CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Petition No. 274/TT/2022

Coram:

Shri I. S. Jha, Member
Shri Arun Goyal, Member
Shri P. K. Singh, Member

Date of Order: 22.11.2023

In the matter of:
Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 for determination of transmission tariff from COD to 31.3.2024 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 in respect of the asset: +/-300 MVAR STATCOM at 400 kV Lucknow Sub-station under "Provision of STATCOM at Nalagarh & Lucknow 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. Ajmer Vidyut Vitran Nigam Limited,
Corporate Office, Vidyut Bhawan,
Panchsheel Nagar, Makarwali Road,
Ajmer-305004 (Rajasthan).

2. Jaipur Vidyut Vitran Nigam Limited,
Vidyut Bhawan, Janpath, Jyoti Nagar,
Jaipur-302005 (Rajasthan).

3. Jodhpur Vidyut Vitran Nigam Limited,
New Power House, Industrial Area,
Jodhpur-342003 (Rajasthan).

4. Himachal Pradesh State Electricity Board Limited,
Vidyut Bhawan, Kumar House Complex Building II,
Shimla-171004 (Himachal Pradesh).

5. Punjab State Power Corporation Limited,
The Mall, PSEB Head Office,

Patiala-147001 (Punjab).

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

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

8. Uttar Pradesh Power Corporation Limited,
Shakti Bhawan, 14, Ashok Marg,
Lucknow-226001 (Uttar Pradesh).

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

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

11. Tata Power Delhi Distribution Limited,
NDPL House, Hudson Lines Kingsway Camp,
Delhi-110009.

12. Chandigarh Administration,
Sector-9, Chandigarh.

13. Uttarakhand Power Corporation Limited,
Urja Bhawan, Kanwali Road,
Dehradun (Uttarakhand).

14. North Central Railway,
DRM Office, Nawab Yusuf Road,
Prayagraj, Uttar Pradesh-211011.

15. New Delhi Municipal Council,
Palika Kendra, Sansad Marg,
New Delhi-110002.
…**Respondent(s)**

For Petitioner : Shri S. S. Raju, PGCIL
Shri B. B. Rath, PGCIL
Shri D. K. Biswal, PGCIL
Shri V. P. Rastogi, PGCIL
Shri Ranjeet Kumar Pandey, PGCIL

For Respondents : None

ORDER

Power Grid Corporation of India Limited 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 asset +/- 300 MVAR STATCOM at 400 kV Lucknow Sub-station (hereinafter referred to as the "transmission asset") under "Provision of STATCOM at Nalagarh and Lucknow" (hereinafter referred to as "the transmission project") in Northern Region.

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 –9 above.

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

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

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

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

7) Allow the Petitioner to claim the overall security expenses and consequential IOWC on that security expenses separately.

8) Allow the petitioner to claim the capital spares at the end of tariff block as per actual.

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

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

11) Condone the Time overrun of all the assets as per clause 22 (2) of Tariff Regulation'2019 *and allow IDC/IEDC as claimed in the petition.*

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) Investment Approval (IA) of the transmission project was accorded by the Board of Directors of the Petitioner's Company in its 332nd meeting held on 19.8.2016 and communicated vide Ref. No. C/CP/STATCOM in NR dated 29.8.2016 at an estimated cost of ₹43189 lakh including an Interest During Construction (IDC) of ₹2623 lakh based on April, 2016 price level.

(b) The scope of the transmission project was discussed and agreed in 32nd Standing Committee Meeting on Transmission System planning of Northern Region held on 31.8.2012. Further, the transmission project was discussed and ratified in the 29th Northern Regional Power Committee (NRPC) meeting held on 13.9.2013.

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

Sub-stations

Sub-station	Mechanically switched compensation		Dynamic compensation (STATCOM)
	Reactor x125 MVAR	Capacitor x125 MVAR	+/-MVAR
Lucknow	2	1	+/- 300
Nalagarh	2	2	+/- 200

(d) The details of the associated petitions for the transmission assets covered in the transmission project are as follows:

Sl. No.	Assets	COD	Petition
1.	+/-300 MVAR STATCOM at 400 kV Lucknow Sub-station	25.12.2020	Instant petition
2.	+/-200 MVAR STATCOM at 400/220 kV Nalagarh Sub-station	31.3.2019	Tariff for 2014-19 period has been determined vide order dated 25.1.2021 in Petition No. 85/TT/2019

(e) The complete scope of work as per IA has been completed.

(f) As per the IA, the transmission project was scheduled to be put into commercial operation within 30 months from the date of IA, i.e. by 19.2.2019. The Petitioner has claimed the date of commercial operation as 25.12.2020. The details of scheduled date of commercial operation (SCOD), date of commercial operation (COD) and time over-run in case of the transmission asset is as follows:

SCOD	COD claimed	Time over-run
19.2.2019	25.12.2020	675 days

4. The Respondents are distribution licensees, power departments, power utilities and transmission licensees, who are procuring transmission services from the Petitioner, mainly, the 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 the newspapers in accordance with Section 64 of the Electricity Act, 2003 (the Act). No comments or suggestions have been received from the general public in response to the aforesaid notices published in the newspapers by the Petitioner. Respondent No. 8, Uttar Pradesh Power Corporation Limited (UPPCL) has filed its reply vide affidavit dated 25.5.2022 and raised issues of IDC and IEDC, apportionment of cost and Initial Spares therein. In response, the Petitioner has filed its rejoinder vide affidavit dated 19.12.2022.

6. The hearing in this matter was held on 20.12.2022 and order was reserved in the matter.

7. This order is being issued considering the submissions made by the Petitioner in the petition vide affidavit dated 9.3.2022, the Petitioner's submissions vide affidavits dated 21.9.2022 and 9.1.2023, UPPCL's reply filed vide affidavit dated 25.5.2022 and the Petitioner's rejoinder affidavit dated 19.12.2022 to the reply of UPPCL.

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 FROM COD TO 31.3.2024 FOR 2019- 24 TARIFF PERIOD

9. The Annual Fixed Charges (AFC) claimed by the Petitioner in respect of the transmission asset for 2019-24 tariff period are as follows:

(₹ in lakh)

Particulars	**2020-21 (Pro-rata for 97 days)**	**2021-22**	**2022-23**	**2023-24**
Depreciation	307.67	1219.37	1294.47	1319.13
Interest on Loan	255.00	960.95	941.56	875.98
Return on Equity	309.69	1228.92	1306.53	1332.03
Interest on Working Capital	16.24	63.41	65.83	66.02
O&M Expenses	97.55	379.92	393.28	407.06
Total	**986.15**	**3852.57**	**4001.67**	**4000.22**

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

(₹ in lakh)

Particulars	**2020-21 (Pro-rata for 97 days)**	**2021-22**	**2022-23**	**2023-24**
O&M Expenses	30.59	31.66	32.77	33.92
Maintenance Spares	55.06	56.99	58.99	61.06
Receivables	457.49	474.97	493.36	491.83
Total	**543.14**	**563.62**	**585.12**	**586.81**
Rate of Interest (in %)	11.25	11.25	11.25	11.25
Interest on Working Capital	**16.24**	**63.41**	**65.83**	**66.02**

Date of Commercial Operation ("COD")

11. The Petitioner has claimed COD of the transmission asset as 25.12.2020.

12. Regulation 5 of the 2019 Tariff Regulations provides as follows:

*"**5. Date of Commercial Operation:** (1) The date of commercial operation of a generating station or unit thereof or a transmission system or element thereof and associated communication system shall be determined in accordance with the provisions of the Grid Code.*

(2) In case the transmission system or element thereof executed by a transmission licensee is ready for commercial operation but the interconnected generating station or the transmission system of other transmission licensee as per the agreed project implementation schedule is not ready for commercial operation, the transmission licensee may file petition before the Commission for approval of the date of commercial operation of such transmission system or element thereof:

Provided that the transmission licensee seeking the approval of the date of commercial operation under this clause shall give prior notice of at least one month, to the generating company or the other transmission licensee and the long-term customers of its transmission system, as the case may be, regarding the date of commercial operation:

Provided further that the transmission licensee seeking the approval of the date of commercial operation of the transmission system under this clause shall be required to submit the following documents along with the petition:

(a) Energisation certificate issued by the Regional Electrical Inspector under Central Electricity Authority;
(b) Trial operation certificate issued by the concerned RLDC for charging element with or without electrical load;
(c) Implementation Agreement, if any, executed by the parties;
(d) Minutes of the coordination meetings or related correspondences regarding the monitoring of the progress of the generating station and transmission systems;
(e) Notice issued by the transmission licensee as per the first proviso under this clause and the response;
(f) Certificate of the CEO or MD of the company regarding the completion of the transmission system including associated communication system in all respects.
(3) The date of commercial operation in case of integrated mine(s), shall mean the earliest of —

a) the first date of the year succeeding the year in which 25% of the Peak Rated Capacity as per the Mining Plan is achieved; or
b) the first date of the year succeeding the year in which the value of production estimated in accordance with Regulation 7A of these regulations, exceeds total expenditure in that year; or
c) the date of two years from the date of commencement of production:

Provided that on earliest occurrence of any of the events under sub-clauses (a) to (c) of Clause (3) of this Regulation, the generating company shall declare the date of commercial operation of the integrated mine(s) under the relevant sub-clause with one week prior intimation to the beneficiaries of the end-use or associated generating station(s);

Provided further that in case the integrated mine(s) is ready for commercial operation but is prevented from declaration of the date of commercial operation for reasons not attributable to the generating company or its suppliers or contractors or the Mine Developer and Operator, the Commission, on an application made by the generating company, may approve such other date as the date of commercial operation as may be considered appropriate after considering the relevant reasons that prevented the declaration of the date of commercial operation under any of the sub-clauses of Clause (3) of this Regulation;

Provided also that the generating company seeking the approval of the date of commercial operation under the preceding proviso shall give prior notice of one month to the beneficiaries of the end-use or associated generating station(s) of the integrated mine(s) regarding the date of commercial operation."

13. In support of the COD of the transmission asset, the Petitioner has submitted CEA Regional Inspectorial Organisation (North) certificate dated 12.11.2020, certificate of completion of trial operation dated 21.1.2021, CMD certificate and self-declaration of COD certificate dated 31.12.2020 in accordance with Regulation 5(1) of the 2019 Regulations.

14. Taking into consideration CEA Regional Inspectorial Organisation (North) certificate, certificate of completion of trial operation dated 21.1.2021, the Petitioner's CMD certificate and self-declaration of COD certificate, as required under the Grid Code, COD of the transmission asset is approved as 25.12.2020.

Capital Cost

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

*"**19 Capital Cost:** (1) The Capital cost of the generating station or the transmission system, as the case may be, as determined by the Commission after prudence check in accordance with these regulations shall form the basis for determination of tariff for existing and new projects.*

(2) The Capital Cost of a new project shall include the following:

(a) The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;

(b) Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;

(c) Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period;

(d) Interest during construction and incidental expenditure during construction as computed in accordance with these regulations;

(e) Capitalised Initial Spares subject to the ceiling rates in accordance with these regulations;

(f) Expenditure on account of additional capitalization and de-capitalisation determined in accordance with these regulations;

(g) Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the date of commercial operation as specified under Regulation 7 of these regulations;
(h) Adjustment of revenue earned by the transmission licensee by using the Asset-before the date of commercial operation;
(i) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;
(j) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal up to the receiving end of the generating station but does not include the transportation cost and any other appurtenant cost paid to the railway.
(k) Capital expenditure on account of biomass handling equipment and facilities, for co-firing;
(l) Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;
(m) Expenditure on account of fulfilment of any conditions for obtaining environment clearance for the project;
(n) Expenditure on account of change in law and force majeure events; and
(o) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.

(3) The Capital cost of an existing project shall include the following:
(a) Capital cost admitted by the Commission prior to 1.4.2019 duly trued up by excluding liability, if any, as on 1.4.2019;
(b) Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;
(c) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;
(d) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;
(e) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal up to the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and
(f) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries."

(4) The capital cost in case of existing or new hydro generating station shall also include:
(a) cost of approved rehabilitation and resettlement (R&R) plan of the project in conformity with National R&R Policy and R&R package as approved; and
(b) cost of the developer's 10% contribution towards Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) and Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) project in the affected area.

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

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

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

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

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

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

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

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

16. The Petitioner vide Auditor's Certificate dated 10.3.2021 has claimed the following capital cost as on COD and Additional Capital Expenditure (ACE) projected to be incurred, in respect of the transmission asset:

(₹ in lakh)

FR apportioned approved cost	**Expenditure Up to COD**	**Projected ACE**				**Estimated completion cost**
		2020-21	**2021-22**	**2022-23**	**2023-24**	
24215.19	20623.66	301.64	1809.86	904.93	0.00	23640.09

17. UPPCL has submitted that the apportioned approved cost is higher than the estimated completion cost. The Petitioner has failed to adopt prudent practices and rationalised parameters for preparation of the original cost estimates. UPPCL has further submitted that original cost in the IA is highly inflated, therefore, the same cannot be used for comparison with the actual cost. All issues may be settled with reference to the award cost. Further, the Petitioner is required to

submit break-up of construction/supply/service/packages, amongst others, in terms of award cost and actual expenditure till completion or up to the COD. Also, at the time of DPR and after the Standing Committee approved the transmission project on 31.8.2012 and NRPC on 13.9.2013, the Petitioner was aware of the geographical format of the transmission project and it was within its understanding that for implementation, the transmission project should be split into two packages. However, the Petitioner chose not to prepare separate cost estimates of STATCOM at Lucknow and at Nalagarh for IA on 19.8.2016, which is contrary to the intent of Regulation 3(20), Regulation 3(50), Regulation 3(51), Regulation 8(1) and Regulation 8(3) of the 2019 Tariff Regulations. UPPCL submitted that the Petitioner may be directed that in future after the approval of the project from the competent authority, the Petitioner shall split the project into relevant elements/packages, as per geographical requirement of the project, and provide cost estimates of each such elements in the IA of the Board of Directors and invite bid for such elements/packages. No splitting shall be allowed after IA is accorded. UPPCL has also prayed to modify Part-III Form-5 to include package wise detailed break up of award cost in comparison with original cost estimate and actual expenditure.

18. In response, the Petitioner has submitted that apportionment done in case of both the assets as per the approved IA. It is further submitted that both the assets covered in the transmission project are of different ratings and placed at different locations. Therefore, the Petitioner has considered the apportionment prudently for both the assets. Further, the Petitioner has already submitted the apportionment of "+/-200 MVAR STATCOM at 400/220 kV at Nalagarh Sub-station" in Petition No.

85/TT/2019 and the Commission has already considered the apportionment vide order dated 25.1.2021 in Petition No. 85/TT/2019.

19. We have considered the submissions of the Petitioner and UPPCL. With regard to apportionment of the transmission assets, we agree with the submissions of the Petitioner that both the assets covered in the transmission project are of different ratings and placed at different locations and as such the Petitioner considered the apportionment prudently for both the transmission assets. With regard to preparation of cost estimates and completion cost, we are of the view that the Petitioner should adopt more prudent methods while estimating the cost.

20. The estimated completion cost of the transmission asset based on the Auditor's Certificate works out to ₹23640.09 lakh including IEDC and IDC which is within the FR apportioned approved cost of ₹24215.19 lakh. Therefore, there is no cost over-run.

Time Over-run

21. As per IA, the transmission asset was scheduled to be put into commercial operation within 30 months from the date of IA. Accordingly, SCOD of the transmission asset is 19.2.2019, against which it has been put under commercial operation on 25.12.2020. Therefore, there is time over-run of 675 days in the COD of the transmission asset.

22. The Petitioner has submitted the following reasons in respect of the transmission asset for time over-run:

a) **Rejection of PSDF Grant from PSDF Appraisal Committee (From 7.1.2016 to 14.2.2019-Total 1134 days)**

Despite all the efforts being made by the Petitioner at various levels, the PSDF grant proposal was rejected by the Appraisal Committee. The Petitioner conducted various meetings, discussions and deliberations in various Northern Region forums and details of the same are as follows:

13.9.2013 – Agreed in 29th NRPC meeting and the proposal was approved without a pre-condition of PSDF funding.

10.1.2014 - Cabinet approval for PSDF operationalization.

13.9.2014 - Agreed in 28th meeting of ERPC for debt part to be funded through PSDF.

31.5.2016 - Appraisal Committee directed the Petitioner to take up the proposal with NRPC for PSDF funding recommendations.

29.8.2016 - Investment Approval for the transmission project was accorded by Board of Directors of the Petitioner.

2.5.2017 – The Petitioner's proposal was taken up in 39th NRPC wherein NRPC recommended the proposal for PSDF funding.

19.3.2018 - POSOCO informed regarding denial of funding through PSDF by Appraisal Committee. Meeting was held on 5.2.2018.

28.6.2018 - Proposal again taken up in 42nd NRPC wherein it was decided to request PSDF Appraisal Committee to consider the project for PSDF funding as a special case.

5.10.2018 - Ministry of Power, GoI requested PSDF Appraisal Committee to consider the transmission project as a special case for PSDF funding post placement of loan.

18.10.2018 - Application of NR STATCOM to PSDF Appraisal Committee to reconsider the proposal as a special case for the benefit of constituents.

14.2.2019 - POSOCO informed regarding denial of funding through PSDF by Appraisal Committee.

Chronology of various activities with respect to PSDF funding is as follows:

Sl. No.	STATCOM in the Region/ Entity for Communication	Activity	Date
1	NR	Agreed in 32nd SCM of Northern region	31.8.2013
2	NR	Agreed in 29th meeting of NRPC	13.9.2013
3	ER	25th meeting of ERPC (in-principle approval for the scheme and possibility of PSDF funding to be explored)	21.9.2013
4	GoI	Cabinet approval for PSDF operationalization	10.1.2014
5	CERC	CERC (PSDF) Regulations	9.6.2014
6	ER	Agreed in 28th meeting of ERPC for debt part to be funded through PSDF	13.9.2014
7	GoI	Approved guidelines for disbursement of fund from PSDF	18.9.2014
8	ER	Submission of ER STATCOM application to NLDC	5.6.2015
9	ER	MoP sanction order for ER STATCOM	5.1.2016
10	NR	Application of NR STATCOM to NLDC for PSDF	7.1.2016
11	NR	Appraisal committee directed the Petitioner to take up the proposal with NRPC for PSDF funding recommendation	31.5.2016
12	NR	Investment Approval for the transmission project accorded by Board of Directors of the Petitioner	29.8.2016
13	NR	The Petitioner's proposal taken up in 39th NRPC wherein NRPC recommended the proposal for PSDF funding	2.5.2017
14	NR	POSOCO informed regarding denial of funding through PSDF by Appraisal Committee (meeting held on 5.2.2018)	19.3.2018
15	NR	Proposal again taken up in 42nd NRPC wherein it was decided to request PSDF Appraisal Committee to consider the project for PSDF funding as a special case	28.6.2018
16	GoI	Ministry of Power (MoP), GOI requested PSDF Appraisal Committee to consider instant scheme as a special case for PSDF funding post placement of loan.	5.10.2018
17	NR	Application of NR STATCOM to PSDF Appraisal Committee to reconsider the	18.10.2018

		proposal as a special case for the benefit of the constituents.	
18	POSOCO /NLDC	POSOCO informed regarding denial of funding through PSDF by Appraisal Committee.	14.2.2019

b) **<u>Delay due to various orders of NGT for streamlining lawful mining in Uttar Pradesh (From April, 2017 to September, 2017-Approx. 6 Months):</u>**

Due to various orders of NGT for streamlining lawful mining in Uttar Pradesh, there was severe shortage of sand in the Uttar Pradesh for a period of about 6 months which resulted in slowdown of all the civil works at site (Lucknow and Uttar Pradesh) causing delay in execution of the transmission project.

c) **<u>Delay due to Doklam issue (From June, 2017 to August, 2017-Approx. 3 Months):</u>**

The main contractor was from China, namely, Montnets Rongxin Technology Group Co. Ltd. Due to Doklam issue between both the countries, the Chinese staff was not granted visa and most of the Chinese Engineers left the country and this led to the delay in execution of the transmission asset.

d) **<u>Delay due to COVID-19 pandemic (From February, 2020 to December, 2020-Approx. 11 Months):</u>**

The Government of India on 14.2.2020, notified that due to coronavirus, visa restriction and condition for entry into India from China was restricted. The Chinese contractor also intimated about the urgent situation due to COVID-19 and non-deputation of manpower from China because of travel restrictions imposed on Chinese nationals in India. Government of India through its notifications dated 19.2.2020 and 13.5.2020, *inter-alia*, considered the global COVID-19 pandemic as a case of natural calamity.

e) Further, the Petitioner has submitted the summary of time over-run as follows:

Sl. No.	From	To	Period in months	Reason for delay	Remarks/ Documentary evidence
1.	January, 2016	March, 2019	37 months	Delay due to rejection of PSDF grant from the PSDF Appraisal Committee	Despite all the efforts made by Petitioner at various levels, proposal was rejected by the Appraisal Committee.
2.	April, 2017	September, 2017	6 months	Delay due to various orders of NGT for streamlining lawful mining in Uttar Pradesh	A summary of key NGT orders pertaining to sand mining in Uttar Pradesh in the year 2018.
3.	June, 2017	August, 2017	3 months (concurrent with Sl. No. 1 above for 3 months)	Delay due to Doklam issue	Press release by GoI regarding developments in Doklam Area in the year 2017 and news clipping regarding visa restrictions by China due to Doklam.
4.	February, 2020	December, 2020	11 months	Delay due to COVID-19 pandemic	GoI's notification (as on 14.2.2020) regarding coronavirus related visa restrictions and conditions for entry into India from China. The Contractor's intimation of urgent situation due to COVID 19 and non-deputation of manpower from China vide its letter dated 6.3.2020. GoI's notifications dated 19.2.2020 and 13.5.2020, inter alia, declaring global COVID-19 pandemic as a case of natural calamity. Petitioner's declaration dated 17.4.2020 indicating the subject project of national importance.
Total Delay due to uncontrollable factors			**37 months**		

23. We have considered the submissions of the Petitioner and have gone through the documents placed on record with regard to time over-run. As per IA dated 19.8.2016, the SCOD of the transmission project was 30 months. Accordingly, the SCOD of the transmission project was 19.2.2019 against which the transmission

asset has been put into commercial operation on 25.12.2020 with delay of 675 days.

24. The Petitioner has submitted that time over-run in case of the transmission asset is due to rejection of PSDF grant, orders of NGT for streamlining lawful mining in U.P, Doklam issue and COVID-19 pandemic. We deal with various contentions raised by the Petitioner for the time over-run in COD of the transmission asset.

Delay due to rejection of PSDF grant

25. The Petitioner has submitted that on 7.1.2016, it applied for PSDF funding for STATCOMs in NR. The Appraisal Committee in the month of May, 2016 directed the Petitioner to obtain approval from NRPC. The Petitioner obtained NRPC approval for implementation through PSDF funding in the month of May, 2017. The Appraisal Committee in the month of February, 2018 rejected the proposal of PSDF funding on the ground that LoA of the transmission project has already been placed. The Petitioner again requested the Appraisal Committee to consider the transmission project for PSDF funding as a special case. However, request for PSDF funding for installation of NR STATCOMs was declined on 14.2.2019.

26. We have perused letters dated 19.3.2018 and 14.2.2019 of POSOCO addressed to the Petitioner with regard to denial of funding through PSDF. The relevant extracts of the letter dated 19.3.2018 are as follows:

> *"To*
> *ED (CP),*
> *Power Grid Corporation of India Limited*

Subject: PSDF-Proposal for installation of STATCOM at Nalagarh & Lucknow in Northern Region by POWERGRID
Sir,
The scheme for installation of STATCOM in Northern Region was examined by the sub group in the meeting held on 6th May, 2016. Thereafter, the proposal was put up for recommendation of the Appraisal Committee during its 12th meeting held on 16.6.2016. The Appraisal Committee was of the view that approval of the concerned RPC may be taken. Accordingly, POWERGRID was asked to take necessary action in this regard. NRPC approval dated 14.7.2017 was conveyed by POWERGRID in November, 2017.

Before placing the proposal in the Appraisal Committee, the sub group reviewed the status of the proposal in its 36th meeting held on 12.1.2018, wherein it was informed by the representative of POWERGRID that the proposed STATCOMs of NR had already been awarded.

The Appraisal Committee deliberated the proposal during its eighteenth meeting held on 5th February, 2018. The Committee observed that as per the decision of the Monitoring Committee taken during its third meeting, schemes, for which the LOA's have already been placed, cannot be considered for funding under PSDF.

Therefore, in line with the above, the proposal for installation of STATCOM in Northern Region is deemed as returned."

27. POSOCO vide its letter dated 14.2.2019 informed the Petitioner that the request to re-consider the proposal for installation of STATCOM in the Northern Region from PSDF funding was not accepted by the Appraisal Committee as LoA for the project had already been placed before submitting the proposal for the approval of PSDF funding. It is pertinent to mention that financial tie up for a project is part of the project execution plan and needs to be completed in time so that project schedule does not get affected. It is observed that petitioner itself has chosen to go for PSDF funding, and they should have taken timely corrective action if approval of PSDF funding was getting delayed. It is further observed that the other element of the transmission project, +/-200 MVAR STATCOM at 400/220 kV Nalagarh Sub-station, which was also the part the proposed PSDF funding, was implemented and put into commercial operation by the Petitioner on 31.3.2019 with

a time over-run of 40 days only. Therefore, we are of the view that time over-run on account of delay in grant of PSDF fund is not condonable.

Delay due to various orders of NGT for streamlining lawful mining in U.P.

28. The Petitioner has submitted that there was acute shortage of sand in the U.P from April, 2017 to September, 2017 due to which there was slowdown of all the civil works at site. We have gone through the submissions of the Petitioner. The Petitioner has submitted random paper clippings as documentary evidence in support of the time over-run. The Petitioner has not been able to submit any valid NGT order and has also not submitted any other valid document to show that the said period of six months period was impacted on account of shortage of sand. Accordingly, we are not inclined to condone the delay for the duration from April, 2017 to September, 2017.

Delay due to Doklam Issue:

29. The Petitioner has submitted that the period of time from June, 2017 to August, 2017 (3 months) was impacted on account of Doklam issue between India and China due to which the Chinese staff was not granted visa. In support of its contention, the Petitioner has furnished random paper clippings wherein it has been mentioned that China issued travel advisory for tourists to India and the Chinese mission in India asked Chinese citizens to reduce unnecessary travel to India. We have gone through the submissions of the Petitioner. The Dhoklam issue started on 16.6.2017 and was finally resolved on 28.8.2017. In the instant case, the implementing agency is based in China i.e. Rongxin Xingye Power Technology Co., Ltd. and it had difficulties and the work was hampered due to grant of visa

issues and travel advisory during the said period. Accordingly, we are of the view that the time over-run of 73 days from 16.6.2017 to 28.8.2017 is beyond the control of the Petitioner and the same has been condoned.

<u>Delay due to COVID-19 Pandemic:</u>

30. The Petitioner has submitted that time over-run for the period from February, 2020 to December, 2020 was impacted on account of COVID-19 pandemic. The Petitioner has also submitted that main contractor of the transmission project was Montnets Rongxin Technology Group Company Limited, China. On account of COVID-19 pandemic situation, the deputation of Chinese Engineers at site remained on hold to ease out the situation. The Petitioner has submitted letter dated 6.3.2020 wherein the main contractor intimated that non-deputation of manpower from China was due to COVID-19 pandemic. The Petitioner has further submitted that Ministry of Finance (MoF) vide OM dated 19.2.2020 clarified that disruption of supply chains due to spread of corona virus in China or in any other country will be covered under the force majeure clause (FMC). The Petitioner has referred to MoF OM dated 13.5.2020, wherein it is provided that the date of completion of contractual obligations shall be extended for a period not less than three months and not more than six months without imposition of any cost or penalty on the contractor/concessionaire.

31. It is observed that Government of India, Ministry of Finance, Department of Expenditure, Procurement Policy Division, vide Office Memorandum No. F.18/4/2020- PPD dated 13.5.2020 extended the contracts for a period of three

months to six months from 20.2.2020 due to prevailing force majeure conditions. The relevant portion of the O.M. dated 13.5.2020 is as follows:

> *"4. It is recognized that in view of the restrictions placed on the movement of goods, services and manpower on account of the lock-down situation prevailing overseas and in the country in terms of the guidelines issued by the MHA under the DM Act, 2005 and the respective State and UT Governments, it may not be possible for the parties to the contract to fulfil contractual obligations. In respect of Public-Private Partnership (PPP) concession contracts, a period of the contract may have become unremunerative. Therefore, after fulfilling due procedure and wherever applicable parties to the contract may invoke FMC for all construction/works contracts, goods and services contracts and PPP contracts with Government Agencies and in such event, date for completion of contractual obligations which had to be completed on or after 20th February, 2020 shall stand extended for a period of not less than three months and not more than six months without imposition of any cost or penalty on the contractor/concessionaire. Concession period in PPP contracts ending on or after 20th February, 2020 shall be extended by not less than three and not more than six months. The period of extension (between three and six months) may be decided based on the specific circumstances of the case and the period for which performance was affected by the force majeure events."*

32. In the instant case, it is not clear from the submissions of the Petitioner whether the contractor has invoked FMC Clause or not. It is further observed that whether the Petitioner has extended the contractual obligations of the contractor on account of FMC Clause. The Petitioner is directed to submit all the relevant documents in support of FMC and the procedure followed in the instant case at the time of truing-up and the same will be reviewed accordingly at the time of truing-up.

33. The Petitioner has referred MoP's letter dated 27.7.2020 and has sought extension of 5 months of SCOD of transmission projects which were under construction as on 25.3.2020 and further period of three months in case of the transmission projects which were construction as on 1.4.2021 in accordance with MoP's letter dated 12.6.2021.

34. The relevant portion of the MoP's letter dated 27.7.2020 is as follows:

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

Sir,
I am directed to state that transmission utilities have pointed out that construction activities at various transmission project sites have been severely affected by the nationwide lockdown measures announced since 25th march, 2020 to contain outbreak of COVID-19 and have requested for extension of Scheduled Commercial Operation (SCOD) to mitigate the issues of disruption in supply chains and manpower, caused due to outbreak of COVID-19 pandemic.
2. It has been, therefore, decided that; i. All inter-state transmission projects, which were under construction as on date of lock-down i.e. 25th March 2020, shall get an extension of five months in respect of SCOD ii. This order shall not apply to those projects, whose SCOD date was prior to 25th March 2020
iii. Start date of Long Term Access granted to a generator by CTU based on completion of a transmission line, whose SCOD is extended by 5 months due to COVID-19 as mentioned above at point(i), shall also be extended by 5 months."

35. The relevant portion of the MoP's letter dated 12.6.2021 is as follows:

"Sub: Extension to TSP/Transmission Licensees for completion of under construction inter-State transmission projects – reg.
Sir,
I am directed to state that transmission utilities have approached this Ministry stating that construction activity at various transmission projects sites have been severely affected by the current second wave of COVID-19 pandemic and various measures taken by State/UT Governments to contain the pandemic; such as night curfew, imposition of section 144, weekend lockdown and complete lockdown. In this regard they have requested for extension of Scheduled Commercial Operation Date (SCOD) for the undergoing Transmission projects to mitigate the issues of disruption in supply chains and manpower, caused due to COVID-19 pandemic.
2. The matter has been examined in the Ministry and it has been noted that unlike last year complete lock-down in the entire country, this time different States/UTs have ordered lock-down in their State/UTs as per their own assessments. Therefore, after due consideration, it has been decided that;
i. All inter-state transmission projects, which are under construction with SCOD coming after 01 April 2021 shall get an extension of three (3) months in respect of their SCOD;
ii. The commencement date of Long Term Access (LTA) to a generator by CTU based on completion of a transmission line, whose SCOD is extended by three (3) months due to COVID-19 as mentioned above at point(i), shall also be extended by three (3) months.
3. This issue with the approval of Competent Authority."

36. We have gone through the above-mentioned MoP's letters dated 27.7.2020 and 12.6.2021. As per the letter dated 27.7.2020, five months extension is not applicable if the SCOD of the transmission project is prior to 25.3.2020. In the instant case, the SCOD of the project is 19.2.2019. Therefore, the extension of 5 months is not applicable. As per the letter dated 12.6.2021, if the SCOD of the inter-State transmission projects is after 1.4.2021 then they are eligible for

extension of three months. In the instant case, the SCOD of the transmission project is prior to 1.4.2021, therefore the MoP's letter of 12.6.2021 is also not applicable.

37. We have considered the submissions of the Petitioner. On account of COVID-19 pandemic, the Government of India issued various directions for lockdown and also imposed certain restrictions and the same were in force during Covid 19 Phase-I from 25.3.2020 to 14.4.2020 (21 days), Phase-2 from 15.4.2020 to 3.5.2020 (19 days), Phase-3 from 4.5.2020 to 17.5.2020 (14 days) and Phase-4 from 18.5.2020 to 31.5.2020 (14 days), aggregating to about 68 days. Therefore, we condone the delay of 68 days in execution of the transmission asset on account of COVID-19 pandemic for the period from 25.3.2020 to 31.5.2020, as detailed above.

38. Accordingly, out of the total time over-run of 675 days, time over-run of 141 days, 73 days on account of Doklam issue and 68 days on account of COVID-19 pandemic has been condoned.

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

39. The Petitioner has claimed IDC in respect of the transmission asset and has submitted the Auditor's Certificate dated 10.3.2021 in support of the same. The Petitioner has submitted the computation of IDC along with year-wise details of the IDC discharged.

40. The loan amount as on COD has been mentioned in Form-6 and Form-9C. The loan details submitted in Form-9C for 2019-24 tariff period and IDC

computation statement have been considered for the purpose of IDC calculation on cash basis and on accrued basis. The un-discharged IDC as on COD has been considered as ACE during the year in which it has been discharged. However, in the statement showing IDC discharged up to COD, the Petitioner has indicated the floating rate of interest of the loans deployed. IDC on cash basis up to COD has been worked out on the basis of loan details given in the statement showing discharge of IDC and Form-9C for the transmission asset. The Petitioner is directed to submit information on actual interest rates at the time of truing-up.

41. UPPCL has made the following submissions with respect to IDC and IEDC:

a. The transmission project was to be implemented within 30 months from the date of IA i.e. 19.2.2019 against which the transmission project was put into commercial operation on 25.12.2020. The Petitioner took unrealistically long execution time of 30 months resulting in loading of higher cost on account of IDC in original cost estimates.

b. Original cost estimate is on higher side on account of higher level of IEDC of 10.7% and contingency charges of 3% have been considered over and above 10.7%. Therefore, there was an extra loading of 3% in the original cost estimates.

c. In the original cost estimate, IDC for both the STATCOMs has been taken as 6.46% of the total cost, whereas, actual IDC has increased to 10.16% of the actual cost.

d. Therefore, the cost estimate approved by the Board of Directors of the Petitioner cannot be considered for comparison of completion cost of the project as on COD as it is already inflated and if it is taken as reference for comparison, cost and time over-run cannot be ascertained properly.

42. In response, the Petitioner has submitted as follows:

a. The IDC and IEDC estimation are considered based on the IDC and IEDC approved in the IA dated 19.8.2016. It is further submitted that IDC and IEDC claimed in the instant petition are as per the fund infusion and actual expenditure of IEDC up to COD i.e. 25.12.2020. Therefore, the time over-run which is on account of the uncontrollable factors mentioned in the petition may be condoned and IDC may be allowed as claimed.

b. The cost estimates are prepared based on schedule of rates. The schedule of rates 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 transmission project. Subsequently, the award for execution of the transmission project was placed after following the transparent process of tendering, bid evaluation and award of work to lowest technical and commercially responsive bid.

c. The Petitioner follows a robust and time-tested system of preparing cost estimates before obtaining IA. After the IA, the award letters are placed on the executing agencies on the basis of tendering process as per the best industry practices and due diligence is undertaken including justification of bid prices vis-à-vis estimated cost before placing the awards. Further, 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.

43. We have considered the submissions of the Petitioner and UPPCL. Accordingly, based on the information furnished by the Petitioner, IDC considered in respect of the transmission asset is as follows:

(₹ in lakh)

IDC as per Auditor's Certificate	IDC admissible	IDC disallowed due to time over-run not condoned/ computational difference	IDC discharged as on COD	IDC Un-discharged as on COD	IDC Discharge During	
					2020-21	2021-22
A	B	C=A-B	D	E=B-D	F	G
2402.40	792.29	1610.11	792.29	0.00	0.00	0.00

44. The Petitioner has claimed IEDC of ₹1234.01 lakh and has submitted Auditor's Certificate in support of the same. The Petitioner has also submitted that entire IEDC has been discharged as on COD in respect of the transmission asset. Accordingly, IEDC allowed in respect of the transmission asset is as follows:

(₹ in lakh)

IEDC claimed	IEDC disallowed due to time over-run not condoned	IEDC allowed
1234.01	414.70	819.31

Initial Spares

45. Regulation 23(d) of the 2019 Tariff Regulations provides the following ceiling norms:

> *"(d) Transmission System*
> *i. Transmission line: 1.00%*
> *ii. Transmission sub-station*
> *- Green Field: 4.00%*
> *- Brown Field: 6.00%*
>
> *iii. Series Compensation devices and HVDC Station: 4.00%*
> *iv. Gas Insulated Sub-station (GIS)*
> *- Green Field: 5.00%*
> *- Brown Field: 7.00%*
> *v. Communication System: 3.50%*
> *vi. Static Synchronous Compensator: 6.00%"*

46. The Petitioner has claimed the following Initial Spares in respect of the transmission asset:

Particulars	Plant and machinery cost as on cut-off date (₹ in lakh)	Initial Spare claimed (₹ in lakh)	Ceiling as mentioned as per Regulation (in %)	Entitled Initial Spare as per Regulations (₹ in lakh)	Excess capitalised Initial Spares (₹ in lakh)
	A	B	C	D=(A-B) *C/(100-C)	E=B-D
Static Synchronous Compensator	20003.69	1115.10	6.00	1205.65	-

47. The year wise discharge of Initial Spares in respect of the transmission asset is as follows:

(₹ in lakh)

Particulars	Amount
Actual Expenditure up to COD	1016.34
Actual Expenditure from COD to 31.3.2021	19.75
Estimated Expenditure from 1.4.2021 to 31.3.2022	39.50
Estimated Expenditure from 1.4.2022 to 31.3.2023	39.50

48. Further, the Petitioner has submitted that discharge of Initial Spares is included in ACE claimed as per the Auditor's Certificate.

49. UPPCL has submitted that the Petitioner invited bids for the transmission project and awarded work at a cost of ₹24191.05 lakh. However, head-wise cost as required in Form-5 is not given in the petition i.e. in the original cost estimate or the cost quoted by the bidder. Further, the Petitioner has provided the abstract of cost estimate approved by the Board of Directors in IA without the details of head-wise cost as required for the purposes of Form-5. Therefore, the Petitioner may be directed to clarify the manner in which head-wise cost has been identified in Form-5 whereas, Form-5A requires only the comparison of actual cost with the award cost. In fact, the actual cost incurred has been compared with the original cost estimate without considering the price discovered through bids. Further, if the actual expenditure is compared with the inflated original cost estimate without comparison with the bid cost, then it would be difficult to establish if the bid cost was accepted for an optimum investment as required under Section 61 of the Act.

50. In response, the Petitioner has submitted that the apportionment between the elements is being done as per DPR of the IA which covers the complete break-up of IA. Details regarding award of work, date of award, contractor detail etc. of work had already been given in Form-5A in the instant petition. Form-5, as per actual expenditure for the transmission asset has already been submitted along with the tariff forms. Further, multiple packages were awarded by the Petitioner for given scope of work depending upon factors such as nature of work i.e. supply, erection, 'civil', 'consultancy' packages, on shore, off shore contracts and quantum of work

i.e. line length, green field/brown field Sub-station and supply items such as tower package, conductor package, insulator packages etc. The Petitioner has further submitted all this is done for the purpose of competitiveness, efficiency, availability of prospective bidders, project execution schedule, combination/ clubbing of equipment/ services that can be advantageously engineered and independence with regard to its work content and clear-cut terminal points for interfacing. The reference bids/contracts vary from item to item. For example, the three reference bids/ contracts for tower steel, conductor and insulator will be different from each other. Similarly, three reference bids/ contracts for transformer will be different from that of reactor and will also be different from that of sub-station equipment. Transformers and reactors of different rating will also have different sets of bids/ contracts. Even within sub-station, different items may have different sets of bids/ contracts as all items may not have same three sets of bids/ contracts. In the instant case, multiple packages were awarded and not a single bid/ package as claimed by UPPCL. Details regarding award of work, date of award, contractor details etc. of work have already been furnished in Form-5A in the respective petition. These packages under a project are awarded to the lowest evaluated and responsive bidder based on competitive bidding. Thus, the award prices represent the lowest prices available at the time of bidding of various packages. Detailed break-up of estimated cost and actual cost has also been furnished in Form 5 along with the tariff forms.

51. We have considered the submissions of the Petitioner and UPPCL. Initial Spares are allowable subject to the ceiling specified in Regulation 23(d)(vi) of the 2019 Tariff Regulations. The Petitioner's claim with respect to Initial Spares is

within the ceiling specified under Regulation 23(d)(vi) of the 2019 Tariff Regulations. Accordingly, the details of Initial Spares allowed in respect of the transmission asset for 2019-24 tariff period are as follows:

Static synchronous

Plant and machinery cost as on cut-off date (₹ in lakh)	Initial Spare claimed (₹ in lakh)	Ceiling as mentioned as per Regulation (in %)	Initial Spares allowable as per 2019 Tariff Regulations (₹ in lakh)	Allowed Initial Spares (₹ in lakh)
20003.69	1115.10	6.00	1205.65	1115.10

<u>Capital Cost allowed as on COD</u>

52. Accordingly, capital cost allowed in respect of the transmission asset as on COD is as follows:

(₹ in lakh)

Capital cost claimed in Auditor's Certificate as on COD (A)	Less: IDC disallowed due to time over-run not condoned/computational difference (B)	Less: IEDC disallowed due to time over-run not condoned (D)	Capital Cost as on COD (D) = (A-B-C)
20623.66	1610.11	414.70	18598.85

<u>Additional Capital Expenditure ("ACE")</u>

53. Regulation 24 and Regulation 25 of the 2019 Tariff Regulations provide as follows:

> ***"24. Additional Capitalization within the original scope and up to the cut-off date:***
>
> *(1) The Additional Capital Expenditure in respect of a new project or an existing project incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-*

off date may be admitted by the Commission, subject to prudence check:

(a) Undischarged liabilities recognized to be payable at a future date;

(b) Works deferred for execution;

(c) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 23 of these regulations;

(d) Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority or order or decree of any court of law;

(e) Change in law or compliance of any existing law; and

(f) Force Majeure events:

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

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

***"25. Additional Capitalisation within the original scope and after the cut-off date**:*

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

a) 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;
b) Change in law or compliance of any existing law;
c) Deferred works relating to ash pond or ash handling system in the original scope of work;
d) Liability for works executed prior to the cut-off date;
e) Force Majeure events;
f) Liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments; and g) Raising of ash dyke as a part of ash disposal system.

(2) In case of replacement of assets deployed under the original scope of the existing project after cut-off date, the additional capitalization may be admitted by the Commission, after making necessary adjustments in the gross fixed assets and the cumulative depreciation, subject to prudence check on the following grounds:

(a) The useful life of the assets is not commensurate with the useful life of the project and such assets have been fully depreciated in accordance with the provisions of these regulations
.

(b) The replacement of the asset or equipment is necessary on account of change in law or Force Majeure conditions;

(c) The replacement of such asset or equipment is necessary on account of

(d) The replacement of such asset or equipment has otherwise been allowed by the Commission."

54. The Petitioner has claimed projected ACE for 2019-24 tariff period on account of balance and retention payments under Regulation 24(1)(a) and Regulation 24(1)(b) of the 2019 Tariff Regulation for the works executed within the cut-off date. The details are as follows:

(₹ in lakh)

Projected ACE			
2020-21	**2021-22**	**2022-23**	**2023-24**
301.64	1809.86	904.93	0.00

55. Further, the Petitioner vide affidavit dated 21.9.2022 has submitted the liability flow statement in respect of the transmission asset. The details of the same are as follows:

(₹ in lakh)

Head-wise / Party-wise	Particulars	Discharge			
		2020-21	**2021-22**	**2022-23**	**2023-24**
Rongxin Power Electronics Co. Ltd. and Techno Electric & Engg Co. Ltd. (LOA-6977, 6978, 6979 & 6980)	Sub-station	0.00	813.20	889.14	0.00
Rongxin Power Electronics Co. Ltd. and Techno Electric & Engg Co. Ltd. (LOA-6977, 6978, 6979 & 6980)	IT Works	0.00	0.00	15.79	0.00
ACE (A)		**0.00**	**813.20**	**904.93**	**0.00**
		Unexecuted Works			
		2020-21	**2021-22**	**2022-23**	**2023-24**
Rongxin Power Electronics Co. Ltd. and Techno Electric & Engg Co. Ltd. (LOA-6977, 6978, 6979 & 6980)	Sub-station	296.38	965.09	0.00	0.00
Rongxin Power Electronics Co. Ltd. and Techno Electric & Engg Co. Ltd. (LOA-6977, 6978, 6979 & 6980)	IT Works	5.26	31.57	0.00	0.00
ACE (B)		**301.64**	**996.66**	**0.00**	**0.00**

Total ACE (A+B)		301.64	1809.86	904.93	0.00

56. We have considered the submissions of the Petitioner. ACE claimed is on account of balance and retention payments and is allowed under Regulation 24(1)(a) and Regulation 24(1)(b) of the 2019 Tariff Regulations. The projected ACE allowed is subject to truing up in respect of the transmission asset and the same is as follows:

(₹ in lakh)

Particulars	Projected ACE			
	2020-21	**2021-22**	**2022-23**	**2023-24**
Proposed ACE allowed under Regulation 24(1)(a) and Regulation 24(1)(b) of the 2019 Tariff Regulations	301.64	1809.86	904.93	0.00
Add: IDC discharge	0.00	0.00	0.00	0.00
Total	**301.64**	**1809.86**	**904.93**	**0.00**

Capital Cost as on 31.3.2024

57. Accordingly, the capital cost allowed in respect of the transmission asset as on 31.3.2024 is as follows:

(₹ in lakh)

Capital cost allowed as on COD	Projected ACE				Total capital cost as on 31.3 2024
	2020-21	**2021-22**	**2022-23**	**2023-24**	
18598.85	301.64	1809.86	904.93	0.00	21615.28

Debt-Equity Ratio

58. 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 utilized 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 details of debt-equity ratio considered for the purpose of computation of tariff for 2019-24 period in respect of the transmission asset are as follows:

Particulars	Capital cost as on COD (₹ in lakh)	(in %)	Total capital cost as on 31.3.2024 (₹ in lakh)	(in %)
Debt	13019.20	70.00	15130.70	70.00

Equity	5579.66	30.00	6484.58	30.00
Total	**18598.85**	**100.00**	**21615.28**	**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 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 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. The IT equipment has been considered as part of the Gross Block and depreciated using Weighted

Average Rate of Depreciation (WAROD). WAROD has been worked out and placed as Annexure after considering the depreciation rates of IT and non-IT assets as prescribed in the 2019 Tariff Regulations. The salvage value of IT equipment has been considered nil, i.e. IT asset has been considered as 100% depreciable. Depreciation allowed in respect of the transmission assets for 2019-24 tariff period is as follows:

(₹ in lakh)

	Particulars	**2020-21 (Pro-rata for 97 days)**	**2021-22**	**2022-23**	**2023-24**
A	Opening Gross Block	18598.85	18900.49	20710.35	21615.28
B	Addition during the year 2019-24 due to projected ACE	301.64	1809.86	904.93	0.00
C	Closing Gross Block (A+B)	18900.49	20710.35	21615.28	21615.28
D	Average Gross Block (A+C)/2	18749.67	19805.42	21162.82	21615.28
E	Average Gross Block (90% depreciable assets)	18136.44	19173.77	20507.49	20952.06
F	Average Gross Block (100% depreciable assets)	613.23	631.65	655.33	663.22
G	Depreciable value (excluding IT equipment and software) (E*90%)	16322.79	17256.39	18456.74	18856.85
H	Depreciable value of IT equipment and software (F*100%)	613.23	631.65	655.33	663.22
I	Total Depreciable Value (G+H)	16936.03	17888.04	19112.07	19520.07
J	Weighted Average Rate of Depreciation (WAROD) (in %)	5.60	5.59	5.58	5.58
K	Lapsed useful life at the beginning of the year (Year)	0.00	0.00	1.00	2.00
L	Balance useful life at the beginning of the year (Year)	24.00	24.00	23.00	22.00
M	Depreciation during the year (D*J)	**278.93**	**1107.12**	**1181.09**	**1205.75**
N	Cumulative Depreciation at the end of the year	278.93	1386.05	2567.15	3772.90
O	Remaining Aggregate Depreciable Value at the end of the year	16657.09	16501.99	16544.92	15747.17

<u>Interest on Loan ("IoL")</u>

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

(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year.

(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting adjustment for interest capitalized:

Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered;

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

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

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

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

63. The Weighted Average Rate of Interest on Loan has been considered on the basis of the rates prevailing as on COD for respective loans. The Petitioner has prayed that change in interest rate due to floating rate of interest applicable, if any, during 2019-24 tariff period will be adjusted. Accordingly, the floating rate of interest, if any, shall be considered at the time of truing-up.

64. In view of above, IoL has been worked out in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL allowed in respect of the transmission asset is as follows:

(₹ in lakh)

	Particulars	2020-21 (Pro-rata for 97 days)	2021-22	2022-23	2023-24
A	Gross Normative Loan	13019.20	13230.34	14497.25	15130.70
B	Cumulative Repayments up to Previous Year	0.00	278.93	1386.05	2567.15
C	Net Loan-Opening (A-B)	13019.20	12951.41	13111.19	12563.55
D	Addition due to ACE	211.15	1266.90	633.45	0.00
E	Repayment during the year	278.93	1107.12	1181.09	1205.75
F	Net Loan-Closing (C+D-E)	12951.41	13111.19	12563.55	11357.79
G	Average Loan (C+F)/2	12985.30	13031.30	12837.37	11960.67
H	Weighted Average Rate of Interest on Loan (in %)	6.70	6.70	6.70	6.70
I	**Interest on Loan (G*H)**	**231.18**	**872.65**	**859.85**	**801.82**

Return on Equity ("RoE")

65. 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 cut-off 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."

66. The Petitioner has submitted that MAT rate is applicable to it. MAT rate applicable in the year 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	**2020-21 (Pro-rata for 97 days)**	**2021-22**	**2022-23**	**2023-24**
A	Opening Equity	5579.66	5670.15	6213.11	6484.58
B	Addition due to ACE	90.49	542.96	271.48	0.00
C	Closing Equity (A+B)	5670.15	6213.11	6484.58	6484.58
D	Average Equity (A+C)/2	5624.90	5941.63	6348.84	6484.58
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500
F	Tax Rate applicable (in %)	17.472	17.472	17.472	17.472
G	Rate of Return on Equity (Pre-tax)	18.782	18.782	18.782	18.782
H	**Return on Equity (Pre-tax) (D*G)**	**280.76**	**1115.96**	**1192.44**	**1217.93**

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

67. The Petitioner has considered the capital cost of ₹23640.10 lakh for claiming O&M Expenses for the transmission asset which are Static Synchronous Compensators (STATCOM). O&M Expenses claimed by the Petitioner for the transmission asset for 2019-24 period are as follows:

(₹ in lakh)

Particulars	2020-21 (Pro-rata for 97 days)	2021-22	2022-23	2023-24
STATCOM in Northern Region				
Original Project Cost (₹ lakh)	23640.10	23640.10	23640.10	23640.10
Norms (in %)	1.5527	1.6071	1.6636	1.7219
Total O&M Expenses (₹ in lakh)	**97.54**	**379.93**	**393.27**	**407.07**

68. We have considered the submission made by the Petitioner. Regulation 35(3)(a) of the 2019 Tariff Regulations provides as follows:

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

Particulars	*2019-20*	*2020-21*	*2021-22*	*2022-23*	*2023-24*
Norms for sub-station Bays (₹ Lakh per bay)					
765 kV	*45.01*	*46.60*	*48.23*	*49.93*	*51.68*
400 kV	*32.15*	*33.28*	*34.45*	*35.66*	*36.91*
220 kV	*22.51*	*23.30*	*24.12*	*24.96*	*25.84*
132 kV and below	*16.08*	*16.64*	*17.23*	*17.83*	*18.46*
Norms for Transformers (₹ Lakh per MVA)					
765 kV	*0.491*	*0.508*	*0.526*	*0.545*	*0.564*
400 kV	*0.358*	*0.371*	*0.384*	*0.398*	*0.411*
220 kV	*0.245*	*0.254*	*0.263*	*0.272*	*0.282*
132 kV and below	*0.245*	*0.254*	*0.263*	*0.272*	*0.282*
Norms for AC and HVDC lines (₹ Lakh per km)					
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*	*0.260*	*0.270*	*0.279*	*0.289*
Double Circuit (Bundled conductor with four or more sub-conductors)	*1.322*	*1.368*	*1.416*	*1.466*	*1.517*

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

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

Provided further that:

i. *the operation and maintenance expenses for new HVDC bi-pole schemes commissioned after 1.4.2019 for a particular year shall be allowed pro-rata on the basis of normative rate of operation and maintenance expenses of similar HVDC bi-pole scheme for the corresponding year of the tariff period;*

ii. *the O&M expenses norms for HVDC bi-pole line shall be considered as Double Circuit quad AC line;*

iii. *the O&M expenses of ±500 kV Mundra-Mohindergarh HVDC bipole scheme (2000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ±500 kV Talchar-Kolar HVDC bi-pole scheme (2000 MW);*

iv. *the O&M expenses of ±800 kV Champa-Kurukshetra HVDC bi-pole scheme (3000 MW) shall be on the basis of the normative O&M expenses for ±800* *kV, Bishwanath-Agra HVDC bi-pole scheme;*

v. *the O&M expenses of ±800 kV, Alipurduar-Agra HVDC bi-pole scheme (3000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ±800 kV, Bishwanath-Agra HVDC bi-pole scheme; and*

vi. *the O&M expenses of Static Synchronous Compensator and Static Var Compensator shall be worked at 1.5% of original project cost as on commercial operation which shall be escalated at the rate of 3.51% to work out the O&M expenses during the tariff period. The O&M expenses of Static Synchronous Compensator and Static Var Compensator, if required, may be reviewed after three years.*

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

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

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

69. As per clause (vi) of the second proviso to Regulation 35(3)(a) of the 2019 Tariff Regulations provides for O&M Expenses of Static Synchronous Compensator and Static Var Compensator shall be worked out at @ 1.5% of the "original project cost" as on COD. "Original Project Cost" has been defined in Regulation 3(46) of the 2019 Tariff Regulations as follows:

"3(46) ***'Original Project Cost'*** *means the capital expenditure incurred by the generating company or the transmission licensee, as the case may be, within the original scope of the project up to the cut-off date, and as admitted by the Commission;"*

70. The "Original Project Cost" has been defined in Regulation 3(46) of the 2019 Tariff Regulations as the capital expenditure/cost within the original scope of the transmission project up to the cut-off date. However, as per clause (vi) of the second proviso to Regulation 35(3)(a) of the 2019 Tariff Regulations refers to the "original project cost" of the STATCOM as on COD for the purpose of determining

the O&M Expenses. To over-come this difference in the definition of "original project cost" in Regulation 3(46) and in clause (vi) of the second proviso to Regulation 35(3)(a) of the 2019 Tariff Regulations, the Commission vide order dated 18.10.2021 in Petition No.658/TT/2020, while allowing O&M Expenses for the STATCOM relaxed clause (vi) of the second proviso to Regulation 35(3)(a) of the 2019 Tariff Regulations by exercising the power conferred under Regulation 76 of the 2019 Tariff Regulations and allowed O&M Expenses for the STATCOM @1.5% of the plant and machinery cost (excluding IDC, IEDC, land cost and cost of civil works) of the STATCOM as on the cut-off date. The relevant portion of the order dated 18.10.2021 is extracted hereunder:

> *"77. The clause (vi) of the second proviso to Regulation 35(3)(a) of the 2019 Tariff Regulations provides for O&M Expenses @ 1.5% of the "original project cost" of the STATCOM as on COD. "Original Project Cost" has been defined in Regulation 3(46) of the 2019 Tariff Regulations as under:*
>
> > *"3(46) 'Original Project Cost' means the capital expenditure incurred by the generating company or the transmission licensee, as the case may be, within the original scope of the project up to the cut-off date, and as admitted by the Commission;"*
>
> *78. While "Original Project Cost" as defined in Regulation 3(46) of the 2019 Tariff Regulations covers capital expenditure/ cost within the original scope of the project up to the cut-off date, clause (vi) of the second proviso to Regulation 35(3)(a) of the 2019 Tariff Regulations refers to the "original project cost" of the STATCOM as on COD for the purpose of determining O&M Expenses.*
>
> *79. We also observe that "original project cost" includes components of IDC, IEDC, land cost and cost of civil works. However, as per Regulation 3(45) of the 2019 Tariff Regulations extracted hereunder, the O&M Expenses are allowed for operation and maintenance of the project or part thereof and includes the expenditure towards manpower, maintenance, repairs and maintenance etc. but it excludes IDC, IEDC, land cost and cost of civil works:*
>
> > *"(45) 'Operation and Maintenance Expenses' or 'O&M expenses' means the expenditure incurred for operation and maintenance of the project, or part thereof, and includes the expenditure on manpower, maintenance, repairs and maintenance spares, consumables, insurance and overheads and fuel other than used for generation of electricity;"*
>
> *80. Therefore, we are of the view that determination of O&M expenses on the basis of Project cost (including IDC, IEDC Land cost and Cost of civil work) will not be consistent with the provisions of the 2019 Tariff Regulations as extracted above.*
>
> *81. Regulation 76 of the 2019 Tariff Regulations provides for relaxation of any of*

the provisions of the 2019 Tariff Regulations by recording the reasons for the same. The said Regulation provides as follows.

"76. Power to Relax: The Commission, for reasons to be recorded in writing, may relax any of the provisions of these regulations on its own motion or on an application made before it by an interested person."

82. To address above issues arising out of the difference in the way in which "original project cost" has been considered in clause (vi) of the second proviso to Regulation 35(3)(a) and Regulation 3(46) of the 2019 Tariff Regulations, we relax clause (vi) of the second proviso to Regulation 35(3)(a) of the 2019 Tariff Regulations under Regulation 76 of the 2019 Tariff Regulations and allow O&M Expenses for the transmission assets @1.5% of the Plant and Machinery cost (excluding IDC, IEDC, Land cost and cost of Civil works) of the STATCOM as on the cut-off date. The same has been escalated at the rate of 3.51% to work out the O&M Expenses for the 2019-24 tariff period."

71. Accordingly, in line the Commission's order dated 18.10.2021 in Petition No.658/TT/2020, O&M Expenses are allowed @1.5% of the plant and machinery cost (excluding IDC, IEDC, land cost and cost of civil works) as on the cut-off date of the transmission asset. The same has been escalated at the rate of 3.51% to work out the O&M Expenses for 2019- 24 tariff period and it is as follows:

(₹ in lakh)

Particulars	2020-21 (Pro-rata for 97 days)	2021-22	2022-23	2023-24
STATCOM in Northern Region				
Original Project Cost (₹ lakh)	18888.59	18888.59	18888.59	18888.59
Norms (in %)	1.5000	1.5527	1.6071	1.6636
Total O&M Expenses (₹ in lakh)	**75.30**	**293.27**	**303.57**	**314.22**

Interest on Working Capital ("IWC")

72. Regulations 34(1)(c), Regulation 34(3) and 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. Definition** - 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;"*

73. The Petitioner has submitted that it has computed IWC for 2019-24 period considering the SBI Base Rate plus 350 basis points as on 1.4.2020. The Petitioner has considered the rate of IWC as 11.25%. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The rate of IWC considered is 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 and as on 1.4.2022 of 7.00% plus 350 basis points) for 2021-24. The components of the working capital and interest allowed thereon in respect of the transmission asset are as follows:

(₹ in lakh)

Particulars	**2020-21 (Pro-rata for 97 days)**	**2021-22**	**2022-23**	**2023-24**
Working Capital for O&M Expenses (O&M Expenses for one month)	23.61	24.44	25.30	26.19
Working Capital for Maintenance Spares (15% of O&M Expenses)	42.50	43.99	45.54	47.13
Working Capital for Receivables (Equivalent to 45 days of annual fixed cost /annual transmission charges)	408.41	424.20	442.71	441.86
Total Working Capital	**474.52**	**492.63**	**513.54**	**515.18**

Particulars	2020-21 (Pro-rata for 97 days)	2021-22	2022-23	2023-24
Rate of Interest for working capital (in %)	11.25	10.50	10.50	10.50
Interest of working capital	14.19	51.73	53.92	54.09

Annual Fixed Charges for 2019-24 Tariff Period

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

(₹ in lakh)

Particulars	2020-21 (Pro-rata for 97 days)	2021-22	2022-23	2023-24
Depreciation	278.93	1107.12	1181.09	1205.75
Interest on Loan	231.18	872.65	859.85	801.82
Return on Equity	280.76	1115.96	1192.44	1217.93
O&M Expenses	75.30	293.27	303.57	314.22
Interest on Working Capital	14.19	51.73	53.92	54.09
Total	**880.36**	**3440.73**	**3590.87**	**3593.81**

Filing Fee and Publication Expenses

75. 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 and RLDC Fees and Charges

76. The Petitioner shall be entitled for reimbursement of licence fee 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 fee and charges in accordance with Regulations 70(3) of the 2019 Tariff Regulations for 2019-24 tariff period.

Goods and Services Tax

77. 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.

78. 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 pre-mature.

Security Expenses

79. The Petitioner has submitted that security expenses in respect of transmission asset is not claimed in the instant petition and it would file a separate petition for claiming the overall security expenses and consequential IWC.

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

Capital Spares

81. The Petitioner has sought reimbursement of capital spares at the end of 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

82. As per Regulation 57 of the 2019 Tariff Regulations, the transmission charges shall be governed by the Sharing Regulations. Accordingly, the transmission charges approved in this order shall be governed by the Central Electricity Regulatory Commission (Sharing of inter-State Transmission Charges and Losses) Regulations.

83. To summarise,

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

(₹ in lakh)

2020-21 (Pro-rata for 97 days)	2021-22	2022-23	2023-24
880.36	3440.73	3590.87	3593.81

84. Annexure given hereinafter forms part of the order.

85. This order disposes of Petition No. 274/TT/2022 in terms of the above discussions and findings.

sd/-	sd/-	sd/-
(P. K. Singh)	(Arun Goyal)	(I. S. Jha)
Member	Member	Member

Annexure

2019-24	Admitted capital cost as on COD (₹ in lakh)	ACE				Admitted capital cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations			
Capital expenditure as on COD		**2020-21 (₹ in lakh)**	**2021-22 (₹ in lakh)**	**2022-23 (₹ in lakh)**	**2023-24 (₹ in lakh)**			**2020-21 (₹ in lakh)**	**2021-22 (₹ in lakh)**	**2022-23 (₹ in lakh)**	**2023-24 (₹ in lakh)**
Sub-Station	17988.25	296.38	1778.29	889.14	0.00	20952.06	5.28	957.60	1012.38	1082.80	1106.27
IT Equipment and software	610.60	5.26	31.57	15.79	0.00	663.22	15.00	91.99	94.75	98.30	99.48
Total	**18598.85**	**301.64**	**1809.86**	**904.93**	**0.00**	**21615.28**		**1049.59**	**1107.12**	**1181.09**	**1205.75**
						Average Gross Block (₹ in lakh)		18749.67	19805.42	21162.82	21615.28
						Weighted Average Rate of Depreciation (in %)		5.60	5.59	5.58	5.58