CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Petition No. 22/TT/2022

Coram:

Shri I. S. Jha, Member
Shri Arun Goyal, Member

Date of Order: 21.12.2022

In the matter of:

Approval under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and for determination of Transmission Tariff from COD to 31.3.2024 under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for 765/400 kV, 333 MVA single phase auto transformer at Bhiwani Sub-station under "Spare Transformers in the Northern Region".

And in the matter of:

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

Versus

1. Rajasthan Rajya Vidyut Prasaran Nigam Limited,
   Vidyut Bhawan, Vidyut Marg,
   Jaipur-302005.

2. Ajmer Vidyut Vitran Nigam Limited,
   400 kV GSS Building (Ground Floor),
   Ajmer Road, Heerapura, Jaipur (Rajasthan).

3. Jaipur Vidyut Vitran Nigam Limited,
   400 kV GSS Building (Ground Floor),
   Ajmer Road, Heerapura, Jaipur (Rajasthan).

4. Jodhpur Vidyut Vitran Nigam Limited,
   400 kV GSS Building (Ground Floor),
   Ajmer Road, Heerapura, Jaipur (Rajasthan).

5. Himachal Pradesh State Electricity Board,
   Vidyut Bhawan,

Kumar House Complex Building II,
Shimla-171004.

6. Punjab State Electricity Board,
Thermal Shed Tia,
Near 22 phatak, Patiala-147001.

7. Haryana Power Purchase Centre,
Shakti Bhawan, Sector-6,
Panchkula (Haryana) 134109.

8. Power Development Department,
Government of Jammu & Kashmir,
Mini Secretariat, Jammu.

9. Uttar Pradesh Power Corporation Limited,
(Formerly Uttar Pradesh State Electricity Board)
Shakti Bhawan, 14, Ashok Marg,
Lucknow-226001.

10. Delhi Transco Limited,
Shakti Sadan, Kotla Road,
New Delhi-110002.

11. BSES Yamuna Power Limited,
B-Block, Shakti Kiran, Bldg. (Near Karkadooma Courte),
Karkadooma 2nd Floor,
New Delhi-110092.

12. BSES Rajdhani Power Limited,
BSES Bhawan, Nehru Place,
New Delhi- 110019.

13. Tata Power Delhi Distribution Limited (TPDDL),
NDPL House, Hudson Line, Kingsway Camp,
Delhi- 110009

14. Chandigarh Administration,
Sector -9, Chandigarh.

15. Uttarakhand Power Corporation Limited,
Urja Bhawan,
Kanwali Road, Dehradun.

16. North Central Railway,
Allahabad.

17. New Delhi Municipal Council,

Palika Kendra, Sansad Marg,
New Delhi-110002. **...Respondent(s)**

For Petitioner: Ms. Swapna Seshadri, Advocate, PGCIL
Ms. Ritu Apurva, Advocate, PGCIL
Shri V. P. Rastogi, PGCIL
Shri D. K. Biswal, PGCIL
Shri Ashish Alankar, PGCIL

For Respondent: Shri S. K. Meena, NHPC
Shri Aman Mahajan, NHPC

ORDER

Power Grid Corporation of India Limited, a deemed transmission licensee, has filed the instant petition for determination of transmission tariff from COD to 31.3.2024 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as "the 2019 Tariff Regulations") in respect of 765/400 kV, 333 MVA single phase auto transformer at Bhiwani Sub-station (hereinafter referred to "the transmission asset") under "Spare Transformers in the Northern Region" (hereinafter referred to as "the transmission system"):

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 –7.3 above.

3) Allow the petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission as provided in Tariff Regulation 2019 as per para 8 above for respective block.

4) Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on publishing of notices in newspapers in terms of Regulation 70 (1) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019, and other expenditure (if any) in relation to the filing of petition.

5) *Allow the petitioner to bill and recover Licensee fee and RLDC fees and charges, separately from the respondents in terms of Regulation 70 (3) and (4) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019.*

6) *Allow the petitioner to bill and adjust impact on Interest on Loan due to change in Interest rate on account of floating rate of interest applicable during 2019-24 period, if any, from the beneficiaries.*

7) *Allow the petitioner to file a separate petition before Hon'ble Commission for claiming the overall security expenses and consequential IOWC on that security expenses.as mentioned at para 7.7 above*

8) *Allow the petitioner to claim the capital spares at the end of tariff block as per actual. Allow the initial spare as procured in the current petition in full as given in para-6 under Regulation 76 of the CERC (Terms and Condition of Tariff) Regulations,2019, "Power to Relax".*

9) *Allow the Petitioner to bill and recover GST on Transmission Charges separately from the respondents, if GST on transmission is levied at any rate in future. Further, any taxes including GST and duties including cess etc. imposed by any statutory/Govt./municipal authorities shall be allowed to be recovered from the beneficiaries.*

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

11) *Condone the Time overrun of all the assets as per clause 22 (2) of Tariff Regulation'2019.*

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 been entrusted with the implementation of Transmission System associated with "Spare 765/400 kV transformers for Northern Region". The Investment Approval (IA) and expenditure sanction to the transmission system was accorded by Board of Directors (BoD) of PGCIL, vide Memorandum dated 4.3.2015 at an estimated cost of ₹6356 lakh including an IDC of ₹364 lakh based on October, 2014 price level (communicated vide Memorandum No. C/CP/Spare Transformers in NR dated 9.3.2015).

b. The scope of the scheme was discussed and agreed in 31st Standing Committee Meetings held on 2.1.2013 and 31st NRPC meeting held on 24.7.2014.

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

Sub-station

(i) Three (3) numbers single phase 765/400 kV ICTs of 500 MVA capacity as spare ICTs (to be kept in ready for charging condition and to be located each at Jhatikara, Agra and Fatehpur Sub-station).

(ii) One (1) number single phase 765/400 kV ICT of 333 MVA capacity as spare ICT (to be kept in ready for charging condition and to be located at Bhiwani Sub-station).

d. Details of the petitions in which the assets covered in the transmission scheme are covered are as follows:

<table>
<tr><th>Sl. No.</th><th>Asset nomenclature in earlier Petition</th><th>Asset Description</th><th>SCOD</th><th>COD</th><th>Covered under Petition</th></tr>
<tr><td>1</td><td>Asset-I</td><td>1X500 MVA, 765/400 kV Transformer as spare ICT at Agra Sub-station</td><td rowspan="4">4.3.2017</td><td>1.5.2017</td><td rowspan="3">Covered in Petition No. 247/TT/2017. Petition No. 655/TT/2020 filed for truing up of 2014-19 tariff block and tariff for 2019-24 tariff Period.</td></tr>
<tr><td>2</td><td>Asset-II</td><td>1X500 MVA, 765/400 kV Transformer as spare ICT at Fatehpur Sub-station</td><td>1.10.2017</td></tr>
<tr><td>3</td><td>Asset-III</td><td>765/400 kV, 500 MVA, single phase Auto Transformer as spare ICT at Jhatikra Sub-station</td><td>30.6.2018</td></tr>
<tr><td>4</td><td>Asset-IV</td><td>765/400 kV, 333 MVA, single phase Auto Transformer as spare ICT at Bhiwani Sub-station</td><td>31.1.2020</td><td>Covered in the instant petition</td></tr>
</table>

e. The Commission, vide order dated 10.1.2020 in Petition No. 247/TT/2017, has observed as follows:

> *"7. The Petitioner vide affidavit dated 3.9.2019 has submitted that Asset-IV is anticipated to be commissioned in 2019-24 tariff block, therefore, fresh petition will be filed in due course of time under 2019 Tariff Regulations. Accordingly, the particulars regarding Asset-IV are not being perused further and we are proceeding to determine the transmission tariff only for Asset-I, II & III."*

f. Accordingly, the Petitioner has claimed the tariff for the transmission asset in the instant petition after the COD of the transmission asset.

4. The Respondents are distribution licensees, power departments, power utilities and transmission licensees, who are procuring transmission services from the

Petitioner, mainly beneficiaries of the Northern Region.

5. The Petitioner has served the petition on the Respondents and notice regarding filing of this petition has also 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 notice published in the newspapers by the Petitioner. Uttar Pradesh Power Corporation Limited (UPPCL), Respondent No. 9, has filed its reply vide affidavit dated 21.1.2022 and has raised issue of IDC, IEDC, time over-run, completion cost and initial spares.

6. The hearing in this matter was held on 27.10.2022 and the order was reserved.

7. This order is issued considering the submissions made by the Petitioner in the petition vide affidavits dated 8.11.2021, 28.4.2022, UPPCL's reply filed vide affidavit dated 21.1.2022 and Petitioner's rejoinder vide affidavit dated 25.10.2022.

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

Determination of Annual Fixed Charges For 2019-24 Tariff Period

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

(₹ in lakh)

Particulars	2019-20 (pro-rata 61 days)	2020-21	2021-22	2022-23	2023-24
Depreciation	8.41	55.31	60.15	60.15	60.15
Interest on Loan	8.58	47.08	47.50	43.44	39.38
Return on Equity	8.98	59.03	64.19	64.19	64.19
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	0.39	2.43	2.59	2.53	2.46

Total	**26.36**	**163.85**	**174.43**	**170.31**	**166.18**

10. The details of Interest on Working Capital (IWC) claimed by the Petitioner in respect of the transmission asset for 2019-24 tariff period are as follows:

(₹ in lakh)

Particulars	2019-20 (pro-rata 61 days)	2020-21	2021-22	2022-23	2023-24
O & M Expenses	0.00	0.00	0.00	0.00	0.00
Maintenance Spares	0.00	0.00	0.00	0.00	0.00
Receivables	19.45	20.20	21.51	21.00	20.43
Total Working Capital	**19.45**	**20.20**	**21.51**	**21.00**	**20.43**
Rate of Interest (in %)	11.25	11.25	11.25	11.25	11.25
Interest on Working Capital	**0.39**	**2.43**	**2.59**	**2.53**	**2.46**

Date of Commercial Operation ("COD")

11. The Petitioner has claimed actual COD in respect of the transmission asset covered in the instant petition and the same is as follows:

Sl. No.	Asset Description	SCOD	COD
1	765/400 kV, 333 MVA single phase auto transformer (Spare) at Bhiwani Sub-station	4.3.2017	31.1.2020

12. In support of its claim towards the actual COD of the transmission asset, the Petitioner has submitted a self-declaration COD letter dated 12.1.2021 and CMD certificate as required under the Grid Code.

13. The Petitioner has submitted copy of meeting of 31st NRPC meeting held on 2.1.2013 and 31st SCM held on 24.7.2014, wherein approval of RPC for installation of spare ICTs was agreed by the members.

14. We have considered the submissions of the Petitioner. The relevant extract of the minutes of the 31st SCM is as follows:

"31. Procurement of Spare 765/400 kV ICTs for Northern Region

Powergrid proposed to procure three (3 units of 765/400 kV, 500 MVA (single-phase) ICTs and one (1) unit of 765/400 kV, 333 MVA (single-phase) ICT as spares for Northern region.

Member (PS), CEA enquired about the number of 765kV transformers presently installed.

AGM (OS), POWERGRID informed that fifty four (54) units of 500 MVA and seven (7) units of 333 MVA, 765/400 kV ICTs are in operation at Ballia, Lucknow, Fatehpur, Agra, Moga, Bhiwani and Jhatikara Sub-stations. Further, additional six (6) units of 500 MVA, 765/400 kV ICTs are likely to be commissioned by 31.03.2013 at Meerut S/s. He further mentioned that any major failure of these ICTs would necessitate repairs in their off-shore works only, which is time consuming because of long time taken in transportation of the unit from site to works & back and manufacturing of winding. Any failure of these units may cause overloading of the other units operating in parallel and result in transmission constraint at 765 kV level especially in view of ensuing commissioning of various power projects in the Region. In view of the above, it was proposed to procure three (3) nos. single phase 765/400 kV ICTs of 500 MVA capacity and one (1) no. single phase 765/400 kV ICT of 333MVA capacity as spare for Northern Regional Grid.

Considering above, following ICTs were agreed to be procured under "Spare transformers for 765/400KV ICTS in Northern Region" scheme:

- *Three (3) nos. single phase 765/400 kV ICTs of 500 MVA capacity as spare ICTs (to be kept in ready for charging condition)*
- *One (1) no. single phase 765/400 kV ICT of 333 MVA capacity as spare ICT (to be kept in ready for charging condition)*

Members agreed to the above proposal."

15. The relevant minutes of the 28th TCC & 31st NRPC Meetings is as follows:

"**D.1 Transmission proposals as agreed in Standing Committee Meeting**

D.1.1 Procurement of Spare 765/400 kV ICTs for Northern Region

D.1.1.1 Representative of CTU stated that the issue of procurement of spare ICTs at 765/400 kV level was discussed earlier in 27th NRPC meeting wherein it was referred to the Standing Committee Meeting for Power System Planning. In line with the direction of NRPC, the issue of spare ICTs was discussed during the 31st standing committee meeting held on 2/1/2013 and agreed to procure the ICTs under "Spare transformers for 765/400KV ICTS in Northern Region" scheme:

• Three (3) nos. single phase 765/400 kV ICTs of 500 MVA capacity as spare ICTs (to be kept in ready for charging condition)
• One (1) no. single phase 765/400 kV ICT of 333MVA capacity as spare ICT (to be kept in ready for charging condition)

D.1.1.2 Members agreed to the proposal."

16. Taking into consideration the certificates and the minutes of the 31st NRPC meeting held on 2.1.2013 and 31st SCM held on 24.7.2014, wherein approval of RPC for installation of spare ICTs was agreed by the members, the COD for the transmission asset is approved as 31.1.2020.

Capital Cost

17. Regulation 19 of the 2019 Tariff Regulations provides as follows:

> ***"19. Capital Cost:*** *(1) The Capital cost of the generating station or the transmission system, as the case may be, as determined by the Commission after prudence check in accordance with these regulations shall form the basis for determination of tariff for existing and new projects.*
>
> *(2) The Capital Cost of a new project shall include the following:*
>
> *(a) The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;*
> *(b) Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;*
> *(c) Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period;*
> *(d) Interest during construction and incidental expenditure during construction as computed in accordance with these regulations;*
> *(e) Capitalised initial spares subject to the ceiling rates in accordance with these regulations;*
> *(f) Expenditure on account of additional capitalization and de-capitalisation determined in accordance with these regulations;*
> *(g) Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the date of commercial operation as specified under Regulation 7 of these regulations;*
> *(h) Adjustment of revenue earned by the transmission licensee by using the assets before the date of commercial operation;*
> *(i) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*
> *(j) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of the generating station but does not include the transportation cost and any other appurtenant cost paid to the railway;*
> *(k) Capital expenditure on account of biomass handling equipment and facilities, for co-firing;*
> *(l) Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;*
> *(m) Expenditure on account of fulfilment of any conditions for obtaining*

environment clearance for the project;

(n) Expenditure on account of change in law and force majeure events; and

(o) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.

(3) The Capital cost of an existing project shall include the following:

(a) Capital cost admitted by the Commission prior to 1.4.2019 duly trued up by excluding liability, if any, as on 1.4.2019;

(b) Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;

(c) Capital expenditure on account of renovation and modernisation as admitted by this Commission in accordance with these regulations;

(d) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;

(e) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and

(f) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.

(4) The capital cost in case of existing or new hydro generating station shall also include:

(a) cost of approved rehabilitation and resettlement (R&R) plan of the project in conformity with National R&R Policy and R&R package as approved; and

(b) cost of the developer's 10% contribution towards Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) and Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) project in the affected area.

(5) The following shall be excluded from the capital cost of the existing and new projects:

(a) The assets forming part of the project, but not in use, as declared in the tariff petition;

(b) De-capitalised Assets after the date of commercial operation on account of replacement or removal on account of obsolescence or shifting from one project to another project:

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

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

(c) In case of hydro generating stations, any expenditure incurred or committed to be incurred by a project developer for getting the project site allotted by the

State Government by following a transparent process;

(d) Proportionate cost of land of the existing project which is being used for generating power from generating station based on renewable energy; and

(e) Any grant received from the Central or State Government or any statutory body or authority for the execution of the project which does not carry any liability of repayment."

18. The Petitioner has claimed the following capital cost in respect of the transmission asset and has submitted the Auditor's certificate in support of the same:

(₹ in lakh)

FR approved apportioned cost	Cost up to COD	Projected expenditure		Estimated completion cost
		2019-20	2020-21	
1398.07	959.14	0.00	180.00	1139.14

19. The Petitioner has submitted that the estimated completion cost of the transmission asset is within the FR approved apportioned cost. Therefore, there is no cost over-run. The Petitioner has further submitted that the Petitioner, being a government enterprise, has been following a well laid down procurement policy which ensures both transparency and competitiveness in the bidding process. Through this process, lowest possible market prices for required product/ services/ as per detailed designing is obtained and contracts are awarded on the basis of lowest evaluated eligible bidder. The best competitive bid prices against tenders may vary as compared to the cost estimate depending upon prevailing market forces, design and site requirements. Whereas, the estimates, are prepared by the Petitioner as per well-defined procedures. The FR cost estimate is broad indicative cost worked out generally based on average unit rates of recently awarded contracts/general practice.

20. As regards cost variation in cost of individual items, the Petitioner has submitted that the packages under subject scope of works comprise of a large number of items and the same are awarded through open competitive bidding. In the said bidding

process, bids are received from multiple parties quoting different rates for various BOQ items under the said package. Further, lowest bidder can be arrived at/ evaluated on overall basis only. Hence, the item-wise unit prices in contracts and its variation over unit rate considered in FR estimates are beyond the control of the Petitioner.

21. UPPCL, vide its affidavit dated 21.1.2022, has submitted that the IA approved 3 numbers 500 MVA and 1 number 333 MVA transformers to be installed at four different locations in NR. The Petitioner has apportioned the approved cost based on certain criteria not explained in the petition since IA has not indicated cost of 333 MVA transformer separately. Hence, the apportioned cost cannot be accepted for the present tariff exercise. The estimated cost approved in IA is high on account of high IEDC (@10.75% of the cost of works), contingency charges (@3%of the cost of works) and IDC (at rate of interest domestic loan 0.5%). As such, the completion cost of the transmission asset, as on COD or 31.3.2024, cannot be compared with FR cost derived from the cost estimate approved in IA. UPPCL has further submitted that the Petitioner has stated that the work has been executed at lowest market rate and its cost estimate in IA was based on the rate quoted by vendors in contracts executed prior to approval of IA. UPPCL has requested that the Petitioner should submit the cost discovered by it through bids for execution of the present asset and such cost be considered for computation of completion cost. In other words, the completion cost should be compared with the cost estimate made based on bid price for the purposes of evaluation of the cost over-run.

22. In response, the Petitioner has submitted that the estimates are prepared based on Schedule of Rates (SoR). The SoR is prepared based on the average of unit rates

of latest three bids/ LOAs/ raw material prices in order to achieve the cost efficiency by estimating the capital cost of the transmission project. Subsequently, the award for execution of the project was placed after following the transparent process of tendering, bid evaluation and award of work to lowest technical and commercially responsive bid. The Petitioner has submitted that the Petitioner follows a robust and time-tested system of preparing cost estimates before obtaining the IA. After IA, the award letters are placed on the executing agencies on the basis of tendering process as per best industry practices and due diligence is undertaken including justification of bid prices vis-à-vis estimated cost before placing the awards. Further, the cost control measures are taken during execution of the project and only under unavoidable situations caused by the actual soil/ terrain conditions, crossing requirements (river, power line, railway line, forest stretches and any other compelling technical reason), the cost may undergo changes. The Petitioner has further submitted that the details regarding award of work, date of award, contractor detail etc. of work was already submitted in Form-5A along with the petition. In the instant case, award was placed after successful bidder was selected as per the competitive bidding process. The Petitioner has also submitted that there is no cost over-run and that the cost variation details are furnished in Form-5 submitted along with the petition.

23. We have considered the submissions of the Petitioner and UPPCL. The major reason for cost variation as submitted by the petitioner is due to difference in item-wise unit prices in contracts and the unit rate considered in FR estimates and the same are beyond the control of the Petitioner.

24. It is observed that the estimated completion cost of ₹1139.14 lakh including ACE of ₹180.00 lakh is within the FR apportioned approved cost of ₹1398.07 lakh. Thus, the estimated completion cost is lower than the approved cost by an amount of ₹258.93 lakh. It is observed that the estimated completion cost including ACE is within the FR apportioned approved cost. Therefore, there is no cost over-run.

Time over-run

25. As per IA dated 4.3.2015, the transmission asset was scheduled to be put into commercial operation within 24 months from the date of IA i.e. by 4.3.2017 and it was put into commercial operation on 31.1.2020. Accordingly, there is a time over-run of 1063 days in case of the transmission asset. The Petitioner has submitted that the time over-run was due to following reasons and has requested to condone the same:

a. **Delay due to demonetization drive by Government of India:** Government of India, on 8.11.2016, had withdrawn the Legal Tender status of ₹500 and ₹1000 denominations of banknotes because of which, construction workers were badly affected since this had crippled the ability of contractors and business owners to pay daily wages to workers. As a consequence, the availability of labour was reduced and it affected the construction work. The events were beyond the control and unavoidable notwithstanding reasonable efforts of GE to mitigate. Accordingly, there was a delay of approximately 3 months on account of this.

b. **Delay due to implementation of GST:** In July 2017, associated contractor had to go through all the transactions pertaining GST i.e. new material codes/HSN codes etc., which took time in placing purchase orders to all the different vendors. As a result, there was a delay of around 3 months in supply of balance materials like OST and spares.

c. **Delay due to failure of type test of transformer:** There was failure of type test of transformer. Initially, type testing was carried out on 19.11.2018 and in April, 2019 which failed. After addressing the issues observed in type tests, the final type test was successfully conducted on 11.9.2019. After conducting the final type test on 11.9.2019, the transformer was supplied on 24.10.2019 and the transmission asset was put into commercial operation on 31.1.2020.

26. UPPCL vide affidavit dated 21.1.2022 has submitted as follows:

a) The SCOD of the transmission asset was 4.3.2017. Demonetization took place on 8.11.2016, very close to the COD in March, 2017. If the work had actually progressed smoothly after award of bid, it must have reached almost completion by then. As such, delay of 3 months on this account is excessive and may not be allowed.

b) GST was implemented by Government of India with effect from 1.7.2017, well after SCOD i.e. 4.3.2017. If, the plea of 3 months delay from SCOD is accepted, the ICT would have achieved COD by the end of June, 2017, the date before enforcement of GST. Therefore, the 3 months delay in implementation of the work on account of GST may not be allowed.

c) Major portion of the time over-run has been attributed to failure of type test of the transformer, rectification of fault/design thereafter and successful final type test on 11.9.2019. Therefore, the transformer could be available to working agency only after 11.9.2019 and there upon the transformer was put into commercial operation quickly within 4 months on 31.1.2020.

27. UPPCL has further submitted that the time over-run in case of the ICT is on account of failure of type test and not otherwise. The demonetization and implementation of GST had no impact on the transmission assets, which is clear from the fact that the successful type test happened only on 11.9.2019, i.e. after 945 days from SCOD. The period of demonetization and GST was concurrent to delay due to event of type test failure. As such, whole time over-run is solely attributable to failure of type test and should not be condoned.

28. The Petitioner has further submitted the following chronology of events leading to time over-run:

Sl. No.	Description of activity/ works/ service	Original Schedule (As per planning)		Actual Achieved (As per Actual)		Time over-run (in days)	Remarks
		Start Date	Completion Date	Start Date	Completion Date		
1	Investment Approval	4.3.2015	4.3.2015	4.3.2015	4.3.2015	0	No delay
2	NOA	4.5.2015	4.5.2015	31.3.2015	31.3.2015	0	No delay
3	Supply	1.2.2016	25.11.2016	19.9.2019	24.10.2019	1063	There is a delay of 1063 days in supply of Spare transformer due to the following reasons: 1) 90 days of delay due to non-availability of labour after demonetization drive by Government of India on 8.11.2016 2) Further, another 90 days delay is due to implementation of GST 3) Failure of type test of transformer

Sl. No.	Description of activity/ works/ service	Original Schedule (As per planning)		Actual Achieved (As per Actual)		Time over-run (in days)	Remarks
		Start Date	Completion Date	Start Date	Completion Date		
							(19.11.2018 to 11.9.2019)
4	Civil Works and Erection	2.7.2015	30.1.2017	17.4.2017	27.1.2020	1092	Subsequent delay due to Supply delay and delay due to type test
5	Testing and ready for charging	31.1.2017	3.3.2017	28.1.2020	30.1.2020	1063	Subsequent delay due to Supply delay and delay due to type test
6	Commissioning and project completion	3.3.2017	3.3.2017	30.1.2020	30.1.2020	1063	Subsequent delay due to Supply delay and delay due to type test
7	COD declaration				31.1.2020	1064	Subsequent delay due to Supply delay and delay due to type test

29. We have considered the submissions of the Petitioner and UPPCL. As per the Investment approval dated 4.3.2015, the SCOD of the transmission asset was 3.3.2017, against which the transmission asset was put into commercial operation on 31.1.2020 with a time over-run of 1063 days. The Petitioner has attributed time over-run of 1063 days to demonetization by Government of India on 8.11.2016, implementation of GST in July 2017, and delay by supplier and due to failure of type test of transformer. The time over-run is analysed as follows:

a) Delay due to demonetisation

30. The Petitioner has submitted that on 8.11.2016, the Government of India demonetized the high denomination banknotes of ₹500 and ₹1000. The Petitioner has submitted that the same affected the execution of the transmission work as the construction workers are paid daily wages and due to restricted cash withdrawal limits imposed by the Government of India, there was delay in payment of wages to the

workers. The Petitioner has submitted that the impact on account of the above is 90 days.

31. We have considered the submissions made by the Petitioner. In our view, the demonetization of the banknotes of ₹500 and ₹1000 cannot be considered to be a *force majeure* event within the provisions of the Tariff Regulations. Therefore, the claim of the Petitioner for condoning the time over-run on account of the demonetisation cannot be considered under *force majeure* and, thus, deserves to be rejected.

b) Delay due to Notification of Goods and Services Taxes (GST) Act, 2017

32. The Petitioner has submitted that pursuant to the notification of GST Laws with effect from 1.7.2017, associated contractor had to go through all the transactions pertaining GST i.e. new material codes/HSN codes etc., which has taken enormous amount of time in placing purchase orders to all the different vendors as a result of which there was delay in supply of balance material like OST and spares. The Petitioner has submitted that the impact on account of the above is 90 days i.e. from 1.7.2017 to 28.9.2017.

33. We have considered the submissions of the Petitioner. The Petitioner has submitted that pursuant to introduction of GST Laws, it faced various issues relating to the disruption of the material/supplies from the vendors and, therefore, the notification of GST Laws constitutes *force majeure* event. The Petitioner, therefore, has sought condonation of time over-run of 90 days i.e. from 1.7.2017 to 28.9.2017. However, nothing has been brought on record by the Petitioner indicating as to how, in performance of its obligations, the disruption of the material/supplies has been affected by the aforesaid event, despite exercising the reasonable care/control or by complying

with prudent utility practices. Therefore, the claim of the Petitioner for condoning the time over-run on account of the notification of the GST Laws deserves to be rejected.

<u>C) Delay due to failure of type test of transformer:</u>

34. The Petitioner has submitted that due to failure of type test of transformer, the time period from 19.11.2018 to 11.9.2019 is delayed. We further note that the delay is on account of contractual delays. Regulation 22 of the 2019 Tariff Regulations provides as follows:

> "***22. Controllable and Uncontrollable factors****: The following shall be considered as controllable and uncontrollable factors for deciding time over-run, cost escalation, IDC and IEDC of the new projects:*
>
> (1) The "controllable factors" shall include but shall not be limited to the following:
>
> > *a. Efficiency in the implementation of the new projects not involving approved change in scope of such new projects, change in statutory levies or change in law or force majeure events; and*
> >
> > *b. Delay in execution of the new projects on account of contractor or supplier or agency of the generating company or transmission licensee.*
>
> *(2) The "uncontrollable factors" shall include but shall not be limited to the following:*
>
> > *a. Force Majeure events.*
> >
> > *b. Change in law; and*
> >
> > *c. Land acquisition except where the delay is attributable to the generating company or the transmission licensee"*

35. Therefore, the entire time over-run in case of the said transmission asset falls under contractual issues and, therefore, covered under the controllable factor as per Regulation 22(1)(b) of the 2019 Tariff Regulations. Accordingly, we are not inclined to condone the time over-run in case of the transmission asset. Accordingly, the time over-run of 1063 days is not condoned.

Interest during Construction ("IDC")

36. The Petitioner has claimed the following IDC and has submitted the statement showing IDC claim, discharge of IDC liability as on the date of COD and, thereafter, which is summarised as follows:

(₹ in lakh)

IDC as per Auditor's Certificate	IDC discharged up to COD	IDC discharged during 2020-21
49.64	46.46	3.18

37. UPPCL vide affidavit dated 21.1.2022 has submitted that according to DPR, the sanctioned expenditure, besides IDC, includes IEDC of ₹566 lakh which is 10.75% of the cost of equipment and civil works of ₹5268 lakh. IEDC, which comprises of pre-operative expenditure, estimated is on a higher side and the Petitioner may be required to submit break-up of the same. UPPCL has further submitted that the contingency @ 3% of ₹5268 lakh has been included, which is also on higher side and the Petitioner has not provided break-up of the same. The IDC has been claimed at interest rate of 10.5% which is on very high side in comparison to prevailing rate of domestic loan. UPPCL has submitted that according to Form-9C, the actual interest of loan ranges from 6.00% to 7.7% averaging to annual interest rate 7.74%. On account of higher percentage of IEDC, contingency charges and interest rate for IDC, the cost estimation of the sanctioned scope of work is on higher side. UPPCL has further submitted that the Commission in many cases observed that PGCIL's cost estimates are over estimated and advised PGCIL to adopt a prudent practice. Therefore, UPPCL has requested that the Petitioner may not be allowed to compare the completion cost with the estimate approved in IA.

38. In response, the Petitioner vide affidavit dated 25.10.2022 has submitted that the details of IDC and IEDC expenditure has been submitted along with IDC statement as per the Form-12A. The Petitioner has submitted that the contingency expenditure is kept in anticipated expenditure and same has been submitted along with the Form-5. As regards the cost estimate, the Petitioner has submitted that cost estimates are prepared based on SoR. The SoR was prepared based on the average of unit rates of latest three bids/ LOAs/ raw material prices in order to achieve the cost efficiency by estimating the capital cost of the instant Transmission.

39. We have considered the submissions of the Petitioner and UPPCL. The allowable IDC has been worked out considering the information submitted by the Petitioner. Further, the loan amount as on COD has been mentioned in Form-6 and Form-9C. IDC claimed and considered as on COD and summary of discharge of IDC liability up to COD and thereafter for the purpose of tariff determination is as follows:

(₹ in lakh)

IDC as per Auditor certificate	IDC disallowed due to time over-run	IDC allowed on accrual basis	IDC allowed on cash basis as on COD	Un-discharged IDC liability as on COD	Discharge of IDC liability allowed as ACE	
					2020-21	2021-22
49.64	49.64	0.00	0.00	0.00	0.00	0.00

Incidental Expenditure During Construction (IEDC)

40. The Petitioner has claimed IEDC of ₹15.99 lakh in respect of the transmission asset. The Petitioner has submitted Auditor’s Certificate in this regard. Further, the Petitioner has submitted that entire IEDC claimed in the Auditor’s Certificates is on cash basis and is paid up to COD of the transmission asset.

41. We have considered the submissions of the Petitioner. The IEDC considered in respect of the transmission asset as on COD for the purpose of tariff determination and the IEDC disallowed due to time over-run not condoned in the instant order is as follows:

(₹ in lakh)

IEDC claimed as per Auditor's Certificate	IEDC disallowed due to time over-run	IEDC allowed
15.99	9.48	6.52

Initial Spares

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

"23 (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%
(iv) Gas Insulated Sub-station (GIS)
-Green Field - 5.00%
-Brown Field - 7.00%
(v) Communication system - 3.50%
(vi) Static Synchronous Compensator - 6%"

43. The Petitioner has claimed the following initial spares in respect of the transmission asset for sub-station based on completion cost as per the auditor certificates of the transmission asset covered in the instant petition and has re-calculated the initial spares for the remaining assets of the transmission project based on the completion cost as per auditor certificates of the transmission asset covered in true up Petition No. 655/TT/2020.

44. The Petitioner has prayed to view initial spares on overall cost of all the transmission asset covered in the project and has claimed Initial Spares in respect of the transmission asset as follows:

(₹ in lakh)

Asset	**Plant and Machinery excluding IDC, IEDC, land cost and cost of Civil works as on cut-off date (A)**	**Initial spares claimed by the Petitioner (B)**	**Ceiling limit (in %) (C)**	**Initial spares worked out by the Petitioner D = [(A-B)*C/(100-C)]**
	Sub Station (Brownfield)			
The transmission asset covered in the instant Petition	1073.51	69.82	6.00	64.07
Asset-I covered in 655/TT/2020	1285.99	42.28	6.00	79.39
Asset-II covered in 655/TT/2020	1393.91	112.09	6.00	81.82
Asset-III covered in 655/TT/2020	1237.11	61.58	6.00	75.03
Total	**4990.52**	**285.77**	**6.00**	**300.31**

45. UPPCL vide affidavit dated 21.1.2022 has submitted as follows:

a) The Petitioner is not correctly interpreting the APTEL order dated 14.9.2019 passed in Appeal No. 74/2017. The Tribunal has opined that the project has to be considered as a whole comprising of all the elements and the requirement of whole of the initial spares worked out on the basis of total cost of the project within the ceiling limit the time of true up. The opinion of the Tribunal, under Para 8.13 of the order, is reproduced as follows:

> *"8.13 ………………………………………………………………………*
> *The Central Commission to have a prudence check on the initial spare, being restricted based on the individual asset wise cost initially, but subsequently out to have allowed as per the ceiling limits on the overall project cost during the true up".*

The Petitioner has not approached the Commission for true-up of tariff and as such said APTEL order does not apply to the case of the Petitioner in this Petition.

b) The IA approval dated 4.3.2015 is for installation of 4 numbers ICTs at different locations of the Northern Region as spare ICTs. As per Regulation 3(50)(iii) of the 2019 Tariff Regulations, all component of the transmission system including communication system would mean a project. In the present case, there is installation of ICTs at 4 discrete locations for independent installations and operation. This work is dissimilar to other transmission project where all of its elements, unless put together, would not operate or transmit electricity. In the present case, the ICT at Bhiwani is not dependent on the installation or operation of other ICTs installed at different places. The ICT at Bhiwani is an individual project in itself and its individual cost should only be considered for computation of the cost of Initial Spares for it being on higher side.

c) The Petitioner has not explained as to the manner, the cost of the transmission asset/ICT in this petition has been computed at ₹1073.51 lakh. The cost of this transmission asset is on higher side for reasons stated in the preceding paragraphs because it has been computed based on the estimated cost in IA which cannot be considered for calculation of Initial Spares.

d) The cost of the transmission asset in this petition should be calculated based on the cost of the works (civil/electrical works) discovered through bids, IDC calculated at actual rate of interest on loan contracted covering 24 months of period of construction, IEDC ascertained at actual pre-operative expenses (not at 10.75% work cost taken under IA) excluding the expenses that are covered under O&M expenses, and actual contingency expenses instead of 3% of the work cost discovered through bids. After the awards of contracts at bid cost and actual expenditure made, estimated cost approved in IA cannot be used for comparison of actual cost for the purpose of computation cost/time over-run.

46. In light of the submissions made above, UPPCL has prayed not to allow the cost of initial spares calculated based on FR cost derived from the cost approved in IA and requested that the Petitioner may be directed to compute the cost of the asset based on cost discovered through bid.

47. In response, the Petitioner has submitted that in line with Regulations and APTEL direction, the initial spare has been re-calculated based on the completion cost as per the auditor certificates of the transmission asset covered in the instant petition and auditor certificates of remaining assets covered in true up Petition No. 655/TT/2020.

48. We have considered the submissions of Petitioner and UPPCL. Taking into consideration the judgement of the APTEL dated 14.9.2019 in Appeal No.74 of 2017, the Commission shall consider the Initial spares on overall project cost of all the assets covered in the transmission project when all the assets are combined in the 2019-24 period. Accordingly, the Petitioner is directed to submit a combined petition of all the assets in the transmission project at the time of truing up of the 2019-24 tariff.

49. In response to the Commission’s query regarding justification for claiming initial spares under transmission Sub-station (Brown Field) i.e., 6% of the Plant &Machinery cost for the transmission asset, and not as Green Field Sub Station, the Petitioner vide affidavit dated 28.4.2022 has submitted that in case of Brown Field Sub Station, the new equipment may be of different make/ design or of latest technology as compared to the existing assets. Therefore, new set of spares has to be procured in order to ensure reliability of operations and grid stability. Since the capital cost of extension project is less as compared to a new Sub-station, higher percentage of capital cost is required for procuring initial spares. The Petitioner has further submitted that the 765/400 kV, 333 MVA single phase auto transformer at Bhiwani Sub-station has been procured and located at existing Bhiwani Sub-station and, as per the regulations, assets executed in the existing Sub-station are considered in brown field category. Hence, the spares are claimed @ 6% of Plant & Machinery cost under brown field category.

50. The Petitioner has submitted that the discharge of Initial Spares for the transmission asset has been considered on cash basis in the Auditor’s certificate. The discharge statement of initial spares is submitted as follows:

(₹ in lakh)

Total spares Claimed	**Initial Spares discharged up to COD**	**Initial Spares discharged during**			
		2020-21	**2021-22**	**2022-23**	**2023-24**
Transmission Sub-station **(Brownfield)**					
69.82	13.96	55.86	0.00	0.00	0.00

51. Accordingly, the Commission has considered the Plant & Machinery (P&M) cost as per Auditor’s Certificate for computation of initial spares. Therefore, initial spares allowed in respect of the transmission asset for 2019-24 tariff period are as follows:

(₹ in lakh)

Particulars	P&M cost (excluding IDC and IEDC, land cost & cost of civil works) upto cut-off date	Initial spares claimed	Norms as per the 2019 Tariff Regulations	Initial spares allowable	Excess initial spares	Initial spares allowed
	A	B	C	D=(A-B)*C/(100-C)	E = B-D	F=B-E
Sub Station (Brownfield)	1073.51	69.82	6.00%	64.07	5.75	64.07

52. The details of capital cost approved as on COD in respect of the transmission asset in the instant petition are as follows:

(₹ in lakh)

Capital Cost claimed as on COD (A)	Disallowed as on COD (B)		Capital Cost allowed as on COD (D = A-B)
	IDC	IEDC	
959.14	49.64	9.48	900.02

Additional Capital Expenditure ("ACE")

53. Regulation 24 of the 2019 Tariff Regulations provide as follows:

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

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

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

54. The Petitioner has claimed the following ACE in respect of the transmission asset for 2019-24 period in accordance with the provisions of Regulation 24 of the 2019 Tariff Regulations on account of undischarged liability towards final payment for works executed and for works deferred for execution within cut-off date:

(₹ in lakh)

***ACE claimed**
2020-21
183.18

*(*Inclusive of discharge of IDC)*

55. Further, the Petitioner vide affidavit dated 28.4.2022 has submitted the package-wise and vendor-wise details of ACE claimed in respect of the transmission asset during 2019-24 tariff period and the same is as follows:

(₹ in lakh)

Year	**ACE**	**Party Name**	**Package**	**Balance and Retention/ Deferred work**
2020-21	119.16	M/s GE T&D India Ltd	Sub-station	Balance and Retention payment as per clause 24(1)(a) of 2019 Tariff Regulations
	60.84	M/s GE T&D India Ltd	Sub-station	Deferred work liability as per clause 24(1)(b) of 2019 Tariff Regulations

56. We have considered the submissions of the Petitioner. ACE claimed by the Petitioner is allowed under Regulation 24(1)(a) and Regulation 24(1)(b) of the 2019 Tariff Regulations, as it is towards undischarged liabilities recognised to be payable at a future date and balance work deferred for execution. ACE allowed in respect of the transmission asset for 2019-24 tariff period is as follows:

(₹ in lakh)

Particulars	2020-21
ACE as per Auditor's certificate	180.00
ACE disallowed	5.75
Add: IDC Discharged	0.00
ACE allowed in the instant order	**174.25**

57. Accordingly, ACE for 2019-24 tariff period and capital cost as on 31.3.2024 in respect of the transmission asset considered for the purpose of tariff determination for 2019-24 tariff period are as follows:

(₹ in lakh)

Capital Cost as on COD	Projected ACE				Capital Cost allowed as on 31.3.2024
	2020-21	2021-22	2022-23	2023-24	
900.02	174.25	0.00	0.00	0.00	1074.26

Debt-Equity ratio

58. Regulation 18 of the 2019 Tariff Regulations provides as follows:

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

Provided that:

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

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

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

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

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

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

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

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

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

59. The Petitioner has considered debt-equity ratio of 70:30 as on COD, and for ACE for 2019-24 tariff period, debt-equity ratio of 70:30 has been considered for ACE allowed during 2019-24 period in accordance with Regulation 19 of the 2019 Tariff Regulations. The details of debt-equity ratio considered for the purpose of computation of tariff for 2019-24 tariff period is as follows:

Funding	**Capital Cost as on 1.4.2019 (₹ in lakh)**	**(in %)**	**ACE during 2019-24 (₹ in lakh)**	**(in %)**	**Capital Cost as on 31.3.2024 (₹ in lakh)**	**(in %)**
Debt	630.01	70.00	121.97	70.00	751.98	70.00
Equity	270.00	30.00	52.27	30.00	322.28	30.00
Total	**900.02**	**100.00**	**174.25**	**100.00**	**1074.26**	**100.00**

Depreciation

60. Regulation 33 of the 2019 Tariff Regulations provides as follows:

*"**33. Depreciation:** (1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system or element thereof including communication system. In case of the tariff of all the units of a generating station or all elements of a transmission system including communication system for which a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission system taking into consideration the depreciation of individual units:*

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

a) twenty five years, in case the generating station or unit thereof is in operation for fifteen years or less as on the date of operation of the emission control system; or
b) balance useful life of the generating station or unit thereof plus fifteen years, in case the generating station or unit thereof is in operation for more than fifteen years as on the date of operation of the emission control system; or
c) ten years or a period mutually agreed by the generating company and the beneficiaries, whichever is higher, in case the generating station or unit thereof has completed its useful life."

61. We have considered the submissions of the Petitioner. Weighted Average Rate of Depreciation (WAROD) at Annexure has been worked out after taking into account the depreciation rates of the transmission asset as specified in the 2019 Tariff Regulations. Depreciation has been worked out considering ACE as on COD and ACE in 2019-24 tariff period. Depreciation allowed in respect of the transmission asset is as follows:

(₹ in lakh)

Particulars	2019-20 (pro-rata 61 days)	2020-21	2021-22	2022-23	2023-24
Opening Gross Block	900.02	900.02	1074.26	1074.26	1074.26
ACE	0.00	174.25	0.00	0.00	0.00
Closing Gross Block	900.02	1074.26	1074.26	1074.26	1074.26
Average Gross Block	900.02	987.14	1074.26	1074.26	1074.26
Weighted average rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28	5.28	5.28
Balance useful life of the asset	25	25	24	23	22
Elapsed life	0	0	1	2	3
Depreciable Value	810.01	888.43	966.84	966.84	966.84
Combined Depreciation during the year	**7.92**	**52.12**	**56.72**	**56.72**	**56.72**
Cumulative depreciation at the end of the year	7.92	60.04	116.76	173.48	230.20
Remaining Depreciable Value at the end of the year	802.09	828.38	850.07	793.35	736.63

Interest on Loan ("IoL")

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

> ***"32. Interest on loan capital:*** *(1) The loans arrived at in the manner indicated in Regulation 18 of these regulations shall be considered as gross normative loan for calculation of interest on loan.*
>
> *(2) The normative loan outstanding as on 1.4.2019 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2019 from the gross normative loan.*
>
> *(3) The repayment for each of the year of the tariff period 2019-24 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of de-capitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered upto the date of de-capitalisation of such asset.*
>
> *(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year.*
>
> *(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting adjustment for interest capitalized:*
>
> *Provided that if there is no actual loan for a particular year but normative loan is*

still outstanding, the last available weighted average rate of interest shall be considered;

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

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

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

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

63. The weighted average rate of IoL has been considered on the basis of rate prevailing as on 1.4.2019. The Petitioner has prayed that change in interest rate due to floating rate of interest applicable, if any, during 2019-24 tariff period may be adjusted. Accordingly, floating rate of interest, if any, shall be considered at the time of truing-up. Therefore, IoL has been allowed in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL allowed in respect of the Asset-I for 2019-24 tariff period is as follows:

(₹ in lakh)

Particulars	**2019-20 (pro-rata 61 days)**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Gross Normative Loan	630.01	630.01	751.98	751.98	751.98
Cumulative Repayments up to Previous Year	0.00	7.92	60.04	116.76	173.48
Net Loan-Opening	630.01	622.09	691.94	635.22	578.50
Additions due to ACE	0.00	121.97	0.00	0.00	0.00
Repayment during the year	7.92	52.12	56.72	56.72	56.72
Net Loan-Closing	622.09	691.94	635.22	578.50	521.78
Average Loan	626.05	657.02	663.58	606.86	550.14
Weighted Average Rate of Interest on Loan (in %)	7.7400	6.7524	6.7510	6.7510	6.7510
Interest on Loan	**8.08**	**44.36**	**44.80**	**40.97**	**37.14**

Return on Equity ("RoE")

64. Regulation 30 and Regulation 31 of the 2019 Tariff Regulations provide as follows:

> ***"30. Return on Equity**: (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with Regulation 18 of these regulations.*
>
> *(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating station, transmission system including communication system and run-of-river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run-of-river generating station with pondage:*
>
> *Provided that return on equity in respect of additional capitalization after cutoff date beyond the original scope, excluding additional capitalization on account of emission control system, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system or in the absence of actual loan portfolio of the generating station or the transmission system, the weighted average rate of interest of the generating company or the transmission licensee, as the case may be, as a whole shall be considered, subject to ceiling of 14%.*
>
> *Provided further that:*
>
> *i. In case of a new project, the rate of return on equity shall be reduced by 1.00% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO) or Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system based on the report submitted by the respective RLDC;*
>
> *ii. in case of existing generating station, as and when any of the requirements under (i) above of this Regulation are found lacking based on the report submitted by the concerned RLDC, rate of return on equity shall be reduced by 1.00% for the period for which the deficiency continues;*
>
> *iii. in case of a thermal generating station, with effect from 1.4.2020:*
>
> *a) rate of return on equity shall be reduced by 0.25% in case of failure to achieve the ramp rate of 1% per minute;*
>
> *b) an additional rate of return on equity of 0.25% shall be allowed for every incremental ramp rate of 1% per minute achieved over and above the ramp rate of 1% per minute, subject to ceiling of additional rate of return on equity of 1.00%:*
>
> *Provided that the detailed guidelines in this regard shall be issued by National Load Dispatch Centre by 30.6.2019.*
>
> *(3) The return on equity in respect of additional capitalization on account of emission control system shall be computed at the base rate of one-year marginal cost of lending*

rate (MCLR) of the State Bank of India as on 1st April of the year in which the date of operation (ODe) occurs plus 350 basis point, subject to ceiling of 14%;"

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

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

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."

65. The Petitioner has submitted that MAT rate is applicable to it. Accordingly, MAT rate applicable for 2019-20 has been considered for the purpose of RoE which shall be trued up with actual tax rate 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	**2019-20 (pro-rata 61 days)**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Opening Equity	270.00	270.00	322.28	322.28	322.28
Additions due to ACE	0.00	52.27	0.00	0.00	0.00
Closing Equity	270.00	322.28	322.28	322.28	322.28
Average Equity	270.00	296.14	322.28	322.28	322.28
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472	17.472
Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782	18.782
Return on Equity	**8.45**	**55.62**	**60.53**	**60.53**	**60.53**

Operation & Maintenance Expenses ("O&M Expenses")

66. The Petitioner has not claimed any O&M expenses for the transmission asset covered in the instant petition. Accordingly, the O&M Expenses have been considered as 'nil' for the purpose of tariff in the instant petition.

Interest on Working Capital ("IWC")

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

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

…….

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

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

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

including security expenses; and
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:-*

*'**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;"*

68. The Petitioner has submitted that it has computed IWC for 2019-24 period considering the SBI Base Rate plus 350 basis points as on 1.4.2019. The Petitioner has considered the rate of IWC as 11.25%.

69. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The Rate of Interest (RoI) considered is 12.05% (SBI 1-year 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 2020-2021 and from 2021-22 onwards as 10.50% (SBI 1-year MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points). The components of the working capital and interest allowed thereon in respect of the transmission asset are as follows:

(₹ in lakh)

Particulars	**2019-20 (pro-rata 61 days)**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Working Capital for O&M Expenses (O&M Expenses for one month)	0.00	0.00	0.00	0.00	0.00

Working Capital for Maintenance Spares (15% of O&M Expenses)	0.00	0.00	0.00	0.00	0.00
Working Capital for Receivables (Equivalent to 45 days of annual transmission charges)	18.31	19.02	20.24	19.76	19.23
Total Working Capital	18.31	19.02	20.24	19.76	19.23
Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50
Interest on Working Capital	**0.37**	**2.14**	**2.13**	**2.08**	**2.02**

Annual Fixed Charges of 2019-24 Tariff Period

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

(₹ in lakh)

Particulars	**2019-20 (pro-rata 61 days)**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Depreciation	7.92	52.12	56.72	56.72	56.72
Interest on Loan	8.08	44.36	44.80	40.97	37.14
Return on Equity	8.45	55.62	60.53	60.53	60.53
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	0.37	2.14	2.13	2.08	2.02
Total	**24.82**	**154.24**	**164.18**	**160.30**	**156.41**

Filing Fee and the Publication Expenses

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

Licence Fee & RLDC Fees and Charges

72. The Petitioner shall be entitled for reimbursement of licence fees in accordance with Regulation 70(4) of the 2019 Tariff Regulations for 2019-24 tariff period. The

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

Goods and Services Tax

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

74. 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

75. The Petitioner has submitted that security expenses for 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.

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

Capital Spares

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

Sharing of Transmission Charges

78. The Petitioner has prayed that transmission charges in respect of the transmission asset from its COD to 31.3.2024 may be allowed to be recovered on monthly basis in accordance with Regulation 57 of the 2019 Tariff Regulations and may be shared by the beneficiaries and long-term transmission customers in accordance with 2010 Sharing Regulations or as amended from time to time.

79. With effect from 1.7.2011, sharing of transmission charges for inter-State transmission systems is governed by the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2010. With effect from 1.11.2020, sharing of transmission charges is governed by the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2020. Accordingly, the liabilities of the DICs for arrears of transmission charges determined through this order shall be computed DIC-wise in accordance with the provisions of respective Tariff Regulations and shall be recovered from the concerned DICs through Bill 2 under Regulation 15(2)(b) of the 2020 Sharing Regulations. For subsequent period, the billing, collection and disbursement of the transmission charges approved in this order shall be governed by the provisions of the 2020 Sharing Regulations as provided in Regulation 57 of the 2019 Tariff Regulations.

80. To summarise:

The Annual Fixed Charges (AFC) allowed in respect of the transmission asset for 2019-24 tariff period are as follows:

Asset-I

(₹ in lakh)

Particulars	**2019-20 (pro-rata 61 days)**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
AFC	24.82	154.24	164.18	160.30	156.41

81. Annexure given hereinafter form part of the order.

82. This order disposes of Petition No. 22/TT/2022 in terms of the above discussions and findings.

sd/- **(Arun Goyal)** **Member**	**sd/-** **(I. S. Jha)** **Member**

Annexure

Transmission Asset

2019-24	Admitted Capital Cost as on COD (₹ in lakh)	Projected ACE (₹ in lakh)		Admitted Capital Cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)				
Capital Expenditure		**2020-21**	**Total**			**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Sub Station	900.02	174.25	174.25	1074.26	5.28%	47.52	52.12	56.72	56.72	56.72
Total	**900.02**	**174.25**	**174.25**	**1074.26**		**47.52**	**52.12**	**56.72**	**56.72**	**56.72**
				Average Gross Block (₹ in lakh)		**900.02**	**987.14**	**1074.26**	**1074.26**	**1074.26**
				Weighted Average Rate of Depreciation		**5.28%**	**5.28%**	**5.28%**	**5.28%**	**5.28%**