

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 10/TT/2022

Coram:

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

Date of Order: 14.12.2022

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 of 400/220/33 kV, 500 MVA ICT-4 along with associated bays at Amritsar (PG) Sub-station under Additional 1X500 MVA, 400/220 kV (4th) transformer at Amritsar (Balachak) Sub-station under ISTS.

And in the matter of:

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

.... Petitioner

Vs.

1. Rajasthan Rajya Vidyut Prasaran Nigam Limited,
Vidyut Bhawan, Vidyut Marg,
Jaipur-302005.
2. Ajmer Vidyut Vitran Nigam Limited,
132 kV, GSS RVPNL Sub-station Building,
Caligiri Road, Malviya Nagar,
Jaipur-302017 (Rajasthan).
3. Jaipur Vidyut Vitran Nigam Limited,
132 kV, GSS RVPNL Sub-station Building,
Caligiri Road, Malviya Nagar,
Jaipur-302017 (Rajasthan).
4. Jodhpur Vidyut Vitran Nigam Limited,
132 kV, GSS RVPNL Sub-station Building,
Caligiri Road, Malviya Nagar,
Jaipur-302017 (Rajasthan).
5. Himachal Pradesh State Electricity Board,
Vidyut Bhawan, Kumar House Complex Building II,
Shimla-171004.



6. Punjab State Electricity Board,
The Mall, Patiala-147001.
7. Haryana Power Purchase Centre,
Shakti Bhawan, Sector-6,
Panchkula-134109 (Haryana).
8. Power Development Department,
Government of Jammu & Kashmir,
Mini Secretariat, Jammu.
9. Uttar Pradesh Power Corporation Limited,
(Formerly Uttar Pradesh State Electricity Board),
Shakti Bhawan, 14, Ashok Marg,
Lucknow-226001.
10. Delhi Transco Limited,
Shakti Sadan, Kotla Road,
New Delhi-110002.
11. BSES Yamuna Power Limited,
BSES Bhawan, Nehru Place,
New Delhi.
12. BSES Rajdhani Power Limited,
BSES Bhawan, Nehru Place,
New Delhi.
13. Tata Power Delhi Distribution Limited,
33 kV Sub-station, Building,
Hudson Lane, Kingsway Camp,
North Delhi-110009.
14. Chandigarh Administration,
Sector-9, Chandigarh.
15. Uttarakhand Power Corporation Limited,
Urja Bhawan, Kanwali Road,
Dehradun.
16. North Central Railway,
Allahabad.
17. New Delhi Municipal Council,
Palika Kendra, Sansad Marg,
New Delhi-110002.

...Respondent(s)



For Petitioner : Shri Ved Prakash Rastogi, PGCIL
Shri D.K. Biswal, PGCIL
Shri Ashish Alankar, PGCIL

For Respondents : None

ORDER

Power Grid Corporation of India Limited, a deemed transmission licensee, has filed the instant petition for determination of transmission tariff for the period 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 400/220/33 kV, 500 MVA ICT-4 along with associated bays at Amritsar (PG) Sub-station (hereinafter referred to as the “transmission asset”) under “Additional 1X500 MVA, 400/220 kV (4th) transformer at Amritsar (Balachak) Sub-station under ISTS” (hereinafter referred to as “the transmission project”):

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

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

2) Approve the Transmission Tariff for the tariff block 2019-24 block for the asset covered under this petition, as per para-9 above.

3) Condone the delay and allow IDC/IEDC as claimed in the petition as delay is on account of force majeure as per CERC Regulations’2019 22(2)(a) “uncontrollable factors”

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

5) Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on 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.



6) 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.

7) 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.

8) Allow the petitioner to file a separate petition before Hon'ble Commission for claiming the overall security expenses and consequential IOWC on that security expenses as mentioned at para 8.8 above.

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

10) 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.

11) 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:

(a) The Investment Approval (I.A.) and expenditure sanction to the transmission project was accorded by competent authority vide Memorandum dated 9.3.2020 at an estimated cost of ₹2487.00 lakh including an IDC of ₹28.00 lakh based on September, 2019 price level.

(b) The Petitioner vide affidavit dated 31.3.2022, has submitted Revised Cost Estimate-I (RCE-I) approved by COIP during its 125th meeting held on 9.8.2021 and RCE have been issued vide Memorandum No. C/CP/PA2122-06-0P-RCE002 dated 17.9.2021 at an estimate cost of ₹2904.00 lakh including IDC of ₹0.00 at April, 2021 price level.



(c) The scope of the scheme was discussed and agreed in 4th Northern Region Standing Committee Meetings on transmission held on 25.7.2019, and in 46th meeting of NRPC and 43rd meeting of TCC held on 23.9.2019.

(d) The scope of work covered under “Additional 1X500 MVA, 400/220 kV (4th) transformer at Amritsar (Balachak) Sub-station under ISTS” is as follows:

400/220 kV Amritsar (PG) Sub-station (Extn.)

400 kV

- (i) 1X500 MVA, 400/230 kV ICT
- (ii) ICT bay: 01 number

220 kV

- (i) ICT bay: 01 number

(e) As per I.A. dated 9.3.2020, the transmission asset was scheduled to be put into commercial operation within 5 months from the date of I.A. i.e. by 8.8.2020. The transmission asset was put into commercial operation on 3.11.2020. Thus, there is a time over-run of 87 days.

4. The Petitioner has submitted that entire scope of the transmission project has been completed and covered under the instant petition. The Respondents are distribution licensees, power departments, power utilities and transmission licensees, who are procuring transmission services from the Petitioner, mainly beneficiaries of the Northern Region.

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



published in the newspapers by the Petitioner. None of the Respondent(s) have filed the reply.

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

7. This order is issued considering the submissions made by the Petitioner in the petition vide affidavits dated 20.4.2021 and 31.3.2022.

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

DETERMINATION OF ANNUAL FIXED CHARGES FROM COD TO 31.3.2024

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 149 days)	2021-22	2022-23	2023-24
Depreciation	47.27	134.55	146.54	152.53
Interest on Loan	36.72	99.33	100.42	96.25
Return on Equity	50.45	143.59	156.38	162.77
O&M Expenses	98.82	250.57	259.62	268.25
Interest on working capital	5.91	15.50	16.24	16.67
Total	239.17	643.54	679.20	696.47

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 149 days)	2021-22	2022-23	2023-24
O&M Expenses	20.17	20.88	21.64	22.35
Maintenance Spares	36.31	37.59	38.94	40.24
Receivables	72.23	79.34	83.74	85.63
Total	128.71	137.81	144.32	148.22
Rate of Interest (in %)	11.25	11.25	11.25	11.25



Interest on Working Capital	5.91	15.50	16.24	16.67
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Date of Commercial Operation (“COD”)

11. The Petitioner has claimed actual COD in respect of the transmission asset under Regulation 5(1) of the 2019 Tariff Regulations and the same is as follows:

SCOD	Completion of Trial run	COD claimed
8.8.2020	2.11.2020	3.11.2020

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 COD of the transmission asset, the Petitioner has submitted CEA Energisation Certificate dated 30.10.2020, certificate dated 18.11.2020 certifying that trial operation completed on 2.11.2020 and CMD certificate in accordance with Regulation 5(1) of the 2019 Regulations.

14. Taking into consideration CEA energisation certificate, RLDC charging certificate of trial operation and CMD certificate as required under the Grid Code, COD of the transmission asset is approved as 3.11.2020.

Time Over-run

15. As per I.A. dated 9.3.2020, the transmission asset was scheduled to be put into commercial operation within 5 months from the date of I.A. Accordingly, the SCOD comes to 8.8.2020, against which the transmission asset was put under commercial operation on 3.11.2020. Therefore, there is time over-run of 87 days in the declaring



the COD of the transmission asset.

16. The Petitioner has submitted that delay is on account of worldwide COVID-19 pandemic. Due to Covid-19 Pandemic, the Government of India imposed lock down throughout the country for around 3-4 months which restricted the movement from one place to another. The movement and restrictions affected the suppliers' chain, transportation shortage, workers absenteeism due to illness/quarantine/migration labour shortages which resulted in decrease in output and delayed all countrywide ongoing projects. The lock-down imposition was unavoidable and complicated things further. The site was closed or access was restricted as a result of measures to contain the COVID-19 outbreak. The contractor was not able to carry out the works as a result of action by Governments to prevent the spread of the outbreak. Further, Ministry of Power (MoP) vide letter dated 27.7.2020 had provided extension of 5 month in respect to SCOD for inter-State transmission project. Accordingly, the revised SCOD as per MoP order is 8.1.2021 and the transmission asset was put under commercial operation within the revised SCOD as per MoP order.

17. The Petitioner has requested to condone the time delay on the aforementioned issues under Regulation 22(2)(a) of the 2019 tariff Regulations.

18. We have considered the submission of the Petitioner. The relevant extracts of the letter dated 27.7.2020 of Ministry of Power (MoP), which provided extension of 5 months in respect of SCOD for inter-State transmission project 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.”

19. As per I.A., the schedule COD of the project is 8.8.2020. In terms of the above letter dated 27.7.2020, the COD has to be extended by 5 months. Taking into consideration the said letter, the revised SCOD of the transmission asset is 8.1.2021. Hence, there is no time over-run in declaring the commercial operation of the transmission asset in terms of the revised SCOD.

Capital Cost

20. 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 renovation and modernisation as admitted by this Commission in accordance with these regulations;*
- (d) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*
- (e) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal 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 assets 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.”

21. The Petitioner vide Auditor’s Certificate dated 28.1.2021 has claimed the following capital cost as on COD and Additional Capital Expenditure (ACE) projected to be incurred, in respect of the transmission asset:

Approved cost as per FR	Capital cost claimed as on COD	Projected ACE			Total capital cost as on 31.3 2024
		2020-21	2021-22	2022-23	
2487.36	1951.64	483.25	226.98	226.98	2888.85

Cost Over-run

22. The estimated completion cost of the transmission asset based on the Auditor’s certificate is ₹2888.85 lakh including IEDC and IDC which is beyond the approved FR cost of ₹2487.36 lakh. Therefore, there is cost over-run of ₹401.49 lakh.

23. The Petitioner vide affidavit dated 31.3.2022, has submitted Revised Cost Estimate-I (RCE-I) approved by COIP during its 125th meeting held on 9.8.2021 and RCE have been issued vide Memorandum No. C/CP/PA2122-06-0P-RCE002 dated



17.9.2021 at an estimate cost of ₹2904.00 lakh including IDC of ₹0.00 at April, 2021 price level.

24. The Petitioner vide affidavit dated 31.3.2022, has submitted Form-5 and following justification for cost variation:

Sl. No.	Variation on account of:	Variation in RCE from approved DPR	
		(₹ in lakh)	(in %)
(i)	Price Variation (PV)		
a	DPR to Award	388.00	15.60
b	PV as per contractual provision	70.00	2.80
	Total (PV)	458.00	18.40
(ii)	Other Reasons (IEDC and IDC)		
a	IEDC (including Contingencies)	(-) 13.00	(-) 0.52
b	IDC	(-) 28.00	(-) 1.13
	Sub- Total (IEDC & IDC)	(-) 41.00	(-) 1.65
	Grand Total	417.00	16.76

25. The Petitioner has further submitted that the variation is due to PV, IDC and IDC. The details are as follows:

Price Variation (PV) (Net increase of ₹458.00 lakh: 18.40%): The Petitioner has submitted that based on the actual expenditure incurred and balance anticipated expenditure, there has been an increase in the cost of the project by ₹458.00 lakh on this account, which works out to 18.40% of the approved cost. The Petitioner has further submitted that out of ₹458 lakh, ₹388 lakh was attributable to DPR to award and submitted that the major amount of increase is in contract for transformer package, which was awarded to the lowest evaluated and responsive bidder, on the basis of Domestic/ Global Competitive Bidding, after publication of NIT. Thus, the award prices represent the lowest prices available at the time of bidding and implementation. Further, ₹70 lakh was attributable to PV as per contractual provision, the Petitioner has submitted that a PV amount kept is on the basis of applicable price variation clause provision of respective contracts.

a) Other Reasons (IEDC & IDC) (Net decrease of ₹41 lakh: (-)1.64%):

The Petitioner has submitted that the net IDC and IEDC under the



transmission project have decreased by ₹41 lakh compared with approved DPR, which works out to (-) 1.64% of the approved RCE-I cost. The details are as follows:

- i. **Decrease in IEDC:** The IEDC including contingencies for the project in approved DPR cost was estimated at ₹297 lakh, whereas in the RCE, on the basis of actual / anticipated expenditure incurred, this works out to ₹284 lakh. Thus, IEDC under the project has decreased by ₹13 lakh.
- ii. **Decrease in IDC:** Interest during Construction (IDC) for the project as per approved DPR cost was estimated at ₹28 lakh whereas no IDC was incurred.

26. We have considered the submissions of the Petitioner. It is observed that the cost variation is primarily on account of variation in DPR to award and price variation as per contractual provision. Against the total approved cost as per FR of ₹2487.36 lakh, the estimated completion cost including ACE is ₹2888.85 lakh which is beyond the approved FR cost. Accordingly, there is a cost over-run of ₹401.49 lakh. Further, the Petitioner vide affidavit dated 31.3.2022 has submitted RCE-I of ₹2904 lakh. Therefore, there is no cost over-run w.r.t. RCE-I. The cost variation is due to PV and decrease in IDC and IEDC and it is allowed.

27. The Petitioner has not claimed IDC in respect of the transmission asset.

Incidental Expenditure During Construction (IEDC)

28. The Petitioner has claimed IEDC of ₹263.36 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 of ₹263.36 lakh is allowed.



Initial Spares

29. Regulation 23(d) of the 2019 Tariff Regulations provides the following ceiling norms in respect of the transmission asset:

“23 (d) Transmission System

- (i) *Transmission line - 1.00%*
- (ii) *Transmission Sub-station*
 - Green Field - 4.00%
 - Brown Field - 6.00%
- (iii) *Series Compensation devices and HVDC Station - 4%*
- (iv) *Gas Insulated Sub-station (GIS)*
 - Green Field - 5.00%
 - Brown Field - 7.00%
- (v) *Communication system - 3.50%*
- (vi) *Static Synchronous Compensator - 6%”*

30. The Petitioner has claimed the following Initial Spares:

Particulars	Plant & Machinery cost up to cut-off date (₹ in lakh) (excluding IEDC)	Initial spares claimed (₹ in lakh)	Ceiling limit (in %)
Sub-station	2546.86	78.63	6

31. We have considered the submissions of the Petitioner. The Initial Spares claimed by the Petitioner is within ceiling limit of 6%. The initial spares allowed are as follows:

Particulars	Plant & Machinery cost up to cut-off date (₹ in lakh) (excluding IDC and IEDC)	Initial spares claimed (₹ in lakh)	Allowable initial spares (₹ in lakh)	Ceiling (in %)	Initial spares allowed (₹ in lakh)
Sub-station	2546.86	78.63	157.55	6	78.63

Capital Cost allowed as on COD

32. 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: disallowed IEDC and Initial spares (B)	Capital cost as on COD (C) = (A-B)
1951.64	0.00	1951.64

Additional Capital Expenditure ("ACE")

33. 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.”

34. The Petitioner has claimed projected ACE for 2019-24 tariff period on account of balance and retention payments for works executed within the cut-off date (31.3.2023) and claimed under Regulation 24(1)(a) and Regulation 24(1)(b) of the 2019 Tariff Regulations. The projected ACE claimed by the Petitioner are as follows:

(₹ in lakh)

Projected ACE		
2020-21	2021-22	2022-23
483.25	226.98	226.98

35. The Petitioner vide affidavit dated 31.3.2022 has submitted the details of ACE claimed. The details are as follows:

(₹ in lakh)

Details of Unexecuted Works		
Head wise/ Party wise	Particulars	Projected ACE
		2020-21
GE T&D and ABB Limited	Sub-station Work	483.25

(₹ in lakh)

Projected ACE / Liability Flow Statement						
Head wise/ Party wise	Particulars	Year of Actual Capitalisation	Outstanding liability as on COD	Projected ACE		
				2020-21	2021-22	2022-23
GE T&D and ABB Limited	Sub-station Work	2020-21	453.96	0.00	226.98	226.98



36. We have considered the submissions of the Petitioner. ACE claimed is on account of balance and retention payments is allowed under Regulations 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 is as follows:

Particulars	Proposed ACE		
	2020-21	2021-22	2022-23
Proposed ACE allowed under Regulation 24(1)(a) and Regulation 24(1)(b) of the 2019 Tariff Regulations	483.25	226.98	226.98

Capital Cost as on 31.3.2024

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

Capital cost claimed as on COD	Projected ACE			Total capital cost as on 31.3.2024
	2020-21	2021-22	2022-23	
1951.64	483.25	226.98	226.98	2888.85

Debt-Equity Ratio

38. 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.”

39. The details of debt-equity considered for the purpose of computation of tariff for 2019-24 period in respect of the transmission asset is as follows:

Particulars	Capital cost as on COD (₹ in lakh)	(in %)	Capital cost as on 31.3.2024 (₹ in lakh)	(in %)
Debt	1366.15	70.00	2022.21	70.00
Equity	585.49	30.00	866.64	30.00
Total	1951.64	100.00	2888.85	100.00



Depreciation

40. 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.”

41. 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 at Annexure has been worked out 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. Accordingly, the depreciation allowed in respect of the transmission asset for the 2019-24 tariff period



is as follows:

(₹ in lakh)

	Particulars	2020-21 (Pro-rata for 149 days)	2021-22	2022-23	2023-24
A	Opening Gross Block	1951.64	2434.89	2661.87	2888.85
B	Addition during the year 2019-24 due to projected ACE	483.25	226.98	226.98	0.00
C	Closing Gross Block (A+B)	2434.89	2661.87	2888.85	2888.85
D	Average Gross Block (A+C)/2	2193.27	2548.38	2775.36	2888.85
E	Average Gross Block (90% depreciable assets)	2193.27	2548.38	2775.36	2888.85
F	Average Gross Block (100% depreciable assets)	0.00	0.00	0.00	0.00
G	Depreciable value (excluding IT equipment and software) (E*90%)	1973.94	2293.54	2497.82	2599.97
H	Depreciable value of IT equipment and software (F*100%)	0.00	0.00	0.00	0.00
I	Total Depreciable Value (G+H)	1973.94	2293.54	2497.82	2599.97
J	Weighted average rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28	5.28
K	Elapsed 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)	25.00	25.00	24.00	23.00
M	Depreciation during the year (D*J)	47.27	134.55	146.54	152.53
N	Cumulative Depreciation at the end of the year	47.27	181.83	328.37	480.90
O	Remaining Aggregate Depreciable Value at the end of the year	1926.66	2111.71	2169.46	2119.07

Interest on Loan (“IoL”)

42. 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 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”.

43. The weighted average rate of interest of IoL has been considered on the basis of the rates prevailing as on COD for respective loans. The Petitioner has prayed that the change in interest rate due to 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. 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 149 days)	2021-22	2022-23	2023-24
A	Gross Normative Loan	1366.15	1704.43	1863.32	2022.21
B	Cumulative Repayments up to Previous Year	0.00	47.27	181.83	328.37
C	Net Loan-Opening (A-B)	1366.15	1657.16	1681.49	1693.84
D	Addition due to ACE	338.28	158.89	158.89	0.00
E	Repayment during the year	47.27	134.55	146.54	152.53
F	Net Loan-Closing (C+D-E)	1657.16	1681.49	1693.84	1541.31
G	Average Loan (C+F)/2	1511.65	1669.32	1687.67	1617.58



H	Weighted Average Rate of Interest on Loan (in %)	5.95	5.95	5.95	5.95
I	Interest on Loan (G*H)	36.72	99.32	100.42	96.25

Return on Equity (“RoE”)

44. 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:

$$\text{Rate of pre-tax return on equity} = \text{Base rate} / (1-t)$$

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

Illustration-

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

$$\text{Rate of return on equity} = 15.50 / (1 - 0.2155) = 19.758\%$$

(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.”

45. The Petitioner has submitted that MAT rate is applicable to it. We have considered the submissions of the Petitioner. The 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. The RoE allowed in respect of the transmission asset is as follows:

(₹ in lakh)					
	Particulars	2020-21 (Pro-rata for 149 days)	2021-22	2022-23	2023-24
A	Opening Equity	585.49	730.46	798.55	866.64
B	Addition due to ACE	144.97	68.09	68.09	0.00
C	Closing Equity (A+B)	730.46	798.55	866.64	866.64
D	Average Equity (A+C)/2	657.98	764.51	832.60	866.64
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)	50.45	143.59	156.38	162.77

Operation & Maintenance Expenses (“O&M Expenses”)

46. Regulation 35(3)(a) and Regulation 35(4) of the 2019 Tariff Regulations provide 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



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
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
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
<i>Norms for HVDC stations</i>					
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.

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

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

Particulars	2020-21	2021-22	2022-23	2023-24
Sub-station Bays (Numbers)				
400 kV: Amritsar: ICT Bay	1	1	1	1
220 kV: Amritsar: ICT Bay	1	1	1	1
400 kV Bay	1	1	1	1
220 kV Bay	1	1	1	1

Particulars	2020-21	2021-22	2022-23	2023-24
Transformer (MVA)				
400 kV: Amritsar: ICT- IV	500	500	500	500
Total O&M claimed	98.82	250.57	259.62	268.25

48. The O&M Expenses has worked out for the transmission asset for 2019-24



tariff period are as follows:

O&M Expenses				
Sub-station Bays (Numbers)	2020-21 (Pro-rata for 149 days)	2021-22	2022-23	2023-24
400 kV Bay (AIS)	1	1	1	1
220 kV Bay (AIS)	1	1	1	1
Norm (₹ lakh/bay)				
400 kV Bay (AIS)	33.28	34.45	35.66	36.91
220 kV Bay (AIS)	23.30	24.12	24.96	25.84
Total Sub-station O&M Expenses (₹ in lakh) (A)	56.58	58.57	60.62	62.75
Transformer (MVA)				
400 kV	500	500	500	500
Norms (₹ lakh/MVA)				
400 kV	0.371	0.384	0.398	0.411
Total Transformer (B)	185.50	192.00	199.00	205.50
Total O&M Expenses allowed (₹ in lakh) (C=A+B)	98.82	250.57	259.62	268.25

Interest on Working Capital (“IWC”)

49. Regulation 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;”

50. 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 1year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) for 2020-21 and 10.50% (SBI 1year MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points) for 2021-24. The components of the working capital and interest allowed thereon is as follows:

(₹ in lakh)					
	Particulars	2020-21 (Pro-rata for 149 days)	2021-22	2022-23	2023-24
A	Working Capital for O&M Expenses (O&M expenses for one month)	20.17	20.88	21.64	22.35
B	Working Capital for Maintenance Spares (15% of O&M expenses)	36.31	37.59	38.94	40.24
C	Working Capital for Receivables (Equivalent to 45 days of annual fixed cost /annual transmission charges)	72.23	79.21	83.60	85.49
D	Total Working Capital (A+B+C)	128.72	137.68	144.18	148.09
E	Rate of Interest for working capital (in %)	11.25	10.50	10.50	10.50
F	Interest of working capital (D*E)	5.91	14.46	15.14	15.55

Annual Fixed Charges for 2019-24 Tariff Period

51. 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 149 days)	2021-22	2022-23	2023-24
Depreciation	47.27	134.55	146.54	152.53
Interest on Loan	36.72	99.32	100.42	96.25
Return on Equity	50.45	143.59	156.38	162.77
O&M Expenses	98.82	250.57	259.62	268.25
Interest on Working Capital	5.91	14.46	15.14	15.55
Total	239.17	642.49	678.10	695.35

Filing Fee and Publication Expenses

52. 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

53. 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

54. 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.

55. We have considered the submissions of the Petitioner. Since GST is not levied



on transmission service at present, we are of the view that Petitioner's prayer is premature.

Security Expenses

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

57. We have considered the above submissions of Petitioner. The Petitioner has claimed consolidated security expenses for all the transmission assets owned by it on projected basis for 2019-24 tariff period on the basis of actual security expenses incurred in 2018-19 in Petition No. 260/MP/2020. The said petition has already been disposed of by the Commission vide order dated 3.8.2021 and the Commission has approved security expenses from 1.4.2019 to 31.3.2024. Therefore, security expenses will be shared in terms of the order dated 3.8.2021 in Petition No. 260/MP/2020. 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

58. 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

59. With effect from 1.7.2011, sharing of transmission charges for inter-State transmission systems was governed by the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2010.



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

60. To summarise,

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

(₹ in lakh)			
2020-21 (Pro-rata for 149 days)	2021-22	2022-23	2023-24
239.17	642.49	678.10	695.35

61. Annexure given hereinafter form part of the order.

62. This order disposes of Petition No. 10/TT/2022 in terms of the above discussions and findings.

sd/-
(Arun Goyal)
Member

sd/-
(I. S. Jha)
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 (%)	Annual Depreciation as per Regulations			
Capital Expenditure as on COD		2020-21 (₹ in lakh)	2021-22 (₹ in lakh)	2022-23 (₹ in lakh)			2020-21 (₹ in lakh)	2021-22 (₹ in lakh)	2022-23 (₹ in lakh)	2023-24 (₹ in lakh)
Sub-Station	1951.64	483.25	226.98	226.98	2888.85	5.28	115.80	134.55	146.54	152.53
Total	1951.64	483.25	226.98	226.98	2888.85		115.80	134.55	146.54	152.53
					Average Gross Block (₹ in lakh)		2193.27	2548.38	2775.36	2888.85
					Weighted Average Rate of Depreciation (%)		5.28	5.28	5.28	5.28

