

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 34/TT/2023

Coram:

**Shri Jishnu Barua, Chairperson
Shri Arun Goyal, Member**

Date of Order: 02.08.2024

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 determination of transmission tariff from COD to 31.3.2024 for assets:

(i) Installation of 12 Ω , 420 kV fault limiting bus series reactors at Thiruvalem Sub-station between Bus Section-A and Bus Section-B & Bus Section-B and Bus section-C along with 4 nos 400 kV bays for 2 nos. series bus reactors + 1 no. tie bay (Note: Any Sub-station element viz. ICTs, bus reactors, switchable line reactors, etc. require one main bay and a tie bay for their operation. In case of each series reactor, 2 main breakers and 2 tie breakers are required for their reliable operation. Therefore, 4 numbers of bays have been considered as main bays (2 main bays per bus series reactor) in the current scheme).

(ii). Opening of one of the bus (other than on which fault limiting bus series reactors are being installed) between the above-mentioned bus sections through suitable arrangement.

(iii). Bypass of Kolar-Thiruvalem and Thiruvalem-Sriperumbudur 400 kV Single Circuit line to form Kolar- Sriperumbudur 400 kV Single Circuit direct line under Transmission system for controlling high Short Circuit Current level at 400 kV Thiruvalem Sub-station in Southern Region.

And In the matter of:

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

... Petitioner

Vs.

1. Tamil Nadu Generation and Distribution Corporation Limited,
NPKRR Maaligai, 800, Anna Salai,
Chennai-600002.



2. Kerala State Electricity Board,
Vaidyuthi Bhavanam, Pattom, Thiruvananthapuram-695004.
3. Electricity Department,
Government of Goa,
Vidyut Bhawan, Panaji, Near Mandvi Hotel,
Goa-403001.
4. Electricity Department,
Government of Pondicherry,
Pondicherry-605001.
5. Eastern Power Distribution Company of Andhra Pradesh Limited,
APEPDCL, P&T Colony, Seethmmadhara, Vishakhapatnam,
Andhra Pradesh.
6. Southern Power Distribution Company of Andhra Pradesh Limited (APSPDCL),
Srinivasasa Kalyana Mandapam Backside,
Tiruchanoor Road, Kesavayana Gunta,
Tirupati, Chittoor District,
Andhra Pradesh-517501.
7. Southern Power Distribution Company of Telangana Limited,
6-1-50, Corporate Office, Mint Compound,
Hyderabad,
Telangana-500063.
8. Northern Power Distribution Company of Telangana Limited,
H. No 2-5-3 1/2, Vidyut Bhawan, Corporate Office,
Nakkal Gutta, Hanamkonda, Warangal,
Telangana-506001.
9. Bangalore Electricity Supply Company Limited
Corporate Office, K.R. Circle, Bangalore,
Karnataka-560001.
10. Gulbarga Electricity Supply Company Limited,
Station Main Road, Gulbarga,,
Karnataka.
11. Hubli Electricity Supply Company Limited (HESCOM),
Navanagar, PB Road, Hubli,
Karnataka.
12. Mangalore Electricity Supply Company Limited,
Corporate Office, Paradigm Plaza,



AB Shetty Circle, Mangalore,
Karnataka-575001.

13. Chamundeswari Electricity Supply Corporation Limited,
927, L J Avenue, Ground Floor, New Kantharaj Urs Road,
Saraswatipuram, Mysore,
Karnataka-570009.

... Respondent(s)

For Petitioner : Shri Mohd. Mohsin, PGCIL
Shri A. Naresh Kumar, PGCIL
Ms. Ashita Chauhan, PGCIL

For Respondents : Shri. S. Vallinayagam, Advocate, TANGEDCO

ORDER

The Petitioner, Power Grid Corporation of India Limited (PGCIL), has filed the instant Petition for 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 (hereinafter referred to as “the 2019 Tariff Regulations) for the determination of the transmission tariff from COD to 31.3.2024 in respect of the transmission asset, namely,

- (i) Installation of 12 Ω , 420 kV fault limiting bus series reactors at Thiruvalem Sub-station (“S/s”) between Bus Section-A and Bus Section-B & Bus Section-B and Bus section-C along with 4 Nos. 400 kV bays for 2 Nos. series bus reactors + 1 No. tie bay. According to the Petitioner, any sub-station element in regard to the ICTs, bus reactors, switchable line reactors, etc., require one main bay and a tie bay for their operation. In the case of each series reactor, 2 main breakers and 2 tie breakers are required for their reliable operation. Therefore, 4 bays have been



considered as main bays (2 main bays per bus series reactor) in the current scheme.

- (ii) Opening of one of the bus (other than on which fault limiting bus series reactors are being installed) between the above-mentioned bus sections through suitable arrangement.
- (iii) Bypass of Kolar-Thiruvalem and Thiruvalem-Sriperumbudur 400 kV Single Circuit (“S/C”) line to form Kolar-Sriperumbudur 400 kV S/C direct line under Transmission System for controlling high Short Circuit Current level at 400 kV Thiruvalem Sub-station in Southern Region (hereinafter referred to as ‘the transmission project’).

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 –8.5.*
- 3) Condone the time overrun in commissioning of Assets covered under instant petition.*
- 4) Allow the petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission as provided in Tariff Regulation 2019 as per para 8 above for respective block.*
- 5) Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on 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 petition.*
- 6) Allow the petitioner to bill and recover Licensee fee 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 bill and adjust impact on Interest on Loan due to change in Interest rate on account of floating rate of interest applicable during 2019-24 period, if any, from the beneficiaries.*
- 8) Allow the Petitioner to claim the overall security expenses and consequential IOWC on that security expenses separately.*
- 9) Allow the petitioner to claim the capital spares at the end of tariff block as per actual.*
- 10) Allow the Petitioner to bill and recover GST on Transmission Charges separately from the respondents, if GST on transmission is levied at any rate in future. Further, any taxes including GST and duties including cess etc. imposed by any statutory/Govt./municipal authorities shall be allowed to be recovered from the beneficiaries.*



11) Allow interim tariff in accordance with Regulation 10 (3) of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for purpose of inclusion in the PoC charges.

12) Allow Final tariff in accordance with Regulation 10 (5) of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for 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 Petitioner was entrusted with implementing the transmission project. The project's Investment Approval ("IA") was accorded by the petitioner's Competent Authority, vide the Memorandum Ref.: C/CP/ PA2021-03-0D-IA004 dated 12.6.2020, at an estimated cost of ₹8839 lakh, including Interest During Construction (IDC) of ₹402 lakh at the December 2019 price level.

b. The scheme was discussed and agreed upon in the 2nd meeting of the Southern Region Standing Committee on Transmission (SRST) held on 10.6.2019. The transmission scheme was also discussed in the 36th SRPC meeting held on 12.7.2019 and recommended vide letter dated 14.8.2019. Further, the 4th meeting of the National Committee on Transmission (NCT) held on 31.7.2019 recommended the implementation of the transmission scheme through the Regulated Tariff Mechanism (RTM) route. Further, the Ministry of Power (MoP), vide its Office Memorandum dated 15.1.2020, approved the implementation of the subject scheme of the Petitioner under the RTM route.

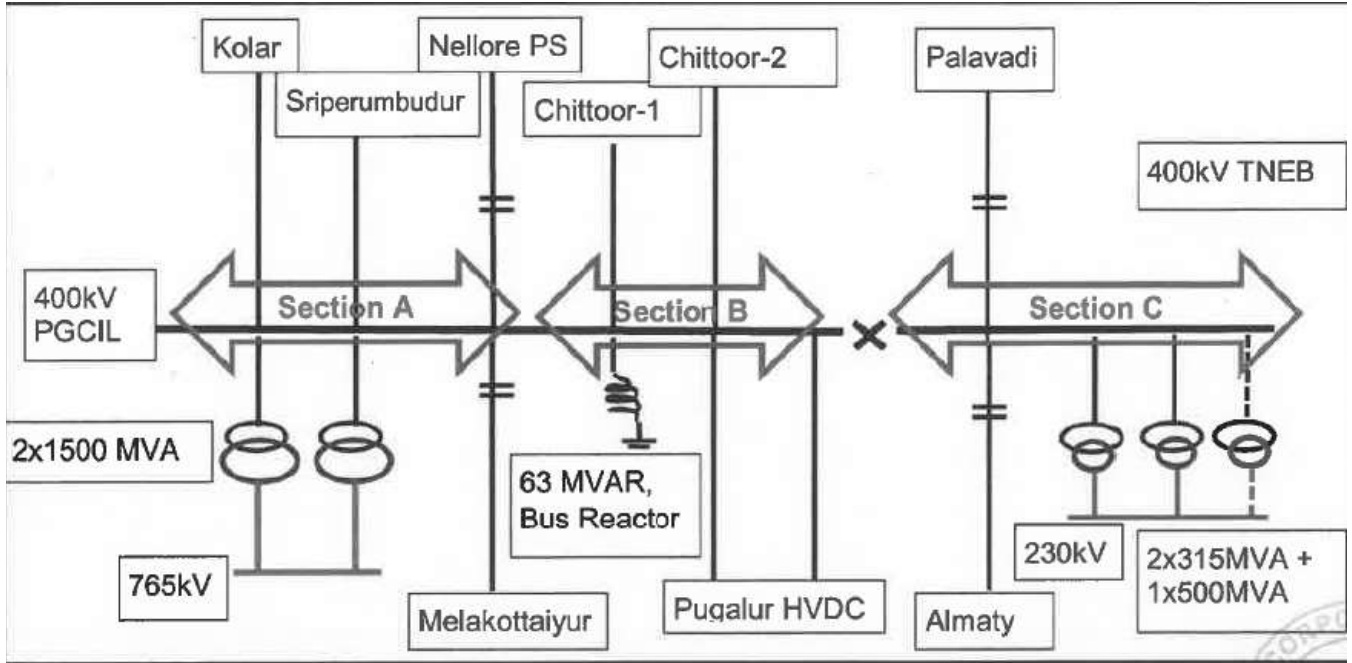
c. The scope of work covered under the transmission project is as follows:



Sub-station extension at Thiruvalem Sub-station:

- i) Installation of 12 Ω , 420 kV fault limiting bus series reactors at Thiruvalem S/s between:
- Bus section-A and Bus section-B
 - Bus section-B and Bus section-C
 - 4 Nos. 400 kV bays for 2 Nos. series bus reactors + 1 No. tie bay (Note: Any sub-station element viz. ICTs, bus reactors, switchable line reactors, etc. require one main bay and a tie bay for their operation. In the case of each series reactor, 2 main breakers and 2 tie breakers are required for their reliable operation. Therefore, 4 bays have been considered as main bays (2 main bays per bus series reactor) in the current scheme)
- ii) Opening of one of the bus (other than on which fault limiting bus series reactors are being installed) between the above-mentioned bus sections through suitable arrangement.
- iii) By-pass of Kolar-Thiruvalem and Thiruvalem-Sriperumbudur 400 kV S/C line to form Kolar–Sriperumbudur 400 kV S/C direct line.
- d. The entire scope of the project is completed and covered in the instant Petition.
- e. The Single Line Diagram (SLD) for the transmission asset is as follows:





f. As per IA, the transmission scheme was scheduled to be put under commercial operation within 14 months from the date of IA i.e. 12.6.2020. Hence, the scheduled date of commercial operation (SCOD) works out to be 12.8.2021.

g. The details of SCOD, COD/ and time over-run in the case of the transmission asset are as follows:

SCOD	COD	Delay
12.8.2021	13.4.2022	244 days

4. The instant Petition seeks approval of tariff, based on the actual expenditure incurred up to COD and Additional Capital Expenditure (ACE) projected to be incurred from COD to 31.3.2024 in respect of the transmission asset as per the following details:

Approved Cost (FR)	Expenditure up to COD	Additional Capital Expenditure (ACE)		Estimated completion Cost
		2022-23	2023-24	
8839.15	6643.43	635.44	346.28	7625.15

(₹ in lakh)



5. The Respondents are distribution licensees, transmission licensees, and power departments of the Southern Region, who are procuring transmission service from the Petitioner.

6. The Petitioner has served the Petition on the Respondents, and the notice regarding the filing of this Petition has been published in newspapers in accordance with Section 64 of the Electricity Act, 2003 (in short, 'the Act'). No comments or suggestions have been received from the general public in response to the aforesaid notice published in newspapers by the Petitioner. Further, during the course of the hearing, the Petition on 27.2.2024 it was submitted on behalf of Tamil Nadu Generation and Distribution Corporation Limited (TANGEDCO), which submitted that it has no submissions to make in the matter.

7. The final hearing in this matter was held on 27.2.2024, and the order was reserved.

8. This order is issued considering the submissions made by the Petitioner vide affidavit dated 25.11.2022 in the Petition accompanied by affidavit dated 25.11.2022 and subsequent affidavits dated 15.1.2024 and 14.3.2024.

9. Having heard the Petitioner's representative and after perusing the material on record, we proceed to dispose of the Petition.

Determination of Annual Fixed Charges for the 2019-24 Tariff Period

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

Particulars	(₹ in lakh)	
	2022-23 (pro-rata for 353 days)	2023-24
Depreciation	360.67	398.67
Interest on Loan	270.25	277.31
Return on Equity	379.32	419.89
Interest on Working Capital	18.48	19.93
O&M Expenses	137.95	147.64
Total AFC	1166.67	1263.44



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

Particulars	(₹ in lakh)	
	2022-23 (pro-rata for 353 days)	2023-24
O&M Expenses	11.89	12.30
Maintenance Spares	21.40	22.15
Receivables	148.73	155.34
Total Working Capital	182.02	189.79
Rate of Interest (in %)	10.50	10.50
Interest on Working Capital	19.11	19.93
Interest on Working Capital (pro-rata)	18.48	19.93

Date of Commercial Operation (COD)

12. The Petitioner has claimed the COD of the transmission asset as 13.4.2022. The Petitioner has submitted a copy of the CEA energization certificate dated 22.3.2022, WRLDC charging certificate dated 31.5.2022, certifying that the transmission asset has been successfully charged and put under commercial operation with effect from 00:00 hours on 13.4.2022, self-declaration COD letter dated 2.8.2022 and CMD's certificate in support of COD of the transmission asset.

13. Taking into consideration the CEA energization certificate, RLDC charging certificate and CMD certificate as required under the Grid Code, the COD of the transmission asset is approved as 13.4.2022.

Capital Cost

14. 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 ash disposal and utilization including handling and transportation facility;
- (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 decapitalised 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.”

15. The Petitioner has submitted the Auditor's certificate dated 8.11.2022 and has claimed the following capital cost incurred as on COD and projected ACE to be incurred in respect of the transmission asset:

Approved Cost (FR)	Expenditure Up to COD	Additional Capital Expenditure		Estimated completion Cost
		2022-23	2023-24	
8839.15	6643.43	635.44	346.28	7625.15

16. The Petitioner has submitted that there is a decrease of ₹1213.99 lakh in the estimated completion cost with respect to the apportioned FR cost, and there is no cost over-run. The Petitioner has further submitted item-wise cost variation between the approved cost and the estimated completion cost for the transmission line, which is as follows:



(₹ in lakh)				
S. No	Description	Cost as per FR	Estimated Capital Cost	Variation (-decrease, +increase)
		A	B	c = b – a
B	Sub-station & Communication Equipment			
1	Land, site preparation, design, and Engg. etc.	20.00	0.00	(-) 20.00
2	Civil Works etc.	22.53	28.18	5.65
3	Switchgear	2947.25	2853.30	(-) 93.95
4	Compensating Equipment (Reactor, SVCs, etc.)	1871.19	1978.56	107.37
5	Control & Relay Panel	208.01	200.56	(-) 7.45
6	Bus Bars/ Conductors / Insulators	330.67	157.93	(-) 172.74
7	Sub-station Auxiliaries & Grounding System	261.85	290.04	28.19
8	Structure for switchyard	71.08	92.42	21.34
9	Spares	508.61	266.24	(-) 242.37
10	Taxes & duties	1248.95	993.95	(-) 255.00
C	IEDC & contingency	947.00	733.47	(-) 213.53
D	Interest During Construction (IDC)	402.00	30.51	(-) 371.49
Grand Total		8839.15	7625.16	(-) 1213.99

Main Reasons for Cost Variation:

a) Variation in Equipment Cost:

The Petitioner has submitted that being a Government Enterprise, it has an obligation for the indigenous development of the manufacturer as well as to follow the prevalent guidelines of the Government of India. The Petitioner has been following a well laid down procurement policy which ensures both transparency and competitiveness in the bidding process. Through this process, the lowest possible market prices for required product/services/as per detailed designing is obtained and contracts are awarded on the basis of the lowest evaluated eligible bidder. The best competitive bid prices against tenders may happen to be lower or higher than the cost estimate, depending upon



prevailing market conditions, design, and site requirements. Further, regarding variation in equipment cost, the Petitioner submitted that the FR cost estimate is a broad indicative cost worked out generally on the basis of average unit rates of recently awarded contracts/general practice. The FR cost estimate of the project is on the basis of the December 2019 price level.

b) Variation in IDC Cost:

The Petitioner has submitted that the decrease in IDC is attributable to a decrease in estimated completion cost, variation in actual interest rates with respect to the interest rates considered in FR, and actual infusion of funds. The actual IDC accrued up to COD has been considered in the claimed tariff.

c) IEDC:

The Petitioner has submitted that IEDC, including contingencies for the transmission asset in approved FR, was estimated at ₹947 lakh, whereas, based on the actual expenditure incurred, the IEDC works out to ₹733 lakh. Thus, IEDC under the project has decreased by ₹214 lakh. The Petitioner has submitted that during the estimation of FR, 3% and 10.75% of the equipment cost and civil works have been considered for contingency and IEDC, respectively. The actual amount of IEDC has been considered in the claimed tariff.

17. We have considered the Petitioner's submissions. The estimated completion cost as on 31.3.2024 is ₹7625.15 lakh, which is within the FR apportioned approved capital cost of ₹8839.15 lakh. Thus, there is no cost overrun with regard to the transmission asset.



Time Over-run

18. The Petitioner has submitted that, as per the IA, the transmission scheme was scheduled to be put under commercial operation within 14 months from the date of its approval by the Board of Directors, i.e., 12.6.2020. Hence, the SCOD of the transmission asset is on 12.8.2021, against which it was declared under commercial operation on 13.4.2022 with a delay of 244 days.

19. With regard to the delay in COD of the transmission asset, the Petitioner has submitted that though IA was approved during Covid-19, the completion schedule was considered as 14 months in view of the requirement of subject fault-limiting bus series reactors to mitigate the operational constraints.

20. The Petitioner has submitted that the transmission project was immediately awarded on 30.6.2020. However, due to the Covid-19 pandemic (including the second wave), which completely disrupted the supply chain the progress of work was severely impacted or stalled. Due to the Covid-19 pandemic, there was a nationwide lockdown from 25.3.2020 to 14.4.2020 (21 days), from 15.4.2020 to 3.5.2020 (19 days); from 4.5.2020 to 17.5.2020 (14 days), and from 18.5.2020 to 31.5.2020 (14 days). During the unlock period following the first Covid-19 wave, i.e., from 12.6.2020 to 30.9.2020 (110 days), the project works were severely affected due to restrictions on movements, limited transportation logistics, and a shortage of labour and resources at the site. The Petitioner has prayed the aforesaid delay, which led to disruption in the global supply chain and project execution due to the outbreak of Covid-19 and imposition of consequential lock-down in India, may be treated as *force majeure*.

21. Further, in the middle of March 2021, /Second wave of the Covid-19 pandemic impacted the works severely till the end of July 2021. Due to the widespread magnitude of the pandemic,



severe restrictions were imposed on the movement of manpower and resources at the project site, which witnessed an actual shortage of labour and other resources. Thus, in the period from 15.3.2021 to 31.7.2021 (138 days), the works remained severely affected due to the pandemic. The Ministry of Power (MoP), vide its letter dated 12.6.2021, stated that all inter-State projects, that are under construction with SCOD coming after 1.4.2021 shall get an extension of 3 months in respect of the SCOD due to various measures taken by the State/UT Governments to contain the pandemic. The Petitioner has submitted that the delay occurred owing to Covid-19 restrictions, and as per the MoP letter dated 12.6.2021, it is liable to be condoned under Regulation 22(2) of the 2019 Tariff Regulations as the same are uncontrollable factors.

22. In addition to Covid-19, the Petitioner has further submitted that there was a delay on account of hindrances due to the Nivar cyclone and the Burevi cyclone, followed by heavy rainfall, which impacted the progress at the site. The Petitioner has submitted that the said force majeure conditions had derailed the progress of the project activities from 25.11.2020 to 6.12.2020 (11 days), and the same was beyond the control of the Petitioner. The Petitioner has submitted that a large container vessel ran aground accidentally in the Suez Canal, which blocked one of the world's busiest maritime trade routes. The ship Ever Green got stuck across the canal after deviating from its course on 23.3.2021, which gridlocked 150 other ships in the area. The Suez Canal Authority temporarily suspended navigation through the Suez Canal. The Petitioner has submitted that the Bus series reactors were designed and supplied from Austria, and their supplies were affected for 24 days on account of the blockage of the Suez Canal from 23.3.2021 to 16.4.2021.



23. The Petitioner has also attributed the delay to persistent rainfall from the month of July 2021 to November 2021, which had badly affected the civil works due to water logging in excavated foundations, road, and culvert casting. The Petitioner has submitted that the civil works were planned to be carried out before the monsoon period. However, due to several factors as mentioned in the Petition, the execution got extended, and the civil works had to be carried out in the monsoon period. The Petitioner has submitted that persistent rainfall caused a delay of 152 days.

24. The Petitioner has submitted the details of overlapping and non-overlapping delays suffered by the transmission project as under:

Delay encountered during execution of the transmission asset

Sl. No.	Description	Force Majeure Start date	Force Majeure end date	No. of days	Remarks
1	Covid-19 Pandemic	12.6.2020	30.9.2020	110 days	
2	Hindrances due to the Nivar cyclone & the Burevi cyclone	25.11.2020	6.12.2020	11 days	
3	Delay in shipment of Series Reactor consignment due to blockage of Suez Canal	23.3.2021	16.4.2021	24 days	
4	Impact due to Covid-19 2 nd wave *	15.3.2021	31.7.2021	138 days	Overlapping delay of 24 days mentioned at Sl. No.3
5	Persistent rainfall, which impacted the civil work execution as per the above table	1.7.2021	30.11.2021	152 days	Overlapping delay of 31 days in July 2021
Total				435 days	Overlapping delays - 55 days
Net delays due to uncontrollable factors after excluding overlapping delays					380 days

*The Ministry of Power, Govt. of India vide Circular No. 3/1/2020-Trans dated 12th June, 2021 stated that all inter-State projects which are under construction with SCOD coming after 1st April, 2021, shall get an extension of 3 months in respect of the SCOD.



25. The Petitioner has submitted that against the total delay of 380 days witnessed during the construction of the transmission asset, the Petitioner put its best efforts into executing the transmission asset with a delay of 244 days.

26. We have considered the submissions of the Petitioner and have also gone through the documents on record. As per the IA dated 12.6.2020, the SCOD of the transmission asset was 12.8.2021, against which the transmission asset was put into commercial operation on 13.4.2022 with a delay of 244 days. The Petitioner has submitted that time over-run in the case of the transmission asset is beyond its control and is attributable to the Covid-19 pandemic, delay due to the blockage of the Suez Canal by a huge containership, hindrances due to the Nivar and the Burevi cyclones and persistent rainfall during the period from July 2021 to November 2021. The detailed analysis of the time over-run on different heads is as follows:

(a) Covid-19 Pandemic:

27. The Petitioner has submitted that the time period from 12.6.2020 to 30.9.2020 (110 days), was impacted on account of the Covid-19 pandemic. Further, the duration of time from 15.3.2021 to 31.7.2021 (138 days) was impacted due to the second wave of Covid-19. The Petitioner has submitted that MoP vide letters dated 27.7.2020 and 12.6.2021 has extended the SCOD by 5 months and 3 months, respectively, for the inter-State transmission project owing to the Covid-19 pandemic. The relevant extracts of the letter dated 27.7.2020 are as follows:

“Sub: Extension to TSP/Transmission Licensees for completion of under construction inter-State transmission projects

Sir,

I am directed to state that transmission utilities have pointed out that construction activities at various transmission project sites have been severely affected by the nationwide lockdown measures announced since 25th March,2020 to contain outbreak of COVID-19 and have requested for extension of Scheduled Commercial Operation (SCOD) to mitigate the issues of disruption in supply chains and manpower, caused due to outbreak of COVID-19 pandemic.

2. It has been, therefore, decided that;

i. All inter-state transmission projects, which were under construction as on date of lock-down i.e. 25th March 2020, shall get an extension of five months in respect of SCOD



- ii. This order shall not apply to those projects, whose SCOD date was prior to 25th March 2020*
iii. Start date of Long Term Access granted to a generator by CTU based on completion of a transmission line, whose SCOD is extended by 5 months due to COVID-19 as mentioned above at point(i), shall also be extended by 5 months.”
3. This issue with the approval of Competent Authority.”

28. The relevant extracts of the letter dated 12.6.2021 of MoP, which provided an extension of 3 months in respect of the SCOD for inter-State transmission projects, are as follows:

“Sub: Extension to TSP/Transmission Licensees for completion of under construction inter-State transmission projects – reg.

Sir,

I am directed to state that transmission utilities have approached this Ministry stating that construction activity at various transmission projects sites have been severely affected by the current second wave of COVID-19 pandemic and various measures taken by State/UT Governments to contain the pandemic; such as night curfew, imposition of section 144, weekend lockdown and complete lockdown. In this regard they have requested for extension of Scheduled Commercial Operation Date (SCOD) for the undergoing Transmission projects to mitigate the issues of disruption in supply chains and manpower, caused due to COVID-19 pandemic.

2. The matter has been examined in the Ministry and it has been noted that unlike last year complete lock-down in the entire country, this time different States/UTs have ordered lock-down in their State/UTs as per their own assessments. Therefore, after due consideration, it has been decided that;

i. All inter-state transmission projects, which are under construction with SCOD coming after 01 April 2021 shall get an extension of three (3) months in respect of their SCOD;

ii. The commencement date of Long Term Access (LTA) to a generator by CTU based on completion of a transmission line, whose SCOD is extended by three (3) months due to COVID-19 as mentioned above at point(i), shall also be extended by three (3) months.

3. This issue with the approval of Competent Authority.”

29. In terms of the above letters dated 27.7.2020 and 12.6.2021, the COD of the transmission assets was to be extended by 5 months for the transmission projects that were under construction on 25.3.2020 and by 3 months in the case of the transmission projects that were under construction with SCOD after 1.4.2021, respectively.

30. As per the IA, the SCOD of the transmission project is 12.8.2021. Since the transmission project was not under construction on 25.3.2020, the relief granted as per the MoP letter dated 27.7.2020 is not applicable to the present case, and the delay of 110 days on account of Covid-19 (1st wave) is not condoned. However, the relief granted under the MoP letter dated 12.6.2021



is applicable to the present case, and the 3-month delay (92 days) on account of the Covid-19 pandemic is condoned.

(b) Hindrances due to Nivar and Burveri cyclones and rainfall

31. The Petitioner has submitted that the time period from 25.11.2020 to 6.12.2020 (11 days) was impacted on account of the Nivar and Burevi cyclones. The Petitioner has further submitted that due to persistent rainfall, the pile foundation work from 1.7.2021 to 30.11.2021 (152 days) was affected.

32. We have considered the Petitioner's submissions. The Petitioner has placed on record paper clippings in support of its submissions that there were hindrances due to the Nivar and Burveri cyclones as well as heavy rainfall during the relevant period, which led to the time over-run in the case of the transmission asset. Regulation 3(25) of the 2019 Tariff Regulations defines the "force majeure" as follows:

"(25) 'Force Majeure' for the purpose of these regulations means the events or circumstances or combination of events or circumstances including those stated below which partly or fully prevents the generating company or transmission licensee to complete the project within the time specified in the Investment Approval, and only if such events or circumstances are not within the control of the generating company or transmission licensee and could not have been avoided, had the generating company or transmission licensee taken reasonable care or complied with prudent utility practices:

(a) Act of God including lightning, drought, fire and explosion, earthquake, volcanic eruption, landslide, flood, cyclone, typhoon, tornado, geological surprises, or exceptionally adverse weather conditions which are in excess of the statistical measures for the last hundred years".

33. As per Regulation 3(25) of the 2019 Tariff Regulations, the Petitioner is required to submit data for the last hundred years to show that the rain during the above-mentioned period was abnormal. As the Petitioner has not furnished any such information to show that the rain and cyclones during the said period were abnormal, we are not inclined to accept the Petitioner's



claim that it affected the execution of the transmission asset. Accordingly, the delay of 11 days and 152 days as attributable to cyclones and excess rainfall, respectively, are not condoned.

(c) Delay in shipment of Series Reactor consignment due to blockage of Suez Canal:

34. The Petitioner has submitted that the time period from 23.3.2021 to 16.4.2021 is impacted on account of the shipment of a series reactor consignment due to blockage of the Suez Canal. We have gone through the submissions of the Petitioner. It is observed that the delay in this regard, is overlapping with the delay on account of 2nd wave of Covid-19. Since we have already condoned the time over-run on account of the 2nd wave of Covid-19, the time over-run on account of the blockage of the Suez Canal is not condoned. Accordingly, out of the total time over-run of 244 days, a time over-run of 3 months (92 days) is condoned on account of the Covid-19 (2nd wave) as the same was beyond the control of the Petitioner and delay of 152 days is not condoned as stated above.

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

35. The Petitioner has submitted that out of a total IDC of ₹30.51 lakh, IDC discharged up to COD is ₹29.72 lakh, and the balance IDC of ₹0.79 lakh had been discharged in the financial year 2022-23. It has been further submitted that a total IEDC of ₹733.47 lakh had been discharged up to COD.

36. We have considered the allowable IDC based on the information submitted by the Petitioner. The IDC amount of ₹29.72 lakh claimed and discharged up to modified CoD on HDFC bank borrowings has been allowed and the amount of IDC of ₹0.79 lakh claimed on bond LXIX which was drawn after Modified CoD has been disallowed due to partial condition of delay.



37. The Petitioner has claimed IEDC of ₹733.47 lakh for the transmission asset as per the Auditor's certificate dated 8.11.2022. The Petitioner has submitted that the entire amount of IEDC for the transmission asset has been discharged up to COD. As the partial time over-run in the case of the transmission asset has been disallowed, IEDC for the transmission asset has been allowed in proportion as per the IA up to SCOD. Accordingly, the IDC and IEDC claimed as per the Auditor's certificate, IDC and IEDC considered, and discharged up to the COD are as follows:

(₹ in lakh)

IDC claimed	IDC disallowed due to time over-run not condoned	IDC allowed	IEDC claimed	IEDC disallowed due to time over-run not condoned	IEDC allowed
30.51	0.79	29.72	733.47	166.40	567.07

Initial Spares

38. Regulation 23(d) of the 2019 Tariff Regulations provides that Initial Spares shall be capitalized 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) GIS Insulated Sub-station
- (Green Field): 5.00%
- (Brown Field): 7.00%
(v) Communication System: 3.50%
(vi) Static Synchronous Compensator: 6.00%”



39. The Petitioner has calculated allowable Initial Spares considering the transmission asset under the brownfield category and has claimed Initial Spares as per the cost certified in Auditor's certificate.

40. The following Initial Spares have been claimed by the Petitioner:

(₹ in lakh)

Head	Plant and Machinery cost for calculation of Initial Spares	Ceiling limit as per Regulations (in %)	Allowable Initial Spares	Initial Spares claimed	Excess Initial Spares
Sub-Station	6833.00	6	419.15	266.24	Nil

41. We have considered the submissions of the Petitioner. The Initial Spares claimed by the Petitioner are within the ceiling of 6%. The Initial Spares allowed are as follows:

(₹ in lakh)

Head	Plant and Machinery cost for calculation of Initial Spares (A)	Ceiling as per Regulations (in %) (X)	Allowable Initial Spares $C = (A - B) * X / (100 - X)$	Initial Spares allowed (B)
Sub-station	6833.00	6	419.15	266.24

Capital Cost Allowed as on COD

42. The capital cost allowed in respect of the transmission asset as on COD is as follows:

(₹ in lakh)

Capital Cost claimed till COD	Less: IDC Disallowed	Less: IEDC Disallowed	Capital Cost approved as on COD
6643.43	0.79	166.40	6476.24

Additional Capitalization

43. The Petitioner has submitted that the admissibility of ACE incurred after COD is to be dealt in accordance with the provisions of Regulation 24 of CERC Regulations 2019. Regulation 24 of the 2019 Tariff Regulations provides as follows:



“24. Additional Capitalization 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. Un discharged 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; and
- 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.

44. The Petitioner has further submitted that the ACE claimed is mainly on account of the balance/retention payments as per Regulation 24(1)(a) of the 2019 Tariff Regulations and works deferred for execution as per Regulation 24(1)(b) of the 2019 Tariff Regulations. The Petitioner has claimed the following ACE as per the Auditor’s certificate:

(₹ in lakh)

Approved Cost (FR)	ACE (2019-24)		Total Projected ACE
	2022-23	2023-24	
8839.15	635.44	346.28	981.72

45. The details of ACE claimed by the Petitioner for the transmission asset are as follows:

(₹ in lakh)

Party	Particulars	Discharge		Additional Liability recognized		Total 2022-23	Total 2023-24
		2022-23	2023-24	2022-23	2023-24		
M/s GE T&D India Limited	SS	316.57	266.28	290.63	0.00	607.20	266.28
M/s GE T&D India Limited	IT equipment	0.00	0.00	0.23	0.00	0.23	0.00



	including SW						
M/s EHA Infra	Building & Civil	0.36	0.00	0.00	0.00	0.36	0.00
M/s SS Power Works	SS	0.50	0.00	0.24	0.00	0.74	0.00
Construction of storage platform	Building & Civil	0.00	0.00	0.00	20.00	0.00	20.00
SCADA Software upgradation	SS	0.00	0.00	0.00	60.00	0.00	60.00
M/s G.R. Power Switchgear Limited	SS	0.00	0.00	26.92	0.00	26.92	0.00
Total		317.43	266.28	318.01	80.00	635.45	346.28

46. We have gone through the submissions of the Petitioner. The COD of the transmission asset is 13.4.2022. Accordingly, the cut-off date of the transmission asset will be as 31.3.2025. The ACE claimed by the Petitioner for the transmission asset is allowed under Regulations 24(1)(a) and 24(1)(b) of the 2019 Tariff Regulations. The ACE allowed in respect of the transmission asset is as follows:

(₹ in lakh)

Particulars	Regulations	ACE allowed	
		2022-23	2023-24
Balance and retention payments for liabilities other than IDC	Regulation 24(1)(a) and Regulation 24(1)(b) of the 2019 Tariff Regulations	635.44	346.28
IDC Discharged after COD		0.00	0.00
Total ACE		635.44	346.28

47. Accordingly, the capital cost considered for the transmission asset for the 2019-24 tariff period is as follows:

(₹ in lakh)

Capital cost as on COD	Projected ACE		Capital cost as on 31.3.2024
	2022-23	2023-24	
6476.24	635.44	346.28	7457.96



Debt-Equity Ratio

48. Regulations 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:

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

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

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

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

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

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

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

(5) Any expenditure incurred or projected to be incurred on or after 1.4.2019 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation



and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this Regulation.

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

49. The debt: equity considered for the purpose of computation of tariff for the 2019-24 period of the transmission asset is as follows:

Particulars	(in %)	As on COD (₹ in lakh)	(in %)	As on 31.3.2024 (₹ in lakh)
Debt	70.00	4533.37	70.00	5220.57
Equity	30.00	1942.87	30.00	2237.39
Total	100.00	6476.24	100.00	7457.96

Depreciation

50. 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.

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

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

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



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

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

Provided also that any depreciation 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.”

51. The depreciation is worked out considering the admitted capital expenditure as on COD. The Weighted Average Rate of Depreciation (WAROD) has been worked out and placed in Annexure-I as per the rates of depreciation specified in the 2019 Tariff Regulations. Depreciation allowed in respect of the transmission asset for the 2019-24 tariff period is as follows:

(₹ in lakh)			
	Particulars	2022-23 (Pro-rata 353 days)	2023-24
A	Opening Gross Block	6476.24	7111.68
B	Addition during the year 2019-24 due to projected ACE	635.44	346.28
C	Closing Gross Block (A+B)	7111.68	7457.96
D	Average Gross Block (A+C)/2	6793.96	7284.82
E	Average Gross Block (90% depreciable assets)	6738.09	7228.84
F	Average Gross Block (100% depreciable assets)	55.87	55.98
G	Depreciable value (excluding IT equipment and software) (E*90%)	6064.29	6505.96
H	Depreciable value of IT equipment and software (F*100%)	55.87	55.98
I	Total Depreciable Value (G+H)	6120.15	6561.94
J	Weighted average rate of Depreciation (WAROD) (in %)	5.36	5.35
K	Lapsed useful life at the beginning of the year (Year)	0	0
L	Balance useful life at the beginning of the year (Year)	25	25
M	Depreciation during the year (D*J)	352.01	389.71
N	Cumulative Depreciation at the end of the year	352.01	741.73
O	Remaining Aggregate Depreciable Value at the end of the year	5768.14	5820.22

Interest on Loan (IoL)

52. 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 asset, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered up to the date of de-capitalisation of such asset.*

(4) *Notwithstanding any moratorium period availed 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”*

53. The Weighted Average Rate of IoL (WAROI) has been considered on the basis of the rates prevailing as on COD for the respective loans. 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 will be adjusted. Accordingly, the floating rate of interest, if any, shall be considered at



the time of truing-up. IoL has been worked out in respect of the transmission asset in accordance with Regulation 32 of the 2019 Tariff Regulations, and the same is as follows:

(₹ in lakh)

	Particulars	2022-23 (Pro-rata 353 days)	2023-24
A	Gross Normative Loan	4533.37	4978.18
B	Cumulative Repayments up to Previous Year	0.00	352.01
C	Net Loan-Opening (A-B)	4533.37	4626.16
D	Addition due to ACE	444.81	242.40
E	Repayment during the year	352.01	389.71
F	Net Loan-Closing (C+D-E)	4626.16	4478.85
G	Average Loan (C+F)/2	4579.77	4552.50
H	Weighted Average Rate of Interest on Loan (in %)	5.96	5.96
I	Interest on Loan (G*H)	263.78	271.12

Return on Equity (RoE)

54. 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 cutoff date beyond the original scope excluding Additional Capitalization due to Change in Law, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system or in the absence of actual loan portfolio of the generating station or the transmission system, the weighted average rate of interest of the generating company or the transmission licensee, as the case may be, as a whole shall be considered, subject to ceiling of 14%.

Provided further that:

- i. In case of a new project, the rate of return on equity shall be reduced by 1.00% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO) or Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system based on the report submitted by the respective RLDC;
- ii. in case of existing generating station, as and when any of the requirements under (i) above of this Regulation are found lacking based on the report submitted by the concerned RLDC, rate of return on equity shall be reduced by 1.00% for the period for which the deficiency continues;



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

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

(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.”

55. The Petitioner has submitted that the MAT rate is applicable to it. Accordingly, the MAT rate applicable has been considered for the purpose of RoE which shall be trued up in accordance with Regulation 31(3) of the 2019 Tariff Regulations. RoE allowed in respect of the transmission asset is as follows:

		(₹ in lakh)	
	Particulars	2022-23 (Pro-rata 353 days)	2023-24
A	Opening Equity	1942.87	2133.50
B	Addition due to ACE	190.63	103.88
C	Closing Equity (A+B)	2133.50	2237.39
D	Average Equity (A+C)/2	2038.19	2185.45
E	Return on Equity (Base Rate) (in %)	15.50	15.50
F	Tax Rate applicable (in %)	17.472	17.472
G	Rate of Return on Equity (Pre-tax) (in %)	18.782	18.782
H	Return on Equity (Pre-tax) (D*G)	370.22	410.46

Operation & Maintenance Expenses (O&M Expenses)

56. Regulations 35(3)(a) and 35(4) 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)					



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
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	0.26	0.27	0.279	0.289
Double Circuit (Bundled conductor with four or more sub-conductors)	1.322	1.368	1.416	1.466	1.517
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.

(4) **Communication system:** The operation and maintenance expenses for the communication system shall be worked out at 2.0% of the original project cost related to such communication system. The transmission licensee shall submit the actual operation and maintenance expenses for truing up.”

57. O&M Expenses claimed by the Petitioner for the transmission asset are as follows:

Particulars	(₹ in lakh)	
	2022-23 (Pro-rata 353 days)	2023-24
4 Nos. 400 kV Bus Reactor Bays at Thiruvallam Sub-station	137.95	147.64

58. We have considered the submissions of the Petitioner. The O&M Expenses allowed as per the norms specified in the 2019 Tariff Regulations in respect of the transmission asset are as follows:

Particulars	(₹ in lakh)	
	2022-23 (Pro-rata 353 days)	2023-24
4 Nos. of 400 kV Bus Reactor Bays at Thiruvallam Sub-station	137.95	147.64



Interest on Working Capital (IWC)

59. Regulations 34(1)(c), 34(3), 34(4), and 3(7) of the 2019 Tariff Regulations provides as under:

“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.*

(2)

(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;”*

60. The Petitioner has submitted that it has computed IWC for the 2019-24 period considering the SBI Base Rate plus 350 basis points as on the Project’s COD. The Petitioner has considered the rate of IWC as 10.50%.

61. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The Rate of Interest (RoI) considered is 10.50% (SBI 1-year MCLR applicable as on COD of 7.00% plus 350 basis points) for the financial years 2022-23, and for 2023-24, 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). The components of the working capital and interest allowed thereon with respect to the transmission asset are as follows:

Particulars	(₹ in lakh)	
	2022-23 (Pro-rata 353 days)	2023-24
Working Capital for O&M Expenses (O&M expenses for one month)	11.89	12.30
Working Capital for Maintenance Spares (15% of O&M expenses)	21.40	22.15
Working Capital for Receivables (Equivalent to 45 days of Annual Fixed Cost /Annual Transmission Charges)	145.60	152.63
Total Working Capital	178.88	187.08
Rate of Interest for Working Capital (in %)	10.50	12.00
Interest on Working Capital	18.16	22.45

Annual Fixed Charges for the 2019-24 Tariff Period

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

Particulars	(₹ in lakh)	
	2022-23 (Pro-rata 353 days)	2023-24
Depreciation	352.01	389.71
Interest on Loan	263.78	271.12
Return on Equity	370.22	410.46
O&M Expenses	137.95	147.64
Interest on Working Capital	18.16	22.45
Total	1142.12	1241.38

Filing Fee and Publication Expenses

63. 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

64. The Petitioner shall be entitled to reimbursement of 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 recovery of RLDC fees and charges in accordance with Regulations 70(3) of the 2019 Tariff Regulations for the 2019-24 tariff period.

Goods and Services Tax

65. The Petitioner has submitted that if GST is levied at any rate and at any point of time in the 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 the Government/Statutory Authorities; the same may be allowed to be recovered from the beneficiaries.

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

Security Expenses

67. 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 consequential IWC.

68. We have considered the 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 on the basis of actual security expenses incurred in 2018-19 in



Petition No. 260/MP/2020. The Commission vide order dated 3.8.2021 in Petition No. 260/MP/2020 approved the security expenses for the period from 1.4.2019 to 31.3.2024. Accordingly, the Petitioner's prayer in the instant petition for allowing it to file a separate petition for claiming the overall security expenses and consequential IWC has become infructuous.

69. 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

70. With effect from 1.11.2020, the sharing of transmission charges is governed by the provisions of the 2020 Sharing Regulations. Accordingly, the billing, collection, and disbursement of the 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.

71. To summarize, Annual Fixed Charges (AFC) allowed in respect of the transmission asset for the 2019-24 tariff period in this order are as follows:

(₹ in lakh)		
Particulars	2022-23	2023-24
AFC claimed	1166.67	1263.44
AFC allowed	1142.12	1241.38

72. The Annexure-I to this order forms part of the order.

73. This order disposes of Petition No. 34/TT/2023 in terms of the above findings and discussions.

sd/-
(Arun Goyal)
Member

sd/-
(Jishnu Barua)
Chairperson



Annexure I

(₹ in lakh)

Capital Expenditure	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
Building	8.62	0.36	20.00	28.98	3.34	0.29	0.63
Transmission Line	0.00	0.00	0.00	0.00	5.28	0.00	0.00
Substation	6411.87	634.85	326.28	7373.00	5.28	355.31	380.68
PLCC	0.00	0.00	0.00	0.00	6.33	0.00	0.00
IT Equipment	55.75	0.23	0.00	55.98	15.00	8.38	8.40
Total	6476.24	635.44	346.28	7457.96		363.98	389.71
					Average Gross Block	6793.96	7284.82
					WAROD (in %)	5.36	5.35

