

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No.333/TT/2022

Coram:

**Shri Jishnu Barua, Chairperson
Shri Arun Goyal, Member
Shri P. K. Singh, Member**

Date of Order: 22.03.2024

In the matter of:

Approval under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for revision of Transmission tariff for 2019-24 tariff block for Stage-1 of 400 kV Thyristor controlled series compensation project (Fact Device) on Kanpur-Ballabgarh 400 kV S/C line at Ballabgarh in Northern Region; and approval under Regulation 76 and Regulation 77 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019, "Power to Relax" and "Power to Remove Difficulty" for one-time reimbursement of unrecovered depreciation for Stage-1 of 400 kV Thyristor controlled series compensation project (Fact Device) on Kanpur-Ballabgarh 400 kV S/C line at Ballabgarh in Northern Region.

And in the matter of:

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

... Petitioner

Vs.

1. Uttar Pradesh Power Corporation Limited,
Shakti Bhavan, 14, Ashok Marg, Lucknow – 226 001
2. Ajmer Vidyut Vitran Nigam Limited,
132 kV, GSS RVPNL Sub- station building,
Caligiri Road, Malviya Nagar, Jaipur– 302017
3. Jaipur Vidyut Vitran Nigam Limited,
132 kV, GSS RVPNL Sub- station building,
Caligiri Road, Malviya Nagar, Jaipur– 302017
4. Jodhpur Vidyut Vitran Nigam Limited,
132 kV, GSS RVPNL Sub- station building,
Caligiri Road, Malviya Nagar, Jaipur– 302017



5. Himachal Pradesh State Electricity Board
Vidyut Bhawan, Kumar House Complex Building-II, Shimla – 171 004
 6. Punjab State Electricity Board
The Mall, Patiala – 147 001
 7. Haryana Power Purchase Centre
Shakti Bhawan, Sector-6,
Panchkula, Haryana – 134 109
 8. Power Development Department
Government of Jammu & Kashmir,
Mini Secretariat, Jammu
 9. BSES Yamuna Power Limited
BSES Bhawan, Nehru Place,
New Delhi
 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 – 110 009
 12. Chandigarh Administration,
Sector - 9, Chandigarh
 13. Uttarakhand Power Corporation Limited
Urja Bhawan, Kanwali Road, Dehradun
 14. North Central Railway,
Allahabad
 15. New Delhi Municipal Council,
Palika Kendra, Sansad Marg
New Delhi – 110 002
 16. Central Transmission Utility of India Ltd. (CTUIL)
First Floor, Saudamini Plot No-2, Sector-29,
Near IFFCO Chowk Metro Station, Gurgaon – 122 001
- ...Respondent(s)**



For Petitioner : Ms. Swapna Seshadri, Advocate, PGCIL
Ms. Sneha, Advocate, PGCIL
Shri Utkarsh Singh, PGCIL
Ms. Supriya Singh, PGCIL
Shri Bipin Bihari Rath, PGCIL
Shri Vivek Kumar Singh, PGCIL

For Respondents : Shri Sandeep Kamawat, CTUIL
Shri Akshayvat Kislav , CTUIL
Shri Siddharth Sharma, CTUIL

ORDER

The instant petition is filed Power Grid Corporation of India Limited for revision of transmission tariff of 2019-24 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) and approval under Regulation 76 and Regulation 77 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations’ 2019, “Power to Relax” and “Power to Remove Difficulty” for one-time reimbursement of unrecovered depreciation, in respect of assets under Stage-1 of 400 kV Thyristor controlled series compensation project (Fact Device) on Kanpur-Ballabgarh 400 kV S/C line (hereinafter referred to as “the transmission asset”) at Ballabgarh in Northern Region.

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

- “1) Approve the de-cap and revision of transmission tariff for 2019-24 block for the assets covered under this petition.*
- 2) Allow unrecovered depreciation under Regulation 76 and Regulation 77 of CERC (Terms and Conditions of Tariff) Regulations’ 2019, “Power to Relax” and “Power to Remove Difficulty”.*
- 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 2014 and Tariff regulations 2019 as per para 8 and 9 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 respondents.*
- 7) *Allow the Petitioner to claim the overall security expenses and consequential IOWC on that security expenses separately.*
- 8) *Allow the Petitioner to bill and recover GST on Transmission Charges separately from the respondents, if GST on transmission is levied at any rate in future. Further, any taxes including GST and duties including cess etc. imposed by any statutory/Govt./municipal authorities shall be allowed to be recovered from the beneficiaries.*

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

Background

3. The brief facts of the case are as follows:
 - a. The Investment Approval (IA) for the transmission asset was accorded by the Board of Directors of the Petitioner vide Memorandum dated 12.5.2000 at an estimated cost of ₹1476 lakh at the 4th quarter 1999 price level, including an IDC of ₹83 lakh.
 - b. The transmission asset was scheduled to be put into commercial operation in December 2000 against which it was put into commercial operation on 1.7.2002.
 - c. The transmission tariff for the period from 1.4.2002 to 31.3.2004 for the transmission asset was determined vide order dated 23.3.2005 in Petition No. 116/2002; for the period from 1.4.2004 to 31.3.2009, vide order dated 9.5.2006 in Petition No. 60/2005; and for the period from 1.4.2009 to 31.3.2014 vide order dated 14.9.2009 in Petition No.131/2009. The transmission tariff for the 2009-14 period was trued up, and the tariff for the period from 1.4.2014 to 31.3.2019 was determined vide order dated 15.2.2016 in Petition No.168/TT/2014. The tariff for



the 2014-19 period was trued up and the tariff for the period from 1.4.2019 to 31.3.2024 was determined vide order dated 1.2.2021 in Petition No. 7/TT/2020.

- d. The Petitioner, in its Petition 7/TT/2020, had claimed additional capitalization during 2019-24 for upgradation of Fact Device Series Compensation (FSCs) due to obsolescence of technology and the lack of availability of spare parts.
- e. The Commission, vide order dated 1.2.2021 in Petition No 7/TT/2020, disallowed the additional capitalization projected against the upgradation of FSCs and directed to consult OEM and seek a comprehensive report on the status of control and protection system for FSC installation in 400 kV S/C Kanpur-Ballabgarh Line at Ballabgarh Sub-station with the purpose of grid reliability and security and place the same on record for consideration of the Commission at the time of true up of the 2019-24 tariff period.
- f. The Petitioner held a meeting with stakeholders on 3.8.2021 under the chairmanship of Chief Engineer (PSPA-1), CEA, where it was observed by various stakeholders that there is no need for refurbishing the FSCs as system already possesses sufficient power transfer capacity.
- g. Based on the above meeting, the matter was taken up with NRPC in the 49th NRPC meeting held on 27.9.2021, and the 47th TCC held on 23.9.2021 & 24.9.2021, in which TCC resolved that the Petitioner may approach the Commission, contingent upon the outcome of the forthcoming CEA's NRPC-TP meeting, where discussions on the viability of the FSC will be held.
- h. Accordingly, the matter was further taken up for discussion in the 4th meeting of NRPC-TP held on 05.10.2021 & 12.10.2021, wherein it was decided that there was



no requirement for refurbishment of FSC at Kanpur-Ballabgarh Line-1 and also the same cannot be relocated as the FSC is designed for a particular line with specific line parameters.

- i. The transmission tariff allowed for the 2019-24 tariff period vide order dated 1.2.2021 in Petition No. 7/TT/2020, and the revised transmission tariff claimed by the Petitioner in the instant petition is as follows:

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Allowed in order dated 1.2.2021 in Petition no. 7/TT/2020	137.14	135.89	136.50	137.76	139.05
Claimed by the Petitioner in the instant petition	137.14	136.09	46.82	-	-

- j. The Petitioner has sought revision of transmission tariff approved for the 2020-21 to 2023-24 tariff period on account of De-Capitalisation of transmission asset on 3.8.2021 and has also sought one-time reimbursement of unrecovered depreciation of ₹194.68 lakh under Regulation 76 and Regulation 77 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations' 2019, "Power to Relax" and "Power to Remove Difficulty".

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

5. The Petitioner has served the petition on the Respondents and notice regarding filing of this petition has been published in newspapers 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 notices published in the newspapers. Respondent No. 1, Uttar Pradesh Power



Corporation Ltd. (UPPCL) has filed its reply vide affidavit dated 5.8.2022. In response, the Petitioner has filed its rejoinder vide affidavit dated 29.12.2022.

6. During the hearing on 12.1.2023, the Commission directed the Petitioner to implead CTUIL as a party to the instant petition. Accordingly, the Petitioner vide email dated 20.1.2023 impleaded CTUIL as a party to the instant petition.

7. This order is being issued considering the submissions made by the Petitioner in the petition, affidavit dated 17.2.2023, UPPCL's reply vide affidavit 5.8.2022, and the Petitioner's rejoinder to the reply of UPPCL, vide affidavit dated 29.12.2022.

8. The hearing in this matter was held on 1.12.2022, 12.1.2023, 6.3.2023 and on 27.9.2023 the order was reserved.

9. Having heard the representatives of the Petitioner and Respondents and perused the material on record, we proceed to dispose of the petition.

Revision of transmission charges for 2019-24 tariff period

10. The Petitioner has claimed decapitalization of the transmission asset w.e.f. 3.8.2021 and reimbursement of unrecovered depreciation of ₹194.68 lakh.

11. The Petitioner has claimed the following revised tariff for the transmission asset for the 2019-24 tariff period:

Particulars	2019-20	2020-21	(₹ in lakh)
			2021-22 (pro rata for 125 days)
Depreciation	29.24	29.24	10.01
Interest on Loan	2.80	0.60	0.00
Return on Equity	70.01	70.01	23.98
Interest on Working Capital	2.94	2.96	1.03
O&M Expenses	32.15	33.28	11.80
Total	137.14	136.09	46.82



12. The Petitioner has requested for a revision of the transmission tariff for the 2019-24 tariff period based on the De-Capitalisation of the transmission asset w.e.f. 3.8.2021. Further, the Petitioner has requested a one-time reimbursement of unrecovered depreciation of ₹194.68 lakh under Regulation 76 and Regulation 77 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019, “Power to Relax” and “Power to Remove Difficulty.”

Revision of Transmission Tariff for 2019-24 Tariff Period

13. The Commission, vide order dated 1.2.2021 in petition no. 7/TT/2020, had allowed the tariff for the 2019-24 period as below:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	29.24	29.24	29.24	29.24	29.24
Interest on Loan	2.80	0.60	0.00	0.00	0.00
Return on Equity	70.01	70.01	70.01	70.01	70.01
Interest on Working Capital	2.94	2.76	2.80	2.85	2.89
O&M Expenses	32.15	33.28	34.45	35.66	36.91
Total	137.14	135.89	136.50	137.76	139.05

14. The Petitioner has submitted the information as required under the 2019 Tariff Regulations for the revision of annual fixed charges for the 2019-24 period. The tariff for the 2019-24 period has accordingly been revised, as discussed in the subsequent paragraphs.

15. The details of the revised transmission charges claimed by the Petitioner are as follows:

(₹ in lakh)			
Particulars	2019-20	2020-21	2021-22 (pro rata for 125 days)
Depreciation	29.24	29.24	10.01
Interest on Loan	2.80	0.60	0.00
Return on Equity	70.01	70.01	23.98
Interest on Working Capital	2.94	2.96	1.03
O&M Expenses	32.15	33.28	11.80
Total	137.14	136.09	46.82



Capital Cost as on 1.4.2019

16. The Commission, vide order dated 1.7.2021 in Petition No. 7/TT/2020, had allowed the transmission tariff for the transmission asset for the 2019-24 period based on the admitted capital cost of ₹1499.18 lakh as on 1.4.2019 for the transmission asset. The Petitioner has not claimed any ACE during the 2019-24 tariff period. However, the Petitioner claimed de-capitalization of ₹1499.18 lakh during 2021-22. Accordingly, the capital cost considered in accordance with Regulation 19 of the 2019 Tariff Regulations is as follows.

(₹ in lakh)

Particular	2019-20	2020-21	2021-22
Opening Capital Cost	1499.18	1499.18	1499.18
Add: Addition during the year/ period	0.00	0.00	0.00
Less: Decapitalization during the year/period	0.00	0.00	1499.18
Less: Reversal during the year/period	0.00	0.00	0.00
Add: Discharges during the year/period	0.00	0.00	0.00
Closing Capital Cost	1499.18	1499.18	0.00
Average Capital Cost	1499.18	1499.18	749.59

17. The capital cost of ₹1499.18 lakh as on 31.3.2019 has been considered by the Commission.

Additional Capital Expenditure (ACE):

18. The Petitioner in Petition No. 7/TT/2020 has claimed ACE of ₹871.20 lakh (₹784.08 lakh during 2020-21 and ₹87.12 lakh during 2021-22) and de-capitalisation of ₹334.38 lakh during 2020-21 on account of upgradation of FSCs in view of obsolescence of old technology used in these FSCs. The Commission vide order dated 1.2.2021 did not approve the proposed ACE for the 2019-24 tariff period. The relevant extracts of the order dated 1.2.2021 is as follows:

"73. We have considered the submissions of the Petitioner and perused the documents placed on record. The Petitioner has submitted letter dated 13.2.2014 received from BHEL regarding



supply of certain items in connection to Jeypore Substation. In the annexure to aforesaid letter, BHEL has expressed regret in supply of some items. However, the items for which BHEL has expressed its inability are not legible. Hence, it cannot be determined whether those items were related to control and protection panel of FSCs installed at Jeypore sub-station. Further, vide email dated 14.11.2019, AGM (CE-SACDA, HVDC & RPM), BHEL suggested for an R&M of the FSCs system installed at Jeypore Sub-station on account of non-availability of electronic components control and protection panel as the said system was installed way back in 2005. It is also noted that the Petitioner has not placed on record any communication to demonstrate that it has approached the OEM seeking solution for outage due to maloperation of control and protection system at Ballabgarh Substation. Rather the Petitioner has submitted copy of proposal received from OEM for upgradation of the control and protection system for FSC installed in 400 kV S/C Kanpur-Ballabgarh Line at Ballabgarh Sub-station. On perusal of the said proposal, it is observed that the Petitioner itself intended to upgrade the existing control and protection system for smooth operation and maintenance of the system. In view of the above, we are not convinced that the proposed ACE during 2019-24 is on account of suggestion from OEM for replacement of old control and protection system for FSC installation in 400 kV S/C Kanpur-Ballabgarh Line at Ballabgarh Sub-station. Therefore, we are of the considered view that the Petitioner has proposed ACE during 2019-24 for replacement of old control and protection system for FSC installation at Ballabgarh Sub-station without express recommendation of the OEM and hence, the proposed expenditure is disallowed. The Petitioner is directed to consult OEM and seek comprehensive report on the status of control and protection system for FSC installation in 400 kV S/C Kanpur-Ballabgarh Line at Ballabgarh Sub-station with the purpose of grid reliability and security and place the same on record for consideration of the Commission at the time of true up of the 2019-24 tariff period.

74. The total capital cost allowed as on 1.4.2019 is ₹1499.18 lakh and the Petitioner has proposed ACE of ₹536.82 lakh (de-capitalisation of ₹334.38 lakh reduced). The proposed ACE is about 35.80% of the total capital cost approved as on 31.3.2019. Therefore, we are of the view that the proposed ACE is in the nature of upgradation and, therefore, the Petitioner is directed to obtain consent of beneficiaries or the long term customers and RPC. The Petitioner is also directed to submit the details of power transfer capability of the Kanpur-Ballabgarh 400 kV S/C line at Ballabgarh, dynamic stability details, voltage regulation and reactive power balance and load sharing between parallel lines at the time of true up.

76. We have perused the aforesaid orders. In Petition No. 133/TT/2015, the Commission has allowed ACE for tower strengthening and replacement of insulators based on recommendation of CEA. Similarly, in Petition No. 35/TT/2015, the Commission took a considered view based on the report of CPRI and discussion in 12th meeting of SRPC. Further, in Petition No. 543/TT/2014, the Commission allowed ACE as a special case under Regulation 54 of the 2014 Tariff Regulations and also observed that it should not to be quoted as a precedent in future petitions. It is clear that the Commission had allowed ACE in the above cases referred by the Petitioner only after prudence check and it was a conscious decision. The Petitioner is also directed to discuss this issue in the RPC/OCC and seek consent of beneficiaries for upgradation of FSC installation in 400 kV S/C Kanpur-Ballabgarh Line at Ballabgarh Sub-station, if required, and place the same along with OEM report on record for consideration of the Commission at the time of true up of the 2019-24 tariff period



19. The Respondent, UPPCL, vide affidavit dated 5.8.2022, has submitted that the Petitioner took a unilateral decision to refurbish the FSC. The Petitioner discussed the matter with beneficiaries at the forum of CTU, NRPC, CEA and TCC only as per the specific directions of the Commission ordered in Petition No. 7/TT/2020 and despite specific direction from the Commission to come back with this matter at the time of true-up of tariff, the Petitioner approached the Commission with this petition prior to true-up. UPPCL has further submitted that it has no liability to bear the cost on account of the de-capitalization of FSC because UPPCL had never consented to such capital expenditure. Therefore, it has requested to remove the capital expenditure made on refurbishment of FSC by the Petitioner with effect from the date the work of refurbishment was completed. It was submitted that the Petitioner has to bear the full impact of this expenditure. The Respondent has no liability to share this cost as reimbursement or through tariff or any other mode.

20. In response, the Petitioner vide affidavit dated 29.12.2022 has submitted that the Respondent got confused with the claim on unrecovered depreciation being a claim for the cost incurred for the refurbishment of FSC. However, no expenditure has been incurred/claimed against refurbishment of FSC and the unrecovered depreciation is claimed for the original investment done for the FSC. Thus, it is prayed that the Commission should allow unrecovered depreciation as claimed in the petition, as FSC was installed as per system requirement and is being removed based on system requirement, and the investment made should be fully recovered.

21. We have considered the submissions of the Petitioner and UPPCL. The Petitioner has not proposed any ACE in the 2019-24 tariff Period. Therefore, the Respondents are not required to bear any additional cost/ tariff.



De-Capitalization

22. The Petitioner has proposed to de-capitalize the transmission asset after undergoing a series of discussions with beneficiaries and the Northern Regional Power Committee (NRPC) in accordance with the direction of the Commission, vide order dated 1.2.2021. The relevant extract of paragraphs 73, 74 and 76 of the aforementioned order is as follows:

“73..... The Petitioner is directed to consult OEM and seek comprehensive report on the status of control and protection system for FSC installation in 400 kV S/C Kanpur-Ballabgarh Line at Ballabgarh Sub-station with the purpose of grid reliability and security and place the same on record for consideration of the Commission at the time of true up of the 2019-24 tariff period.

74..... Therefore, we are of the view that the proposed ACE is in the nature of upgradation and, therefore, the Petitioner is directed to obtain consent of beneficiaries or the long term customers and RPC. The Petitioner is also directed to submit the details of power transfer capability of the Kanpur-Ballabgarh 400 kV S/C line at Ballabgarh, dynamic stability details, voltage regulation and reactive power balance and load sharing between parallel lines at the time of truing up.

76.... The Petitioner is also directed to discuss this issue in the RPC/OCC and seek consent of beneficiaries for upgradation of FSC installation in 400 kV S/C Kanpur-Ballabgarh Line at Ballabgarh Sub-station, if required, and place the same along with OEM report on record for consideration of the Commission at the time of true up of the 2019-24 tariff period.”

23. Further, the Commission vide hearing dated 1.2.2023 directed the Petitioner to implead CTUIL as a party to the instant petition. In compliance with the Commission’s directive, CTUIL was impleaded as a party to the instant petition.

24. As regards the consent of beneficiaries with regard to upgradation of the transmission asset, the Petitioner has submitted that CTUIL was approached to carry out a load flow study of FSC at Ballabgarh and a meeting was held on 3.8.2021 with stakeholders under the chairmanship of Chief Engineer (PSPA-1), CEA, to discuss the issue. After detailed deliberations, all parties reached a consensus that there was no necessity to proceed with the refurbishment of the FSC at the Kanpur-Ballabgarh transmission line. The relevant extract of the minutes of the meetings is as follows:



“(ii) In view of the factors like loading of Kanpur-Ballabgarh line in present and future scenarios, the voltage profile of Kanpur & Ballabgarh and the angular difference, CTUIL suggested that there is no requirement to refurbish the FSC at Kanpur-Ballabgarh Line-1 and system has sufficient power transfer capacity and sufficient margin in terms of stability (both voltage and angular) even without FSC at Line-1.

(iii) POSOCO stated that at present these lines remain under-loaded. However, POSOCO enquired about the anticipated loading on these lines in future scenarios with RE generations. On which, CTUIL replied that as per the system studies, under normal conditions, these lines remain less loaded of the order of 200-300 MW.

(iv) UPPTCL also suggested that as loading on the Kanpur-Ballabgarh Lines are quite low in present scenario and are also expected to be low in 2024-25 scenario, refurbishment of FSC at Kanpur-Ballabgarh Line-1 is not advisable.

(v) After deliberations, it was agreed that there is no requirement of refurbishment of FSC at Kanpur-Ballabgarh Line-1.”

25. Further, the Petitioner submitted the matter was taken up in the 49th NRPC held on 27.9.2021 and 47th TCC held on 23.9.2021 and 24.9.2021, respectively. In the said meetings, the Technical Co-ordination Committee (TCC) resolved that the Petitioner may approach the Commission based on the decision from CEA's upcoming NRPCTP meeting regarding the utility of FSC. The relevant extract of the minutes of the meetings is as follows:

“C.6.4 Representative of CTU informed that as noted in the MoM of the meeting held on 03.08.21, there was no requirement of the FSC in present load flow conditions. Hence FSC refurbishment for Kanpur-Ballabgarh Line-1 was declined. He further informed that the matter will also be deliberated in upcoming 4thNRPC (TP) meeting.

C.6.5 Representative of POWERGRID informed that balance unrecovered Depreciation (up to 90%) for this FSC is about Rs. 2.0 Crores as on 31.03.2021. If the FSC in Line-1 is being de-capitalized due to no utility in present network condition, the balance unrecovered depreciation may be reimbursed.

TCC decided that POWERGRID may approach CERC based on the decision taken in the upcoming CEA's NRPCTP meeting regarding utility of the FSC

NRPC deliberations:

C.6.6 NRPC concurred with the TCC deliberations.”

26. The Petitioner submitted that the matter was further taken up for discussion in the 4th meeting of NRPC-TP held on 5.10.2021 and 12.10.2021, wherein it was decided that there was



no requirement for refurbishment of FSC at Kanpur-Ballabgarh Line-1. The relevant extract of the minutes of the meetings is as follows:

“10.6 CTU stated that relocation of FSC is a challenging task as FSCs are designed for a particular line with specific line parameters like Short Circuit MVA, as such it is difficult to find the exact match for the FSC to fit in after relocation. Also, there is a technical issue of control and protection in the FSC of Kanpur- Ballabgarh line. Therefore, it cannot be relocated.

10.9 After Deliberation following was decided:

(iii) There is no requirement of refurbishment of FSC at Kanpur-Ballabgarh Line-1”

27. The Petitioner further submitted that the instant transmission asset is not required now and, in the future, and the same cannot be reallocated to other locations as FSC is designed for a particular line with specific line parameters like Short Circuit MVA. Moreover, there is a technical issue of control and protection in the FSC of the Kanpur-Ballabgarh line. Therefore, the Petitioner has proposed to de-capitalize the instant asset w.e.f. 3.8.2021, i.e. from the date when the first meeting was held with stakeholders wherein it was decided that the transmission asset was not required in present and future scenarios.

28. We have considered the submission made by the Petitioner and gone through the minutes of the meeting held on 3.8.2021 with stakeholders under the chairmanship of Chief Engineer (PSPA-1), CEA, minutes of the 49th NRPC held on 27.9.2021 and 47th TCC held on 23.9.2021 and 24.9.2021, the minutes of the 4th meeting of NRPC-TP held on 5.10.2021 and 12.10.2021, wherein it was decided that there was no requirement of refurbishment of FSC at Kanpur-Ballabgarh Line-1. Taking into consideration the recommendations of CEA, TCC/NRPC and NRPC-TP that the instant asset is not required, we accordingly decapitalize the transmission asset w.e.f. 3.8.2021.



Debt-Equity Ratio

29. Regulations 18 of the 2019 Tariff Regulations provides as follows:

“18. Debt-Equity Ratio: (1) For new projects, the debt-equity ratio of 70:30 as on date of commercial operation shall be considered. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:

Provided that:

i. where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:

ii. the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:

iii. any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt: equity ratio.

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

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

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

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

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

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

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

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

30. The debt-equity ratio has been allowed in accordance with Regulation 18(3) of the 2019 Tariff Regulations. As per Regulation 18(3) of the 2019 Tariff Regulations, the debt-equity ratio



allowed by the Commission for the determination of tariff for the period ending on 31.3.2019 shall be considered. Accordingly, the debt-equity ratio of 75.14:24.86 for the period ending on 31.3.2019 has been considered for the purpose of revision of the tariff of the transmission asset for the 2019-24 tariff period. The details of the debt-equity ratio as on 1.4.2019 of the asset is as follows:

Funding	Capital Cost as on 1.4.2019 (₹ in lakh)	(in %)
Debt	1126.43	75.14
Equity	372.75	24.86
Total	1499.18	100.00

Depreciation

31. 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 asset 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 asset of the hydro generating station for the purpose of computation of depreciated value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff:



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

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

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

Provided that the remaining depreciable value as on 31st March of the year closing after a period of 12 years from the effective date of commercial operation of the station shall be spread over the balance useful life of the 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 up to 31.3.2019 from the gross depreciable value of the asset.

(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 asset 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 decapitalized 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.”

32. The Petitioner has claimed unrecovered depreciation of ₹194.68 lac in respect of transmission assets on account of decapitalization. The Petitioner has sought to recover the unrecovered depreciation under Regulation 76 (Power to Relax) and Regulation 77 (Power to



Remove Difficulty) of the 2019 Tariff Regulations. UPPCL has submitted that it has no liability to bear any cost on account of the de-capitalization of FSC because UPPCL had never consented to such capital expenditure, and the Petitioner has to bear the full impact of this expenditure.

33. In response, the Petitioner has submitted that no expenditure has been incurred/ claimed against the refurbishment of FSC, and the unrecovered depreciation is claimed for the original investment done for the FSC. Further, the Petitioner requested the Commission to allow unrecovered depreciation as claimed in the petition, as FSC was installed as per system requirement and is being removed based on system requirement, and investment made should be duly recovered.

34. We have considered the submissions of the Petitioner and UPPCL. It is observed that there is no provision to recover the unrecovered depreciation on account of de-capitalization in the 2019 Tariff Regulations.

35. It is further observed that the Petitioner has filed a Petition No. 61/MP/2022 seeking recovery of unrecovered depreciation on decapitalization of the transmission assets. Therefore, we are not inclined to allow the Petitioner's prayer for recovery of the unrecovered depreciation due to decapitalization of the instant transmission asset under the "Power to Relax" in this order, and the same shall be subject to the order in Petition No. 61/MP/2022. The Petitioner may make appropriate claims on the basis of the order in Petition No.61/MP/2022 at the time of truing up.

36. Depreciation has been allowed considering the gross fixed assets and cumulative depreciation as on 1.4.2019 as approved by the Commission vide order dated 1.2.2021 in Petition No. 7/TT/2020 for 2019-24. Further, the transmission asset has been de-capitalized as on 3.8.2021. Accordingly, depreciation allowed in respect of the transmission asset for 2019-20, 2020-21 and 2021-22 is as follows:



(₹ in lakh)

Particulars	2019-20	2020-21	2021-22
Opening Gross Block	1499.18	1499.18	1499.18
Additional Capital Expenditure	0.00	0.00	0.00
De-Capitalization during the year	0.00	0.00	1499.18
Closing Gross Block	1499.18	1499.18	0.00
Average Gross Block	1499.18	1499.18	749.59
Weighted Average Rate of Depreciation (%)	Spread	Spread	Spread
Balance Useful life of Asset	9	8	7
Elapsed life at the beginning of the year	16	17	18
Aggregate Depreciation Value	1349.26	1349.26	1349.26
Depreciation during the year (Annualised)	29.24	29.24	29.24
Pro-rated Depreciation during the year	29.24	29.24	10.01
Aggregate Cumulative Depreciation	1115.33	1144.57	1154.58
Remaining Aggregate Depreciation Value at the end of the year	233.93	204.69	194.68

37. The details of depreciation allowed vide order dated 1.2.2021 in Petition No. 7/TT/2020, as claimed by Petitioner in the instant petition and depreciation allowed in respect of the transmission asset in the instant order are as follows:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Allowed vide order dated 1.2.2021 in Petition No. 7/TT/2021	29.24	29.24	29.24	29.24	29.24
Claimed by the Petitioner in the instant petition	29.24	29.24	10.01	-	-
Allowed after revision in this order	29.24	29.24	10.01	-	-

Interest on Loan (IoL)

38. Regulation 32 of the 2019 Tariff Regulations provides as follows:

"32. Interest on loan capital: (1) The loans arrived at in the manner indicated in Regulation 18 of these regulations shall be considered as gross normative loan for calculation of interest on loan.

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

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

39. The Petitioner has repaid the entire loan availed for the purpose of the transmission asset before 1.4.2019. The Commission vide order dated 1.2.2021 in Petition No. 7/TT/2020 has allowed IoL based on normative loan outstanding as on 1.4.2019, i.e. ₹40.34 lakh. Further, the Petitioner has decapitalized the transmission asset amounting to ₹1499.18 lakh on 3.8.2021. The Commission, vide order dated 1.2.2021 in Petition No. 7/TT/2020, had approved the debt equity ratio for the 2019-24 tariff period as 75.14:24.86. Accordingly, a reduction in loan amounting to ₹1126.43 lakh has been done, corresponding to 75.14% of the decapitalized amount. The revised IoL allowed for the 2019-24 tariff period is as follows:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22
Gross Normative Loan	1126.43	1126.43	1126.43
Cumulative repayment up to the previous Year	1086.09	1115.33	1126.43
Net Loan-Opening	40.34	11.10	0.00
Addition due to Additional Capitalization	0.00	0.00	0.00



Particulars	2019-20	2020-21	2021-22
Repayment during the year	29.24	11.10	0.00
Less: Decrease due to de-capitalization during the year/ period	0.00	0.00	1126.43
Net Loan Closing	11.10	0.00	0.00
Average Loan	25.72	5.55	0.00
Weighted Average Rate of Interest on Loan (in %)	10.90	10.90	10.90
Interest on Loan	2.80	0.60	0.00

40. The details of IoL allowed vide order dated 1.2.2021 in Petition No. 7/TT/2020, as claimed by Petitioner in the instant petition and IoL allowed in respect of the transmission asset in the instant order, are as follows:

Particulars	(₹ in lakh)		
	2019-20	2020-21	2021-22
Allowed vide order dated 1.2.2021 in Petition No. 7/TT/2021	2.80	0.60	0.00
Claimed by the Petitioner in the instant petition	2.80	0.60	0.00
Allowed after revision in this order	2.80	0.60	0.00

Return on Equity (RoE)

41. Regulation 30 and Regulation 31 of the 2019 Tariff Regulations provides as follows:

“30. Return on Equity: (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with Regulation 18 of these regulations.

(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating station, transmission system including communication system and run-of river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run-of-river generating station with pondage:

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

Provided further that:

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



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

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

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

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

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

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

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

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

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

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

Illustration-

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

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 they are liable to pay income tax at the MAT rate prescribed vide the taxation laws (Amendment) ordinance 2019 published in the Gazette dated 20.9.2019. The Petitioner has submitted further that the ROE has been calculated @ 18.782% after grossing up the RoE with a MAT rate of 17.472% (Base Rate 15% + Surcharge 12% + Cess 4%) based on the formula given at regulation 31(2) of 2019 Tariff Regulation during 2019-24 period.

43. We have considered the submission of the Petitioner. Accordingly, the MAT rate applicable in 2019-24 has been considered for the purpose of RoE. Further, the Petitioner has decapitalized the transmission asset amounting to ₹1499.18 lakh on 3.8.2021. The Commission, vide order dated 1.2.2021 in Petition No. 7/TT/2020, has approved the debt-equity ratio for the 2019-24 tariff period as 75.14:24.86. Accordingly, a reduction in equity amounting to ₹372.75 lakh has been done, corresponding to 24.86% of the decapitalized amount. Accordingly, the RoE allowed is as follows:

Particulars	(₹ in lakh)		
	2019-20	2020-21	2021-22
Opening Normative Equity	372.75	372.75	372.75
Less: Adjustment in Equity	0.00	0.00	0.00
Adjustment during the year	0.00	0.00	0.00
Net opening equity (Normal)	372.75	372.75	372.75
Add: Increase in Equity due to addition during the year / period	0.00	0.00	0.00
Less: Decrease due to de-capitalisation during the year / period	0.00	0.00	0.00
Add: Increase due to discharge during the year / period	0.00	0.00	0.00
Closing Normative Equity	372.75	372.75	372.75
Average Normative Equity	372.75	372.75	372.75
Rate of return on Equity (in %)	18.78	18.78	18.78
Reduced rate of 1% decided by commission under Regulation 30(2) (if any)	0.00	0.00	0.00
Effective rate of ROE (in %)	15.50	15.50	15.50
MAT Rate (in %)	17.47	17.47	17.47



Particulars	2019-20	2020-21	2021-22
Grossed up rate of ROE (in %)	18.78	18.78	18.78
Return on Equity (Annualised)	70.01	70.01	70.01
Pro-rata Return on Equity	70.01	70.01	23.98

44. The details of RoE allowed, vide order dated 1.2.2021 in Petition No. 7/TT/2020, as claimed by Petitioner in the instant petition and RoE allowed in respect of the transmission asset in the instant order, are as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Allowed vide order dated 1.2.2021 in Petition No. 7/TT/2021	70.01	70.01	70.01	70.01	70.01
Claimed by the Petitioner in the instant petition	70.01	70.01	23.98	-	-
Allowed after revision in this order	70.01	70.01	23.98	-	-

Operation & Maintenance Expenses (O&M Expenses)

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

(₹ in lakh)		
2019-20	2020-21	2021-22
32.15	33.28	11.80

46. Regulation 35(3)(a) of the 2019 Tariff regulations specifies the norms for the O&M Expenses for the transmission system, and the same are as follows:

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

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Norms for sub-station Bays (Rs Lakh per bay)					
765 kV	45.01	46.60	48.23	49.93	51.68
400 kV	32.15	33.28	34.45	35.66	36.91
220 kV	22.51	23.30	24.12	24.96	25.84
132 kV and below	16.08	16.64	17.23	17.83	18.46
Norms for Transformers (Rs Lakh per MVA)					
765 kV	0.491	0.508	0.526	0.545	0.564
400 kV	0.358	0.371	0.384	0.398	0.411
220 kV	0.245	0.254	0.263	0.272	0.282
132 kV and below	0.245	0.254	0.263	0.272	0.282
Norms for AC and HVDC lines (Rs Lakh per km)					



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Single Circuit (Bundled Conductor with six or more sub-conductors)	0.881	0.912	0.944	0.977	1.011
Single Circuit (Bundled conductor with four sub-conductors)	0.755	0.781	0.809	0.837	0.867
Single Circuit (Twin & Triple Conductor)	0.503	0.521	0.539	0.558	0.578
Single Circuit (Single Conductor)	0.252	0.26	0.27	0.279	0.289
Double Circuit (Bundled conductor with four or more sub-conductors)	1.322	1.368	1.416	1.466	1.517
Double Circuit (Twin & Triple Conductor)	0.881	0.912	0.944	0.977	1.011
Double Circuit (Single Conductor)	0.377	0.391	0.404	0.419	0.433
Multi Circuit (Bundled Conductor with four or more sub-conductor)	2.319	2.401	2.485	2.572	2.662
Multi Circuit (Twin & Triple Conductor)	1.544	1.598	1.654	1.713	1.773
Norms for HVDC stations					
HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB)	834	864	894	925	958
Gazuwaka HVDC Back-to-Back station (Rs Lakh per 500 MW)	1,666	1,725	1,785	1,848	1,913
500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)	2,252	2,331	2,413	2,498	2,586
±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)	2,468	2,555	2,645	2,738	2,834
±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500 MW)	1,696	1,756	1,817	1,881	1,947
±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)	2,563	2,653	2,746	2,842	2,942

Provided that the O&M expenses for the GIS bays shall be allowed as worked out by multiplying 0.70 of the O&M expenses of the normative O&M expenses for bays;

Provided further that:

- i. the operation and maintenance expenses for new HVDC bi-pole schemes commissioned after 1.4.2019 for a particular year shall be allowed pro-rata on the basis of normative rate of operation and maintenance expenses of similar HVDC bi-pole scheme for the corresponding year of the tariff period;
- ii. the O&M expenses norms for HVDC bi-pole line shall be considered as Double Circuit quad AC line;
- iii. the O&M expenses of ±500 kV Mundra-Mohindergarh HVDC bipole scheme (2000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ±500 kV Talchar-Kolar HVDC bi-pole scheme (2000 MW);
- iv. the O&M expenses of ±800 kV Champa-Kurukshetra HVDC bi-pole scheme (3000 MW) shall be on the basis of the normative O&M expenses for ±800 kV, Bishwanath-Agra HVDC bi-pole scheme;



- v. the O&M expenses of ± 800 kV, Alipurduar-Agra HVDC bi-pole scheme (3000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ± 800 kV, Bishwanath-Agra HVDC bi-pole scheme; and
- vi. the O&M expenses of Static Synchronous Compensator and Static Var Compensator shall be worked at 1.5% of original project cost as on commercial operation which shall be escalated at the rate of 3.51% to work out the O&M expenses during the tariff period. The O&M expenses of Static Synchronous Compensator and Static Var Compensator, if required, may be reviewed after three years

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

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

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

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

47. The O&M Expenses allowed for the transmission asset are as follows:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Sub-Station Bays					
400 kV Bay at Ballabgarh	1.00	1.00	1.00	1.00	1.00
400 kV	32.15	33.28	34.45	35.66	36.91
Total O&M Expenses (Annualised)	32.15	33.28	34.45	-	-
Pro-rata O&M Expenses	32.15	33.28	11.80	-	-

48. The details of O&M allowed vide order dated 1.2.2021 in Petition No. 7/TT/2020; as claimed by Petitioner in the instant petition, and O&M Expenses allowed in respect of the transmission asset in the instant order are as follows:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Allowed vide order dated 1.2.2021 in Petition No. 7/TT/2021	32.15	33.28	34.45	35.66	36.91
Claimed by the Petitioner in the instant petition	32.15	33.28	11.80	-	-
Allowed after revision in this order	32.15	33.28	11.80	-	-



Interest on Working Capital (IWC)

49. Regulation 34(1)(c), Regulation 34(3), Regulation 34(4) and Regulation 3(7) of the 2019

Tariff Regulations provide 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;”*

50. The Petitioner has computed the IWC for the 2019-24 tariff period considering the SBI Base Rate plus 350 basis points as on 1.4.2019. The Petitioner has considered the rate of IWC as 12.05%. The IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The rate of IWC considered is 12.05% (SBI 1year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20, 11.25% (SBI 1-year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) for 2020-21 and 10.50% (SBI 1-year MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points) for 2021-22. The components of the working capital and interest allowed thereon is as follows:



(₹ in lakh)

Particulars	2019-20	2020-21	2021-22
O&M Expenses-one month	2.68	2.77	2.87*
Maintenance spares 15% of O&M Expenses	4.82	4.99	5.17*
Receivables equivalent to 45 days of AFC	16.86	16.75	16.81*
Total Working capital	24.36	24.52	24.84*
Rate of Interest (in %)	12.05	11.25	10.50
Interest on working capital (Annualised)	2.94	2.76	2.61
Pro rata interest on working capital	2.94	2.76	0.89

* Annualised figure

51. The details of IoWC allowed vide order dated 1.2.2021 in Petition No. 7/TT/2020; as claimed by Petitioner in the instant petition and IoWC allowed in respect of the transmission asset in the instant order, are as follows:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Allowed vide order dated 01.02.2021 in Petition No. 7/TT/2021	2.94	2.76	2.80	2.85	2.89
Claimed by the Petitioner in the instant petition	2.94	2.96	1.03	-	-
Allowed after revision in this order	2.94	2.76	0.89	-	-

Annual Fixed Charges for 2019-24 Tariff Period

52. The revised transmission charges allowed for the transmission asset for the 2019-24 tariff period are as summarized below:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22 (pro-rata for 125 days)
Depreciation	29.24	29.24	10.01
Interest on Loan	2.80	0.60	0.00
Return on Equity	70.01	70.01	23.98
Interest on Working Capital	2.94	2.76	0.89
O&M Expenses	32.15	33.28	11.80
Total	137.14	135.89	46.68



Filing Fee and Publication Expenses

53. 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.

License Fee and RLDC Fees and Charges

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

55. The Petitioner has submitted that if GST is levied at any rate and at any point of time in future on charges of transmission of electricity, the same shall be borne and additionally paid by the Respondent(s) to the Petitioner and the same 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, the same may be allowed to be recovered from the beneficiaries.

56. We have considered the submissions of the Petitioner. Since GST is not levied on transmission service at present, the Petitioner's prayer is premature.

Security Expenses

57. The Petitioner submitted that it filed Petition No. 260/MP/2020 claiming the overall Security Expenses and consequential Interest on Working Capital (IOWC) on the same wherein



it was proposed to consider the actual Security Expenses incurred by the Petitioner in 2018-19 after escalating the same at 3.51% per annum and the estimated additional Security Expenses for new Sub-stations to be commissioned in the future, for arriving at the Estimated Security Expense for the year 2019-24, period. The Commission vide order dated 3.8.2021 in Petition No. 260/MP/2020 allowed the Petitioner to recover the estimated security expenses from beneficiaries as per provisions of the 2020 Sharing Regulations. The difference, if any, between the estimated security expenses and the actual security expenses calculated as per audited accounts on a year-to-year basis may be allowed to be recovered/refunded from beneficiaries.

58. The Commission has considered the above submissions of the Petitioner. The Petitioner has prayed to allow it to recover the difference between the estimated security expenses approved vide order dated 3.8.2021 in Petition No.260/MP/2020 and the actual security expenses on a year-to-year basis from the beneficiaries. The 2019 Tariff Regulations do not provide for such an arrangement. Therefore, the Petitioner is directed to make a claim for the same at the time of truing up of the tariff of the 2019-24 tariff period.

Capital Spares

59. 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

60. The revised transmission charges approved for the transmission asset for the 2019-24 period shall be shared by the Respondents in accordance with the Central Electricity Regulatory Commission (Sharing of Inter State Transmission Charges and Losses) Regulations, 2020, as provided in Regulation 57 of the 2019 Tariff Regulations.



61. To summarize, AFC allowed vide order dated 1.2.2021, as claimed by Petitioner in the instant petition and allowed in respect of the transmission asset for the 2019-24 tariff period in this order are as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Allowed vide order dated 01.02.2021 in Petition No. 7/TT/2021	137.14	135.89	136.50	137.76	139.05
Claimed by the Petitioner in the instant petition	137.14	136.09	46.82	-	-
Allowed after revision in this order	137.14	135.89	46.68	-	-

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

63. This order disposes of Petition No. 333/TT/2022 in terms of the above findings and discussions.

sd/-
(P.K. Singh)
Member

sd/-
(Arun Goyal)
Member

sd/-
(Jishnu Barua)
Chairperson



Annexure

(₹ in lakh)

	Admitted Capital Cost as on 01.04.2019	De-Capitalization					Admitted Capital Cost as on 31-03-2024	Dep Rate	Annual Depreciation					
		2019-20	2020-21	2021-22	2022-23	2023-24			2019-20	2020-21	2021-22	2022-23	2023-24	
Capex														
Sub-Station	1499.18	-	-	1499.18	-	-	-	Spread	29.24	29.24	10.01	-	-	
Total	1499.18	-	-	1499.18	-	-	-							
								Average Gross Block (₹ in lakh)	1499.18	1499.18	749.59	-	-	
								Weighted Average Rate of Depreciation (%)	Spread	Spread	Spread	-	-	

