CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

<u>Petition No. 36/TT/2023</u>

Coram:

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

Date of Order: 16.05.2024

In the matter of:

Approval of transmission tariff from COD to 31.3.2024 of two 400 kV line bays at Subhashgram Sub-station for termination of 400 kV D/C Jeerat (New)-Subhsagram line (under TBCB) under "POWERGRID works associated with Eastern Region Strengthening Scheme XVIII" in Eastern Region under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019.

And in the matter of:

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

Vs.

1. Bihar State Power (Holding) Company Limited,
(Formerly Bihar State Electricty Board-BSEB),
Vidyut Bhawan, Bailey Road,
Patna-800001.

2. West Bengal State Electricity Distribution Company Limited,
Bidyut Bhawan, Bidhan Nagar,
Block DJ, Sector-II, Salt Lake City,
Calcutta-700091.

3. Grid Corporation of Orissa Limited,
Shahid Nagar, Bhubaneswar-751007.

4. Damodar Valley Corporation,
   DVC Tower, Maniktala,
   Civic Centre, VIP Road, Calcutta-700054.

5. Power Department,
   Government of Sikkim, Gangtok-737101.

6. Jharkhand Bijli Vitran Nigam Limited,
   Engineering Building, H.E.C., Dhurwa,
   Ranchi-834004.

7. Powergrid Medinipur Jeerat Transmission Limited,
   (PMJTL Subsidiary of Powergrid Corporation of Indian Limited),
   B-9, Qutab Institutional Area,
   Katwaria Sarai, New Delhi-110016. **… Respondent(s)**

For Petitioner	**:**	Shri Amit Yadav, PGCIL Shri Vivek Singh, PGCIL Shri Bipin Bihari Rath, PGCIL
For Respondents	**:**	None

ORDER

Power Grid Corporation of India Limited has filed the instant petition for the determination of transmission tariff from the date of commercial operation (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 two 400 kV line bays at Subhashgram Sub-station for termination of 400 kV D/C Jeerat (New)-Subhsagram line (line under TBCB) (hereinafter referred to as the "transmission asset") under "Powergrid works associated with Eastern Region Strengthening Scheme XVIII" (hereinafter referred to as "the transmission project") in Eastern Region.

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

"1) Approve the Transmission Tariff for the tariff block 2019-24 block for the assets covered under this petition, as per para –8.3 above.

2) Admit the capital cost as claimed in the Petition and approve the Additional Capitalisation incurred / projected to be incurred.

3) Approve the DOCO for the subject Asset-I and allow full tariff as claimed under instant petition.

4) Approve the initial spares as claimed in the instant asset-I.

5) 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 8.3 above for respective block.

6) 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.

7) 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.

8) 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.

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

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

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

Background

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

(i) The Investment Approval (IA) of the transmission project was accorded by the Board of Directors of the Petitioner in its 353rd meeting held on 1.5.2018 and communicated vide the Memorandum Ref. No.: C/CP/PA1819-02-0D-IA004 dated 25.5.2018 at an estimated cost of ₹12536 lakh, including an IDC of ₹752 lakh based on the December 2017 price level.

(ii) The transmission project was initially proposed and discussed in the 16th Standing Committee Meeting (SCM) held on 2.5.2014 and further approved in the 17th SCM dated 25.5.2015. The initial plan was also deliberated upon in the 30th ERPC dated 20.6.2015.

(iii) Subsequently, the transmission project was finalized and its scope of work was deliberated upon and approved in the 1st Eastern Region Standing Committee Meeting on Transmission (ERSCT) held on 16.8.2018. The same was also deliberated upon and noted in the meeting with constituents of Eastern Region in the 39th TCC of ERPC meeting held on 16.11.2018 and 17.11.2018.

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

Sub-station:

a) Extension of 765 kV Ranchi (New) Sub-station

- 765 kV Line bay: Two 765 kV line bays at Ranchi (New) for termination of Ranchi (New)-Medinipur 765 kV D/C line (line under TBCB)

- 765 kV Line reactor: 240 MVAR (765 kV, 3X80 MVAR single phase units) switchable line reactor with 750 Ohm NGR in each circuit at Ranchi (New) for Ranchi (New)-Medinipur 765 kV D/C line (line under TBCB)

b) Extension of 400 kV Subhasgram Sub-station

- 400 kV Line bay: Two 400 kV line bays at Subhashgram for termination of Jeerat (New)-Subhashgram 400 kV D/C (ACSR Quad Moose) line (line under TBCB)

(v) The details of the transmission assets covered in the transmission project is as follows:

Sl. No.	Name of Asset	SCOD as per IA	COD	Remarks
1	Two 400 kV line bays at Subhashgram Sub-station for termination of 400 kV D/C Jeerat (New)-Subhsagram line (line under TBCB).	31.8.2020 matching with the TBCB line	26.8.2022	Covered in the instant petition
2	Two 765 kV line bays along with 240 MVAR (765 kV, 3x80 MVAR single phase units) switchable line reactor with 750 Ohm NGR (Neutral Grounding Reactor) in each circuit along with associated bays at 765/400 kV Ranchi (New) Sub-station for termination of Ranchi (New)-Medinipur 765 kV D/C line	1.8.2020 matching with the TBCB line	9.2.2021	Covered in Petition No. 13/TT/2022

(vi) The entire transmission project has been put into commercial operation with the COD of the transmission asset.

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

5. The Petitioner has served the petition on the Respondents and notice regarding filing of this petition has been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments or suggestions have been received from the general public in response to the aforesaid notice published in the newspapers by the Petitioner. No reply has been received from any of the Respondents.

6. The final hearing in this matter was held on 31.1.2024, and the order was reserved.

7. Having heard the Petitioner’s representative and perused the materials available on record, we proceed to dispose of the petition.

DETERMINATION OF ANNUAL FIXED CHARGES FOR 2022-23 AND 2023-24

8. The Petitioner has claimed the following transmission charges for the transmission asset:

(₹ in lakh)

Particulars	**2022-23 (pro-rata 218 days)**	**2023-24**
Depreciation	33.15	60.13
Interest on Loan	30.72	52.47
Return on Equity	35.38	64.17
Interest on Working Capital	2.91	5.11
O&M Expenses	42.60	73.82
Total AFC	**144.76**	**255.70**

9. The Petitioner has claimed the following Interest on Working Capital (IWC) for the transmission asset:

(₹ in lakh)

Particulars	2022-23 (pro-rata 218 days)	2023-24
O&M Expenses	5.94	6.15
Maintenance Spares	10.70	11.07
Receivables	29.88	31.44
Total Working Capital	**46.52**	**48.66**
Rate of Interest (in %)	10.50	10.50
Interest on Working Capital	**2.91**	**5.11**

Date of Commercial Operation ("COD")

10. The Petitioner has submitted that the transmission asset was put into commercial operation on 26.8.2022 matching with the associated transmission line implemented under the TBCB route by Powergrid Medinipur-Jeerat Transmission Limited (PMJTL), a wholly owned subsidiary of the Petitioner.

11. In support of the COD of the transmission asset, the Petitioner has submitted a copy of the CEA energization certificate dated 21.12.2020, the RLDC charging certificate dated 29.1.2021 certifying that successful trial operation was completed on 25.8.2022, the CMD certificate as required under the Grid Code and a self-declaration COD letter dated 30.8.2022.

12. The Petitioner has submitted that as per IA dated 1.5.2018, the SCOD of the transmission asset was progressively within 27 months from the date of IA, matching with the completion of the associated TBCB line, i.e., 31.7.2020. As per TSA, the SCOD of the transmission line is 28.07.2020, and the SCOD as per IA is 31.07.2020. Therefore, there is a three day mismatch between the SCOD of RTM bays and the TBCB line. The actual COD of the TBCB line is 26.8.2022, and the Petitioner also claimed the COD of

the bays as 26.8.2022. The Commission directed the Petitioner to submit the reason for claiming the COD of the transmission asset as on 26.8.2022 when the “no load” trial was completed on 30.1.2021. In response, the Petitioner has submitted that even though the transmission asset was ready for charging since 30.1.2021 (as evident from the no-load charging certificate issued by ERLDC), the Petitioner waited for the completion of its associated 400 kV D/C Jeerat (New)-Subhsagram transmission line of PMJTL. The Petitioner has further submitted that it is as per the implementation schedule and is in accordance with Regulation 4(ii) of the Indian Electricity Grid Code, 2010. The Petitioner has further submitted that the Commission, an in order dated 20.6.2017 in Petition No. 83/TL/2017, has specifically directed PMJTL to execute its line matching with associated upstream and downstream assets. The relevant extracts are reproduced below:

> *“13. The grant of transmission licence to the Petitioner (hereinafter ‘licensee’) is subject to the fulfillment of the following conditions throughout the period of licence:*
> *…*
> *(m) The licensee shall as far as practicable coordinate with the licensee (including deemed licensee) executing the upstream or downstream transmission projects and the Central Electricity Authority for ensuring execution of the project in a matching timeline.*”

13. The Petitioner has also submitted that it would have been imprudent on the part of the Petitioner to put the transmission asset into commercial operation and keep it stranded until the associated TBCB line is ready for its intended use.

14. We have considered the Petitioner’s submissions. It is observed that the Petitioner completed the ‘no-load’ trial operation on 30.01.2021, but the Petitioner has claimed the COD of the asset as 26.8.2022 matching with the associated transmission line implemented under the TBCB route by POWERGRID Medinipur Jeerat Transmission Limited (PMJTL). Accordingly, taking into consideration of the CEA energisation

certificate, RLDC charging certificate, and CMD Certificate, the COD of the transmission asset is approved as 26.8.2022.

<u>Capital Cost</u>

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 upto the receiving end of the generating station but does not include the transportation cost and any other appurtenant cost paid to the railway.
(k) Capital expenditure on account of biomass handling equipment and facilities, for co-firing;
(l) Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;
(m) Expenditure on account of fulfilment of any conditions for obtaining environment clearance for the project;
(n) Expenditure on account of change in law and force majeure events; and
(o) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme

of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.

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

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

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

(a) cost of approved rehabilitation and resettlement (R&R) plan of the project in conformity with National R&R Policy and R&R package as approved; and
(b) cost of the developer's 10% contribution towards Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) and Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) project in the affected area.

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

(a) The Asset-forming part of the project, but not in use, as declared in the tariff petition;
(b) De-capitalised Asset-after the date of commercial operation on account of replacement or removal on account of obsolescence or shifting from one project to another project:

Provided that in case replacement of transmission Asset-is recommended by Regional Power Committee, such Asset-shall be decapitalised only after its redeployment;
Provided further that unless shifting of an Asset-from one project to another is of permanent nature, there shall be no de-capitalization of the concerned asset.

(c) In case of hydro generating stations, any expenditure incurred or committed to be incurred by a project developer for getting the project site allotted by the State Government by following a transparent process;
(d) Proportionate cost of land of the existing project which is being used for generating power from generating station based on renewable energy; and
(e) Any grant received from the Central or State Government or any statutory body or authority for the execution of the project which does not carry any liability of repayment."

16. The Petitioner has claimed the transmission tariff based on actual expenditure up to the COD and projected ACE from COD to 31.3.2024 in respect of the transmission asset as per the details given below. The capital cost incurred up to COD and projected to be incurred up to 2023-24 has been duly certified in the Auditor's Certificate.

(₹ in lakh)

FR Approved cost	Expenditure Up to actual COD	ACE		Estimated completion cost
		2022-23	2023-24	
1353.58	1013.03	96.72	64.48	1174.23

17. In response to the Commission's query, the Petitioner, vide affidavit dated 5.1.2024, has submitted the following reasons for the variation in the cost of the transmission asset:

(i) The market forces prevailing at the time of the bidding process for various packages awarded for execution of the project resulted in variation between awarded rates and the FR cost.

(ii) The price variation (PV) for various items on the basis of PV formulae as per the provisions of the relevant contract(s) during project execution. The PV is against price escalations applicable for the period; PV was mainly attributable to inflationary trends prevalent during the project's execution.

(iii) Further, there was negative variation in expenditure on foundation for structures due to variance in actual site conditions against those envisaged in FR (based on normative rates). The IEDC and IDC have been taken as actuals, highlighting the positive and negative variation, respectively, against the normative FR considered.

18. The Petitioner has submitted that the estimated completion cost is within the FR approved cost. The Petitioner has submitted that the cost variation was mainly due to the actual site conditions, awarded rate and other associated factors which were beyond the control of the Petitioner and requested to allow the marginal cost variation in respect of the transmission asset.

19. We have considered the Petitioner’s submissions. The estimated completion cost of the transmission asset is within the FR cost. Further, the cost variation is beyond the Petitioner’s control. Therefore, the capital cost claimed by the Petitioner is allowed.

Time Over-run

20. The Petitioner has submitted that as per IA dated 1.5.2018, the SCOD of the transmission asset was progressively within 27 months from the date of IA, matching with the completion of the associated TBCB line, i.e., 31.7.2020. Against that, the transmission asset is put under commercial operation on 26.8.2022 with a time over-run of 756 days.

21. The Petitioner has made the following submissions with respect to the time over-run of the transmission asset:

a) Delay due to unprecedented rainfall during the lean season:

(i) The unseasonal and unprecedented rainfall in and around Subhasgram (under 24 South Parganas District of West Bengal), during the lean rainfall season, i.e., in the months of February-March 2019, November 2019, and January 2020, led to deferment of works associated with the transmission asset.

(ii) The said months are defined as the winter season by the Indian Meteorological Department. However, the actual rainfall in these months was unprecedented due to cyclonic activity in the Bay of Bengal and the development of low pressure over areas of Jharkhand, Odisha, and West Bengal.

(iii) Civil works were planned keeping in mind the rainfall pattern in and around Subhasgram. The major part of civil works was planned to be carried out during the lean season months or when there is minimal rainfall. Accordingly, the period identified/ scheduled for these civil works was from October 2019 to February 2020.

(iv) The unprecedented and continuous rainfall over these months affected the execution of civil works planned as per the initial schedule. Further, the continuous rainfall in this period was also accompanied by lightning and thunderstorm conditions which are not considered ideal for executing works in electrically charged switchyard, in this case, 400 kV Subhasgram Sub-station apart from issues related to hindrances caused by water logging, restricted movement of machinery, swift mobilisation/ re-mobilisation of man and material, etc.

(v) As per clause 14.2.1 of the Model TSA, exceptional adverse weather conditions that are in excess of the statistical measures for the last hundred (100) years can be considered as *force majeure,* and in such cases, any delays will not be attributable to the Petitioner. In the instant case, as per the available data from the website of the Indian Meteorological Department, the rainfall was excess during the said period as against long term average at Subahsgram (District of 24 South Parganas) is as follows:

- During February, 2019, the total rainfall recorded was about 180.60 mm which was 611% of normal (Long Period Average) rainfall.
- During March, 2019, the total rainfall recorded was about 82.40 mm which was 110% of normal (Long Period Average) rainfall.
- During November, 2019, the total rainfall recorded was about 195.80 mm which was 280% of normal (Long Period Average) rainfall.

- During January, 2020, the total rainfall recorded was about 47.40 mm which was 248% of normal (Long Period Average) rainfall.

(vi) The works related to the transmission asset, particularly civil works were affected largely due to unprecedented and unseasonal rains during the lean rainfall period as compared to the LPA of the region, which were unforeseen and therefore uncontrollable on part of the Petitioner affecting approximately five (5) months of time over-run.

b) <u>Delay due to Covid-19 related lockdown and restrictions:</u>

(i) The Petitioner's projects were affected by the COVID-19 pandemic and the consequent nationwide lockdown.

(ii) COVID-19 restricted people, and this restricted the movement from one place to another. The restricted movement affected the critical supply chain, transportation, worker/ labour absenteeism due to illness/quarantine/ migration etc., which resulted in the complete halting of ongoing projects. The lockdown imposition led to the voluntary step back of construction workers, which was unforeseen and unavoidable. The sites were either closed or access was largely restricted as a result of measures to contain the COVID-19 outbreak. The contractors were not able to carry out the work as a result of actions by governments to prevent the spread of the outbreak.

(iii) Lack of engineering and technical support and supply chain disruptions were the major factors impacting project schedules and implementations. Thus, the execution of various projects, including the instant transmission project faced delays due to the squeezing of supply lines and construction activities.

(iv) When construction resumed, additional delays and inefficiencies further pushed back completion dates. Construction could not be started immediately. Construction pace came to a grinding halt for almost 4-5 months and gradually gathered speed in line with Government directives.

(v) The Ministry of Power (MoP) Government of India, vide letter dated 27.7.2020 provided an extension of 5 months or 150 days in respect to SCOD for inter-State transmission project (under construction as on 25.3.2020 and SCOD not prior to 25.3.2020) owing to unforeseen circumstances forced by the COVID-19 pandemic. Thus, COVID-19 restrictions affected the construction work by approximately 5 months.

c) <u>Delay due to non-availability of requisite shutdown approvals:</u>

(i) The Petitioner approached the concerned authorities /forums for availing of the requisite shutdowns, but the requests were denied time owing to various system/ grid/ availability constraints viz., from 1.10.2020 to 18.10.2020 (due to the online semester exam of WB State Universities which was deferred to November, 2020 due to COVID issue) and from 20.10.2020 to 20.11.2020 (due to Durga Puja & Kali Puja).

(ii) Therefore, owing to the above reasons, no progress could be made in October-November 2020. The time period from October 2020 (1.10.2020) to November 2020 (20.11.2020) is 50 days.

d) <u>Delay due to matching with TBCB line:</u>

(i) As per the implementation schedule of the IA of the transmission project, the SCOD of the transmission asset was 31.7.2020, matching the associated TBCB line.

(ii) Subsequent to receipt of necessary shutdown approval in the last week of November 2020, the balance works were completed by 25.11.2020, which is the date of application filed by the Petitioner before CEA for charging clearance. After submission of compliance report, as per CEA directives, the CEA charging clearance was received on 21.12.2020.

(iii) Subsequently, one month's notice as per proviso 2 of Regulation 5, the 2019 Tariff Regulations, was sent to PMJTL, vide letter dated 1.1.2021. Further, the RLDC (no-load) charging was done successfully on 30.1.2021.

(iv) Despite being ready on 21.12.2020, the Petitioner waited for the completion of the associated TBCB line before declaring or invoking the COD of the transmission asset. The Petitioner waited to declare the COD of the transmission asset in line with the observations made by the Commission in many of its tariff orders while dealing with the issue of mismatch in COD of the interconnected transmission projects.

(v) The Petitioner has declared the COD of the transmission asset matching with the associated transmission line in accordance with Regulation 4 (ii) of the Indian Electricity Grid Code, 2010.

22. The Petitioner has further submitted that it would have been imprudent on the part of the Petitioner to execute the transmission asset and keep it stranded till the associated TBCB line is ready for the intended use. The Petitioner has further submitted that the delay in completion of works of the transmission asset, i.e., from 21.12.2020 till COD declaration, i.e., 26.8.2022, is apparent in nature. Hence, this period of time over-run may be condoned on the merits as above.

23. The Petitioner has also submitted that the time over-run was beyond the control of the Petitioner and that the events associated with the time over-run were unforeseen and have occurred concurrently and could have delayed the transmission project further, but

the experience and expertise of the Petitioner in project planning and execution curtailed the time over-run. The Petitioner has requested to condone the time over-run as it is beyond the control of the Petitioner.

24. We have considered the Petitioner's submission and have gone through the documents in support of its contentions. As per the IA dated 1.5.2018, the SCOD of the transmission asset is 31.7.2020, and the COD of the transmission asset is approved as 26.8.2022. Accordingly, the time over-run in the case of the transmission asset is 756 days. The Petitioner has attributed the time over-run to unprecedented rainfall during the lean season, the COVID-19 pandemic, the non-availability of the shutdown, and the time taken for matching with the TBCB line. The item-wise time over-run is analyzed hereunder:

(i) <u>Time over-run due to unprecedented rainfall during the lean season</u>

25. The Petitioner has submitted that there was heavy rainfall in February 2019, March 2019, November 2019, January 2020, and February 2020, and it is unseasonal and a force majeure event. The Petitioner has submitted that the unseasonal rains affected the civil works for five months. The Petitioner has submitted the Long Period Average rainfall during the five months and some paper clippings to show that there was heavy rainfall, which led to the time over-run in the case of the transmission asset. Regulation 3(25) of 2019 Tariff Regulations defines "*force majeure*" as follows:

> *"(25) 'Force Majeure' for the purpose of these regulations means the events or circumstances or combination of events or circumstances including those stated below which partly or fully prevents the generating company or transmission licensee to complete the project within the time specified in the Investment Approval, and only if such events or circumstances are not within the control of the generating company or transmission licensee and could not have been avoided,*

had the generating company or transmission licensee taken reasonable care or complied with prudent utility practices:

(a) Act of God including lightning, drought, fire and explosion, earthquake, volcanic eruption, landslide, flood, cyclone, typhoon, tornado, geological surprises, or exceptionally adverse weather conditions which are in excess of the statistical measures for the last hundred years; or"
(b) Any act of war, invasion, armed conflict or act of foreign enemy, blockade, embargo, revolution, riot, insurrection, terrorist or military action; or
(c) Industry wide strikes and labour disturbances having a nationwide impact in India; or
(d) Delay in obtaining statutory approval for the project except where the delay is attributable to project developer;"

26. As per Regulation 3(25)(a) of the 2019 Tariff Regulations, an "act of God" like rainfall can be considered a force majeure event only if it is more than the average rainfall of the last hundred years. On scrutiny of the details of the rainfall furnished by the Petitioner during the months of February 2019, March 2019, November 2019, and January 2020 is as below:

- During February 2019, the total rainfall recorded was about 180.60 mm which was 611% of normal (Long Period Average) rainfall.
- During March 2019, the total rainfall recorded was about 82.40 mm which was 110% of normal (Long Period Average) rainfall.
- During November 2019, the total rainfall recorded was about 195.80 mm which was 280% of normal (Long Period Average) rainfall.
- During January, 2020, the total rainfall recorded was about 47.40 mm which was 248% of normal (Long Period Average) rainfall.

27. It is noticed that the rainfall was more than 100% of the Long Period Average rainfall. During the month of March 2019, it was observed that the average rainfall was slightly above the 50-year average rainfall at 110%. In absolute terms, the total monthly rainfall was 82.40 mm, which is not unprecedented and would not have affected the

construction activities for an entire month. However, it is observed that the rainfall recorded during February 2019, November 2019, and January 2020 was 180.6 mm, 195.80 mm, and 47.40 mm, respectively, which is 611%, 280%, and 248% of the average rainfall during the respective months over the past 50 years, which we are of the view is on a higher side. Hence, out of the time over-run of 5 months claimed due to unseasonal rainfall, time over-run for three months (89 days) in February 2019, November 2019, and January 2020 is condoned as the rainfall during the said period is abnormal.

(ii) <u>Outbreak of COVID-19 and consequent lockdown</u>

28. The Petitioner has submitted that the COVID-19 pandemic and the consequent lockdown/ restrictions imposed in the various parts of the country affected the execution of the transmission projects in the country, including the instant transmission assets. The Petitioner has submitted that the Ministry of Power (MoP), vide its order dated 27.7.2020, acknowledged the disruption in supply chain and manpower due to the COVID-19 pandemic and granted an extension of 5 months in the execution of inter-State transmission projects that were under construction as on 25.3.2020. The MoP's order dated 27.7.2020 is as follows:

"No. 3/1/2020-Trans
Government of India
Ministry of Power
Shram Shakti Bhawan, Rafi Marg,
New Delhi- 110001.

Dated: 27th July, 2020

To

1. Chairperson, Central Electricity Authority, New Delhi.
2. COO, CTU-Plg, POWERGRID, Gurugram

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 Date (SCOD) to mitigate the issues of disruption in supply chains and man power, 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.

3. This issues with the approval of Competent Authority. ….".

29. In the aforesaid order, the MoP, considering that the construction activities at the various transmission project sites were severely affected by the nationwide lockdown measures announced to contain the outbreak of COVID-19 and the request of the transmission utilities for extension of SCOD, extended the SCOD of all the inter-State transmission projects, that were under construction as on the date of lockdown, i.e., 25.3.2020 by five months. In the instant case, the transmission project of the Petitioner was under construction as on the date of lockdown, i.e., on 25.3.2020, and the SCOD of the transmission project was 31.7.2020, i.e., post 25.3.2020. Therefore, the extension of SCOD by five months allowed by the MoP in its order dated 27.7.2020 is applicable to the Petitioner. Accordingly, the time over-run of 5 months, i.e., from 25.3.2020 to

25.8.2020, is condoned on account of the COVID-19 pandemic under the '*force majeure'* condition.

(iii) <u>Delay due to non-availability of shutdown</u>

30. The Petitioner has submitted that the time over-run period from 1.10.2020 to 20.11.2020, i.e., about 50 days, was on account of shutdown issues. We have gone through the Petitioner's submissions. The Petitioner has submitted the minutes of the 171st OCC and various emails exchanged between ERLDC and WBSLDC. It is observed that the Petitioner first attempted to obtain the shutdown from 1.10.2020 to 4.10.2020 but actually availed of the shutdown in the month of November 2020. Therefore, the time taken from 1.10.2020 to 20.11.2020, i.e., 50 days, for obtaining the shutdown was beyond the Petitioner's control and it is accordingly condoned.

(iv) <u>The time taken to match the COD of the transmission asset with the COD of the associated transmission line implemented under the TBCB route by PMJTL</u>

31. The Petitioner has submitted that the Petitioner applied on 25.11.2020 for a CEA energization certificate, obtained the same on 21.12.2020, and finally charged the transmission asset on "no load" on 30.1.2021. The Petitioner has submitted that though the transmission line was ready, the Petitioner waited for the completion of the associated TBCB line, i.e., 400 kV D/C Jeerat (New)-Subhsagram line under the scope of PMJTL, in line with the provisions of the Indian Electricity Grid Code, 2010 and in line with the Commission's direction in order dated 20.6.2017 in Petition No. 83/TL/2017.

32. The Commission is of the consistent view that the interconnected transmission licensees should put their transmission assets into commercial operation, matching with

the associated transmission assets. Accordingly, the Commission, while issuing the transmission licence directs the transmission licensee to match its COD with the interconnected transmission assets. However, it does not mean that a transmission licensee should wait for the COD of the associated transmission assets even though its transmission assets have achieved the COD. In fact, the Commission has provided for Regulation 5(2) in the 2019 Tariff Regulations to take care of any mismatch in the COD of the interconnected transmission systems. As per Regulation 5(2) of the 2019 Tariff Regulations, in case the transmission system or element thereof executed by a transmission licensee is ready for commercial operation but the interconnected transmission system is not ready, the transmission licensee may file a petition for approval of the COD of the transmission system. In the instant case, the Petitioner has charged the transmission asset on “no load” on 30.1.2021. We are of the view that the Petitioner should have claimed the COD of the transmission asset as 30.1.2021 (when its transmission asset was ready) under Regulation 5(2) of the 2019 Tariff Regulations. However, the Petitioner waited for the COD of the associated transmission line under the scope of PMJTL and claimed the COD matched with PMJTL’s transmission line. It is the decision of the Petitioner to match the COD of the transmission asset with the associated transmission line implemented by PMJTL. Therefore, the time over-run from 25.11.2020 to 26.8.2022 is not condoned.

33. In view of the above, the details of the time over-run condoned and not condoned in case of the transmission asset is as follows:

Sl. No.	Issue	Time over-run	Decision
1	Unprecedented Rainfall	5 months (February-March, 2019 and November, 2019 to January 2020)	Partially Condoned (89 days in February 2019, November 2019, and January 2020)
2	Covid-19	5 months (March, 2020-August, 2020)	Condoned
3	Non-availability of shutdowns	50 days (1.10.2020-20.11.2020)	Condoned
4	Matching with the execution of the associated asset	25.11.2020 to 26.8.2022	Not Condoned

34. Accordingly, out of the total time over-run of 756 days, the time over-run of 289 days due to Covid-19, unprecedented rainfall and shut-down issues is condoned and the remaining time over-run of 467 days is not condoned.

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

35. The Petitioner has claimed ₹72.47 lakh and ₹171.08 lakh as actual IDC and IEDC, respectively, which are within the IDC and IEDC approved in the IA.

36. We have gone through the drawl schedule of the loans submitted by the Petitioner and have observed that in the IDC statement provided by the Petitioner, the drawl of loans from HDFC (on 27.8.2021) and SBI (on 5.7.2022) are after the day up to which the Commission has condoned the time over-run, i.e., 16.5.2021. Hence, the IDC on the above drawl of loan of ₹100 lakh and ₹159.12 lakh from HDFC and SBI respectively have been disallowed.

37. Accordingly, the details of IDC allowed and disallowed on the basis of condonation of time over run is as follows:

(₹ in lakh)

IDC claimed	IDC disallowed due to delay not condoned	IDC allowed
72.47	41.43	31.04

38. The Petitioner has claimed IEDC of ₹171.08 lakh. The allowable IEDC has been worked out on the pro-rata basis of the total number of allowable days and the total number of days taken for execution of the transmission asset. Accordingly, the details of IEDC allowed and disallowed is as follows:

(₹ in lakh)

IEDC Claimed	IEDC Disallowed due to time over-run not condoned	IEDC Allowed
171.08	51.41	119.67

Initial Spares

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

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

40. Initial Spares as claimed by the Petitioner is as follows:

Component	Plant and Machinery cost for calculation of initial spares (₹ in lakh)	Initial Spares claimed		Norm as per Regulations (in %)
		Amount (₹ in lakh)	Percentage (in %)	
Sub-station	930.68	48.11	5.11	6.00

41. We have considered the submissions of the Petitioner. The Initial Spares claimed by the Petitioner is within the norm under Regulation 23(d) of the 2019 Tariff Regulations. Accordingly, the Initial Spares claimed by the Petitioner is allowed and it is as follows:

(₹ in lakh)

Component	Plant and Machinery cost for calculation of Initial Spares	Initial Spares claimed	Norm as per Regulations (in %)	Initial Spares allowable	Excess Initial Spares	Initial Spares allowed
	(A)	(B)	(C)	(D)=(A-B)/(100-C)*C	(E)	(F)=(B-E)
Sub-station	930.68	48.11	6.00	56.33	-	48.11

Capital Cost Allowed as on COD

42. Accordingly, the capital cost allowed in respect of the transmission asset as on COD, excluding the IDC and IEDC disallowed on account of non-condonation of time over-run is as follows:

(₹ in lakh)

Capital cost claimed till COD	Less: IDC disallowed due to time over-run	Less: IEDC disallowed due to time over-run	Capital cost as on COD
1013.03	41.43	51.41	920.19

Additional Capital Expenditure ("ACE")

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

"24. Additional Capitalization
(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. Un discharged 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; and*
- *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 cutoff 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 obsolescence of technology; and*

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

44. The Petitioner has submitted that the admissibility of ACE after COD may be dealt with in accordance with Regulation 24 of the 2019 Tariff Regulations.

45. We have considered the Petitioner's submissions, and it is observed that the ACE claimed is on account of balance and retention payments and is, therefore, allowed under Regulation 24(1)(a) and Regulation 24(1)(b) of the 2019 Tariff Regulations. ACE allowed for the 2019-24 tariff period as follows:

(₹ in lakh)

Particulars	ACE allowed	
	2022-23	2023-24
ACE	96.72	64.48

46. Accordingly, the capital cost allowed as on 31.3.2024 is as follows:

(₹ in lakh)

Capital cost allowed as on COD	Allowed ACE		Capital cost as on 31.3.2024
	2022-23	2023-24	
920.19	96.72	64.48	1081.39

<u>Debt Equity Ratio</u>

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

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

Provided that:

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

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

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

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

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

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

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

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

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

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

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

48. The debt-equity ratio considered for the purpose of computation of tariff for the 2019-24 tariff period for the transmission asset is as follows:

Particulars	Cost as on COD (₹ in lakh)	(in %)	Cost as on 31.3.2024 (₹ in lakh)	(in %)
Debt	644.13	70.00	756.97	70.00
Equity	276.06	30.00	324.42	30.00
Total	**920.19**	**100.00**	**1081.39**	**100.00**

Depreciation

49. 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 upto 31.3.2019 from the gross depreciable value of the assets.

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

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

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

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

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

50. The IT equipment has been considered as part of the gross block and depreciated using the Weighted Average Rate of Depreciation (WAROD). WAROD has been worked out and placed as an Annexure 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 assets have been considered as 100% depreciable. Depreciation allowed in respect of the transmission asset for the 2019-24 tariff period is as follows:

(₹ in lakh)

	Particulars	**2022-23 (pro rata for 218 days)**	**2023-24**
A	Opening Gross Block	920.19	1016.91
B	Addition during the year 2019-24 due to projected ACE	96.72	64.48
C	Closing Gross Block (A+B)	1016.91	1081.39
D	Average Gross Block (A+C)/2	968.55	1049.15
E	Average Gross Block (90% depreciable assets)	968.55	1049.15
F	Average Gross Block (100% depreciable assets)	0.00	0.00
G	Depreciable value (excluding IT equipment and software) (E*90%)	871.69	944.23
H	Depreciable value of IT equipment and software (F*100%)	0.00	0.00
I	Total Depreciable Value (G+H)	871.69	944.23
J	Weighted average rate of Depreciation (WAROD) (in %)	5.28%	5.28%
K	Lapsed useful life at the beginning of the year (Year)	0	0
L	Balance useful life at the beginning of the year (Year)	25	25
M	**Depreciation during the year (D*J)**	**30.54**	**55.40**
N	Cumulative Depreciation at the end of the year	30.54	85.94
O	Remaining Aggregate Depreciable Value at the end of the year	841.15	858.29

Interest on Loan ("IoL")

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

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

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

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

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

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

Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered;
Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.

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

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

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

52. The weighted average rate of IoL has been considered as claimed by the Petitioner. The Petitioner has prayed that the change in the interest rate due to the floating rate of interest applicable, if any, during the 2019-24 tariff period will be adjusted. Accordingly, the floating rate of interest, if any, shall be considered at the time of true-up.

53. IoL has been worked out in accordance with Regulation 32 of the 2019 Tariff Regulations, and it is as follows:

(₹ in lakh)

	Particulars	2022-23 (pro rata for 218 days)	2023-24
A	Gross Normative Loan	644.13	711.84
B	Cumulative Repayments up to Previous Year	0.00	30.54
C	Net Loan-Opening (A-B)	644.13	681.29
D	Addition due to ACE	67.70	45.14
E	Repayment during the year	30.54	55.40
F	Net Loan-Closing (C+D-E)	681.29	671.03
G	Average Loan (C+F)/2	662.71	676.16
H	Weighted Average Rate of Interest on Loan (in %)	7.15%	7.15%
I	**Interest on Loan (G*H)**	**28.29**	**48.34**

Return on Equity ("RoE")

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

*"**30. Return on Equity:** (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with Regulation 18 of these regulations.*
(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating station, transmission system including communication system and run-of river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run-of-river generating station with pondage:

Provided that return on equity in respect of Additional Capitalization after cutoff date beyond the original scope excluding Additional Capitalization 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."

55. The Petitioner has submitted that the MAT rate is applicable to it. MAT rate applicable 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 assets is as follows:

(₹ in lakh)

	Particulars	**2022-23 (pro rata for 218 days)**	**2023-24**
A	Opening Equity	276.06	305.07
B	Addition due to ACE	29.02	19.34
C	Closing Equity (A+B)	305.07	324.42
D	Average Equity (A+C)/2	290.56	314.74
E	Return on Equity (Base Rate) (in %)	15.50%	15.50%
F	Tax Rate applicable (in %)	17.472%	17.472%
G	Rate of Return on Equity (Pre-tax) (in %)	18.782%	18.782%
H	**Return on Equity (Pre-tax) (D*G)**	**32.59**	**59.11**

<u>Operation & Maintenance Expenses ("O&M Expenses")</u>

56. The Petitioner has claimed the following O&M Expenses for the transmission asset:

(₹ in lakh)

Particulars	**2022-23 (pro-rata for 218 days)**	**2023-24**
Sub-station Bays		
400 kV AIS Bay	2	2
Norms		
400 kV	35.66	36.91
Total Sub-station Bays	**42.60**	**73.82**

57. 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*	*0.26*	*0.27*	*0.279*	*0.289*
Double Circuit (Bundled conductor with four or more sub-conductors)	*1.322*	*1.368*	*1.416*	*1.466*	*1.517*
Double Circuit (Twin & Triple Conductor)	*0.881*	*0.912*	*0.944*	*0.977*	*1.011*
Double Circuit (Single Conductor)	*0.377*	*0.391*	*0.404*	*0.419*	*0.433*
Multi Circuit (Bundled Conductor with four or more sub-conductor)	*2.319*	*2.401*	*2.485*	*2.572*	*2.662*
Multi Circuit (Twin & Triple Conductor)	*1.544*	*1.598*	*1.654*	*1.713*	*1.773*
Norms for HVDC stations					
HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except	*834*	*864*	*894*	*925*	*958*

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Gazuwaka BTB)					
Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW)	*1666*	*1725*	*1785*	*1848*	*1913*
500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)	*2252*	*2331*	*2413*	*2498*	*2586*
±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)	*2468*	*2555*	*2645*	*2738*	*2834*
±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500 MW)	*1696*	*1756*	*1817*	*1881*	*1947*
±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)	*2563*	*2653*	*2746*	*2842*	*2942*

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."

58. The O&M Expenses are approved for the transmission asset in accordance with Regulation 35(3)(a) of the 2019 Tariff Regulations and are as follows:

(₹ in lakh)

Particulars	**2022-23 (pro-rata for 218 days)**	**2023-24**
O&M Expenses	42.60	73.82

Interest on Working Capital ("IWC")

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

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

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

(i) Receivables equivalent to 45 days of annual fixed cost;
(ii) Maintenance spares @ 15% of operation and maintenance expenses including security expenses; and
(iii) Operation and maintenance expenses, including security expenses for one month.

(3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2019 or as on 1st April of the year during the tariff period 2019-24 in which the generating station or a unit thereof or the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later:

Provided that in case of truing-up, the rate of interest on working capital shall be considered at bank rate as on 1st April of each of the financial year during the tariff period 2019-24.

(4) Interest on working capital shall be payable on normative basis notwithstanding that the generating company or the transmission licensee has not taken loan for working capital from any outside agency."

*"**3. Definitions.** - In these regulations, unless the context otherwise requires:-*

***(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;"*

60. The Petitioner has considered the rate of IWC as 10.50% as on 1.4.2019. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The Rate of Interest (RoI) is considered as 10.50% (SBI 1-year MCLR applicable as on COD of 7.00% plus 350 basis points) for 2022-23 and 12.00% (SBI 1-year MCLR applicable as on COD of 8.50% plus 350 basis points). The components of the working capital and interest allowed thereon for the transmission asset are as follows:

(₹ in lakh)

Particulars	2022-23 (pro rata for 218 days)	2023-24
Working Capital for O&M Expenses (O&M Expenses for one month)	3.55	6.15
Working Capital for Maintenance Spares (15% of O&M Expenses)	6.39	11.07
Working Capital for Receivables (Equivalent to 45 days of annual fixed cost /annual transmission charges)	16.87	29.79
Total Working Capital	26.81	47.02
Rate of Interest for working capital (in %)	10.50%	12.00%
Interest on working capital	**2.82**	**5.64**

Annual Fixed Charges for 2019-24 Tariff Period

61. The transmission charges allowed for the transmission asset for the 2019-24 tariff period are as follows:

(₹ in lakh)

Particulars	2022-23 (pro rata for 218 days)	2023-24
Depreciation	30.54	55.40
Interest on Loan	28.29	48.34
Return on Equity	32.59	59.11
O&M Expenses	42.60	73.82

Particulars	2022-23 (pro rata for 218 days)	2023-24
Interest on Working Capital	2.82	5.64
Total	**136.84**	**242.31**

Filing Fee and Publication Expenses

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

License Fee and RLDC Fees and Charges

63. The Petitioner shall be entitled to reimbursement of the licence fee in accordance with Regulation 70(4) of the 2019 Tariff Regulations and also to recovery of the RLDC fee and charges in accordance with Regulation 70(3) of the 2019 Tariff Regulations.

Goods and Services Tax

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

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

Security Expenses

66. 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.

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

Capital Spares

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

Sharing of Transmission Charges

69. The COD of the transmission asset is approved as 26.8.2022. Accordingly, the billing, collection, and disbursement of transmission charges shall be recovered in terms of provisions of the Central Electricity Regulatory Commission (Sharing of inter-State

Transmission Charges and Losses), Regulations, 2020 as provided in Regulation 57 of the 2019 Tariff Regulations.

70. To summarise, AFC allowed in respect of the transmission asset for the 2019-24 tariff period in this order are as follows:

(₹ in lakh)

Particulars	**2022-23 (pro rata for 218 days)**	**2023-24**
AFC	136.84	242.31

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

72. This order disposes of Petition No. 36/TT/2023 in terms of the above findings and discussions.

sd/-	**sd/-**	**sd/-**
(P. K. Singh)	**(Arun Goyal)**	**(Jishnu Barua)**
Member	**Member**	**Chairperson**

Annexure

(₹ in lakh)

Capex	Admitted capital cost as on COD	Projected ACE		Admitted capital cost as on 31.3.2024	Depreciation Rate (in %)	Annual Depreciation	
		2022-23	2023-24			2022-23	2023-24
Building	0.00	0.00	0.00	0.00	3.34	0.00	0.00
Transmission Line	920.19	96.72	64.48	1081.39		51.14	55.40
Sub-station	0.00	0.00	0.00	0.00	5.28	0.00	0.00
PLCC	0.00	0.00	0.00	0.00	6.33	0.00	0.00
IT Equipment	0.00	0.00	0.00	0.00	15.00	0.00	0.00
Total	**920.19**	**96.72**	**64.48**	**1081.39**		**51.14**	**55.40**
					Average gross block	**968.55**	**1049.15**
					WAROD (in %)	**5.28**	**5.28**