the project “Eastern Region Expansion Scheme XXVI” in Eastern Region. In the said tariff order, CERC has observed that estimated cost considered by CTUIL while approving the scheme was ₹ 27.00 Crores and Investment approval (IA) approved by the petitioner's board was ₹ 32.10 crores. Thus, there is variation of about ₹5.10 crores (18.88%) compared with the estimated cost of CTUIL. The commission directs CTUIL to put in place a procedure in consultation with NCT for ratification/approval of the schemes in case of the following (1) variation of IA cost beyond 10% of CTUIL's estimated cost, (2) Where the IA cost arrived at by the implementing agency exceeds 100 cr. for a transmission scheme awarded by CTUIL.

4.4.3 The matter was deliberated in NCT and it was decided that the following procedure shall be followed by CTUIL in case variation of DPR cost is beyond 10% of CTUIL's estimated cost.

a. Within 30 days of the allocation of the project/scheme by CTUIL, the Transmission Licensee (TSP) shall intimate the DPR cost along with break-up of cost estimate including compensation cost with supporting documents to CTUIL.

b. CTUIL shall analyse the DPR cost as submitted by TSP and may ask for further clarification along with supporting documents as required within 7 days' time. TSP shall furnish the requisite details to CTUIL within another 7 days' time.

c. CTUIL shall prepare a comparison statement of their original estimated cost vs Licensee's DPR cost. After due diligence, CTUIL shall revise the cost estimate of the ISTS project/scheme, if required and intimate the revised cost estimate to TSP without any change in timeline of the project/scheme within 10 working days if the CTUIL revised cost estimate of ISTS project/scheme is less than Rs.100 Cr.

d. If CTUIL revised cost estimate of ISTS project/scheme is greater than Rs. 100 Cr., then CTUIL shall bring up the scheme in the NCT as a fresh agenda.”

6. It is observed that the estimated cost for the transmission scheme considered by CTUIL during its approval is ₹5400 lakh, whereas the IA granted by the Petitioner is ₹10699 lakh. This results in a variation of ₹5299 lakh, amounting to approximately 98.12% above CTUIL's estimated cost. Since the variation exceeds 10%, the Petitioner is advised to submit the justification for this increase at the time of True up.

7. The whole transmission scheme is complete and included in the current Petition.



8. The Respondents, mainly beneficiaries of the Northern Region, are Distribution Licensees, Generation Utility and Power Departments, which are procuring transmission services from the Petitioner.

9. The Petitioner has served a copy of the Petition on the Respondents, and notice regarding the filing of this Petition has also been published in newspapers in accordance with Section 64 of the Electricity Act, 2003 (hereinafter referred to as “the Act”). No comments or suggestions have been received from the general public in response to the notice published in newspapers by the Petitioner. None of the Respondents has filed their reply.

10. The first hearing in the matter took place on 18.11.2024, and the final hearing was held on 23.1.2025, during which the order was reserved. This order is issued considering the submissions made by the Petitioner in the Petition and the Petitioner’s affidavits dated 28.2.2024, 9.12.2024 and 12.9.2024.

11. Having heard the Petitioner’s representatives and having perused the material on record, we proceed to dispose of the Petition.

DETERMINATION OF ANNUAL FIXED CHARGES FOR THE 2019-24 TARIFF PERIOD

12. The Petitioner has claimed the following transmission charges in respect of the transmission assets for the 2019-24 tariff period:

Asset-1: (₹ in lakh)	
Particulars	2023-24 (pro-rata for 130 days)
Depreciation	88.30
Interest on Loan	84.20
Return on Equity	89.90
Interest on Working Capital	8.06
O&M Expenses	95.28
Total	365.74

Asset-2: (₹ in lakh)	
Particulars	2023-24 (pro-rata for 264 days)
Depreciation	138.50
Interest on Loan	139.23
Return on Equity	146.91
Interest on Working Capital	14.76



O&M Expenses	193.49
Total	632.89

13. The Petitioner has claimed the following Interest on Working Capital (IWC) in respect of the transmission assets for the 2019-24 tariff period:

Asset-1:

(₹ in lakh)

Particulars	2023-24 (pro-rata for 130 days)
O&M Expenses	22.35
Maintenance Spares	40.24
Receivables	126.60
Total Working Capital	189.19
Rate of Interest (in %)	12.00
Interest on Working Capital	22.70
Pro rata Interest on Working Capital	8.06

Asset-2:

(₹ in lakh)

Particulars	2023-24 (pro-rata for 264 days)
O&M Expenses	22.35
Maintenance Spares	40.24
Receivables	107.88
Total Working Capital	170.47
Rate of Interest (in %)	12.00
Interest on Working Capital	20.46
Pro rata Interest on Working Capital	14.76

Date of Commercial Operation (COD)

14. The Petitioner has claimed the COD of Assets-1 and 2 as 23.11.2023 and 12.7.2023, respectively. The Petitioner has submitted a copy of the CEA Energisation Certificate, RLDC Charging Certificate, self-declaration COD letter, and the CMD's Certificate in support of the COD of the transmission assets.

15. Regulation 5 of the 2019 Tariff Regulations provides as follows:

“5. Date of Commercial Operation: (1) The date of commercial operation of a generating station or unit thereof or a transmission system or element thereof and associated communication system shall be determined in accordance with the provisions of the Grid Code.

(2) In case the transmission system or element thereof executed by a transmission licensee is ready for commercial operation but the interconnected generating station or the transmission system of other transmission licensee as per the agreed project implementation



schedule is not ready for commercial operation, the transmission licensee may file petition before the Commission for approval of the date of commercial operation of such transmission system or element thereof:

Provided that the transmission licensee seeking the approval of the date of commercial operation under this clause shall give prior notice of at least one month, to the generating company or the other transmission licensee and the long term customers of its transmission system, as the case may be, regarding the date of commercial operation:

Provided further that the transmission licensee seeking the approval of the date of commercial operation of the transmission system under this clause shall be required to submit the following documents along with the petition:

(a) Energisation certificate issued by the Regional Electrical Inspector under Central Electricity Authority;

(b) Trial operation certificate issued by the concerned RLDC for charging element with or without electrical load;

(c) Implementation Agreement, if any, executed by the parties;

(d) Minutes of the coordination meetings or related correspondences regarding the monitoring of the progress of the generating station and transmission system

(e) Notice issued by the transmission licensee as per the first proviso under this clause and the response;

(f) Certificate of the CEO or MD of the company regarding the completion of the transmission system including associated communication system in all respects.

16. We have considered the Petitioner's submissions. After taking into consideration the supporting documents submitted by the Petitioner, the COD of Assets-1 and 2 is approved as 23.11.2023 and 12.7.2023, respectively.

Assets	Particulars
Asset-1: 1x500 MVA, 400/220 kV ICT along with associated bays at Kurukshetra (PG) Substation.	CEA Energization Certificate dated 29.9.2023, RLDC Charging Certificate dated 30.11.2023 certifying the successful completion of trial run on 22.11.2023, self-declaration COD letter dated 23.11.2023 and CMD's Certificate.
Asset-2: 1x500 MVA, 400/220 kV ICT along with 400 kV and 220 kV bays at Patiala (PG) Substation.	CEA Energization Certificate dated 1.7.2023, RLDC Charging Certificate dated 24.7.2023 certifying the successful completion of trial run on 11.7.2023, self-declaration COD letter dated 17.7.2023 and CMD's Certificate.

Capital Cost

17. Regulation 19 of the 2019 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 check in accordance with these regulations shall form the basis for determination of tariff for existing and new projects.

(2) The Capital Cost of a new project shall include the following:



- (a) The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;
 - (b) Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;
 - (c) Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period;
 - (d) Interest during construction and incidental expenditure during construction as computed in accordance with these regulations;
 - (e) Capitalised Initial spares subject to the ceiling rates in accordance with these regulations;
 - (f) Expenditure on account of additional capitalization and de-capitalisation determined in accordance with these regulations;
 - (g) Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the date of commercial operation as specified under Regulation 7 of these regulations;
 - (h) Adjustment of revenue earned by the transmission licensee by using the asset before the date of commercial operation;
 - (i) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;
 - (j) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of the generating station but does not include the transportation cost and any other appurtenant cost paid to the railway;
 - (k) Capital expenditure on account of biomass handling equipment and facilities, for co-firing;
 - (l) Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;
 - (m) Expenditure on account of fulfilment of any conditions for obtaining environment clearance for the project;
 - (n) Expenditure on account of change in law and force majeure events; and
 - (o) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.
- (3) The Capital cost of an existing project shall include the following:
- (a) Capital cost admitted by the Commission prior to 1.4.2019 duly trued up by excluding liability, if any, as on 1.4.2019;
 - (b) Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;
 - (c) Capital expenditure on account of renovation and modernization as admitted by this Commission in accordance with these regulations;
 - (d) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;
 - (e) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal up to the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and
 - (f) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.
- (4) The capital cost in case of existing or new hydro generating station shall also include:
- (a) cost of approved rehabilitation and resettlement (R&R) plan of the project in conformity with National R&R Policy and R&R package as approved; and



- (b) cost of the developer's 10% contribution towards Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) and Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) project in the affected area.
- (5) The following shall be excluded from the capital cost of the existing and new projects:
- (a) The asset forming part of the project, but not in use, as declared in the tariff petition;
- (b) De-capitalised Asset after the date of commercial operation on account of replacement or removal on account of obsolescence or shifting from one project to another project:

Provided that in case replacement of transmission asset is recommended by Regional Power Committee, such asset shall be decapitalized only after its redeployment;

Provided further that unless shifting of an asset from one project to another is of permanent nature, there shall be no de-capitalization of the concerned asset.

- (c) In case of hydro generating stations, any expenditure incurred or committed to be incurred by a project developer for getting the project site allotted by the State Government by following a transparent process;
- (d) Proportionate cost of land of the existing project which is being used for generating power from generating station based on renewable energy; and
- (e) Any grant received from the Central or State Government or any statutory body or authority for the execution of the project which does not carry any liability of repayment.”

18. The Petitioner has submitted the Auditor's Certificates dated 4.1.2024 and 16.1.2024 and has claimed the capital cost incurred as on the COD and the projected Additional Capital Expenditure (ACE) to be incurred in respect of the transmission assets for the 2019-24 tariff period as follows:

Asset	Apportioned Approved Cost as per FR	Expenditure up to COD	Projected ACE				Estimated Completion Cost
			2023-24	2024-25	2025-26	2026-27	
Asset-1	6305.93	4328.19	383.20	1131.00	192.16	192.16	6226.71
Asset-2	4393.07	3314.84	615.48	410.32	0.00	0.00	4340.64
TOTAL	10699.00	7643.03	998.68	1541.32	192.16	192.16	10567.35

Cost Overrun

19. The Petitioner has submitted that, compared to the FR apportioned approved costs of ₹6305.93 lakh and ₹4393.07 lakh, the estimated completion costs are ₹6226.71 lakh and



₹4340.64 lakh for Assets-1 and 2, respectively. Therefore, there is no cost overrun for the transmission assets concerning the FR costs.

20. However, the Petitioner has provided the item-wise cost variation details between the FR approved cost and the estimated completion cost for the transmission assets for the 2019-24 tariff period, and these are as follows:

Asset-1:

(₹ in lakh)

S. No	Description	Cost as per FR	Estimated Capital Cost	Variation (-decrease, +increase)
		a	b	c = b - a
	Substations			
1	Civil Works	20.00	5.75	-14.25
2	Switchgear (CT, PT, CB, Isolator, etc.)	1959.43	1906.46	-52.97
3	Transformer	1818.13	1958.84	140.71
4	C&R and Protection Panel & SAS	200.63	201.94	1.31
5	O/D Lighting, Power & Control Cable	43.96	50.79	6.83
6	Structure for Switchyard	290.39	225.52	-64.87
7	Spares	478.22	673.95	195.73
8	Tax & Duties	779.91	760.67	-19.24
9	Overheads & Contingency	571.26	350.08	-221.18
10	Interest During Construction (IDC)	144.00	92.71	-51.29
	TOTAL	6305.93	6226.71	-79.22

Asset-2:

(₹ in lakh)

S. No	Description	Cost as per FR	Estimated Capital Cost	Variation (-decrease, +increase)
		a	b	c = b - a
	Substations			
1	Foundation for Structures & Misc. Civil Works	195.24	201.47	6.23
2	Transformer	1583.18	1837.75	254.57
3	Switchgear (CT, PT, CB, Isolator, etc.)	803.12	778.12	-25.00
4	Control, Relay & Protection Panel	71.18	72.39	1.21
5	Structure for Switchyard	139.69	152.63	12.94
6	Miscellaneous (Auxiliaries)	157.58	131.45	-26.13
7	Spares	212.26	170.36	-41.90
8	Tax & Duties	658.78	586.97	-71.81



9	Overheads & Contingency	425.64	386.3	-39.34
10	Interest During Construction (IDC)	146.40	23.20	-123.20
	TOTAL	4393.07	4340.64	-52.43

21. Furthermore, the Petitioner has provided item-wise reasons for the cost variation vis-à-vis the FR cost for the transmission assets, summarised as follows:

i. Variation in Equipment Cost:

22. The Petitioner has submitted that, as a Government enterprise, it has the obligation for indigenous development of manufacturers and must adhere to the Government of India guidelines in vogue. Accordingly, the Petitioner has been following a well-established procurement policy that ensures both transparency and competitiveness in the bidding process. The Petitioner further stated that the route of Domestic Competitive Bidding (DCB) has been followed to award this transmission scheme. Through this process, the lowest possible market prices for the required products/services, as per the detailed designs, are obtained, and contracts are awarded to the lowest evaluated eligible bidder. The competitive bid prices against tenders may vary from the cost estimate depending on prevailing market conditions, design, and site requirements. However, estimates are prepared by the Petitioner using well-defined procedures for cost estimation. The FR cost estimate is a broad, indicative figure generally based on average unit rates from recently awarded contracts or common practice. The cost received during the DCB for the transformer may be higher or lower than the estimate. Therefore, the variations in price for the transmission scheme are attributable to inflationary trends prevailing at the time of the bidding process for the various packages.

ii. Decrease in IDC & IEDC Cost:

23. The Petitioner submitted that there is a reduction of approximately ₹4.35 crores with respect to IDC and 'Incidental Expenditure During Construction' (IEDC) based on the actual figures.



24. Furthermore, regarding the construction of the SAS at Kurukshetra Substation and whether SAS was not available at the Kurukshetra Substation before the commissioning of the instant asset, the Petitioner, in an affidavit dated 9.12.2024, has submitted that Kurukshetra was a SAS-based Substation. However, the transmission scheme required augmentation of the SAS system to accommodate the new ICT equipment and associated bays, enabling seamless integration with the existing SAS system. This augmentation was necessary to ensure that the new asset could be effectively monitored and controlled from the existing SAS system.

25. The Petitioner, regarding the basis of estimation of the FR cost for the transmission assets and whether CTUIL rectified it, vide affidavit dated 9.12.2024, has submitted that the CTUIL vide its OM, provided only the total estimated cost, and the basis of the cost estimate was not known to the Petitioner. Furthermore, the detailed justification and reasons for the variations between the cost estimate as per the CTUIL's OM and the apportioned approved FR cost submitted by the Petitioner are as follows:

- a) CTUIL, in its cost estimation and OM, only considered the cost of the transformer for the Kurukshetra substation.
- b) The DPR cost is prepared based on the detailed BOQ and the actual site requirements. To interface the existing system with the new ICT and associated bays, the GIS Bus Duct and its modules should be considered. Accordingly, the cost of the GIS Bus Duct and modules has been taken into account. The costing is based on the POWERGRID RTM Schedule of Rates. The costs in the Schedule of Rates are derived from the average of recently awarded LOAs and are updated to reflect the latest price levels.
- c) The latest available price level was taken into account during the cost estimation, which is likely to differ from the price level considered for estimation by CTUIL.
- d) The IEDC @10.75% included in the FR cost estimate does not appear to be reflected in CTUIL's OM.
- e) The IDC seems to be regarded as on the lower side in the cost estimate by CTUIL.



To rectify the variation in cost, the matter is being addressed with CTUIL generally, but not exclusively for this case.

26. We have examined the Petitioner's submissions. It is noted that, according to CTUIL's OM dated 16.11.2021, the approved estimated cost is ₹5400 lakh, while the Petitioner approved the IA dated 27.3.2022 at an estimated cost of ₹10699 lakh, including an IDC of ₹290 lakh. The Petitioner states that it is not aware of the basis for the cost estimate prepared by CTUIL.

27. Furthermore, it is observed that according to the abstract of the cost estimate approved by the IA dated 27.3.2022, the Petitioner has considered a cost of ₹ 673 lakh against the customs duty @24.49% plus 2% handling charges, whereas the Form-5 submitted by the Petitioner shows the customs duty as "NIL" in the original cost estimate. Additionally, it is noted that, as per Form-5A submitted by the Petitioner, all the Supply and Service Contracts related to the transmission assets were awarded under the category of the DCB.

28. In addition to the above, some significant variations in the estimated completion cost compared to the original estimate have also been observed regarding the transmission assets as follows:

Asset-1

(₹ in Lakh)			
Particulars	Original cost	Estimated	Estimated Completion Cost
Transformer	1818.13		1958.84
Spares	478.22		673.95
			Variation
			140.71
			195.73

Asset-2

(₹ in Lakh)			
Particulars	Original Cost	Estimated	Estimated Completion Cost
Transformer	1583.18		1837.75
			Variation
			254.57



29. Therefore, in light of the above, the Petitioner is directed to submit a detailed justification for the consideration of customs duty @24.49% plus 2% handling charges in the FR cost, along with supporting documentary evidence and reasons for not including this in Form-5 at the time of truing-up which will be reviewed during the truing-up for the 2019-24 tariff period.

30. As per the Form-5A, it is noted that the award costs for Assets-1 and 2 are ₹1775.58 lakh and ₹2885.49 lakh respectively, while the completion costs for Assets-1 and 2 are ₹6226.71 lakh and ₹4340.64 lakh respectively. Compared to the awarded costs, the completion costs are higher by ₹4451.13 lakh and ₹1455.15 lakh for Assets-1 and 2, respectively.

31. We provisionally approve the capital cost claimed by the Petitioner. However, the Petitioner is also directed to justify the cost variations between the awarded cost and the completion cost. The Petitioner shall also submit details of cost variations between the awarded and completion costs at the time of truing-up for the 2019-24 tariff period, which will be reviewed at the time of truing-up.

32. Further, the Petitioner is directed to follow the procedure approved by the NCT in its 26th meeting on 6.1.2025 and circulated vide letter dated 30.1.2025 to avoid any variation between the FR cost and the estimated cost approved by the CTUIL in future projects/schemes.

Time Over-run

33. The Petitioner has submitted that, as per the IA dated 27.3.2022, Assets-1 and 2 were scheduled to be commissioned by 15.2.2023 and May 2023, respectively, but they were put into commercial operation on 23.11.2023 and 12.7.2023, respectively. There was a delay of 281 days in the commissioning of Asset-1 and a delay of 41 days for Asset-2. Therefore, the time-overrun regarding the transmission assets is as follows:



Asset	SCOD	COD	Time Over-run
Asset-1: 1x500 MVA, 400/220 kV ICT along with associated bays at Kurukshetra (PG) substation.	15.2.2023	23.11.2023	281 days
Asset-2: 1x500 MVA, 400/220 kV ICT along with 400 kV & 220 kV bays at Patiala (PG) substation.	31.5.2023*	12.7.2023	42 days [#]

*The last date of the month has been considered as the exact date has not been mentioned.

Petitioner has sought condonation for 41 days; however, the actual delay is 42 days.

34. The detailed justification for the delays provided by the Petitioner is as follows:

Asset-1:

35. The Petitioner has submitted that for Asset-1, the LOA was issued on 2.5.2022. Subsequently, the Petitioner, utilizing its project implementation expertise and experience, made every effort to complete the transmission scheme, and Asset-1 was commissioned on 23.11.2023.

A. Delay in requisite Shutdown Approvals

36. The Petitioner further submitted that Asset-1 needed to be commissioned within the existing 400/220 kV HVDC Kurukshetra (PG) Substation. Therefore, it was essential to obtain multiple shutdowns for termination and pre-commissioning tasks. As site work progressed as planned, shutdowns were applied to perform essential tasks, including erection, bus stringing, bus-bar stability, GIB, and bushing installation. The Petitioner approached the concerned authorities/STUs to request these shutdowns during various OCC meetings. However, their requests were denied several times due to system or grid availability issues. The Petitioner required continuous shutdowns, as secured and uninterrupted shutdowns would have facilitated better planning and faster execution. Nonetheless, from the discussions, it is clear that continuous shutdowns were not granted for the required period. Additionally, shutdowns were approved intermittently, only during off-peak periods, with specific conditions for returning, which caused significant delays.



37. The Petitioner has submitted that the request for approval of shutdowns of 400/220 kV buses for interconnection with existing buses was made in the following OCC meetings:

Sl. No	OCC meeting	Date	Remarks
1	207 th OCC meeting	19.05.2023	Shutdown has been rejected (S/D applied for the month of June).
2	208 th OCC meeting	20.06.2023	Conditionally shutdown approved for the month of July. While availing the shutdown, NRLDC rejected the shutdown it due to high peak demand of all India and the Northern Region.
3	209 th OCC meeting	19.07.2023	Shutdown of 400/220 kV buses for interconnection with existing buses has also been rejected in the OCC meeting for the month of August & September, 2023.
4	210 th OCC meeting	16.08.2023	

38. However, the shutdown was approved for 400 kV buses-3 and 4 and 220 kV buses-1 and 2 in October 2023. Furthermore, NRLDC linked the shutdowns of buses with the shutdown of HVDC Poles-1, 2, 3, and 4. Subsequently, the shutdown of buses was availed w.e.f. 14.10.2023, and all interconnection activities, including HV Test, and Busbar Stability, were completed in October 2023. The delay of around 6 months (173 days) occurred due to the non-availability of shutdowns at the Kurukshetra Substation.

39. Furthermore, Petitioner, through an affidavit dated 9.12.2024, regarding the delay in availing shutdown after the SCOD of Asset-1 (i.e., 15.2.2023), has stated that the works include the augmentation of the busbar at Kurukshetra GIS, which involves integrating a new Hyosung-made GIS with the existing GE-made GIS, requiring an interfacing module/connector to connect the two buses. These components were necessary for the integration of the GIS busbar arrangement of two different makes. The delivery of these components was received only in May 2023. Consequently, the shutdown request was made according to the availability of the required materials in May 2023.

40. Furthermore, the details of the shutdown request, approval, rejection, and utilisation for Asset-1 as submitted by the Petitioner are as follows:



- a) June 2023: Shutdowns were rejected by OCC. The shutdown request and decision by the Authority are mentioned at Serial Nos. 475, 477, 483, 502, 509 of OCC-207 approval.
- b) July 2023: Shutdowns were conditionally approved by OCC but rejected by NRLDC due to high peak demand.
- c) August and September 2023: Shutdowns were rejected by OCC. The reference Point Nos. 490, 491, 493, 495, 502, 509 of OCC-209 approval and points 11 to 16 of OCC-210 approval.
- d) October 2023: Shutdowns were approved by OCC and NRLDC but were linked to the shutdown of HVDC Poles 1, 2, 3, and 4. The bus shutdowns commenced from 14.10.2023 according to the following schedule: -
- 400 kV BUS-III S/D taken from 10:21 hrs. dated 14.10.2023 till 18:49 hrs. dated 20.10.2023
 - 400 kV BUS-IV S/D taken from 10:45 hrs. on 21.10.2023 until 19:26 hrs. on 27.10.2023
 - 220 kV BUS-I S/D taken from 07:58 hrs on 27.10.2023 until 13:20 hrs on 27.10.2023.
 - 220 kV BUS-II S/D taken from 09:50 hrs on 27.10.2023 until 18:11 hrs on 27.10.2023
 - 400 kV BUS-III S/D taken from 09:50 hrs on 28.10.2023 until 18:17 hrs on 31.10.2023.
 - 220 kV BUS-II S/D taken from 09:59 hrs on 29.10.2023 until 18:20 hrs on 31.10.2023.
 - 220 kV BUS-I S/D taken from 10:29 hrs on 01.11.2023 until 19:04 hrs on 02.11.2023.



- 400 kV BUS-IV S/D taken from 10:08 hrs on 02.11.2023 until 20:04 hrs on 03.11.2023.

Asset-2:

41. The Petitioner has stated that the IA was accorded on 27.03.2022 with a schedule of 14 months, and the LOA was issued on 4.5.2022 and 19.5.2022, respectively. Subsequently, the Petitioner, with its project implementation expertise and experience, made every effort to complete the transmission scheme, which was commissioned on 12.7.2023. It is clear that the delay was beyond the Petitioner's control, and even the events causing the delay were unforeseen, although various issues related to securing the shutdown contributed to the delay in the transmission scheme.

42. In compliance with the query of the Commission vide RoP for the hearing dated 18.11.2024, the Petitioner in its affidavit dated 9.12.2024, has reiterated the submissions made earlier and requested to condone the delay in the completion of the transmission assets on the grounds that it was beyond the control of the Petitioner.

Analysis and Decision

43. As per the IA dated 27.3.2022, Assets-1 and 2 were scheduled to be commissioned by 15.2.2023 and May 2023, respectively, but they were put into commercial operation on 23.11.2023 and 12.7.2023, respectively. The details of SCOD, COD, and time delay claimed by the Petitioner are as follows:

Asset	SCOD as per IA dated 27.3.2022	COD	Time Over-run
Asset-1: 1x500 MVA, 400/220 kV ICT along with associated bays at Kurukshetra (PG) substation.	15.2.2023	23.11.2023	281 days
Asset-2: 1x500 MVA, 400/220 kV ICT along with 400 kV & 220 kV bays at Patiala (PG) substation	31.5.2023*	12.7.2023	42 days [#]

* The last date of the month has been considered as the exact date has not been mentioned.



The Petitioner has sought condonation for 41 days, however actual delay is 42 days.

44. The Petitioner has provided a detailed justification for the delay in commissioning the transmission assets. We have considered the Petitioner's submissions, and the detailed analysis of the delay regarding the transmission assets is as follows:

Asset-1

A. Delay in requisite Shutdown Approvals.

45. The Petitioner has submitted that the commissioning of Asset-1 was delayed due to the deferment of shutdowns on a continuous basis for the required period since May 2023. The shutdown was only approved in October 2023 and was subsequently availed w.e.f. 14.10.2023. Accordingly, all interconnection activities, along with HV testing and busbar stability checks, were completed in October 2023.

46. The Petitioner has also submitted that the execution of Asset-1 involves busbar augmentation at Kurukshetra GIS Substation, which included the integration of a new Hyosung-made GIS with the existing GE-made GIS and therefore required interfacing modules/connectors to join the two buses. These components were essential for integrating the GIS busbar arrangement from two different manufacturers. The delivery of these components was received only in May 2023. Consequently, the shutdown request was made based on the availability of the necessary materials in May 2023.

47. We have considered the Petitioner's submissions. The Petitioner has attributed the delay to the approval process of a required shutdown requested after May 2023, i.e., following the receipt of the interfacing modules/connectors necessary for integrating a new Hyosung make GIS with the existing GE make GIS. Consequently, we first analyse the delay from SCOD (15.02.2023) to 31.5.2023, which covers the period of delay in the supply of the required interfacing modules/connectors, and then from 1.6.2023 to 22.11.2023, which accounts for the delay due to approval of the requisite shutdown.



48. Regarding the delay from SCOD, i.e., 15.2.2023, to 23.11.2023, it has been observed that the Petitioner claimed the delivery of necessary interface modules and other components for the integration of the new Hyosung make GIS with the existing GE make GIS in May 2023. However, as per Form-12 submitted by the Petitioner, the supply of material commenced on 14.7.2023 and was completed on 18.8.2023, which is outside the original schedule from 1.3.2023 to 25.3.2023, and does not align with the Petitioner's claim. Furthermore, the Petitioner has failed to provide documentary evidence substantiating the delivery of the required interface modules and other components separately in May 2023.

49. Further, Regulation 22 of 2019 Tariff Regulations provides as follows:

“22. Controllable and Uncontrollable factors: The following shall be considered as controllable and uncontrollable factors for deciding time over-run, cost escalation, IDC and IEDC of the new projects:

(1) “The “controllable factors” shall include but shall not be limited to the following:

- a. Efficiency in the implementation of the project not involving approved change in scope of such project, change in statutory levies or change in law or force majeure events; and***
- b. Delay in execution of the project on account of contractor or supplier or agency of the generating company or transmission licensee.***

(2) “The “Uncontrollable factors” shall include but shall not be limited to the following:

- a. Force Majeure events;***
- b. Change in law; and***
- c. Land acquisition except where the delay is attributable to the generating company or the transmission licensee.”***

50. Therefore, in accordance with Regulation 22(1)(b) of the 2019 Tariff Regulations, any delay in the execution of a transmission scheme caused by late material supply is considered a controllable factor. Consequently, the time overrun claimed by the Petitioner due to delayed material supply is attributable to the contractor. As a result, we are not inclined to condone the 106-day time overrun from SCOD, that is, 15.2.2023 to 31.5.2023, in commissioning Asset-1.

51. Furthermore, regarding the delay caused by the deferment of shutdown, we have considered the documents on record and found that the shutdown requested by the Petitioner



for June, August, and September 2023 was rejected in the 207th and 210th OCC meetings. Meanwhile, the conditionally approved shutdown in the 209th OCC meeting for July 2023 was rejected by the NRLDC. Consequently, the shutdown approved by the OCC and NRLDC for October 2023 was utilized by the Petitioner from 14.10.2023 to 3.11.2023.

52. Therefore, we are of the view that the delay caused by the deferment of the necessary shutdown by OCC and NRLDC is beyond the control of the Petitioner. Consequently, we condone the 175-day delay from 1.6.2023 to 22.11.2023 for this reason.

Asset-2

53. The Petitioner has submitted that after the IA dated 28.3.2022, the LOA was issued on 4.5.2022 and 19.5.2022. Subsequently, using the project implementation expertise and experience of the Petitioner, the transmission scheme was commissioned on 12.7.2023, and the Petitioner has requested condonation of a delay of 41 days on merits.

54. We have considered the Petitioner's submissions and noted that the Petitioner has not provided any supporting documents to justify the 42-day delay in commissioning Asset-2. Furthermore, under Regulation 22(1)(b) of the 2019 Tariff Regulations, any delay in issuing the LOA after the approval of the IA is also categorised as a controllable factor within the Petitioner's control. Therefore, in light of the above and as per Regulation 22(1)(b) of the 2019 Tariff Regulations, we are not inclined to condone the 42-day delay in commissioning Asset-2.

55. The summary of SCOD, COD, the claimed delay, and whether the time overrun is condoned or not condoned in relation to the transmission assets is as follows:

Asset	SCOD	COD	Time Over-run	Time Overrun Condoned	Time Overrun Not Condoned
Asset-1	15.2.2023	23.11.2023	281 days	175 days	106 days
Asset-2	31.5.2023*	12.7.2023	42 days	Nil	42 days [#]

**The last date of the month has been considered, as the exact date has not been mentioned.*

The Petitioner has sought condonation of the delay of 41 days; however, the actual delay is 42 days.



Interest During Construction (IDC) and Incidental Expenditure During Construction (IEDC)

56. The Petitioner has claimed IDC and submitted the statement showing the IDC claim and discharge of IDC liability as on COD regarding the transmission assets as follows:

(₹ in lakh)

Asset	IDC as per the Auditor's Certificate	IDC discharged up to COD	IDC discharged during 2023-24	IDC discharged during 2024-25
Asset-1	92.71	62.66	4.78	25.28
Asset-2	23.20	7.21	15.99	0.00

57. We have considered the Petitioner's submissions. As discussed earlier in this order, there is a time overrun in the commissioning of the transmission assets, with the time overrun in commissioning being partially condoned for Asset-1 and not condoned for Asset-2. Accordingly, the IDC on a cash basis up to the COD for the transmission assets has been calculated based on the loan details provided in the statement showing the discharge of the IDC and Form-9C. The IDC claimed and considered as on the COD, along with a summary of the discharge of IDC liability up to the COD and thereafter, for the purpose of tariff determination, subject to its revision at the time of truing up concerning the transmission assets, is as follows:

(₹ in lakh)

Asset	IDC as per Auditor's Certificate	IDC disallowed due to the delay not condoned	IDC allowed	IDC discharged up to COD	IDC discharged after COD during 2023-24	IDC discharged during 2024-25
Asset-1	92.71	34.97	57.74	39.11	2.42	16.21
Asset-2	23.20	9.22	13.98	7.21	6.77	0.00

58. Furthermore, the Petitioner has stated that the entire amount of IEDC for the transmission assets has been discharged up to the date of commercial operation (COD). Since the delay for the transmission assets has been partly condoned for Asset-1 but not for



Asset-2, there are proportionate disallowances of IEDC. Accordingly, the details of IEDC claimed as per the Auditor's Certificate, IEDC disallowed, and IEDC allowed for the transmission assets are as follows:

(₹ in lakh)			
Asset	IEDC claimed as per Auditor's certificate (A)	IEDC disallowed due to time overrun, not condoned (B)	IEDC Allowed (C)=(A-B)
Asset-1	291.94	51.07	240.87
Asset-2	386.30	34.37	351.93

Initial Spares

59. Regulation 23(d) of the 2019 Tariff Regulations provides that Initial Spares shall be capitalised as a percentage of plant and machinery cost up to the cut-off date, subject to the following ceiling norms:

“(d) Transmission System

- (i) Transmission line- 1.00%
- (ii) Transmission sub-station
 - Green Field- 4.00%
 - Brown Field- 6.00%
- (iii) Series Compensation devices and HVDC Station- 4.00%
- (iv) Gas Insulated Sub-station (GIS)
 - Green Field- 5.00%
 - Brown Field- 7.00%
- (v) Communication System- 3.50%
- (vi) Static Synchronous Compensator- 6.00%”

60. The Initial Spares as claimed by the Petitioner, vide affidavit dated 12.9.2024 for the transmission assets are as under:

(₹ in lakh)						
Asset	Particulars	Plant & Machinery Cost (A)	Initial Spares Claimed (B)	Ceiling Limit (in %) (C)	Percentage Claimed (in %)	Allowable Initial Spares $D = [(A-B) * C / (100-C)]$
Asset-1	S/S (GIS-Brown Field)	5842.06	673.95	7.0	12.13	389.00
Asset-2	S/S (AIS-Brown Field)	3931.13	170.36	6.0	4.26	240.05



61. The Petitioner has submitted the following Initial Spares discharge details in respect of the transmission assets:

(₹ in lakh)

Asset	Particulars	Total Spares Claimed	Expenditure on Initial Spares up to COD and included in Auditor's Certificate up to COD	Expenditure on Initial Spares in 2023-24 (ACE)	Expenditure on Initial Spares in 2024-25 (ACE)	Expenditure on Initial Spares in 2025-26 (ACE)	Expenditure on Initial Spares in 2026-27 (ACE)
Asset-1	S/S (AIS-Brown Field)	673.95	20.79	98.99	403.44	75.37	75.36
Asset-2	S/S (AIS-Brown Field)	170.36	78.11	66.39	25.86	0.00	0.00

62. We have considered the Petitioner's submissions. It is observed that the Petitioner claimed the Initial Spares for Asset-1 as per the AIS Substation instead of the GIS Substation in the main Petition, which was further revised in its TV reply vide affidavit dated 12.9.2024. We have considered the Initial Spares in accordance with Regulation 23(d) of the 2019 Tariff Regulations, subject to truing-up for the 2019-24 tariff period. The Initial Spares allowed for the transmission assets are worked out and allowed as follows:

(₹ in lakh)

Asset	Particulars	Plan & Machinery cost (A)	Initial Spares Claimed (B)	Ceiling Limit (in %) (C)	Allowable Initial Spares	Excess Initial Spares	Initial Spares Allowed
					$D = [(A-B) * C / (100-C)]$		
Asset-1	S/S (GIS-Brown Field)	5842.06	673.95	7.0	389.00	284.95	389.00
Asset-2	S/S (AIS-Brown Field)	3931.13	170.36	6.0	240.05	Nil	170.36

63. There are excess Initial Spares for Asset-1 as per the provisions of the 2019 Tariff Regulations. These excess Initial Spares will be discharged in the 2024-29 tariff period. Hence, the same will be deducted from the ACE claimed in the 2024-29 tariff period.



Capital Cost Allowed as on COD

64. Accordingly, the capital cost allowed in respect of the transmission assets as on COD is as follows:

(₹ in lakh)					
Asset	Capital Cost Claimed till COD	Less: IDC Disallowed	Less: IEDC Disallowed	Less: Undischarged IDC	Capital Cost Allowed as on COD
Asset-1	4328.19	34.97	51.07	18.63	4223.52
Asset-2	3314.84	9.22	34.37	6.77	3264.48

Additional Capital Expenditure (ACE)

65. Regulation 24 of the 2019 Tariff Regulations provides as follows:

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

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

- (a) *Undischarged liabilities recognized to be payable at a future date;*
- (b) *Works deferred for execution;*
- (c) *Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 23 of 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; and*
- (f) *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.”*

66. The Petitioner has claimed that the ACE incurred/projected to be incurred is mainly on account of balance/retention payments and hence the same is claimed under Regulations 24(1)(a) and 24(1)(b) of the 2019 Tariff Regulations. The ACE claimed by the Petitioner in respect of the transmission assets is as follows:



(₹ in lakh)

Asset	Projected Add Cap.			
	2023-24	2024-25	2025-26	2026-27
Asset-1	383.20	1131.00	192.16	192.16
Asset-2	615.48	410.32	0.00	0.00

67. Further, the Petitioner has submitted a Liability Flow Statement for the ACE claimed under Regulation 24 (1)(a) of the 2019 Tariff Regulations in respect of the transmission assets for the 2019-24 tariff period as follows:

Asset-1:

(₹ in lakh)

Party wise	Particulars	Outstanding Liability as on COD	Discharge		Outstanding Liability as on 31.3.2024
			2022-23	2023-24	
M/s Hyosung T&D and M/s Hitachi	Civil and Building	--	--	--	--
	Substation	718.25	0.00	143.51	574.74
	PLCC	--	--	--	--
	IT	11.33	0.00	2.41	8.92
Total		729.58	0.00	145.92	583.66

Asset-2:

(₹ in lakh)

Party wise	Particulars	Outstanding Liability as on COD	Discharge		Outstanding Liability as on 31.3.2024
			2022-23	2023-24	
M/s Hyosung T&D and M/s Hitachi	Civil and Building	--	--	--	--
	Substation	578.54	0.00	168.22	410.32
	PLCC	--	--	--	--
	IT	--	--	--	--
Total		578.54	0.00	168.22	410.32

68. The Petitioner has further submitted the following ACE for works deferred for execution and claimed the same under Regulation 24(1)(b) of the 2019 Tariff Regulations in respect of the transmission assets during the 2019-24 tariff period:



Asset-1:

(₹ in lakh)

Party wise	Particulars	Works deferred for execution	
		2022-23	2023-24
M/s Hyosung T&D and M/s Hitachi	Civil and Building	--	--
	Substation	--	236.07
	PLCC	--	--
	IT	--	1.21
Total		--	237.28

Asset-2:

(₹ in lakh)

Party wise	Particulars	Works deferred for execution	
		2022-23	2023-24
M/s Hyosung T&D and M/s Hitachi	Civil and Building	--	--
	Substation	--	446.17
	PLCC	--	--
	IT	--	1.09
Total		--	447.26

69. We have considered the Petitioner's submissions. The ACE is allowed under balance and retention payments for liabilities, works deferred for execution and liability for works executed prior to the cut-off date under Regulations 24(1)(a) and 24(1)(b) of the 2019 Tariff Regulations. The ACE allowed in respect of the transmission assets for the 2019-24 tariff period is as under:

Asset-1:

(₹ in lakh)

Particulars	Regulations	ACE allowed (2023-24)
Balance and Retention Payments other than IDC	Regulation 24(1)(a) of the 2019 Tariff Regulations.	145.92
Unexecuted Work	Regulation 24(1)(b) of the 2019 Tariff Regulations.	237.28
IDC Discharged after COD		2.42
Total		385.62

Asset-2:

(₹ in lakh)

Particulars	Regulations	ACE allowed (2023-24)
Balance and Retention Payments other than IDC	Regulation 24(1)(a) of the 2019 Tariff Regulations.	168.22



Addition in Gross Block	Regulation 24(1)(b) of the 2019 Tariff Regulations.	447.26
IDC Discharged after COD		6.77
Total		622.25

70. Accordingly, the capital cost allowed in respect of the transmission assets for the 2019-24 tariff period is as follows:

Assets	FR Apportioned Cost	Capital Cost Allowed as on COD	(₹ in lakh)	
			Additional Capitalization Allowed 2023-24	Capital Cost Allowed as on 31.03.2024
Asset-1	6305.93	4223.52	385.62	4609.14
Asset-2	4393.07	3264.48	622.25	3886.72

Debt Equity Ratio

71. Regulation 18 of the 2019 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:

- where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:
- the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:
- any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt: equity ratio.

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

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

(3) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2019, debt: equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2019 shall be considered:

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



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

(4) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2019, but where debt: equity ratio has not been determined by the Commission for determination of tariff for the period ending 31.3.2019, the Commission shall approve the debt: equity ratio in accordance with clause (1) of this Regulation.

(5) Any expenditure incurred or projected to be incurred on or after 1.4.2019 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this Regulation.

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

72. The Petitioner has claimed a debt equity ratio of 70:30 in respect of the transmission assets, and the same has been considered by the Commission in accordance with Regulation 18, which is as follows:

Asset	Funding	Capital Cost as on COD (₹ in lakh)	(in %)	ACE during 2019-24 (₹ in lakh)	Capital Cost as on 31.3.2024 (₹ in lakh)	(in %)
Asset-1	Debt	2956.47	70.00	269.93	3226.40	70.00
	Equity	1267.06	30.00	115.69	1382.74	30.00
	Total	4223.52	100.00	385.62	4609.14	100.00
Asset-2	Debt	2285.13	70.00	435.572	2720.71	70.00
	Equity	979.34	30.00	186.674	1166.02	30.00
	Total	3264.48	100.00	622.25	3886.72	100.00

Depreciation

73. Regulation 33 of the 2019 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 case of the tariff of all the units of a generating station or all elements of a transmission system including communication system for which a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission system taking into consideration the depreciation of individual units:

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



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

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

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

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

Provided also that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciated value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff:

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

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

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

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

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

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

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

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



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

a) twenty-five years, in case the generating station or unit thereof is in operation for fifteen years or less as on the date of operation of the emission control system; or

b) balance useful life of the generating station or unit thereof plus fifteen years, in case the generating station or unit thereof is in operation for more than fifteen years as on the date of operation of the emission control system; or

c) ten years or a period mutually agreed by the generating company and the beneficiaries, whichever is higher, in case the generating station or unit thereof has completed its useful life.”

74. The depreciation has been worked out considering the admitted capital expenditure as on COD and thereafter up to 31.3.2024. The Weighted Average Rate of Depreciation (WAROD), annexed with this order as Annexure, has been worked out for the transmission assets as per the rates of depreciation specified in the 2019 Tariff Regulations. The depreciation allowed in respect of the transmission assets for the 2019-24 tariff period is as follows:

Asset-1:

	Particulars	(₹ in lakh) 2023-24 (pro-rata for 130 days)
A	Opening Gross Block	4223.52
B	Addition during the year 2019-24 due to projected ACE	385.62
C	Closing Gross Block (A+B)	4609.14
D	Average Gross Block (A+C)/2	4416.33
E	Average Gross Block (90% depreciable assets)	4300.87
F	Average Gross Block (100% depreciable assets)	115.47
G	Depreciable Value (excluding IT equipment and software) (E*90%)	3870.78
H	Depreciable Value of IT equipment and software (F*100%)	115.47
I	Total Depreciable Value (G+H)	3986.25
J	Weighted Average Rate of Depreciation (WAROD) (in %)	5.5342
K	Lapsed useful life at the beginning of the year (Year)	0
L	Balance useful life at the beginning of the year (Year)	25
M	Depreciation during the year (D*J)	86.81



	Particulars	2023-24 (pro-rata for 130 days)
N	Cumulative Depreciation at the end of the year	86.81
O	Remaining Aggregate Depreciable Value at the end of the year	3899.44

Asset-2:

	Particulars	(₹ in lakh) 2023-24 (pro-rata for 264 days)
A	Opening Gross Block	3264.48
B	Addition during the year 2019-24 due to projected ACE	622.25
C	Closing Gross Block (A+B)	3886.72
D	Average Gross Block (A+C)/2	3575.60
E	Average Gross Block (90% depreciable assets)	3563.91
F	Average Gross Block (100% depreciable assets)	11.68
G	Depreciable Value (excluding IT equipment and software) (E*90%)	3207.52
H	Depreciable Value of IT equipment and software (F*100%)	11.68
I	Total Depreciable Value (G+H)	3219.21
J	Weighted Average Rate of Depreciation (WAROD) (in %)	5.3118
K	Lapsed useful life at the beginning of the year (Year)	0
L	Balance useful life at the beginning of the year (Year)	25
M	Depreciation during the year (D*J)	137.00
N	Cumulative Depreciation at the end of the year	137.00
O	Remaining Aggregate Depreciable Value at the end of the year	3082.21

Interest on Loan (IoL)

75. Regulation 32 of the 2019 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 as gross normative loan for calculation of interest on loan.

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

(3) The repayment for each of the year of the tariff period 2019-24 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of decapitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered upto the date of de-capitalisation of such asset.



(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year.

(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting adjustment for interest capitalized:

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

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

(5a) The rate of interest on loan for installation of emission control system shall be the weighted average rate of interest of actual loan portfolio of the emission control system or in the absence of actual loan portfolio, the weighted average rate of interest of the generating company as a whole shall be considered.

(6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.

(7) The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing”.

76. The Weighted Average Rate of Interest on loan (WAROI) has been considered as claimed by the Petitioner. The Petitioner has prayed that the change in interest rate due to the floating rate of interest applicable, if any, during the 2019-24 tariff period may be adjusted. Accordingly, the floating rate of interest, if any, shall be considered at the time of truing-up for the 2019-24 tariff period.

77. The IoL has been worked out in accordance with Regulation 32 of the 2019 Tariff Regulations. The IoL allowed in respect of the transmission assets for the 2019-24 tariff period is as follows:

Asset-1:

(₹ in lakh)		
	Particulars	2023-24 (pro-rata for 130 days)
A	Gross Normative Loan	2956.47
B	Cumulative Repayments up to Previous Year	0.00
C	Net Loan-Opening (A-B)	2956.47



	Particulars	2023-24 (pro-rata for 130 days)
D	Addition due to ACE	269.93
E	Repayment during the year	86.81
F	Net Loan-Closing (C+D-E)	3139.59
G	Average Loan (C+F)/2	3048.03
H	Weighted Average Rate of Interest on Loan (in %)	7.646
I	Interest on Loan (G*H)	82.78

Asset-2:

	Particulars	2023-24 (pro-rata for 264 days)
A	Gross Normative Loan	2285.13
B	Cumulative Repayments up to Previous Year	0.00
C	Net Loan-Opening (A-B)	2285.13
D	Addition due to ACE	435.57
E	Repayment during the year	137.00
F	Net Loan-Closing (C+D-E)	2583.71
G	Average Loan (C+F)/2	2434.42
H	Weighted Average Rate of Interest on Loan (in %)	7.8431
I	Interest on Loan (G*H)	137.72

Return on Equity (RoE)

78. Regulations 30 and 31 of the 2019 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 shall be computed at the base rate of 15.50% for thermal generating station, transmission system including communication system and run-of river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run-of-river generating station with pondage:

Provided that return on equity in respect of additional capitalization after cut-off date beyond the original scope, excluding additional capitalization on account of emission control system, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system or in the absence of actual loan portfolio of the generating station or the transmission system, the weighted average rate of interest of the generating company or the transmission licensee, as the case may be, as a whole shall be considered, subject to ceiling of 14%.

Provided further that:

i. In case of a new project, the rate of return on equity shall be reduced by 1.00% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without



commissioning of any of the Restricted Governor Mode Operation (RGMO) or Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch center or protection system based on the report submitted by the respective RLDC;

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

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

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

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

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

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

31. Tax on Return on Equity:(1) The base rate of return on equity as allowed by the Commission under Regulation 30 of these regulations shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in respect of the financial year in line with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee, as the case may be. The actual tax paid on income from other businesses including deferred tax liability (i.e. income from business other than business of generation or transmission, as the case may be) shall be excluded for the calculation of effective tax rate.

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

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

Where “t” is the effective tax rate in accordance with clause (1) of this Regulation and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the company on pro-rata basis by excluding the income of non-generation or non-transmission business, as the case may be, and the corresponding tax thereon. In case of generating company or transmission licensee paying Minimum Alternate Tax (MAT), “t” shall be considered as MAT rate including surcharge and cess.

Illustration-

(i) In case of a generating company or a transmission licensee paying Minimum Alternate Tax (MAT) @ 21.55% including surcharge and cess:

Rate of return on equity = $15.50 / (1 - 0.2155) = 19.758\%$

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



- (a) Estimated Gross Income from generation or transmission business for FY 2019-20 is Rs 1,000 crore;
(b) Estimated Advance Tax for the year on above is Rs 240 crore;
(c) Effective Tax Rate for the year 2019-20 = Rs 240 Crore/Rs 1000 Crore = 24%;
(d) Rate of return on equity = $15.50 / (1 - 0.24) = 20.395\%$.

(3) The generating company or the transmission licensee, as the case may be, shall true up the grossed up rate of return on equity at the end of every financial year based on actual tax paid together with any additional tax demand including interest thereon, duly adjusted for any refund of tax including interest received from the income tax authorities pertaining to the tariff period 2019-24 on actual gross income of any financial year. However, penalty, if any, arising on account of delay in deposit or short deposit of tax amount shall not be claimed by the generating company or the transmission licensee, as the case may be. Any under-recovery or over-recovery of grossed up rate on return on equity after truing up, shall be recovered or refunded to beneficiaries or the long term customers, as the case may be, on year to year basis.”

79. The Petitioner has submitted that the MAT rate is applicable to it. Accordingly, the MAT rate applicable in the year 2019-20 has been considered for the purpose of ‘Return on Equity’ (RoE), which shall be trued up with the actual tax rate in accordance with Regulation 31(3) of the 2019 Tariff Regulations. The RoE in respect of the transmission assets for the 2019-24 tariff period has been worked out and allowed as follows:

Asset-1:

(₹ in lakh)		
	Particulars	2023-24 (pro-rata for 130 days)
A	Opening Equity	1267.06
B	Addition due to ACE	115.69
C	Closing Equity (A+B)	1382.74
D	Average Equity (A+C)/2	1324.90
E	Return on Equity (Base Rate) (in %)	15.500
F	Tax Rate applicable (in %)	17.472
G	Rate of Return on Equity (Pre-tax) (in %)	18.782
H	Return on Equity (D*G)	88.38

Asset-2:

(₹ in lakh)		
	Particulars	2023-24 (pro-rata for 264 days)
A	Opening Equity	979.34
B	Addition due to ACE	186.67



	Particulars	2023-24 (pro-rata for 264 days)
C	Closing Equity (A+B)	1166.02
D	Average Equity (A+C)/2	1072.68
E	Return on Equity (Base Rate) (in %)	15.500
F	Tax Rate applicable (in %)	17.472
G	Rate of Return on Equity (Pre-tax) (in %)	18.782
H	Return on Equity (D*G)	145.32

Operation & Maintenance Expenses (O&M Expenses)

80. The Petitioner has claimed the 'Operation and Maintenance Expenses' (O&M Expenses) for the transmission assets for the 2019-24 tariff period as follows:

Asset	Particulars	(₹ in lakh) 2023-24
Asset-1	1x500 MVA, 400/220 kV ICT along with associated bays at Kurukshetra (PG) Substation	95.28*
Asset-2	1x500 MVA, 400/220 kV ICT along with 400 kV & 220 kV bays at Patiala (PG) Substation	193.49 [#]

* Pro-rata for 130 days & # pro-rata for 264 days.

81. Regulation 35(3)(a) of the 2019 Tariff Regulations provides as follows:

"35 (3) Transmission system: (a) The following normative operation and maintenance expenses shall be admissible for the combined transmission system:

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Norms for sub-station Bays (₹ Lakh per bay)					
765 kV	45.01	46.60	48.23	49.93	51.68
400 kV	32.15	33.28	34.45	35.66	36.91
220 kV	22.51	23.30	24.12	24.96	25.84
132 kV and below	16.08	16.64	17.23	17.83	18.46
Norms for Transformers (₹ Lakh per MVA)					
765 kV	0.491	0.508	0.526	0.545	0.564
400 kV	0.358	0.371	0.384	0.398	0.411
220 kV	0.245	0.254	0.263	0.272	0.282
132 kV and below	0.245	0.254	0.263	0.272	0.282
Norms for AC and HVDC lines (₹ Lakh per km)					
Single Circuit (Bundled Conductor with six or more sub-conductors)	0.881	0.912	0.944	0.977	1.011
Single Circuit (Bundled conductor with four sub-conductors)	0.755	0.781	0.809	0.837	0.867
Single Circuit (Twin & Triple Conductor)	0.503	0.521	0.539	0.558	0.578
Single Circuit (Single Conductor)	0.252	0.260	0.270	0.279	0.289
Double Circuit (Bundled conductor with four or more sub-conductors)	1.322	1.368	1.416	1.466	1.517



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Double Circuit (Twin & Triple Conductor)	0.881	0.912	0.944	0.977	1.011
Double Circuit (Single Conductor)	0.377	0.391	0.404	0.419	0.433
Multi Circuit (Bundled Conductor with four or more sub-conductor)	2.319	2.401	2.485	2.572	2.662
Multi Circuit (Twin & Triple Conductor)	1.544	1.598	1.654	1.713	1.773
Norms for HVDC stations					
HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB)	834	864	894	925	958
Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW)	1,666	1,725	1,785	1,848	1,913
500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)	2,252	2,331	2,413	2,498	2,586
±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)	2,468	2,555	2,645	2,738	2,834
±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500 MW)	1,696	1,756	1,817	1,881	1,947
±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)	2,563	2,653	2,746	2,842	2,942

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 further that:

- i. the operation and maintenance expenses for new HVDC bi-pole schemes commissioned after 1.4.2019 for a particular year shall be allowed pro-rata on the basis of normative rate of operation and maintenance expenses of similar HVDC bi-pole scheme for the corresponding year of the tariff period;*
- ii. the O&M expenses norms for HVDC bi-pole line shall be considered as Double Circuit quad AC line;*
- iii. the O&M expenses of ±500 kV Mundra-Mohindergarh HVDC bipole scheme (2000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ±500 kV Talchar-Kolar HVDC bi-pole scheme (2000 MW);*
- iv. the O&M expenses of ±800 kV Champa-Kurukshetra HVDC bi-pole scheme (3000 MW) shall be on the basis of the normative O&M expenses for ±800 kV, Bishwanath-Agra HVDC bi-pole scheme;*
- v. the O&M expenses of ±800 kV, Alipurduar-Agra HVDC bi-pole scheme (3000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ±800 kV, Bishwanath-Agra HVDC bi-pole scheme; and*
- vi. the O&M expenses of Static Synchronous Compensator and Static Var Compensator shall be worked at 1.5% of original project cost as on commercial operation which shall be escalated at the rate of 3.51% to work out the O&M expenses during the tariff period. The O&M expenses of Static Synchronous Compensator and Static Var Compensator, if required, may be reviewed after three years.*

(b) The total allowable operation and maintenance expenses for the transmission system shall be calculated by multiplying the number of sub-station bays, transformer capacity of the transformer (in MVA) and km of line length with the applicable norms for the operation and maintenance expenses per bay, per MVA and per km respectively.



(c) The Security Expenses and Capital Spares for transmission system shall be allowed separately after prudence check:

Provided that the transmission licensee shall submit the assessment of the security requirement and estimated security expenses, the details of year-wise actual capital spares consumed at the time of truing up with appropriate justification.”

82. We have considered the Petitioner’s submissions, and it is observed that the Petitioner has claimed the O&M Expenses for Asset-1 based on the norms specified for AIS bays instead of GIS bays. Therefore, in accordance with Regulation 35(3)(a) of the 2019 Tariff Regulation, the O&M Expenses for the transmission assets for the 2019-24 tariff period are allowed as follows:

Asset-1:

(₹ in lakh)	
O&M Expenses	2023-24 (Pro-rata for 130 days)
Substation ICT: 1 No. 500 MVA, 400/220 kV ICT	
Norms as per Regulation (₹ lakh per MVA)	0.411
MVA Capacity	500
O&M Expenses allowable	205.50
Substation: 1 No. 400 kV ICT Bay (GIS)	
Norms as per Regulation (₹ lakh per Bay) *	25.837
O&M Expenses allowable	25.84
Substation: 1 No. 220 kV ICT Bay (GIS)	
Norms as per Regulation (₹ lakh per Bay) *	18.088
O&M Expenses allowable	18.088
Total O&M Expenses allowed	249.43
Total O&M Expenses allowed (pro-rata for 130 days)	88.59

* The O&M expenses for the GIS bays is allowed as worked out by multiplying 0.70 of the O&M Expenses of the normative O&M Expenses for bays.

Asset-2:

(₹ in lakh)	
O&M Expenses	2023-24 (Pro-rata for 264 days)
Substation ICT: 1 No. 500 MVA, 400/220 kV ICT	
Norms as per Regulation (₹ lakh per MVA)	0.411
MVA Capacity	500
O&M Expenses allowable	205.50
Substation: 1 No. 400 kV ICT Bay	
Norms as per Regulation (₹ lakh per Bay)	36.91



O&M Expenses allowable	36.91
Substation: 1 No. 220 kV ICT Bay	
Norms as per Regulation (₹ lakh per Bay)	25.84
O&M Expenses allowable	25.84
Total O&M Expenses allowed	268.25
Total O&M Expenses allowed (pro-rata for 254 days)	193.49

Interest on Working Capital (IWC)

83. Regulations 34(1)(c), 34(3), 34(4), and Regulation 3(7) of the 2019 Tariff Regulations state as follows:

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

(c) For Hydro Generating Station (including Pumped Storage Hydro Generating Station) and Transmission System:

(i) Receivables equivalent to 45 days of annual fixed cost;

(ii) Maintenance spares @ 15% of operation and maintenance expenses including security expenses; and

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

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

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

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

“3. Definitions. - In these regulations, unless the context otherwise requires: -

(7) ‘Bank Rate’ means the one-year marginal cost of lending rate (MCLR) of the State Bank of India issued from time to time plus 350 basis points;”

84. The IWC has been worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The Rate of Interest (RoI) is considered as 12.00% (SBI 1-year MCLR applicable as on 1.4.2023 of 8.50% plus 350 basis points) for the FY 2023-24. The components of the working capital and interest allowed thereon in respect of the transmission assets for the 2019-24 tariff period are as follows:



Asset-1:**(₹ in lakh)**

Particulars	2023-24 (pro-rata for 130 days)
Working Capital for O&M Expenses (O&M Expenses for one month)	20.79
Working Capital for Maintenance Spares (15% of O&M Expenses)	37.41
Working Capital for Receivables (Equivalent to 45 days of Annual Fixed Cost /Annual Transmission Charges)	122.63
Total Working Capital	180.83
Rate of Interest for Working Capital (in %)	12.00
Interest on Working Capital	7.71

Asset-2:**(₹ in lakh)**

Particulars	2023-24 (pro-rata for 264 days)
Working Capital for O&M Expenses (O&M Expenses for one month)	22.35
Working Capital for Maintenance Spares (15% of O&M Expenses)	40.24
Working Capital for Receivables (Equivalent to 45 days of Annual Fixed Cost /Annual Transmission Charges)	107.08
Total Working Capital	169.67
Rate of Interest for Working Capital (in %)	12.00
Interest on Working Capital	14.69

Annual Fixed Charges for the 2019-24 Tariff Period

85. The transmission charges allowed for the 2019-24 tariff period in respect of the transmission assets are as follows:

Asset-1:**(₹ in lakh)**

Particulars	2023-24 (pro-rata for 130 days)
Depreciation	86.81
Interest on Loan	82.78
Return on Equity	88.38
O&M Expenses	88.59
Interest on Working Capital	7.71
Total	354.27



Asset-2:

(₹ in lakh)	
Particulars	2023-24 (pro-rata for 264 days)
Depreciation	137.00
Interest on Loan	137.72
Return on Equity	145.32
O&M Expenses	193.49
Interest on Working Capital	14.69
Total	628.22

86. To summarise, the AFC allowed in respect of the transmission assets for the 2019-24 tariff period is as follows:

Asset-1:

(₹ in lakh)

Particulars	2023-24 (Pro-rata for 130 days)
AFC Claimed	365.74
AFC Allowed	354.27

Asset-2:

(₹ in lakh)

Particulars	2023-24 (Pro-rata for 264 days)
AFC Claimed	632.89
AFC Allowed	628.22

Filing Fee and Publication Expenses

87. The Petitioner has sought reimbursement of the fee paid by it for filing the Petition and publication expenses. The Petitioner shall be entitled to reimbursement of the filing fees and publication expenses in connection with the present Petition, directly from the beneficiaries on a pro-rata basis in accordance with Regulation 70(1) of the 2019 Tariff Regulations.

Licence Fee and RLDC Fees and Charges

88. The Petitioner has sought reimbursement of the license fee in accordance with Regulation 70(4) of the 2019 Tariff Regulations. The Petitioner shall be entitled to



reimbursement of the licence fee in accordance with Regulation 70(4) of the 2019 Tariff Regulations for the 2019-24 tariff period. The Petitioner shall also be entitled to recover the RLDC fee and charges in accordance with Regulation 70(3) of the 2019 Tariff Regulations for the 2019-2024 tariff period.

Goods and Services Tax

89. The Petitioner has submitted that if GST is levied at any rate and at any point of time in future on charges of transmission of electricity, the same shall be borne and additionally paid by the Respondent(s) to the Petitioner, and the same shall be charged and billed separately by the Petitioner. Further additional taxes, if any, are to be paid by the Petitioner on account of demand from Government/Statutory Authorities; the same may be allowed to be recovered from the beneficiaries.

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

Security Expenses

91. The Petitioner has submitted that security expenses in respect of transmission assets are not claimed in the instant Petition, and it would file a separate Petition for claiming the overall security expenses and the consequential IWC as per Regulation 35(3)(c) of the 2019 Tariff Regulations.

92. We have considered the above submissions of the Petitioner. The Petitioner has claimed consolidated security expenses for all the transmission assets owned by it on a projected basis for the 2019-24 tariff period, based on the actual security expenses incurred in 2018-19 in Petition No. 260/MP/2020. The said Petition has already been disposed of by the Commission vide order dated 3.8.2021. Therefore, the Petitioner's prayer in the present Petition to allow it to file a separate Petition for claiming the overall security expenses and the related IWC has become infructuous.



Capital Spares

93. The Petitioner has sought reimbursement of capital spares at the end of the tariff period. The Petitioner's claim, if any, shall be dealt with in accordance with the provisions of the 2019 Tariff Regulations.

Sharing of Transmission Charges

94. With effect from 1.11.2020, the sharing of transmission charges is governed by the provisions of the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020 (hereinafter referred to as 'the 2020 Sharing Regulations'). Accordingly, the billing, collection, and disbursement of transmission charges shall be recovered in terms of the provisions of the 2020 Sharing Regulations as provided in Regulation 57 of the 2019 Tariff Regulations.

Interim Tariff

95. The Petitioner has prayed to allow the interim tariff, in accordance with Regulation 10(3) of the 2019 Tariff Regulations, to be included in the point-of-connection charges.

96. We have considered the Petitioner's submissions. Since we have determined the transmission tariff for the transmission assets in this order, the request for the interim tariff becomes redundant.

97. The Annexure to this order forms part of the order.

98. This order disposes of Petition No. 184/TT/2024 in terms of the above findings and discussions.

Sd/-

**(Harish Dudani)
Member**

Sd/-

**(Ramesh Babu V.)
Member**

Sd/-

**(Jishnu Barua)
Chairperson**



Annexure

Asset-I:

(₹ in lakh)

Capex	Admitted Capital Cost as on COD	Projected ACE		Admitted Capital Cost as on 31.3.2024	Depreciation Rate (in %)	Annual Depreciation	
		2022-23	2023-24			2022-23	2023-24
Substation	4109.90	0.00	381.92	4491.84	5.28	0.00	227.09
IT Equipment	113.62	0.00	3.69	117.31	15.00	0.00	17.32
Total	4223.52	0.00	385.62	4609.14		0.00	244.41
Average Gross Block						0.00	4416.33
WAROD (in %)						0.00	5.53

Asset-II:

(₹ in lakh)

Capex	Admitted Capital Cost as on COD	Projected ACE		Admitted Capital Cost as on 31.3.2024	Depreciation Rate (in %)	Annual Depreciation	
		2022-23	2023-24			2022-23	2023-24
Substation	3253.35	0.00	621.13	3874.48	5.28	0.00	188.17
IT Equipment	11.13	0.00	1.11	12.24	15.00	0.00	1.75
Total	3264.48	0.00	622.25	3886.72		0.00	189.93
Average Gross Block						0.00	3575.60
WAROD (in %)						0.00	5.31

