

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 369/TT/2023**

**Coram:**

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

**Date of Order: 03.12.2024**

**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 the determination of transmission tariff from the COD to 31.3.2024 for a transmission asset, namely, replacement of 1X250 MVA, 400/220 kV ICT at 765/400/220 kV Moga (PG) Sub-station with 1X500 MVA, 400/220 kV ICT along with associated works at 220 kV level under "Replacement of 1X250 MVA, 400/220 kV ICT at 765/400/220 kV Moga (PG) Sub-station with 1X500 MVA, 400/220 kV ICT along with associated works at 220 kV level".

**And in the matter of:**

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

**...Petitioner**

**Vs.**

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



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

...Respondents

**Parties Present** : Shri Vivek Kumar Singh, PGCIL  
Shri V. C. Sekhar, PGCIL

### **ORDER**

The Petitioner, Power Grid Corporation of India Limited, has filed the instant Petition for the determination of transmission tariff under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) from the date of commercial operation (COD) to 31.3.2024 in respect of a transmission asset, namely, ‘Replacement of 1X250 MVA, 400/220 kV ICT at



765/400/220 kV Moga (PG) Sub-station with 1X500 MVA, 400/220 kV ICT along with associated works at 220 kV level (hereinafter referred to as “the transmission asset”) under “Replacement of 1X250 MVA, 400/220 kV ICT at 765/400/220 kV Moga (PG) Sub-station with 1X500 MVA, 400/220 kV ICT along with associated works at 220 kV level” (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 – 8.3 above.*
- 3) Allow the petitioner to submit the Revised Cost estimation for the assets 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 the publishing of notices in newspapers in terms of Regulation 70 (1) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019, and other expenditure (if any) in relation to the filing of the petition.*
- 6) Allow the petitioner to bill and recover Licensee fees and RLDC fees and charges, separately from the respondents in terms of Regulation 70 (3) and (4) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019.*
- 7) Allow the Petitioner to claim the overall security expenses and consequential IOWC on that security expenses separately.*
- 8) Allow the petitioner to claim the capital spares at the end of tariff block as per actual.*
- 9) Allow the Petitioner to bill and recover GST on Transmission Charges separately from the respondents, if GST on transmission is levied at any rate in 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 tariff in accordance with Regulation 10(3) of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for the purpose of inclusion in the PoC charges.

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

### **Background**

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

- a. The Petitioner has submitted that it has been entrusted with the implementation of the transmission asset under the transmission project. The Investment Approval (IA) for the transmission asset was accorded by the Chairman cum Managing Director of the Petitioner's Company on 12.2.2023 and circulated vide Memorandum No. C/CP/PA2223-11-0AQ-IA025 dated 14.2.2023 at an estimated cost of ₹2952.00 lakh, including an IDC of ₹125.00 lakh at September 2022 price level. The transmission project was scheduled to be completed by 27.5.2024. However, as per the request of Punjab State Transmission Company Limited (PSTCL), the transmission project was to be implemented by 31.5.2023.
- b. The transmission project was discussed and agreed upon in the 57<sup>th</sup> meeting of the Northern Regional Power Committee held on 31.8.2022. Further, during the 11<sup>th</sup> Consultation meeting for Evolving Transmission Schemes in Northern Region dated 30.9.2022, the scheme was recommended for implementation by the Petitioner under a regulated tariff mechanism (RTM) with a compressed schedule.
- c. The scope of work covered under the transmission project is as follows:



### **Sub-station**

Replacement of 1x250 MVA 400/220 KV ICT at 765/400/220 KV Moga (PG)

Sub-station with 1x500 MVA 400/220 kV ICT along with associated works at

220 kV level i.e. replacement of 220 kV ICTs in 220 kV ICT bay

- d. The scope of the transmission project has been completed and is covered in the instant Petition.

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

| <b>Name of Asset</b>  | <b>SCOD as per IA</b> | <b>COD</b> | <b>Delay</b> |
|---|-----------------------|------------|--------------|
| Replacement of 1X250 MVA, 400/220 kV ICT at 765/400/220 kV Moga (PG) Sub-station with 1X500 MVA, 400/220 kV ICT along with associated works at 220 kV level | 27.5.2024             | 26.5.2023  | Nil          |

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

6. The Petitioner has served a copy of the Petition on the Respondents, and notice regarding the filing of this Petition has also been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003 (hereinafter referred to as “the Act”). No comments or suggestions have been received from the general public in response to the aforesaid notice published in the newspapers by the Petitioner.

7. This order is being issued considering the submissions made by the Petitioner in the Petition and Petitioner’s subsequent affidavits dated 7.5.2024 and 18.7.2024, respectively.

8. The final hearing in this matter was held on 20.8.2024, and the order was reserved.

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)                           |
|-----------------------------|---------------------------------------|
|                             | 2023-24<br>(pro-rata<br>for 311 days) |
| Depreciation                | 21.57                                 |
| Interest on loan            | 20.94                                 |
| Return on equity            | 23.02                                 |
| Interest on working capital | 8.56                                  |
| O&M expenses                | 174.62                                |
| <b>Total AFC</b>            | <b>248.71</b>                         |

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)                        |
|---|------------------------------------|
|   | 2023-24<br>(pro-rata for 311 days) |
| O&M Expenses                                | 17.13                              |
| Maintenance Spares                          | 30.83                              |
| Receivables                                 | 35.99                              |
| <b>Total Working Capital</b>                | <b>83.95</b>                       |
| Rate of Interest (in %)                     | 12.00                              |
| <b>Interest on Working Capital</b>          | <b>10.07</b>                       |
| <b>Pro rata Interest on Working Capital</b> | <b>8.56</b>                        |

### **Date of Commercial Operation (COD)**

12. The Petitioner has claimed the COD of the transmission asset as 26.5.2023 against the SCOD of 27.5.2024. In support of the COD claimed, the Petitioner has submitted the Central Electricity Authority (CEA) Energization Certificate dated 22.5.2023, Northern Regional Load Despatch Centre (NRLDC) Charging Certificate dated 5.6.2023, self-declaration COD letter dated 5.6.2023 and the CMD's Certificate.

13. For early commissioning of the transmission asset, the Petitioner has submitted that CTUIL, vide its office memo dated 28.11.2022, awarded the scheme to the Petitioner for its implementation under RTM mode within 18 months from the date of issue of the said OM by



CTUIL. However, CTUIL, in its said OM dated 28.11.2022, stated to implement the transmission project by 31.5.2023 as per the request of PSTCL letter dated 6.9.2022. The Petitioner has submitted that PSTCL in its letter dated 25.11.2022, requested for early commissioning of the transmission asset by 31.5.2023. Accordingly, the transmission asset was put under commercial operation before the scheduled date, i.e., on 26.5.2023. Hence, there is no time over-run in the commissioning of the transmission asset.

14. We have considered the Petitioner's submissions and perused the documents submitted by the Petitioner. On perusal of the 57<sup>th</sup> NRPC meeting held on 27.9.2022, we note that in the said meeting, the agenda of PSTCL for deemed enhancement of ATC/TTC for Punjab due to unprecedented load growth during summer/paddy season had been discussed, and the work related to the transmission project, i.e., Augmentation of 1 no. 250 MVA 400/220 kV ICT to 500 MVA at 400 kV (PG) Moga was proposed. This issue was earlier deliberated upon in the 198<sup>th</sup> OCC meeting held on 17.8.2022, wherein the Petitioner agreed to the said work.

15. Perusal of the record further shows that this matter was also discussed in the 11<sup>th</sup> consultation meeting of the Evolving Transmission Scheme in NR. During the meeting, it was discussed that the loading of ICTs at Moga was consistently in the range of 1000-1500 MW in paddy season (May 2022 onwards) with peak loading of about 1200 MW against 1565 MVA (approx. 75% loading). Considering the load growth as indicated by the PSTCL outage of one 500 MVA ICT at Moga, the other ICT may become "N-1" non-compliant in the future. The record shows that in the 198<sup>th</sup> OCC meeting of NRPC held on 17.8.2022, NRLDC had also highlighted that the loading of 400/220 kV ICT at Moga was close to N-1 limits. Therefore, considering the unprecedented growth of load in Punjab and the request of PSTCL, it was agreed to replace the 250 MVA ICT at 765/400/220 kV Moga with a 500 MVA ICT with an



implementation time frame of 15 months from the date of allocation of the transmission project. However, the Petitioner was to implement the transmission asset by May 2023.

16. A perusal of the OM dated 28.11.2022 issued by the CTUIL, it is noticed that the Petitioner was required to commission the transmission asset within 18 months from the date of the issue of the said OM, and in the said OM, it has also been stated that the Transmission Service Provider (TSP) may expedite the implementation of the above transmission project as per the request of PSTCL vide letter dated 6.9.2022 for implementation schedule of May 2023 (reconfirmed to 31.5.2023 vide e-mail dated 1.11.2022). Further, PSTCL vide letter dated 25.11.2022 has also requested the Petitioner for early commissioning of the transmission asset by 31.5.2023.

17. From the above discussions, we are satisfied that the matter regarding the augmentation of 1 no. 250 MVA 400/220 kV ICT to 500 MVA at 400 kV (PG) at Moga, considering the unprecedented load growth during summer/paddy season in Punjab, was proposed and agreed upon in the 57<sup>th</sup> NRPC meeting and 198<sup>th</sup> OCC meeting. We further note that in the 11th consultation meeting of the Evolving Transmission Scheme in NR, the commissioning of the transmission asset was proposed to be expedited to the extent possible by May 2023. Accordingly, the Petitioner commissioned the transmission asset by May 2023.

18. In view of the above and taking into consideration the NRLDC Certificate dated 5.6.2023 certifying the successful completion of the trial run on load on 25.5.2023, CEA Energization Certificate dated 22.5.2023, Self-declaration Certificate dated 5/6.6.2023, the COD of the transmission asset is approved as 26.5.2023.

### **Capital Cost**

19. 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.”

20. The Petitioner has submitted the Auditor's Certificate dated 7.8.2023 and has claimed the following capital cost incurred as on the COD and has projected the following additional capitalisation to be incurred in respect of the transmission asset:

| Approved Cost as per FR | Capital Cost as on COD | Additional Capitalization |         |         | Estimated Completion Cost up to 31.3.2026 | Estimated Completion Cost as on 31.3.2024 |
|-------------------------|------------------------|---------------------------|---------|---------|---|---|
|                         |                        | 2023-24                   | 2024-25 | 2025-26 |   |   |
| 2952                    | 32.78                  | 896.34                    | 1493.91 | 597.56  | 3020.60                                   | 929.12                                    |

21. The Petitioner has submitted that the estimated completion cost of the transmission asset is ₹ 3020.60 lakh, and the estimated capital cost as on 31.3.2024 is ₹929.12 lakh. The estimated completion cost of ₹3020.60 lakh, as on 31.3.2026, claimed by the Petitioner, is more than the approved FR cost. The Petitioner has submitted the item-wise cost variation for the transmission project as follows:



| (₹ in lakh) |                                    |                |                        |                                  |
|-------------|------------------------------------|----------------|------------------------|----------------------------------|
| S. No.      | Description                        | Cost as per FR | Estimated Capital Cost | Variation (-decrease, +increase) |
|             |                                    | a              | b                      | c = b - a                        |
| B           | <b>Sub-stations</b>                |                |                        |                                  |
| 1           | Site Preparation                   | 20.00          | 0                      | -20.00                           |
| 2           | Foundation for structures          | 40.10          | 41.63                  | 1.53                             |
| 3           | Transformer                        | 1843.10        | 2276.91                | 433.81                           |
| 4           | Control & relay panel              | 17.15          | 9.01                   | -8.14                            |
| 5           | Outdoor lighting & FF              | 24.56          | 26.4                   | 1.84                             |
| 6           | Erection                           | 41.14          | 38.43                  | -2.71                            |
| 7           | Spares                             | 57.38          | 94.4                   | 37.02                            |
| 8           | Taxes & Duties                     | 441.87         | 504.30                 | 62.43                            |
| 9           | Over heads (IEDC)                  | 341.70         | 29.26                  | -312.44                          |
| 10          | Interest During Construction (IDC) | 125.00         | 0.26                   | -124.74                          |
|             | <b>Total</b>                       | <b>2952.00</b> | <b>3020.60</b>         | <b>68.60</b>                     |

22. The Petitioner has submitted the reasons for the cost variation vis-à-vis FR cost of the transmission asset, and the same are as follows:

**i. Decrease in IDC and IEDC Cost:**

The IDC and IEDC were estimated by considering the schedule of 18 months. However, as the transmission asset was commissioned well in time for the scheduled date of commercial operation, there is a reduction in IDC and IEDC of around ₹ 400.37 lakh vis-à-vis FR cost.

**ii. Variation in Equipment Cost:**

The Petitioner, being a Government enterprise, has the obligation for indigenous development of the manufacturer as well as to adhere to the Government of India guidelines in vogue. Accordingly, the Petitioner has been following a well laid down procurement policy which ensures both transparency and competitiveness in the bidding process. The route of Domestic Competitive Bidding (DCB) process was followed to award this project. Through this process, the lowest possible market prices for required products/services/as per detailed designing were obtained, and contracts

were awarded on the basis of the lowest evaluated eligible bidder. The best competitive bid prices against tenders may vary as compared to the cost estimates depending upon prevailing market conditions, design, and site requirements. The estimates are prepared by the Petitioner as per the well-defined procedures for cost estimates. 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 cost received during Domestic Competitive Bidding (DCB) for the transformer was higher than the estimated cost. The FR costs of individual items/materials are exclusive of taxes and duties, which have been indicated under a separate head while the cost of items as per the actual expenditure is inclusive of taxes and duties. The increase in the cost of about ₹62 lakh is mainly due to actual taxes and duties, octroi, customs duty, excise duty, GST, etc., paid based on the prevailing rates and charges raised by respective concerned statutory authorities at the time of execution of the transmission project.

23. The Revised Cost Estimate-I (RCE-I) for the transmission project is under preparation and will be submitted before the Commission.

24. We have considered the submissions of the Petitioner and have gone through the documents submitted by the Petitioner. It is observed that as per Form-5 submitted by the Petitioner, the cost variations against the following major items are as under:

| (₹ in lakh) |             |                               |                        |           |
|-------------|-------------|-------------------------------|------------------------|-----------|
| S. No.      | Particulars | Cost as per Original Estimate | Actual Completion Cost | Variation |
| 1           | Transformer | 1843.10                       | 2276.91                | 433.81    |
| 2           | Spares      | 57.38                         | 94.40                  | 37.02     |

25. The Petitioner has submitted that in the case of the transformer, the reason for the variation is rates received through an open domestic Competitive bidding process.



26. As compared to the FR cost of ₹2952.00 lakh, the estimated completion cost of the transmission asset is ₹3020.60 lakh, which is more than the approved FR cost. However, for the tariff period 2019-24, as the capital cost of ₹ 929.12 lakh is within the FR cost, the transmission charges have been approved considering the capital cost as on the COD and additional capitalization incurred during the financial year 2023-24. The estimated completion cost of the transmission asset as on 31.3.2026 would be restricted to FR cost during the 2024-29 tariff period if detailed justifications along with supporting documents are not submitted by the Petitioner at the time of truing up.

27. From the perusal of Form-5A submitted by the Petitioner, we note that the Letter of Award amounting to ₹26.40 lakh was awarded by the Petitioner for the supply of the 66 kV, 1Cx185 sq mm XLPE armoured AL cable required for augmentation of the 315 MVA ICT at Ludhiana Sub-station and augmentation of the 250 MVA ICT at the Moga Sub-station to Universe Cables Limited. However, the Petitioner has considered the completed cost of ₹26.40 lakh against the augmentation of 250 MVA ICT at the Moga Sub-station in the present Petition despite the fact that the said LOA was awarded for two Sub-stations, i.e., for Ludhiana and Moga Sub-stations. The Petitioner is directed to clarify the same at the time of truing-up.

### **Shifting of the ICT:**

28. With regard to 250 MVA ICT at the Moga Sub-station, which is replaced in the transmission project, the Petitioner has submitted that this ICT was originally covered under the “Chamera Stage-I Transmission System” Project. The 250 MVA ICT at the Moga Sub-station was capitalized on 1.5.1994 under the Chamera Stage-I Transmission System Project. The Petitioner filed Petition No. 488/TT/2019 for the truing up of the transmission tariff of the 2014-19 tariff block, and the Commission allowed tariff order vide order dated 19.2.2021 in Petition No. 488/TT/2019. The Petitioner has further submitted that as per



Regulation 19(5)(b) of the 2019 Tariff Regulations, de-capitalization of 250 MVA ICT spared from the Moga Sub-station would be done at the time of filing the truing up Petition.

29. We have considered the submissions of the Petitioner. Regulation 19(5)(b) of the 2019 Tariff Regulations provides as follows:

*“19(5) The following shall be excluded from the capital cost of the existing and new projects:  
(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.”*

30. As per Regulation 19(5) of the 2019 Tariff Regulations, the transmission asset shall be de-capitalized on account of replacement. Accordingly, the 250 MVA ICT at the Moga Sub-station is replaced with 500 MVA ICT. Therefore, the 250 MVA ICT shall be de-capitalized from the “Chamera Stage-I Transmission System” Project, which is covered in Petition No. 488/TT/2019. The Petitioner is directed to submit the details of de-capitalization of the 250 MVA ICT at the Moga Sub-station at the time of filing the Petition for truing up of tariff for the 2019-24 period.

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

31. The Petitioner has claimed ₹0.26 lakh and ₹29.26 lakh as IDC and IEDC, respectively. The Petitioner has submitted that out of a total IDC of ₹0.26 lakh, Nil amount of IDC has been discharged up to the COD of the transmission asset, and the same has been discharged in the FY 2023-24. The Petitioner has further submitted that the entire amount of IEDC of ₹29.26 lakh covered under the instant Petition has been discharged up to the COD.

32. We have considered the submissions of the Petitioner. The IDC on a cash basis and on an accrued basis up to the COD of the transmission asset has been worked out based on the loan details given in the statement showing the discharge of IDC and Form-9C for the transmission asset.



33. The IDC and IEDC claimed and allowed as on the COD for the purpose of tariff determination subject to revision at the time of truing up are as follows:

| (₹ in lakh) |                |             |              |                 |              |
|-------------|----------------|-------------|--------------|-----------------|--------------|
| IDC claimed | IDC disallowed | IDC allowed | IEDC claimed | IEDC disallowed | IEDC allowed |
| 0.26        | 0.00           | 0.26        | 29.26        | 0.00            | 29.26        |

### **Initial Spares**

34. The following Initial Spares concerning the transmission asset have been claimed by the Petitioner:

| (₹ in lakh)                   |                        |                        |                                   |                           |
|-------------------------------|------------------------|------------------------|-----------------------------------|---------------------------|
| Head                          | Plant & Machinery Cost | Initial Spares claimed | Ceiling as per Regulations (in %) | Percentage claimed (in %) |
| Sub-Station (AIS-Brown-field) | 2991.07                | 94.40                  | 6.0                               | 3.06                      |

35. The Initial Spares discharge details submitted by the Petitioner of the transmission asset are as follows:

| (₹ in lakh)                   |                             |  |   |   |
|-------------------------------|-----------------------------|--|---|---|
| Head                          | Total Initial Spare Claimed | Expenditure on Initial Spares upto COD | Expenditure on Initial Spare in 2023-24 (ACE) | Expenditure on Initial Spare in 2024-25 (ACE) |
| Sub-Station (AIS-Brown-field) | 94.40                       | 0.00                                   | 94.40   | 0.00  |

36. Regulation 23(d) of the 2019 Tariff Regulations provides that the 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%”



37. Initial Spares in respect of the transmission asset as per Regulation 23(d) of the 2019 Tariff Regulations are allowed as follows:

| (₹ in lakh)                   |  |                            |   |  |                               |                        |
|-------------------------------|--|----------------------------|---|--|-------------------------------|------------------------|
| Head                          | Plant and Machinery Cost for Calculation of Initial Spares (A) | Initial Spares Claimed (B) | Ceiling limit as per Regulations (in %) (C) | Allowable Initial Spares $D = \frac{(A-B) * C}{(100\% - C)}$ | Excess Initial Spares Claimed | Initial Spares Allowed |
| Sub-station (AIS-Brown field) | 2991.07  | 94.40                      | 6   | 184.89   | 0.00                          | 94.40                  |

### **Additional Capital Expenditure (“ACE”)**

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

**“24. Additional Capitalisation within the original scope and up to the cut-off date**

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

- (a) *Undischarged liabilities recognized to be payable at a future date;*
- (b) *Works deferred for execution;*
- (c) *Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 23 of these regulations;*
- (d) *Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority or order or decree of any court of law;*
- (e) *Change in law or compliance of any existing law; and*
- (f) *Force Majeure events:*

*Provided that in case of any replacement of the assets, the additional capitalization shall be worked out after adjusting the gross fixed assets and cumulative depreciation of the assets replaced on account of de-capitalization.*

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

39. The ACE claimed by the Petitioner for the transmission asset is as follows:

| (₹ in lakh)   |         |         |                   |
|---------------|---------|---------|-------------------|
| Projected ACE |         |         | Total ACE claimed |
| 2023-24       | 2024-25 | 2025-26 |                   |
| 896.34        | 1493.91 | 597.56  | 2993.81           |





40. The Petitioner has submitted that the ACE incurred is on account of undischarged liability towards final payment/withheld payment due to the contractual exigencies for works executed within the cut-off date under Regulations 24(1)(a) and 24(1)(b) of the 2019 Tariff Regulations.

41. The details of ACE claimed by the Petitioner for the 2019-24 tariff period, as well as the liability flow statement for the transmission asset, are as follows:

(₹ in lakh)

| Head/Part wise   | Particulars      | Outstanding Liability as on COD | Discharged Amount |                 | Additional Liability Recognized |                 | Outstanding Liability as on 31.3.2024 |
|--|------------------|---------------------------------|-------------------|-----------------|---------------------------------|-----------------|---------------------------------------|
|  |                  |                                 | 2023-24           | Total (2019-24) | 2023-24                         | Total (2019-24) |                                       |
| M/s Toshiba, M/s Sree Projects, M/s Yamuna Accessories Pvt Ltd and Misc. Petty Contractors | Sub-station Work | 0.65                            | 0.65              | 0.65            | 895.69                          | 895.69          | 0.00                                  |

(₹ in lakh)

| Head/Part wise   | Particulars      | Outstanding Liability as on COD | Discharged Amount |         |                 | Additional Liability Recognized |         |                 | Outstanding Liability as on 31.3.2024 |
|--|------------------|---------------------------------|-------------------|---------|-----------------|---------------------------------|---------|-----------------|---------------------------------------|
|  |                  |                                 | 2024-25           | 2025-26 | Total (2024-29) | 2024-25                         | 2025-26 | Total (2024-29) | (to be discharged during 2024-29)     |
| M/s Toshiba, M/s Sree Projects, M/s Yamuna Accessories Pvt Ltd and Misc. Petty Contractors | Sub-station Work | 0.00                            | 0.00              | 0.00    | 0.00            | 1493.91                         | 597.56  | 2091.47         | 0.00                                  |

42. We have considered the Petitioner's submissions. The COD of the transmission asset is approved as 26.5.2023, and the cut-off date of the transmission project is 31.5.2026. The



ACE claimed by the Petitioner for the 2019-24 tariff period is allowed under Regulations 24(1)(a) and 24(1)(b) of the 2019 Tariff Regulations as it is towards undischarged liabilities recognized to be payable at a future date and balance work deferred for execution. The Petitioner has projected the ACE in the financial years 2024-25 and 2025-26. However, we have not considered it in the instant Petition, and the same will be dealt with separately later as per the 2024-29 Tariff Regulations. The ACE allowed concerning the transmission asset is as follows:

|   |  | (₹ in lakh)   |
|---|--|---------------|
| Particulars   | Regulations                                      | ACE allowed   |
|   |  | 2023-24       |
| Balance and retention payments for liabilities other than IDC | 24(1)(a) and 24(1)(b) of 2019 Tariff Regulations | 896.34        |
| IDC Discharged after COD                                      |  | 0.26          |
| <b>Total ACE</b>  |  | <b>896.60</b> |

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

| (₹ in lakh)           |                                   |                                    |                              |
|-----------------------|-----------------------------------|------------------------------------|------------------------------|
| Particulars           | Capital cost considered as on COD | ACE for the 20219-24 Tariff Period | Capital cost As on 31.3.2024 |
| <b>Capitalisation</b> | 32.52                             | 896.60                             | 929.12                       |

### **Debt-Equity Ratio**

44. 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:*

- (c) 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:*
- (d) 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 utilized for meeting the capital expenditure of the generating station or the transmission system.

- (e) 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.
- (f) 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.

- (g) 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 modernization 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.”

45. The Petitioner has claimed a debt-equity ratio of 70:30, and the same has been considered by the Commission in accordance with Regulation 18 of the 2019 Tariff Regulations and the same is as follows:

| <b>Funding</b> | <b>Capital cost as on COD (₹ in lakh)</b> | <b>(in %)</b> | <b>Capital cost as on 31.3.2024 (₹ in lakh)</b> | <b>(in %)</b> |
|----------------|---|---------------|---|---------------|
| Debt           | 22.76                                     | 70.00         | 650.38  | 70.00         |
| Equity         | 9.76                                      | 30.00         | 278.74  | 30.00         |
| <b>Total</b>   | <b>32.52</b>                              | <b>100.00</b> | <b>929.12</b>                                   | <b>100.00</b> |



## Depreciation

46. 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.*

(h) *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.*

(i) *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.*

(j) *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 31<sup>st</sup> 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 asset*



(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.”

47. We have considered the submissions of the Petitioner. The depreciation is worked out considering the admitted capital cost as on COD and ACE allowed in FY 2023-24. The Weighted Average Rate of Depreciation (WAROD) at Annexure-I has been worked out as per the rates of depreciation specified in the 2019 Tariff Regulations. The depreciation allowed in respect of the transmission asset for the 2019-24 tariff period is as follows:

(₹ in lakh)

|   | Particulars   | 2023-24 (pro-rata for 311 days) |
|---|---|---------------------------------|
| A | Opening Gross Block                                   | 32.52                           |
| B | Addition during the year 2019-24 due to projected ACE | 896.60                          |
| C | Closing Gross Block (A+B)                             | 929.12                          |
| D | Average Gross Block (A+C)/2                           | 480.82                          |
| E | Average Gross Block (90% depreciable assets)          | 480.82                          |



|          | Particulars   | 2023-24 (pro-rata for 311 days) |
|----------|---|---------------------------------|
| F        | Average Gross Block (100% depreciable assets)                   | 0.00                            |
| G        | Depreciable value (excluding IT equipment and software) (E*90%) | 432.74                          |
| H        | Depreciable value of IT equipment and software (F*100%)         | 0.00                            |
| I        | Total Depreciable Value (G+H)                                   | 432.74                          |
| J        | Weighted average rate of Depreciation (WAROD) (in %)            | 5.28%                           |
| K        | Lapsed useful life at the beginning of the year (Year)          | 0                               |
| L        | Balance useful life at the beginning of the year (Year)         | 25                              |
| <b>M</b> | <b>Depreciation during the year (D*J)</b>                       | <b>21.57</b>                    |
| N        | Cumulative Depreciation at the end of the year                  | 21.57                           |
| O        | Remaining Aggregate Depreciable Value at the end of the year    | 411.17                          |

### **Interest on Loan (IoL)**

48. 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.*

(k) *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.*

(l) *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 upto the date of de-capitalisation of such asset.*

(m) *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”.

49. The Weighted Average Rate of Interest on loan (WAROI) has been considered on the basis of the rates prevailing as on COD for 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 may be adjusted. Accordingly, the floating rate of interest, if any, will be considered at the time of true-up. IoL has been worked out in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL allowed in respect of the transmission asset is as follows:

|   |  | (₹ in lakh)                     |
|---|--|---------------------------------|
|   | Particulars                                      | 2023-24 (pro-rata for 311 days) |
| A | Gross Normative Loan                             | 22.76                           |
| B | Cumulative Repayments up to Previous Year        | 0.00                            |
| C | Net Loan-Opening (A-B)                           | 22.76                           |
| D | Addition due to ACE                              | 627.62                          |
| E | Repayment during the year                        | 21.57                           |
| F | Net Loan-Closing (C+D-E)                         | 628.81                          |
| G | Average Loan (C+F)/2                             | 325.79                          |
| H | Weighted Average Rate of Interest on Loan (in %) | 7.56%                           |
| I | <b>Interest on Loan (G*H)</b>                    | <b>20.93</b>                    |

### **Return on Equity (RoE)**

50. 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 1<sup>st</sup> 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:





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.”

51. The Petitioner has submitted that the MAT rate is applicable to it. MAT rate applicable has been considered for the purpose of RoE which will 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                               | 2023-24 (pro-rata for 311 days) |
| A | Opening Equity                            | 9.76                            |
| B | Addition due to ACE                       | 268.98                          |
| C | Closing Equity (A+B)                      | 278.74                          |
| D | Average Equity (A+C)/2                    | 144.25                          |
| E | Return on Equity (Base Rate) (in %)       | 15.50%                          |
| F | Tax Rate applicable (in %)                | 17.472%                         |
| G | Rate of Return on Equity (Pre-tax) (in %) | 18.782%                         |
| H | <b>Return on Equity (Pre-tax) (D*G)</b>   | <b>23.02</b>                    |

### **Operation and Maintenance Expenses (O&M Expenses)**

52. O&M Expenses of the transmission asset claimed by the Petitioner for the 2019-24 tariff period are as follows:



(₹ in lakh)

| Particulars  | 2023-24 (pro-rata for 311 days) |
|--------------|---------------------------------|
| O&M Expenses | 174.62                          |

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

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

| Particulars   | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---------|---------|---------|---------|---------|
| <b>Norms for sub-station Bays (₹ Lakh per bay)</b>                    |         |         |         |         |         |
| 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   |
| <b>Norms for Transformers (₹ Lakh per MVA)</b>                        |         |         |         |         |         |
| 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   |
| <b>Norms for AC and HVDC lines (₹ Lakh per km)</b>                    |         |         |         |         |         |
| 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   |
| <b>Norms for HVDC stations</b>  |         |         |         |         |         |
| 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  $\pm 500$  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  $\pm 500$  kV Talchar-Kolar HVDC bi-pole scheme (2000 MW);
- iv. the O&M expenses of  $\pm 800$  kV Champa-Kurukshetra HVDC bi-pole scheme (3000 MW) shall be on the basis of the normative O&M expenses for  $\pm 800$  kV, Bishwanath-Agra HVDC bi-pole scheme;
- v. the O&M expenses of  $\pm 800$  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  $\pm 800$  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.”

54. 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)                     |
|--|---------------------------------|
|  | 2023-24 (pro-rata for 311 days) |
| O&M Expenses claimed   | 174.62                          |
| 400/220 kV ICT (in MVA)  | 500                             |
| Norms as per Regulation 35(3)(a) of 2019 Tariff Regulation (₹ Per MVA) | 0.411                           |
| O&M Expenses allowed   | 174.62                          |

## **Interest on Working Capital (IWC)**

55. Regulations 34(1)(c), 34(3), 34(4) and 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:-

(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;”

56. The Petitioner has submitted that it has computed IWC for the 2019-24 tariff period considering the SBI Base Rate plus 350 basis points as on the COD of the transmission project. The Petitioner has considered the rate of IWC as 12.00% for the financial year 2023-24.

57. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The Rate of Interest (RoI) considered for FY 2023-24 is 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 for the transmission asset are as follows:

| Particulars   | (₹ in lakh)                     |
|---|---------------------------------|
|   | 2023-24 (pro-rata for 311 days) |
| Working Capital for O&M Expenses (O&M Expenses for one month)   | 17.13                           |
| Working Capital for Maintenance Spares (15% of O&M Expenses)  | 30.83                           |
| Working Capital for Receivables (Equivalent to 45 days of annual fixed cost /annual transmission charges) | 35.99                           |



| Particulars                                 | 2023-24 (pro-rata for 311 days) |
|---|---------------------------------|
| Total Working Capital                       | 83.94                           |
| Rate of Interest for working capital (in %) | 12.00%                          |
| <b>Interest on working capital</b>          | <b>8.56</b>                     |

### **Annual Fixed Charges for the 2019-24 Tariff Period**

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

| Particulars                 | (₹ in lakh)                     |
|-----------------------------|---------------------------------|
|                             | 2023-24 (pro-rata for 311 days) |
| Depreciation                | 21.57                           |
| Interest on Loan            | 20.93                           |
| Return on Equity            | 23.02                           |
| O&M Expenses                | 174.62                          |
| Interest on Working Capital | 8.56                            |
| <b>Total</b>                | <b>248.70</b>                   |

### **Filing Fee and Publication Expenses**

59. The Petitioner has sought reimbursement of the fee paid by it for filing the Petition and incurred towards 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**

60. 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 the 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**

61. 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 Government/Statutory Authorities; the same may be allowed to be recovered from the beneficiaries.

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

### **Security Expenses**

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

64. We have considered the above submissions of the Petitioner. The Petitioner has claimed consolidated security expenses for all the transmission assets owned by it on a projected basis for the 2019-24 tariff period on the basis of actual security expenses incurred in FY 2018-19 in Petition No. 260/MP/2020. The Commission, vide its order dated 3.8.2021 in Petition No. 260/MP/2020, has 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.



### **Capital Spares**

65. 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**

66. With effect from 1.11.2020, the sharing of transmission charges is governed by the provisions of the Central Electricity Regulatory Commission (Sharing of inter-State transmission charges and losses) Regulations, 2020 (2020 Sharing Regulations). Accordingly, the billing, collection, and disbursement of transmission charges shall be recovered in terms of provisions of the 2020 Sharing Regulations as provided in Regulation 57 of the 2019 Tariff Regulations.

### **Interim Tariff**

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

68. We have considered the Petitioner's submissions. Since we have determined the transmission tariff in respect of the transmission asset in this order, the prayer for the interim tariff becomes redundant. Therefore, we have not considered it in this order.

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

| <b>(₹ in lakh)</b> |  |
|--------------------|--|
| <b>Particulars</b> | <b>2023-24 (pro-rata<br/>for 311 days)</b> |
| AFC                | <b>248.70</b>                              |

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



71. This order disposes of Petition No. 369/TT/2023 in terms of the above findings and discussions.

**sd/-  
(Harish Dudani)  
Member**

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

**sd/-  
(Jishnu Barua)  
Chairperson**





**Annexure-I**

(₹ in lakh)

| Particulars  | Admitted Capital Cost as on COD | Projected ACE during 2023-24 | Admitted Capital Cost as on 31-03-2024 | Dep Rate                | Annual Depreciation |
|--------------|---------------------------------|------------------------------|--|-------------------------|---------------------|
|              |                                 |                              |  |                         | 2023-24             |
| Sub-station  | 32.52                           | 896.60                       | 929.12                                 | 5.28%                   | 25.39               |
| <b>Total</b> | <b>32.52</b>                    | <b>896.60</b>                | <b>929.12</b>                          |                         | <b>25.39</b>        |
|              |                                 |                              |  | <b>Avg. Gross Block</b> | <b>480.82</b>       |
|              |                                 |                              |  | <b>WAROD</b>            | <b>5.28%</b>        |

