

CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No. 194/TT/2023

Coram:

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

Date of Order: 30.05.2024

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 in respect of Asset-I: Yelahanka-Tumkur (73.412 km) OPGW communication link along with associated Communication Equipment's and Asset-II: NCTPS (TNEB)-Tondiarpet (TNEB) (17.893 km) OPGW communication link along with associated Communication Equipment's under "Fiber Optic Communication system for central sector Sub-stations & Generating Stations" in the Southern Region.

And in the matter of:

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

.....Petitioner

Versus

1. Tamil Nadu Generation and Distribution Corporation Limited (TAGEDCO),
NPKRR Maligai, 800, Anna Salai,
Chennai-600002.
2. Kerala State Electricity Board Limited (KSEBL),
Vaidyuthi Bhavanam, Pattom,
Thiruvananthapuram-695004.
3. Electricity Department,
Government of Goa,
Vidyuti Bhawan, Panaji,
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-517501.
7. Southern Power Distribution Company of Telangana Limited (TSSPDCL),
6-1-50, Corporate Office, Mint Compound,
Hyderabad, Telangana-500063.
8. Northern Power Distribution Company of Telangana Limited (TSNPDCL),
H.No 2-5-3 1/2, Vidyut Bhawan,
Corporate Office, Nakkal Gutta, Hanamkonda,
Warangal, Telangana-506001.
9. Bangalore Electricity Supply Company Limited (BESCOM),
Corporate Office, K.R. Circle,
Bangalore-560001.
10. Gulbarga Electricity Supply Company Limited (GESCOM),
Station Main Road,
Gulbarga, Karnataka.
11. Hubli Electricity Supply Company Limited (HESCOM),
Navanagar, PB Road,
Hubli, Karnataka.
12. Mangalore Electricity Supply Company Limited (MESCOM),
Corporate Office,
Paradigm Plaza, AB Shetty Circle,
Mangalore, Karnataka-575001.
13. Chamundeswari Electricity Supply Corporation Limited (CESC),
927, LJ Avenue, Ground Floor, New Kantharaj URS Road,
Saraswatipuram, Mysore, Karnataka-570009.
14. Tamil Nadu Transmission Corporation Limited (TANTRANSCO),
NPKRR Maaligai, 800,
Anna Salai, Chennai-600002.

...Respondent(s)



For Petitioner: Shri Zafrul Hassan, PGCIL
Shri Mohd. Mohsin, PGCIL
Shri Angaru Naresh Kumar, PGCIL

For Respondent: None

ORDER

The instant petition has been filed by Power Grid Corporation of India Limited for the determination of tariff under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) for the period from COD to 31.3.2024 in respect of Asset-I: Yelahanka-Tumkur (73.412 km) OPGW communication link along with associated Communication Equipment’s; and Asset-II: NCTPS (TNEB)-Tondiarpet (TNEB) (17.893 km) OPGW communication link along with associated Communication Equipment’s (hereinafter referred to as the “transmission assets”) under “Fiber Optic Communication system for Central Sector Sub-stations and Generating Stations” in the 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 above.*
- 3) 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.*
- 4) 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.*



- 5) *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.*
- 6) *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.*
- 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 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 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) of the transmission project was accorded by the Board of Directors of the Petitioner's Company in its 272nd meeting held on 29.5.2012 and communicated vide Memorandum No. C/CP/FO-SR dated 6.6.2012 at an estimated cost of ₹17416 lakh, including IDC of ₹974 lakh at the February 2012 price level. The transmission project was scheduled to be put into commercial operation within 30 months progressively from the date of IA.

b. The scope of work covered under the transmission project broadly includes:

- Installation of:
 - i. 5207 km of OPGW fiber optic cable on existing/new EHV transmission lines of POWERGRID/ SEBs
 - ii. 118 Numbers of Terminal equipment for communication based on Synchronous Digital Hierarchy (SDH) technology



- iii. 90 Numbers of multiplexers
- iv. 45 Numbers DC Power Supply and
- v. 1 Number Network Management System (NMS)

- Sharing of 499 km of OPGW Fiber under POWERGRID Telecom Network

c. The scope of the transmission project was discussed and agreed in the 17th SRPC meeting held on 12.8.2011. Further, the said transmission project was discussed and agreed upon in the 24th and 25th SRPC meetings held on 15.3.2014 and 26.7.2014, respectively.

d. Further, POSOCO vide letters dated 4.5.2012 and 16.8.2012, requested for installation of reliable voice communication facilities (Hot Line Speech Communication System for Grid Operation) due to the problem faced in view of the expansion of power systems in terms of an increase in the number of power plants, Sub-station, etc. that are reporting to RLDCs and SLDCs. Due to limited capacity and functionality, it has not been possible to accommodate the speech requirement of all power plants in the existing telephone exchanges. During the grid disturbance on 30.7.2012 and 31.7.2012, the operators at the control centres faced many problems in connecting the speech to other control centres and important stations due to the non-availability of fast dialing, easy directory sorting and inter-regional voice connectivity, etc., which consequently affected the grid restoration process.

e. Accordingly, the competent authority accorded its approval on 31.8.2012 for the establishment of a “Hot Line Speech Communication system for Grid Operation” as part of ULDC projects.

f. The approval for the Revised Cost Estimate (RCE) of the transmission project was accorded by the Board of Directors of the Petitioner’s Company in its 347th meeting held on dated 8.12.2017 and circulated vide Memorandum No. C/CP/PA1718-12-0E-RCE005 dated 28.12.2017 at an estimated cost of ₹19474 lakh, including IDC of ₹1233 lakh based on the June 2017 price level.



g. The revised scope of work covered under the transmission project broadly includes:

- Installation of:
 - vi. 5256 km of OPGW fiber optic cable on existing/new EHV transmission lines of POWERGRID/ SEBs
 - vii. 140 Numbers of Terminal equipment for communication based on Synchronous Digital Hierarchy (SDH) technology
 - viii. 143 Numbers of multiplexers
 - ix. 22 Numbers DC Power Supply and
 - x. 3 Numbers Network Management System (NMS)
- Sharing of 2288 km of OPGW Fiber under POWERGRID Telecom Network
- Hot Line Speech Communication (Computer Dialling) System for Grid Operation under the Southern Region.

h. The details of the transmission assets, including scheduled commercial operation date (SCOD), date of commercial operation (COD), and time over-run are as follows:

Assets	IA Date	SCOD	COD	Time over-run
Asset-I	29.5.2012	29.11.2014	22.4.2020	1971 days
Asset-II			30.6.2023 (Anticipated)	3135 days

i. In response to the Commission’s query regarding the status of Asset-II, the Petitioner vide affidavit dated 26.9.2023 submitted that Asset-II “NCTPS (TNEB)-Tondiarpet (TNEB) (17.893 km) OPGW communication link” was held up due to the delay in arranging necessary clearances for stringing and railway crossing by TANTRANSCO, and it is expected to be put into commercial operation by December 2023.

j. Further, in response to the Commission’s direction, the Petitioner vide affidavit dated 16.11.2023 has submitted the details of the petitions, including true-up petitions for the various assets covered under the scope of the instant transmission project. The details of the assets and their respective petitions are as follows:



Sl. No.	Name of the Communication System	COD	Petition No.	True-up Petition No.
1	Asset A1- 275.93 km OPGW fiber optic cable along with associated equipment	1.4.2014	Tariff for 2014-19 period was granted vide order dated 29.7.2016 in Petition No. 275/TT/2015	Truing up of 2014-19 tariff period and determination of tariff for 2019-24 tariff period granted vide order dated 19.1.2024 in Petition No. 294/TT/2022
2	Asset A2- 291.124 km OPGW fiber optic cable along with associated equipment (includes 88.63 km under cost apportionment with POWERTEL)	1.7.2014		
3	Asset B1(a)- OPGW Communication Link for Nellore Pooling Station-400 kV Nellore PG	1.4.2013	Tariff for 2014-19 period was granted vide order dated 20.2.2019 in Petition No. 168/TT/2018 and order dated 6.1.2020 in Review Petition No. 10/RP/2019	
4	Asset B1(b)- OPGW Communication Link for 400 kV Raichur-765 kV Raichur	1.1.2014		
5	Asset B1(c)- OPGW Communication Link for Nellore Pooling Station-TPCIL (Thermo Powertech Corporation India Ltd.)	1.3.2014		
6	Asset B1(d)- OPGW Communication Link for Kurnool (New)-Kurnool Sub-station	1.4.2014		
7	Asset B2- 148 km OPGW fiber optic cable along with associated equipment's for 1) LILO of N'Sagar-Gooty at Kurnool (PG) 2) 765 kV Raichur-Kurnool (PG)	27.9.2014		
8	Asset B3- 159 km OPGW fiber optic cable along with associated equipment's for 1) 400 kV Kadapa (PG)-Chittor (APTRANSCO), 2) 400 kV Kadapa (PG)-Chinakampally (APTRANSCO)	1.10.2014		
9	Asset B4- 1717.112 km OPGW fiber optic cable along with associated equipment (includes 966.436 km under cost apportionment with POWERTEL) for 400 kV Neyvelli TS-II-400 kV Neyveli TS-1 Expn, Tuticorin Pooling Station-Madurai Sub-station Madurai Sub LDC (TNEB)-Madurai 230 kV (TNEB)-Madurai (PG), 400 kV PUGALUR (PG)-Trichy (TNEB)-Trichy (PG), 230 kV Tanjore (TNEB)-400 kV Trichy (TNEB), 230 kV Thiruvaur (TNEB)-230 kV Tanjore (TNEB), 400 kV Hassan (PG)-Neelmangla (KPTCL), 400 kV Narendra-Davengered, Kolar-Thiruvalam, Madurai-Trichy, Madurai-Tirunelveli, Tirunelveli-Trivandrum, Sriperambadurur-Kalivindapattu, Udumalpet-Arasur, Salem-Udumalpet, Nagapattinam-Trichy, Nagapattinam-Neyveli TS-1	30.3.2015		
10	Asset B5- 956.599 km OPGW communication links along with associated Communication Equipment (includes 132.30 km under cost apportionment with POWERTEL) for Kochi-Trichur, Kundakulam-Tirunelveli Link -11, Narendra -Kudgi, Kudgi-Kolhapur, Kolar-Hoody,	31.3.2016		



	Tirunelveli-Edamon, NEYVELI TS 2-Bahour, Salem-Dharampuri, Kochi-Brahmapuram (KSEB), Tiruvarur-Kadalangudi (TANTRANSCO), Sriperambadur-Pondy OPGW Links & EPABX Systems for SRLDC Bangalore, Main SLDC TANTRANSCO Chennai, Main SLDC KSEB Kalamassery, Back-up SLDC KSEB Trivandrum, SCC PED Puduchery, Main SLDC APTRANSCO Vijayawada, Main SLDC TSTRANSCO Hyderabad and EPABX systems (Hot Line Speech Communication Systems for Grid Operation)			
11	Asset B6- OPGW links for Establishment of Fiber optic communications system for central sector stations Project of Southern Region - 1) 400 kV Nagarjun Sagar (PG)-400 kV Mehboob Nagar 2) 400 kV Raichur (PG)-400 kV Mehboob Nagar 3) Nellore Pooling Station-Gooty crossing point to Kadapa 4) 400 kV Simhadri (PG)-400 kV Vemagiri (PG) 5) 220 kV Tallapally, APTRANSCO-220 kV VTPS APTRANSCO 6) LILO of Simhadri-Vemagiri (PG) to Gajuwaka 7) 220 kV Gooty APTRANSCO-400 kV Gooty (PG) 8) 220 kV Ghanapur TSTRANSCO-400 kV Ghanapur PG 9) 220 kV Khammam APTRANSCO-400 kV Khammam PG 10) 400 kV Vijayawada PG-220 kV Vijayawada Sub-LDC 11) 400 kV N'Sagar PG-220 kV Tallapally, APTRANSCO 12) 400 kV Khammam PG-400 kV Vijayawada PG 13) 220 kV Vishakhapatnam VSS-400 kV Gazuwaka PG 14) Ramagundam NTPC-Repeater-204-Bhadrawati 15) 400 kV Ghanapur PG-Repeater-346-Ramagundam NTPC	1.8.2016		
12	Asset B7- OPGW Communication Link for Kaiga (PG)-Narendra (PG), Kaiga (PG)-Gudur, 230 kV Kalpakkam (PG)-230 kV SP Koil (TNEB), NCTPS (TNEB)-Tondiapet (TNEB), Tuticori pooling station-LILO point AP51, Mysore-Kozikode, Kalpakam- Siruchery, Thiruvarur-Neyveli, Neyveli TS II-Neyveli TS I (Ckt-II), Villianur-Bahour, Basthipura-Hootagally D/C Line, LILO of Pomdy -Sriperambadur to SV Chatram	30.3.2017		
13	Asset B8- OPGW Communication Link for 1) 400 kV Vijaywada (PG)-Vemagiri (APTRANSCO); 2) 400 kV LILO of Ramagundam-Khammam to Warangal; 3) 400 kV Ghanapur-Kurnool (APTRANSCO); 4) 220 kV KTPS-Khammam TS Transco; 5) 400 kV Munirabad-Raichur; 6) 220 kV Hindupur-Gooty APTRANSCO and Telecom links under Fibre Sharing: 1) 400 kV Nellore-Sriperambudur 2) 400 kV Ramagundam-Warangal 3) 400 kV	1.10.2017		



	Nagarjunsagar-Gooty 4) 400 kV Vijaywada-Gajuwaka			
14	Asset C1- OPGW Fibre Links (98.484 k.m) Hoody-Yelahanka LILo Point of Nelamangala-Hoody, Hoody-HSR (KPTCL), Peenya-NRS-Hebbal (KPTCL), Hoody-HAL (KPTCL), LILo of Pandy-Sriperambadur to SV Chatram (TANTRANSCO), LILo of Neyveli TS-11-Neyveli TS-1 to NNTPS, Salem (PG)-Salem(TNEB), Sriperambadur(PG)-Sriperambadur(TNEB)	28.3.2018	Tariff for 2014-19 period was granted vide order dated 11.2.2021 in Petition No. 494/TT/2019	
15	Asset C2- Salem Pooling Station (Dharmapuri)-Madhugiri (Tumkur) OPGW Link (246.197 km)	19.3.2019		

k. The detail of assets considered in instant petition is as follows:

Asset	Asset Name	COD
Asset-1	Yelahanka-Tumkur (73.412 km) OPGW communication link along with associated Communication Equipment	22.4.2020
Asset-2	NCTPS (TNEB)-Tondiarpet (TNEB) (17.893 km) OPGW communication link along with associated Communication Equipment	30.6.2023 (Revised anticipated COD: 31.12.2023)

4. It has been observed that the Petitioner has claimed the tariff for Asset-II on the basis of the anticipated COD of 30.6.2023. However, the Petitioner, vide affidavit dated 26.9.2023, submitted that Asset-II is expected to be put into commercial operation by December 2023 and has further revised the anticipated COD to 31.12.2023 vide affidavit dated 16.11.2023. However, it has not been put into commercial operation. Hence, we are not inclined to approve the tariff for Asset-II in this order. The Petitioner is directed to file a fresh petition based on the actual COD of Asset-II. The Petitioner is also directed to submit CMD certificate, CEA energisation certificate, and RLDC certificate in line with the 2019 Tariff Regulations on the basis of the actual COD of Asset-II. Accordingly, the tariff is allowed for only Asset-I in this order.



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

6. The Petitioner has served the petition on the Respondents, and notice regarding the filing of this petition has been published in the newspaper in accordance with Section 64 of the Electricity Act, 2003. No comments or suggestions have been received from the general public in response to the aforesaid notice published in the newspaper by the Petitioner. No reply has been received from any of the Respondents. This order is issued considering the submissions made in the petition and subsequent affidavits dated 26.9.2023 and 16.11.2023.

7. The hearing in this matter was held on 30.10.2023, and the order was reserved.

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

8. The Petitioner has claimed the following transmission charges for Asset-I from its COD to 31.3.2024:

Particulars	(₹ in lakh)			
	2020-21 (pro-rata 344 days)	2021-22	2022-23	2023-24
Depreciation	31.84	34.04	34.04	34.04
Interest on Loan	25.47	24.75	22.18	19.62
Return on Equity	28.34	30.30	30.30	30.30
O&M Expenses	10.14	10.76	10.76	10.76
Interest on Working Capital	1.62	1.69	1.65	1.61
Total	97.41	101.54	98.93	96.33

9. The Petitioner has claimed the following Interest on Working Capital (IWC) in respect of Asset-I from its COD to 31.3.2024:



(₹ in lakh)

Particulars	2020-21 (pro-rata 344 days)	2021-22	2022-23	2023-24
O&M Expenses	0.90	0.90	0.90	0.90
Maintenance Spares	1.61	1.61	1.61	1.61
Receivables	12.74	12.52	12.20	11.84
Total Working Capital	15.25	15.03	14.71	14.35
Rate of Interest (in %)	11.25	11.25	11.25	11.25
Interest on Working Capital	1.62	1.69	1.65	1.61

Date of Commercial Operation (“COD”)

10. The Petitioner has claimed the COD of Asset-I as 22.4.2020.

11. 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 systems;*
- (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.”

12. The Petitioner has submitted that the communication system under the transmission project comprises fiber optic and microwave systems for providing a communication facility between control centres from data concentrator nodes for handling large data volumes. The operating voltage for communication system operation is a 24/48-volt DC supply. Therefore, as per the Central Electricity Authority (Measures Relating to Safety and Electric Supply) Regulation 2010 (herein referred to as “2010 CEA Regulations”), a minimum of 650 volts is required for inspection. Further, the Central government has specified the notified voltage for the purpose of self-certification under Regulation 30 and Regulation 43 of the 2010 CEA Regulations is 11 kV; therefore, no inspection is required by the CEA inspector. Hence, the CEA clearance certificate is not applicable in the case of the instant communication system.

13. In support of the actual COD of Asset-I, the Petitioner has submitted the self-declaration certificate dated 10.9.2020 and SRLDC certificate dated 8.9.2020 of successful execution of the communication system in accordance with Clause IEGC 6.3 A Para 6 and Regulation 5 of the 2019 Tariff Regulations.

14. Taking into consideration the SRLDC charging certificate and self-declaration certificate, we approve the COD of Asset-I as 22.4.2020.

Capital Cost

15. 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 assets before the date of commercial operation;*
- (i) *Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*
- (j) *Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal 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 modernisation 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 upto 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 assets forming part of the project, but not in use, as declared in the tariff petition;
(b) De-capitalised Assets after the date of commercial operation on account of 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 de-capitalised 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 assets.

- (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.”

16. The Petitioner has claimed the capital cost incurred as on COD and ACE projected to be incurred in respect of Asset-I and has submitted the Auditor's Certificates dated 11.1.2021 in support of the same:

(₹ in lakh)

FR approved cost	Capital cost as on COD	Projected ACE		Capital cost as on 31.3.2024
		2020-21	2021-22	
620.00	537.79	0.00	0.00	537.79



Cost Over-run

17. The Petitioner has submitted the RCE dated 8.12.2017. The estimated completion cost claimed by the Petitioner is as follows:

(₹ in lakh)	
FR Apportioned approved cost	Estimated capital cost as on 31.3.2024
620.00	537.79

18. The Petitioner has further submitted that the estimated completion cost in respect of Asset-I is within the FR apportioned approved cost.

19. We have considered the Petitioner's submissions. As compared to the FR apportioned approved cost of ₹620.00 lakh, the estimated completion cost is ₹537.79 lakh, which is within the FR apportioned approved capital cost, and there is no cost over-run.

Time over-run

20. The Petitioner has submitted that as per IA dated 29.5.2012, the transmission project was scheduled to be put into commercial operation within 30 months progressively from the date of IA. Accordingly, the SCOD of the transmission project is 29.11.2014. The details of SCOD, COD, and time-over-run of the transmission asset are as follows:

IA	SCOD	COD	Time over-run
29.5.2012	29.11.2014	22.4.2020	1971 days

21. The Petitioner has submitted the following justification for time over-run:

- (i) The majority of facilities viz.' OPGW links along with associated communication equipment under the transmission project have already been put into commercial operation, whereas the execution of OPGW (Asset-1);



Yelahanka-Tumkur (73.412 km) OPGW communication link along with associated Communication Equipment was held up due to delay in completion of the Madhugiri (Tumkur)-Yelahanka 400 kV D/C (Quad) transmission line which was delayed because of severe RoW issues and court cases in the state of Karnataka.

(ii) The relevant documents and chronology of the events which led to the delay in construction of the associated line, i.e., Madhugiri (Tumkur)-Yelahanka 400 kV D/C (Quad) transmission line between 22.10.2011 to 2.2.2020 has already been submitted along with Petition No. 707/TT/2020 under “Transmission system associated with System Strengthening -XIII in the Southern Regional Grid.” The chronology of events during the construction of the 400 kV Tumkur-Yelahanka line is as follows:

Sl. No.	Time period	Remarks
1	Conceptualization of the line (date of IA)	22.10.2011
2	Completion of subject line as per IA	22.6.2014
3	Completion of subject line as per revised IA	26.9.2019
4	Actual completion of subject line	2.2.2020
5	Total time taken to complete the line from the date of approval	8 years, 1 month and 11 days (from 22.10.2011 to 2.2.2020)
6	Total time over-run for completion of line due to RoW issues.	5 years, 7 months and 11 days (from 22.6.2014 to 2.2.2020)

(iii) The Petitioner filed Petition No. 114/MP/2014 under ‘Power to Relax’ and ‘Power to Remove Difficulty’ of the 2014 Tariff Regulations to adjudicate the differences/disputes that had arisen with respect to compensation and sought direction from the Commission relating to construction of the Madhugiri (Tumkur)-Yelahanka 400 kV D/C (Quad) transmission line and construction of Yelahanka Sub-station and LILO of Nelamangala-Hoody 400 kV S/C (Quad) line at 400/220 kV Yelahanka Sub-station under System Strengthening in the Southern Region-XII, wherein the detailed circumstances that led to inordinate time over-run in completion for the above transmission asset was submitted.

(iv) The Commission vide order dated 18.4.2017 in Petition No. 119/MP/2014, held as follows:



“.....The Petitioner is directed to take steps for completion of transmission line at the earliest.”

(v) The delay in execution of the associated line, i.e., Madhugiri (Tumkur)-Yelahanka 400 kV D/C (Quad) line, was beyond the control of the Petitioner. The associated line was completed and put into commercial operation on 2.2.2020. The execution of Asset-I was dependent on the execution of the associated line, and the Commission has already condoned the time over-run of the associated line up to 2.2.2020 vide order dated 25.7.2022 in Petition No. 707/TT/2020.

(vi) Further, the OPGW string work was completed along with line stringing, and subsequently, splicing of OPGW works was undertaken during splicing, severe RoW issues were encountered, which were resolved with the support of local administration and the OPGW link between Yelahanka and Tumkur was established and put under commercial operation w.e.f. 22.4.2020.

22. We have considered the submissions of the Petitioner and have gone through the documents available on record. As per the IA dated 29.5.2012, Asset-I was scheduled to be put into commercial operation within 30 months from the date of IA, i.e., by 29.11.2014. However, Asset-I was put into commercial operation on 22.4.2020, with a time over-run of 1971 days. The main reason for the time over-run in the execution of the instant OPGW link was a delay in the completion of the associated transmission line, i.e., Madhugiri (Tumkur)-Yelahanka 400 kV D/C (Quad) transmission line.

23. The Petitioner has taken a separate investment approval for the implementation of the Madhugiri-Yelahanka 400 kV D/C (Quad) Line. As per the IA dated 22.10.2011, the transmission line was scheduled to be put into commercial operation within 32 months, i.e., by 22.6.2014, against which the Madhugiri-Yelahanka 400 kV D/C (Quad) line was put into commercial operation on 2.2.2020 with time over-run of about 2051



days. The Petitioner has submitted that the transmission asset was delayed due to RoW problems and court cases pertaining to the construction of the transmission line.

24. The Commission vide order dated 25.7.2022 in Petition No. 707/TT/2020 had condoned the time over-run of the Madhugiri (Tumkur)-Yelahanka 400 kV D/C (Quad) transmission line. The relevant extract of the said order is as follows:

“35. We have considered the submissions of the Petitioner and TANGEDCO. As per IA dated 22.10.2011, the transmission asset was scheduled to be put into commercial operation within 32 months i.e. by 22.6.2014, against which the transmission asset was put into commercial operation on 2.2.2020 with time over-run of about 2051 days. The Petitioner has submitted that the transmission asset is delayed due to RoW problems in construction of transmission line and Court cases pertaining to construction of transmission line.

36. As per the submissions of the Petitioner, it is observed that the Petitioner has faced RoW problems at various locations 2/2, 3/2, 4/4, 6/4, 12/1, 13/4, 13/5, 13/6, 14/6, Page 32 of 60 Order in Petition No. 707/TT/2020 22/3, 24/2 and 31/5. The last such RoW problem faced by the Petitioner was on 23.12.2019. Finally, the Petitioner has obtained provisional approval for charging Circuit-II of 400 kV Tumkur to Yelahanka on 29.12.2019 and final CEA energisation certificate was obtained on 31.1.2020. Finally, the Petitioner has been able to charge 400 kV Tumkur – Yelahanka transmission line alongwith 400 kV line bays Sub-station at Yelahanka on 2.2.2020.

37. The Petitioner has furnished details of correspondences exchanged with various authorities along with supporting documents. From the submissions of the Petitioner, it is apparent that RoW issues from 27.12.2011 to 29.12.2019 (3290 days) at various locations affected the execution of transmission asset. The time over-run of 3295 days on account of RoW problems was beyond the control of the Petitioner. However, the Petitioner has compressed the execution time and executed the transmission asset with overall delay of 2051 days. Therefore, the overall time over-run of 2051 days in execution of the transmission asset is hereby condoned.”

25. As per the above, it is observed that the delay in the execution of the 400 kV Tumkur-Yelahanka transmission line was on account of RoW problems at various locations and the time over-run of 2051 days (from SCOD to COD, i.e., from 22.6.2014 to 2.2.2020) was condoned. In the instant case, the IA was granted on 29.5.2012 and the SCOD was 29.11.2014. The Petitioner is required to install OPGW fibre optic cable on the new EHV transmission line, i.e., 400 kV D/C *Tumkur-Yelahanka* Transmission Line. Therefore, the execution of the transmission line will have a direct impact on the



completion and installation of the OPGW fibre cable. As we have already condoned the time over-run in the case of 400 kV D/C Tumkur-Yelahanka Transmission Line, and since the OPGW links are to be installed on the same transmission line, we condone the time over-run in case of the instant OPGW link, i.e., from 29.11.2014 to 2.2.2020.

26. The Petitioner has further submitted that OPGW stringing was completed along with line stringing, and, subsequently, the splicing of OPGW works was undertaken, and the OPGW link between Yelahanka-Tumkur was established and put into commercial operation w.e.f. 22.4.2020.

27. The Petitioner has submitted that the time over-run of 81 days, from 3.2.2020 to 22.4.2020, was due to substantial RoW issues during the splicing process, and they were subsequently addressed with the cooperation and assistance of the local administrative authorities. However, the Petitioner has failed to furnish any documents substantiating the time over-run of 81 days. Due to a lack of supporting evidence, the time over-run of 81 days is not condoned.

28. Accordingly, out of the total time over-run of 1971 days, the time over-run of 1890 days, i.e., from 29.11.2014 to 2.2.2020, is condoned, and the remaining time over-run of 81 days is not condoned. Accordingly, the details of time over-run condoned/ not condoned are as follows:

SCOD as per IA	Actual COD	Time over-run	Time over-run condoned	Time over-run not condoned
29.11.2014	22.4.2020	1971 days	1890 days	81 days



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

29. The Petitioner has claimed the IDC in respect of Asset-I and has submitted the statement showing the computation of IDC, discharge of IDC liability as on the COD and thereafter, and details of the same are as follows:

(₹ in lakh)

IDC as per Auditor's Certificate	IDC Discharged up to COD	IDC discharged during 2020-21	IDC discharged during 2021-22
122.32	114.18	8.14	0.00

30. We have considered the submissions of the Petitioner. As discussed above in this order, the time over-run in execution of the transmission asset has partially been condoned. Accordingly, the IDC on a cash basis up to the COD has been worked out based on the loan details given in the statement showing the discharge of IDC and Form-9C of the transmission asset. The IDC claimed and considered as on COD, and summary of discharge of IDC liability up to the COD and, thereafter, for the purpose of tariff determination subject to truing up is as follows:

(₹ in lakh)

IDC as per Auditor's Certificate (A)	IDC disallowed (due to time over-run not condoned) (B)	IDC Allowed (C)=(A)-(B)	Undischarged IDC (D)	IDC allowed as on COD (E)=(C)-(D)	IDC discharged in 2020-21 (F)
122.32	20.80	101.52	4.00	97.52	4.00

31. Further, the Petitioner has submitted that the entire amount of IEDC for Asset-I has been discharged up to COD. As the time over-run for Asset-I has partially been condoned, there is a disallowance of IEDC of ₹1.81 lakh. Accordingly, the details of IEDC claimed as per Auditor's Certificate, IEDC disallowed, and IEDC allowed are as follows:



(₹ in lakh)

IEDC as per Auditor's certificate (A)	IEDC disallowed due to time over-run not condoned (B)	IEDC allowed (C) = (A-B)
64.47	1.81	62.66

Initial Spares

32. The Petitioner has not claimed any Initial Spares for Asset-I in the instant petition.

Capital Cost allowed as on COD

33. The capital cost allowed as on the COD for Asset-I is as follows:

(₹ in lakh)

Capital cost claimed as on COD (Auditor's Certificate) (A)	IDC Disallowed (B)	Undischarged IDC as on COD (C)	IEDC Disallowed (D)	Capital cost as on COD (E) = (A-B-C-D)
537.79	20.80	4.00	1.81	511.18

34. The Petitioner has not claimed any ACE incurred/ projected to be incurred in respect of Asset-I. It is observed that the difference in the capital cost approved and the capital cost claimed by the Petitioner is mainly due to the disallowance of time over-run of 81 days from the total time over-run of 1971 days. The capital cost considered for the transmission assets for the 2019-24 tariff period is as follows:

(₹ in lakh)

Capital cost as on COD	Projected ACE 2019-24					Capital cost as on 31.3.2024
	2019-20	2020-21	2021-22	2022-23	2023-24	
511.18	0.00	4.00*	0.00	0.00	0.00	515.18

* Discharged IDC of ₹4.00 lakh

Debt-Equity ratio

35. 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:



- 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.”



36. The debt-equity ratio considered for the purpose of computation of tariff for the 2019-24 tariff period with respect to Asset-I is as follows:

Particulars	Capital cost as on COD (₹ in lakh)	(in %)	ACE during 2019-24 (₹ in lakh)	(in %)	Capital cost as on 31.3.2024 (₹ in lakh)	(in %)
Debt	357.82	70.00	2.80	70.00	360.62	70.00
Equity	153.35	30.00	1.20	30.00	154.55	30.00
Total	511.18	100.00	4.00	100.00	515.18	100.00

Depreciation

37. 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 assets of the generating station and transmission system:*

Provided that the remaining depreciable value as on 31st March of the year closing after a period of 12 years from the effective date of commercial operation of the 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.”

38. The depreciation has been worked out considering the admitted capital cost as on COD. The weighted average rate of depreciation (WAROD) has been worked as per the rates of depreciation prescribed in the 2019 Tariff Regulations and the WAROD table is placed in the Annexure. The depreciation allowed for Asset-I is as follows:

(₹ in lakh)					
	Particulars	2020-21 (pro-rata 344 days)	2021-22	2022-23	2023-24
	Depreciation				
A	Opening Gross Block	511.18	515.18	515.18	515.18
B	ACE	4.00	0.00	0.00	0.00
C	Closing Gross Block (A+B)	515.18	515.18	515.18	515.18
D	Average Gross Block (A+C)/2	513.18	515.18	515.18	515.18
E	Weighted average rate of Depreciation (WAROD) (in %)	6.33	6.33	6.33	6.33
F	Balance useful life of the asset (Year)	15	15	14	13
G	Lapsed Life at the beginning of the year (Year)	0	0	1	2
H	Aggregate Depreciable Value	461.87	463.66	463.66	463.66
I	Depreciation during the year(D*E)	30.62	32.61	32.61	32.61
J	Cumulative Depreciation	30.62	63.23	95.84	128.45
K	Remaining Depreciable Value (H-J)	431.25	400.44	367.83	335.22

Interest on Loan (“IoL”)

39. 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 de-capitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and



the adjustment should not exceed cumulative depreciation recovered 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.”

40. The Petitioner has claimed the weighted average rate of IoL based on its actual loan portfolio and rate of interest. IoL is allowed based on the actual interest rate submitted by the Petitioner in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL allowed for Asset-I is as follows:

(₹ in lakh)					
	Particulars	2020-21 (pro-rata 344 days)	2021-22	2022-23	2023-24
	Interest on Loan				
A	Gross Normative Loan	357.82	360.62	360.62	360.62
B	Cumulative Repayments up to Previous Year	0.00	30.62	63.23	95.84
C	Net Loan-Opening (A-B)	357.82	330.01	297.40	264.79
D	Additions	2.80	0.00	0.00	0.00
E	Repayment during the year	30.62	32.61	32.61	32.61



	Particulars	2020-21 (pro-rata 344 days)	2021-22	2022-23	2023-24
F	Net Loan-Closing (C+D-E)	330.01	297.40	264.79	232.18
G	Average Loan (C+F)/2	343.92	313.70	281.09	248.48
H	Weighted Average Rate of Interest on Loan (in %)	7.5531	7.5535	7.5566	7.5601
I	Interest on Loan (G*H)	24.48	23.70	21.24	18.79

Return on Equity (“RoE”)

41. Regulation 30 and Regulation 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 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 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:

$$\text{Rate of pre-tax return on equity} = \text{Base rate} / (1-t)$$

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.”

42. The Petitioner has submitted that the MAT rate is applicable to the Petitioner's Company. Accordingly, the MAT rate applicable in 2019-20 has been considered for the purpose of RoE, However, this is subject to true up, in accordance with Regulation 31(3) of the 2019 Tariff Regulations. RoE allowed for Asset-I is as follows:

(₹ in lakh)

	Particulars	2020-21 (pro-rata 344 days)	2021-22	2022-23	2023-24
	Return on Equity				
A	Opening Equity	153.35	154.55	154.55	154.55
B	Additions	1.20	0.00	0.00	0.00
C	Closing Equity (A+B)	154.55	154.55	154.55	154.55
D	Average Equity (A+C)/2	153.96	154.55	154.55	154.55
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472
G	Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782
H	Return on Equity (D*G)	27.25	29.03	29.03	29.03

Operation & Maintenance Expenses (“O&M Expenses”)

43. The O&M Expenses claimed by the Petitioner for Asset-I are as follows:

(₹ in lakh)

Particulars	2020-21 (pro-rata 344 days)	2021-22	2022-23	2023-24
Transmission Lines				
Yelahanka-Tumkur OPGW communication link along with associated Communication Equipment				
Normative Rate of O&M Expenses as per Regulation (in %)	2.00	2.00	2.00	2.00
The original project cost / The Assets related to the Communication System (₹ in lakh)	537.79	537.79	537.79	537.79



Particulars	2020-21 (pro-rata 344 days)	2021-22	2022-23	2023-24
Total O&M Expenses	10.14	10.76	10.76	10.76

44. The norms specified under Regulation 35(4) of the 2019 Tariff Regulations provides as follows:

“(4) Communication system: The operation and maintenance expenses for the communication system shall be worked out at 2% of the original project cost related to such communication system. The transmission licensee shall submit the actual operation and maintenance expenses for truing up.”

45. We have considered the submission of the Petitioner. The O&M Expenses have been worked out as per the norms specified in the 2019 Tariff Regulations, and the same are as follows:

(₹ in lakh)				
Particulars	2020-21 (pro-rata 344 days)	2021-22	2022-23	2023-24
Normative Rate of O&M Expenses as per Regulation (in %)	2.00	2.00	2.00	2.00
The Assets related to the Communication System (₹ in lakh)	537.79	537.79	537.79	537.79
Total O&M Expenses	10.14	10.76	10.76	10.76

Interest on Working Capital (“IWC”)

46. Regulation 34(1)(c), Regulation 34(3), Regulation 34(4) and Regulation 3(7) of the 2019 Tariff Regulations specify 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:-

(6) **‘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;”

47. 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 1.4.2019. The Petitioner has considered the rate of IWC to be 11.25%.

48. The IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The Rate of Interest (RoI) considered is 11.25% (SBI 1-year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) for 2020-21, RoI for 2021-22 and 2022-23 has been considered as 10.50% (SBI 1-year MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points) and RoI for 2023-24 has been considered as 12.00% (SBI 1-year MCLR applicable as on 1.4.2021 of 8.50% plus 350 basis points). The components of the working capital and interest allowed thereon for Asset-I are as follows:



(₹ in lakh)

	Particulars	2020-21 (pro-rata 344 days)	2021-22	2022-23	2023-24
	Interest on Working Capital				
A	Working Capital for O&M Expenses (O&M expenses for one month)	0.90	0.90	0.90	0.90
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	1.61	1.61	1.61	1.61
C	Working Capital for Receivables (Equivalent to 45 days of annual fixed cost / annual transmission charges)	12.30	12.04	11.73	11.42
D	Total Working Capital (A+B+C)	14.81	14.54	14.24	13.93
E	Rate of Interest (in %)	11.25	10.50	10.50	12.00
F	Interest on working capital (D*E)	1.57	1.53	1.50	1.67

Annual Fixed Charges

49. The transmission charges allowed in respect of Asset-I for the 2020-24 period are as follows:

(₹ in lakh)

Particulars	2020-21 (pro-rata 344 days)	2021-22	2022-23	2023-24
Annual Transmission Charges				
Depreciation	30.62	32.61	32.61	32.61
Interest on Loan	24.48	23.70	21.24	18.79
Return on Equity	27.25	29.03	29.03	29.03
O&M Expenses	10.14	10.76	10.76	10.76
Interest on Working Capital	1.57	1.53	1.50	1.67
Total	94.06	97.63	95.14	92.86

Filing Fee and the Publication Expenses

50. 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 & RLDC Fees and Charges

51. The Petitioner has sought reimbursement of the licensee 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 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

52. 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 will be borne and additionally paid by the Respondent(s) to the Petitioner and the same will 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, and the same may be allowed to be recovered from the beneficiaries.

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

Security Expenses

54. The Petitioner has submitted that security expenses for the 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.

55. We have considered the submissions of the Petitioner. The Petitioner has claimed consolidated security expenses 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 from 1.4.2019 to 31.3.2024. Therefore, the security expenses will be shared in terms of the order dated 3.8.2021 in Petition No. 260/MP/2020. 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.

Capital Spares

56. 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

57. The billing, collection, and disbursement of the transmission charges approved shall be governed by the provisions of the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020, as amended from time to time and as provided in Regulation 57 of the 2019 Tariff Regulations for the 2019-24 tariff period.

58. To summarise, the AFC allowed for the 2019-24 tariff period is as follows:

(₹ in lakh)			
2020-21 (pro-rata 344 days)	2021-22	2022-23	2023-24
94.06	97.63	95.14	92.86



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

60. This order disposes of Petition No. 194/TT/2023 in terms of the above findings and discussions.

sd/-
(Arun Goyal)
Member

sd/-
(Jishnu Barua)
Chairperson



ANNEXURE

2019-24 Capital Expenditure	Admitted capital cost as on 1.4.2019 (₹ in lakh)	ACE (in lakh)		Admitted capital cost as on 31.3.2024 (₹ in lakh)	Rate of depreciation as per Regulations (in %)	Annual Depreciation as per Regulations (₹ in lakh)			
		2020-21	Total			2020-21	2021-22	2022-23	2023-24
PLCC	511.18	4.00	4.00	515.18	6.33	32.48	32.61	32.61	32.61
Total	511.18	4.00	4.00	515.18		32.48	32.61	32.61	32.61
				Average Gross Block (₹ in lakh)		513.18	515.18	515.18	515.18
				Weighted Average Rate of Depreciation (in %)		6.33	6.33	6.33	6.33

