

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 275/TT/2022

Coram:

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

Date of Order: 06.02.2023

In the matter of:

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and truing up of transmission tariff of 2014-19 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of 2019-24 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for transmission asset "Replacement of existing 4 x 105 MVA, 400/220 kV, 1-Ph ICTs with 1x500 MVA, 400/220 kV, 3Ph ICT at Misa Sub-station" under "North Eastern Region Strengthening Scheme-IV (NERSS-IV)" in the North-Eastern Region.

And in the matter of:

Power Grid Corporation of India Limited,
"SAUDAMINI", Plot No-2,
Sector-29, Gurgaon – 122 001 (Haryana).

.....Petitioner

Versus

1. Assam Electricity Grid Corporation Limited,
(Formerly Assam State Electricity Board),
Bijulee Bhawan, Paltan Bazar,
Guwahati – 781001, Assam.
2. Meghalaya Energy Corporation Limited,
(Formerly Meghalaya State Electricity Board),
Short Round Road, "Lumjingshai",
Shillong – 793001, Meghalaya.
3. Government of Arunachal Pradesh,
Itanagar, Arunachal Pradesh.
4. Power and Electricity Department,
Government of Mizoram,
Aizawl, Mizoram.
5. Manipur State Electricity Distribution Company Limited,
(Formerly Electricity Department, Government of Manipur),
Keishampat, Imphal.



6. Department of Power,
Government of Nagaland,
Kohima, Nagaland.

7. Tripura State Electricity Corporation Limited,
Vidyut Bhawan, North Banamalipur,
Agartala, Tripura (W) – 799001, Tripura.

.....Respondent (s)

For Petitioner : Shri D. K. Biswal, PGCIL
Shri Zafrul Hasan, PGCIL
Shri Ranjeet Kumar Pandey, PGCIL

For Respondents : None

ORDER

The instant petition has been filed by Power Grid Corporation of India Limited, a deemed transmission licensee, for truing up of transmission tariff of 2014-19 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) and determination of tariff under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) for 2019-24 tariff period in respect of the Replacement of existing 4 x 105 MVA, 400/220 kV, 1-Ph ICTs with 1x500 MVA, 400/220 kV, 3Ph ICT at Misa Sub-station (hereinafter referred to as the “transmission asset”) under “North Eastern Region Strengthening Scheme-IV (NERSS-IV)” (hereinafter referred to as the “transmission project”) in the North-Eastern Region:

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

- 1) *“Approve the trued up Transmission Tariff for 2014-19 block and transmission tariff for 2019-24 block for the assets covered under this petition, as per para 12.2 and 13.0 above.*
- 2) *Admit the capital cost claimed and additional capitalization incurred during 2014-19 and also allow the projected additional capitalization during 2019-24.*
- 3) *Allow the petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended*



from time to time) of the respective financial year directly without making any application before the Commission as provided in Tariff Regulation 2014 and Tariff regulations 2019 as per para 12.2 and 13.0 above for respective block.

- 4) Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on publishing of notices in newspapers in terms of Regulation 70 (1) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019, and other expenditure (if any) in relation to the filing of petition.
- 5) Allow the petitioner to bill and recover Licensee fee and RLDC fees and charges, separately from the respondents in terms of Regulation 70 (3) and (4) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019.
- 6) Allow the petitioner to bill and adjust impact on Interest on Loan due to change in Interest rate on account of floating rate of interest applicable during 2019-24 period, if any, from the respondents.
- 7) Allow the Petitioner to claim the overall security expenses and consequential IOWC on that security expenses separately.
- 8) Allow the petitioner to claim the capital spares at the end of tariff block as per actual.
- 9) Allow the Petitioner to bill and recover GST on Transmission Charges separately from the respondents, if GST on transmission is levied at any rate in future. Further, any taxes including GST and duties including cess etc. imposed by any statutory/Govt./municipal authorities shall be allowed to be recovered from the beneficiaries.

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

Background

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

- a. The Investment Approval (IA) of the transmission project was accorded by the Board of Directors of the Petitioner's Company in its 329th meeting held on 26.5.2016 and communicated vide Memorandum No. C/CP/NERSS-IV dated 16.6.2016 at an estimated cost of ₹36460 lakh including IDC of ₹2055 lakh on December, 2015 price level basis. Subsequently, IA was amended vide Memorandum No. C/CP/PA1617-11-0R-IA016/AMEND-I dated 30.11.2016 in its 334th meeting held on 22.10.2022 at an estimated cost of ₹40919 lakh including IDC of ₹2307 lakh based on December, 2015 price level basis. The Revised Cost Estimate (RCE) of the transmission project was accorded by the Board of Directors of the Petitioner's Company vide Memorandum No. C/CP/PA1920-10-0U-RCE005 dated 15.1.2020 at an estimated cost of ₹39825 lakh including IDC of ₹1529 lakh on September, 2019 price level.

- b. The scope of work covered under the transmission project broadly includes:



Augmentation of transformers and Reactors

- i. Dismantling / Removal of 4x105 MVA, 400/220 kV ICT# at Misa Sub-station of PowerGrid and addition of 2x500 MVA, 400/220 kV ICT at Misa Sub-station with GIS bays utilizing the space vacated after removal of 4x105 MVA, 400/220 kV ICT.

Note: 4x105 MVA, 400/220 kV ICT thus released shall be kept as Regional Spare

- ii. 1x125 MVAR 420 kV bus Reactor at Balipara (PowerGrid) Sub-station.
- iii. 1x125 MVAR 420 kV bus Reactor at Bongaigaon (PowerGrid) Sub-station.

Operation of Silchar-Imphal 400 kV D/C line at rated voltage (400 kV) (presently operated at 132 kV)

- i. Up-gradation of existing 2x50 MVA, 132/33 kV Imphal (PowerGrid) Sub-station to 400 kV with following scope:
 - a. Installation of 400/132 kV, 2x315 MVA (7x105 MVA, 1-Ph) ICTs,
 - b. 2 Numbers 400 kV line bays for termination of Silchar - Imphal 400 kV D/C line
 - c. 80 MVAR, 420 kV Bus Reactor
- ii. Extension of existing 400/132 kV Silchar (PowerGrid) Substation
 - a. 2 Numbers of 400 kV GIS line bays for termination of Silchar - Imphal 400 kV D/C line
 - b. Installation of 1x125 MVAR, 420 kV Bus Reactor with GIS bays

Reconductoring of Agartala GBPP-Agartala (State) 132 kV D/C

- i. Reconductoring of Agartala GBPP - Agartala (State) 132 kV D/C line with High Capacity HTLS conductor along with necessary up-gradation/ modification in bay equipment at both ends.
- c. The transmission tariff for 2014-19 tariff period in respect of the transmission asset was allowed vide order dated 2.3.2022 in Petition No. 68/TT/021.
 - d. The details of the transmission assets covered under the transmission project are as follows:

Name of Assets	COD	Remarks
(a) Up gradation of existing 2X50 MVA, 132/33 kV Imphal (PowerGrid) Sub-station to 400 kV by installation of 400/132 kV, 2X315 MVA (7X105 MVA, 1-Ph) ICTs, 2 Numbers 400 kV line bays for termination of 400 kV D/C Silchar-Imphal line and 80 MVAR, 420 kV Bus Reactor along with associated bays at Imphal Sub-station	29.1.2019	Covered under True-up Petition No: 130/TT/2020



(b) Extension of existing 400/132 kV Silchar (PowerGrid) Sub-station with 2 Numbers. of 400 kV GIS line bays for termination of Silchar-Imphal 400 kV D/C line (Asset-1)		
(c) Installation of 1X125 MVAR, 420 kV Bus Reactor along with GIS bays at Silchar Sub-station (Asset-2)	20.12.2018	
1x125 MVAR, 420 kV Bus Reactor along with associated bay at Balipara (PowerGrid) Sub-station (Asset-3)	3.8.2018	
1x125 MVAR, 420 kV Bus Reactor along with associated bay at Bongaigaon (PowerGrid) Sub-station (Asset-4)	22.7.2018	
Reconductoring of Agartala GBPP - Agartala (State) 132 kV D/C line with High Capacity HTLS conductor along with necessary up gradation/ modification in bay equipment at both ends (Asset-5)	8.2.2018	
Replacement of existing 4 x 105 MVA, 400/220 kV, 1-Ph ICTs with 1x500 MVA, 400/220 kV, 3Ph ICT at Misa Sub-station.	29.3.2019	Covered under instant petition
1X500 MVA, 400/220 kV ICT at Misa Sub-station with GIS bays.	29.8.2019	Covered under Petition No. 660/TT/2020

3. The Respondents are distribution licensees and Power Departments, which are procuring transmission service from the Petitioner, mainly beneficiaries of the North-Eastern Region.

4. The Petitioner has served the petition on the Respondents and notice regarding filing of this petition has been published in the newspaper 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 newspaper by the Petitioner. None of the Respondent(s) have filed reply in the matter.

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

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

7. This order is issued considering the submissions made by the Petitioner in the petition vide affidavit dated 23.5.2022 and affidavit dated 21.9.2022.



TRUING UP OF ANNUAL FIXED CHARGES FOR 2014-19 TARIFF PERIOD

8. The details of the trued-up transmission charges claimed by the Petitioner in respect of the transmission asset for 2014-19 tariff period are as follows:

(₹ in lakh)

Particulars	2018-19 (Pro-rata 3 days)
Depreciation	0.82
Interest on Loan	0.90
Return on Equity	0.92
O&M Expenses	0.00
Interest on Working Capital	0.05
Total	2.69

9. The details of the trued-up Interest on Working Capital (IWC) claimed by the Petitioner in respect of the transmission assets for 2014-19 tariff period are as follows:

(₹ in lakh)

Particulars	2018-19 (Pro-rata 3 days)
O&M Expenses	0.00
Maintenance Spares	0.00
Receivables	54.65
Total Working Capital	54.65
Rate of Interest (in %)	12.20
Interest on Working Capital	0.05

Capital Cost

10. The Commission vide order dated 2.3.2022 in Petition No. 68/TT/2021 has allowed the capital cost as on COD respect of the transmission asset and the same are as follows:

(₹ in lakh)

Approved RCE Cost	Capital Cost claimed as on COD	Admitted Capital Cost as on COD
2259.69	2000.70	1891.53

11. The Petitioner in the instant true-up Petition has claimed the same capital cost as approved by the Commission vide order dated 2.3.2022 in Petition No. 68/TT/2021.



12. The estimated completion cost in respect of the transmission asset is within the RCE cost, therefore, there is no cost over-run.

Interest During Construction (“IDC”)

13. The Petitioner has claimed IDC in respect of the transmission asset and has submitted the Auditor’s Certificate in support of the same. The Petitioner has submitted that IDC of ₹85.51 lakh was disallowed due to time over-run in order dated 2.3.2022 in Petition No. 68/TT/2021. The Petitioner has submitted the revised computation of IDC along with the year-wise details of the IDC discharged and has requested to allow the same based on the revised IDC statement as submitted in the instant petition. The revised IDC computation is as follows:

(₹ in lakh)		
IDC as per Auditor’s Certificate	IDC Discharged up to COD	IDC discharged during 2019-20
88.34	79.49	8.85

14. We have considered the submissions of the Petitioner. The time over run in execution of the transmission asset has been condoned partially vide order dated 2.3.2022 in Petition No. 68/TT/2021. Accordingly, IDC is being allowed considering the information submitted by the Petitioner for the transmission asset on cash basis. The loan details submitted in Form-9C for 2014-19 tariff period and the IDC computation sheet have been considered for the purpose of IDC calculation on cash and accrued basis. The un-discharged IDC as on COD has been considered as ACE during the year in which it has been discharged. Accordingly, IDC allowed is as follows:

(₹ in lakh)					
IDC as per Auditor’s Certificate	IDC disallowed due to time over-run not condoned	IDC Allowed	Undischarged IDC	IDC allowed on COD	IDC discharged in 2019-20
88.34	85.57	2.77	1.64	1.12	1.64



Incidental Expenditure During Construction (“IEDC”)

15. The Petitioner has claimed IEDC and has submitted Auditor’s Certificate in support of the same.

16. The Petitioner has submitted that IEDC of ₹23.66 lakh was disallowed by the Commission as on COD due to excess claim vide order dated 2.3.2022 in Petition No. 68/TT/2021.

17. We have considered the submissions of the Petitioner. The time over-run of 281 days in case of the transmission asset has not been condoned. Hence, the amount of IEDC as claimed has not been allowed and the same is as follows:

(₹ in lakh)		
IEDC claimed (as per Auditor’s Certificate)	IEDC disallowed due to time over-run not condoned	IEDC allowed
87.31	23.66	63.65

Initial Spares

18. Regulation 13(d) of the 2014 Tariff Regulations provides that Initial Spares shall be capitalised as a percentage of plant and machinery cost up to cut-off date, subject to the following ceiling norms:

*“(d) Transmission System
Transmission line: 1.00%
Transmission Sub-station (Green Field): 4.00%
Transmission Sub-station (Brown Field): 6.00%
Series Compensation devices and HVDC Station: 4.00%
Gas Insulated Sub-station :5.00%
Communication System: 3.5%”*

19. Initial Spares claimed by the Petitioner are as follows:

(₹ in lakh)			
Plant and Machinery excluding IDC, IEDC, Land cost and cost of Civil works as on cut-off date (A)	Initial Spares claimed by the Petitioner (B)	Ceiling limit (in %) (C)	Initial Spares worked out by the Petitioner $D = [(A-B)*C/(100-C)]$
Sub-station (GIS)			
2058.43	83.82	5.00	103.93



20. The Petitioner has submitted that the expenditure on Initial Spares is included in the Auditor's Certificate as per actual cash expenditure incurred.

21. We have considered the submissions of the Petitioner. Initial Spares claimed by the Petitioner are within ceiling limit of 5.00% of GIS Sub-station. Accordingly, the Initial Spares computed and allowed as per the 2014 Tariff Regulations are as follows:

(₹ in lakh)

Asset	Plant and Machinery excluding IDC, IEDC, Land cost and cost of Civil works as on cut-off date (A)	Initial Spares claimed by the Petitioner (B)	Ceiling limit (in %) (C)	Initial Spares worked out	Initial Spares Allowed (E)	Excess Initial Spares Disallowed (F=B-E)
				$D = [(A-B) \times C / (100-C)]$		
Sub-station (GIS)						
Transmission Asset	2055.02	83.82	5.00	103.75	83.82	Nil

22. Initial Spares claimed by the Petitioner are within the ceiling limit as per the 2014 Tariff Regulations. The details of the capital cost as on COD approved in the instant order are as follows:

(₹ in lakh)

Capital cost claimed as on COD on accrual basis (A)	Less: Undischarged IDC (B)	Less: IDC disallowed due time over-run not condoned (C)	Less: IEDC disallowed due time over-run not condoned (D)	Capital Cost allowed as on COD on cash basis (E) = (A-B-C-D)
2000.70	1.64	85.57	23.66	1889.83

23. The Petitioner in the instant true-up petition has not claimed any ACE in respect for the transmission asset.

24. Accordingly, the capital cost considered for 2014-19 tariff period is as follows:

(₹ in lakh)

Admitted Capital Cost (As on COD)	ACE allowed (2018-19)	Total Capital Cost (As on 31.3.2019)
1889.83	0.00	1889.83



Debt-Equity Ratio

25. Debt-equity ratio has been allowed in accordance with Regulation 19(3) of the 2014 Tariff Regulations for determination of tariff for the period ending on as on COD for the transmission asset. The details of debt-equity ratio as on COD and 31.3.2019 are as follows:

Funding	Capital Cost (as on COD) (₹ in lakh)	(in %)	Capital Cost (as on 31.3.2019) (₹ in lakh)	(in %)
Debt	1322.88	70.00	1322.88	70.00
Equity	566.95	30.00	566.95	30.00
Total	1889.83	100.00	1889.83	100.00

Depreciation

26. The Gross Block during 2014-19 tariff period has been depreciated at Weighted Average Rate of Depreciation (WAROD). WAROD at Annexure-I has been worked out after considering the depreciation rates of the transmission assets as specified in the 2014 Tariff Regulations and depreciation allowed for the transmission asset during 2014-19 tariff period is as follows:

		(₹ in lakh)
	Particulars	2018-19 (Pro-rata 3 days)
A	Opening Gross Block	1889.83
B	ACE	0.00
C	Closing Gross Block (A+B)	1889.83
D	Average Gross Block (A+C)/2	1889.83
F	Weighted Average Rate of Depreciation (in %)	5.28%
G	Balance useful life of the asset (Year)	1700.84
H	Lapsed life at the beginning of the year (Year)	25.00
I	Aggregate Depreciable Value	0.00
J	Combined Depreciation during the year	0.82
K	Aggregate Cumulative Depreciation	0.82
L	Remaining Depreciable Value (I-K)	1700.02

27. The details of depreciation approved by the Commission vide order dated 2.3.2022 in Petition No. 68/TT/2021, as claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:



Particulars	(₹ in lakh)
	2018-19 (Pro-rata 3 days)
Approved by the Commission vide order dated 2.3.2022 in Petition No. 68/TT/2021	0.82
Claimed by the Petitioner in the instant petition	0.82
Approved after true-up in this order	0.82

Interest on Loan (“IoL”)

28. The Petitioner has claimed the weighted average rate of IoL based on its actual loan portfolio and rate of interest. We have considered the submissions of the Petitioner. IoL has been calculated based on actual interest rate submitted by the Petitioner in accordance with Regulation 26 of the 2014 Tariff Regulations. The trued-up IoL allowed in respect of the transmission asset is as follows:

		(₹ in lakh)
	Particulars	2018-19 (Pro-rata 3 days)
A	Gross Normative Loan	1322.88
B	Cumulative Repayments up to Previous Year	0.00
C	Net Loan-Opening	1322.88
D	Additions due to ACE	0.00
E	Repayment during the year	0.82
F	Net Loan-Closing	1322.06
G	Average Loan	1322.47
H	Weighted Average Rate of Interest on Loan (in %)	8.2513
	Interest on Loan (GxH)	0.90

29. The details of IoL approved by the Commission vide order dated 2.3.2022 in Petition No. 68/TT/2021, as claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

Particulars	(₹ in lakh)
	2018-19 (Pro-rata 3 days)
Approved by the Commission vide order dated 2.3.2022 in Petition No. 68/TT/2021	0.90
Claimed by the Petitioner in the instant petition	0.90
Approved after true-up in this order	0.90



Return on Equity (“RoE”)

30. The Petitioner has claimed RoE for the transmission assets in terms of Regulations 24 and 25 of the 2014 Tariff Regulations. The Petitioner has submitted that it is liable to pay income tax at Minimum Alternate Tax (MAT) rates and has claimed the effective tax rates for 2014-19 period as follows:

Year	Claimed effective tax (in %)	Grossed-up RoE (in %) [(Base Rate)/(1-t)]
2018-19	21.549	19.758

31. We have considered the submissions of the Petitioner. The Commission, *vide* order dated 27.4.2020 in Petition No. 274/TT/2019, had arrived at the effective tax rate for the Petitioner based on the notified MAT rates.

Year	Notified MAT rates (inclusive of surcharge & cess) (in %)	Effective tax (in %)
2014-15	20.961	20.961
2015-16	21.342	21.342
2016-17	21.342	21.342
2017-18	21.342	21.342
2018-19	21.549	21.549

32. MAT rates considered in order dated 27.4.2020 in Petition No. 274/TT/2019 are considered for the purpose of grossing up of rate of RoE for truing up of the tariff of the 2014-19 tariff period in terms of the provisions of the 2014 Tariff Regulations as follows:

Year	Notified MAT rates (inclusive of surcharge & cess) (in %)	Base rate of RoE (in %)	Grossed-up RoE [(Base Rate)/(1-t)] (in %)
2014-15	20.961	15.50	19.610
2015-16	21.342	15.50	19.705
2016-17	21.342	15.50	19.705
2017-18	21.342	15.50	19.705
2018-19	21.549	15.50	19.758

33. The trued-up RoE is allowed on the basis of MAT rate applicable for 2014-19 tariff period is as follows:



(₹ in lakh)

	Particulars	Asset-I
		2018-19 (Pro-rata 3 days)
A	Opening Equity	566.95
B	Additions	0.00
C	Closing Equity (A+B)	566.95
D	Average Equity (A+C)/2	566.95
E	Return on Equity (Base Rate) (in %)	15.500
F	MAT Rate for respective year (in %)	21.549
G	Rate of Return on Equity (in %)	19.758
	Return on Equity	0.92

34. The details of RoE approved by the Commission vide order dated 2.3.2022 in Petition No. 68/TT/2021, as claimed by the Petitioner in the instant petition and true-up in the instant order are as follows:

(₹ in lakh)

Particulars	2018-19 (Pro-rata 3 days)
Approved by the Commission vide order dated 2.3.2022 in Petition No. 68/TT/2021	0.92
Claimed by the Petitioner in the instant petition	0.92
Approved after true-up in this order	0.92

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

35. The Petitioner in the instant true-up Petition has not claimed any O&M Expenses for the transmission asset.

Interest on Working Capital (“IWC”)

36. IWC has been worked out and allowed as per the methodology provided in Regulation 28 of the 2014 Tariff Regulations and is allowed as follows:

(₹ in lakh)

Particulars	2018-19 (Pro-rata 3 days)
O&M Expenses (O&M Expenses for one month)	0.00
Maintenance Spares (15% of O&M Expenses)	0.00
Receivables (Equivalent to two months of annual transmission charges)	54.60
Total Working Capital	54.60
Rate of Interest (in %)	12.20
Interest on Working Capital	0.05



37. The details of IWC approved by the Commission vide order dated 2.3.2022 in Petition No. 68/TT/2021, as claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

(₹ in lakh)	
Particulars	2018-19 (Pro-rata 3 days)
Approved by the Commission vide order dated 2.3.2022 in Petition No. 68/TT/2021	0.05
Claimed by the Petitioner in the instant petition	0.05
Approved after true-up in this order	0.05

Approved Annual Fixed Charges for 2014-19 Tariff Period

38. The trued-up Annual Fixed Charges (AFC) approved for the transmission assets for 2014-19 tariff period are as follows:

(₹ in lakh)	
Particulars	2018-19
Depreciation	0.82
Interest on Loan	0.90
Return on Equity	0.92
O&M Expenses	0.00
Interest on Working Capital	0.05
Total	2.69

39. The details of AFC approved by the Commission vide order dated 2.3.2022 in Petition No. 68/TT/2021, as claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

(₹ in lakh)	
Particulars	2018-19 (Pro-rata 3 days)
Approved by the Commission vide order dated 2.3.2022 in Petition No. 68/TT/2021	2.70
Claimed by the Petitioner in the instant petition	2.69
Approved after true-up in this order	2.69



DETERMINATION OF ANNUAL FIXED CHARGES FOR 2019-24 TARIFF PERIOD

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

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	105.49	111.56	112.03	112.11	112.20
Interest on Loan	110.65	108.04	99.34	90.23	81.09
Return on Equity	112.57	119.06	119.55	119.64	119.73
O&M Expenses	179.00	185.50	192.00	199.00	205.50
Interest on Working Capital	12.74	13.20	13.37	13.54	13.66
Total	520.45	537.36	536.29	534.52	532.18

41. The details of IWC claimed by the Petitioner in respect of the transmission asset for 2019-24 tariff period are as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	14.92	15.46	16.00	16.58	17.13
Maintenance Spares	26.85	27.83	28.80	29.85	30.83
Receivables	63.99	66.25	66.12	65.90	65.43
Total Working Capital	105.76	109.54	110.92	112.33	113.39
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	12.74	13.20	13.37	13.54	13.65

Capital Cost

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

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

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

- (a) *The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;*
- (b) *Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;*
- (c) *Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period;*
- (d) *Interest during construction and incidental expenditure during construction as*



- computed in accordance with these regulations;
- (e) Capitalised initial spares subject to the ceiling rates in accordance with these regulations;
 - (f) Expenditure on account of additional capitalization and de-capitalisation determined in accordance with these regulations;
 - (g) Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the date of commercial operation as specified under Regulation 7 of these regulations;
 - (h) Adjustment of revenue earned by the transmission licensee by using the assets before the date of commercial operation;
 - (i) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;
 - (j) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of the generating station but does not include the transportation cost and any other appurtenant cost paid to the railway;
 - (k) Capital expenditure on account of biomass handling equipment and facilities, for co-firing;
 - (l) Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;
 - (m) Expenditure on account of fulfilment of any conditions for obtaining environment clearance for the project;
 - (n) Expenditure on account of change in law and force majeure events; and
 - (o) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.
- (3) The Capital cost of an existing project shall include the following:
- (a) Capital cost admitted by the Commission prior to 1.4.2019 duly trued up by excluding liability, if any, as on 1.4.2019;
 - (b) Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;
 - (c) Capital expenditure on account of renovation and modernisation as admitted by this Commission in accordance with these regulations;
 - (d) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;
 - (e) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and
 - (f) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.
- (4) The capital cost in case of existing or new hydro generating station shall also include:
- (a) cost of approved rehabilitation and resettlement (R&R) plan of the project in conformity with National R&R Policy and R&R package as approved; and
 - (b) cost of the developer's 10% contribution towards Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) and Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) project in the affected area.
- (5) The following shall be excluded from the capital cost of the existing and new projects:



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

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

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

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

43. The Petitioner has claimed capital cost of ₹1891.53 lakh as on 31.3.2019. The Commission has worked out the capital cost of ₹1889.83 lakh as on 31.3.2019 and the same has been considered as opening capital cost as on 1.4.2019 for determination of tariff in accordance with Regulation 19 of the 2019 Tariff Regulations.

Additional Capital Expenditure (“ACE”)

44. Regulation 24 and Regulation 25 of the 2019 Tariff Regulations provides as follows:

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

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

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

45. The Petitioner has claimed ACE for 2019-24 tariff period on account of undischarged liability towards final payment/ withheld payment due to contractual exigencies for works executed within the cut-off date. ACE for the year 2019-20, 2020-21 and 2022-23 for the transmission asset has been claimed under Regulation 24(1)(a) (Undischarged liabilities recognized to be payable at a future date) and 24(1)(b) (Work deferred for execution of the 2019 Tariff Regulations. ACE claimed is as follows:

FR Apportioned approved Cost	Capital cost (as on 31.3.2019)	ACE claimed as per Auditor's Certificate			(₹ in lakh)
		2019-20	2020-21	2022-23	Capital cost (as on 31.3.2024)
2259.69	1891.53	212.71	17.46	3.21	2124.91



46. The Petitioner vide affidavit dated 21.9.2022 has submitted the package-wise and vendor-wise details of the ACE claimed in 2019-24 period and the same is as follows:

Party Name	Particular	Year	Outstanding liability as on 31.3.2019	Discharge of liability			
				2019-20	2020-21	2021-22	2022-23
Sterling & Wilson Ltd.	Sub-station	2018-19	233.38	212.71	17.46	--	3.21

47. We have considered the submission of the Petitioner. ACE has been allowed under Regulation 24(1)(a) and 24(1)(b) of the 2019 Tariff Regulations as the same is towards un-discharged liabilities recognised to be payable at a future date. Accordingly, ACE allowed for 2019-24 tariff period for the transmission asset is as follows:

(₹ in lakh)

Particulars	ACE allowed for 2019-20	ACE allowed for 2020-21	ACE allowed for 2022-23
Expenditure as per Auditor's Certificate	212.71	17.46	3.21
Undischarged IDC	1.64		
Total	214.35	17.46	3.21

48. Accordingly, ACE for 2019-24 tariff period and the capital cost as on 31.3.2024 for the transmission asset considered is as follows:

(₹ in lakh)

RCE Appportioned approved cost	Capital cost (as on 31.3.2019)	ACE allowed			Capital Cost (as on 31.3.2024)
		2019-20	2020-21	2022-23	
2259.69	1889.83	214.35	17.46	3.21	2124.85

Debt-Equity Ratio

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

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



Provided that:

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

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

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

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

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

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

(4) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2019, but where debt: equity ratio has not been determined by the Commission for determination of tariff for the period ending 31.03.2019, 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.”

50. Debt-equity ratio considered for the purpose of computation of tariff for 2019-24 tariff period is allowed as per Regulation 18(3) of the 2019 Tariff Regulations. Debt-



equity ratio considered for the purpose of computation of tariff for 2019-24 tariff period is as follows:

(₹ in lakh)						
Funding	Capital cost (as on 1.4.2019) (₹ in lakh)	(in %)	ACE in 2019-24 (₹ in lakh)	(in %)	Capital cost (as on 31.3.2024) (₹ in lakh)	(in %)
Debt	1322.88	70.00	164.51	70.00	1487.39	70.00
Equity	566.95	30.00	70.51	30.00	637.45	30.00
Total	1889.83	100.00	235.01	100.00	2124.85	100.00

Depreciation

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

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

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

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

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

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

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

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

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



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

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

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

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

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

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

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

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

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

52. Depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and accumulated depreciation up to 31.3.2019 at Weighted Average Rate of Depreciation (WAROD). WAROD at Annexure-II has been worked out after



considering the depreciation rates of assets as prescribed in the 2019 Tariff Regulations. Depreciation allowed in respect of the transmission asset is as follows:

(₹ in lakh)						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Depreciation					
A	Opening Gross Block	1889.83	2104.18	2121.64	2121.64	2124.85
B	ACE	214.35	17.46	0.00	3.21	0.00
C	Closing Gross Block (A+B)	2104.18	2121.64	2121.64	2124.85	2124.85
D	Free hold land	0.00	0.00	0.00	0.00	0.00
E	Average Gross Block (A+C)/2	1997.00	2112.91	2121.64	2123.24	2124.85
F	Weighted average rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28	5.28	5.28
G	Balance useful life of the asset (Year)	25	24	23	22	21
H	Lapsed life at the beginning of the year (Year)	0	1	2	3	4
I	Aggregate Depreciable Value	1797.30	1901.62	1909.47	1910.92	1912.36
J	Depreciation during the year	105.44	111.56	112.02	112.11	112.19
K	Cumulative Depreciation	106.26	217.82	329.85	441.95	554.14
L	Remaining Depreciable Value (I-K)	1691.04	1683.79	1579.63	1468.96	1358.22

Interest on Loan (“IoL”)

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

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

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

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

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

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



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

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

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

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

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

54. The Petitioner has prayed that the change in interest rate due to floating rate of interest applicable, if any, during 2019-24 tariff period may be adjusted.

55. The weighted average rate of IoL has been considered on the basis of rate prevailing as on 1.4.2019. Accordingly, the floating rate of interest, if any, will be considered at the time of true up. IoL has been allowed in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL allowed for 2019-24 tariff period is as follows:

(₹ in lakh)						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Gross Normative Loan	1322.88	1472.92	1485.15	1485.15	1487.39
B	Cumulative Repayments up to Previous Year	0.82	106.26	217.82	329.85	441.95
C	Net Loan-Opening	1322.06	1366.66	1267.32	1155.30	1045.44
D	Additions due to ACE	150.05	12.22	0.00	2.25	0.00
E	Repayment during the year	105.44	111.56	112.02	112.11	112.19
F	Net Loan-Closing	1366.66	1267.32	1155.30	1045.44	933.25
G	Average Loan	1344.36	1316.99	1211.31	1100.37	989.34
H	Weighted Average Rate of Interest on Loan (in %)	8.2272	8.2030	8.2011	8.2000	8.1962
I	Interest on Loan (G*H)	110.60	108.03	99.34	90.23	81.09

Return on Equity (“RoE”)

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

“30. Return on Equity: (1) Return on equity shall be computed in rupee terms, on the



equity base determined in accordance with Regulation 18 of these regulations.

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

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

Provided further that:

- i. In case of a new project, the rate of return on equity shall be reduced by 1.00% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO) or Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system based on the report submitted by the respective RLDC;*
- ii. in case of existing generating station, as and when any of the requirements under (i) above of this Regulation are found lacking based on the report submitted by the concerned RLDC, rate of return on equity shall be reduced by 1.00% for the period for which the deficiency continues;*
- iii. in case of a thermal generating station, with effect from 1.4.2020:*
 - a) rate of return on equity shall be reduced by 0.25% in case of failure to achieve the ramp rate of 1% per minute;*
 - b) an additional rate of return on equity of 0.25% shall be allowed for every incremental ramp rate of 1% per minute achieved over and above the ramp rate of 1% per minute, subject to ceiling of additional rate of return on equity of 1.00%:*

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

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

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



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

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

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.”

57. The Petitioner has submitted that MAT rate is applicable to the Petitioner's company. Accordingly, MAT rate applicable in 2019-20 has been considered for the purpose of RoE, which will be trued-up with actual tax rate in accordance with Regulation 31(3) of the 2019 Tariff Regulations. RoE allowed is as follows:

		(₹ in lakh)				
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Return on Equity					
A	Opening Equity	566.95	631.25	636.49	636.49	637.45
B	Additions	64.31	5.24	0.00	0.96	0.00



	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
C	Closing Equity (A+B)	631.25	636.49	636.49	637.45	637.45
D	Average Equity (A+C)/2	599.10	633.87	636.49	636.97	637.45
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472	17.472
G	Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782	18.782
H	Return on Equity (D*G)	112.52	119.05	119.55	119.64	119.73

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

58. O&M Expenses claimed by the Petitioner in respect of the transmission asset for 2019-24 period is as follows:

	(₹ in lakh)				
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
500 MVA ICT at Misa Sub-station					
Norms (₹ in lakh per MVA)	0.358	0.371	0.384	0.398	0.411
Total O&M Expenses claimed (₹ in lakh)	179.00	185.50	192.00	199.00	205.50

59. The norms specified under Regulation 35(3)(a) of the 2019 Tariff Regulations provide as follows:

“35. Operation and Maintenance Expenses:

...

(3) Transmission system: (a) The following normative operation and maintenance expenses shall be admissible for the 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
Norms for HVDC stations					
HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB)	834	864	894	925	958
Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW)	1,666	1,725	1,785	1,848	1,913
500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)	2,252	2,331	2,413	2,498	2,586
±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)	2,468	2,555	2,645	2,738	2,834
±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500 MW)	1,696	1,756	1,817	1,881	1,947
±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)	2,563	2,653	2,746	2,842	2,942

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

Provided further that:

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



normative O&M expenses for ± 800 kV, Bishwanath-Agra HVDC bi-pole scheme; and

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

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

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

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

(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.”

60. We have considered the submissions of the Petitioner. O&M Expenses allowed for the transmission asset are as follows:

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
500 MVA ICT at Misa Sub-station					
Norms (₹ in lakh per MVA)	0.358	0.371	0.384	0.398	0.411
Total O&M Expenses claimed (₹ in lakh)	179.00	185.50	192.00	199.00	205.50

Interest on Working Capital (“IWC”)

61. Regulation 34, Regulation 34(3), Regulation 34(4) and Regulation 3(7) of the 2019 Tariff Regulations specifies 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:-

‘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;”

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

(₹ in lakh)						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Interest on Working Capital					
A	Working Capital for O&M Expenses (Equivalent to annualized O&M Expenses for one month)	14.92	15.46	16.00	16.58	17.13
B	Working Capital for Maintenance Spares (Equivalent to 15% of O&M Expenses)	26.85	27.83	28.80	29.85	30.83
C	Working Capital for Receivables (Equivalent to	63.97	66.14	65.90	65.68	65.21



	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	45 days of annual transmission charges)					
D	Total Working Capital (A+B+C)	105.74	109.42	110.70	112.11	113.16
E	Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50
F	Interest on working capital (D*E)	12.74	12.31	11.62	11.77	11.88

Annual Fixed Charges of 2019-24 Tariff Period

63. Accordingly, the transmission charges allowed in respect of the transmission asset for 2019-24 tariff period are as follows:

	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
						(₹ in lakh)
	Depreciation	105.44	111.56	112.02	112.11	112.19
	Interest on Loan	110.60	108.03	99.34	90.23	81.09
	Return on Equity	112.52	119.05	119.55	119.64	119.73
	O&M Expenses	179.00	185.50	192.00	199.00	205.50
	Interest on Working Capital	12.74	12.31	11.62	11.77	11.88
	Total	520.31	536.46	534.53	532.75	530.39

Filing Fee and the Publication Expenses

64. The Petitioner has sought reimbursement of fee paid by it for filing the Petition and publication expenses.

65. We have considered the submissions of the Petitioner. The Petitioner shall be entitled for reimbursement of the filing fees and publication expenses in connection with the present Petition, directly from the beneficiaries on pro-rata basis in accordance with Regulation 70(1) of the 2019 Tariff Regulations.

Licence Fee & RLDC Fees and Charges

66. 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

67. The Petitioner has submitted that GST, if it 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.

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

Security Expenses and Capital Spares

69. The Petitioner has submitted that security expenses in respect of the transmission asset are not claimed in the instant petition and it would file a separate petition for claiming the overall security expenses and the consequential IWC. Further, the Petitioner has sought reimbursement of capital spares at the end of tariff period.

70. We have considered the submissions of the Petitioner. The Petitioner has claimed consolidated security expenses 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 wherein the Commission has approved the 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.



71. Also, the Petitioner’s claim pertaining to capital spares, if any, will be dealt with in accordance with the provisions of the 2019 Tariff Regulations.

Sharing of Transmission Charges

72. With effect from 1.7.2011, sharing of transmission charges for inter-State transmission systems was governed by the provisions of the 2010 Sharing Regulations. However, 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 (in short “the 2020 Sharing Regulations”). Accordingly, the liabilities of the DICs for arrears of the transmission charges determined through this order shall be computed DIC-wise in accordance with the provisions of the sharing 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 the provisions of the 2020 Sharing Regulations as provided in Regulation 57 of the 2019 Tariff Regulations.

73. To summarize:

- a) The trued-up AFC approved for the transmission asset for 2014-19 tariff period are as follows:

(₹ in lakh)
2018-19 (Pro-rata 3 days)
2.69

- b) AFC allowed for the transmission asset for 2019-24 tariff period in this order are as follows:

(₹ in lakh)				
2019-20	2020-21	2021-22	2022-23	2023-24
520.31	536.46	534.53	532.75	530.39



74. Annexure-I and Annexure-II given hereinafter shall form part of the order.

75. This order disposes of Petition No. 275/TT/2022 in terms of the above discussions and findings.

sd/-
(P. K. Singh)
Member

sd/-
(Arun Goyal)
Member

sd/-
(I. S. Jha)
Member



Annexure-I

2014-19	Admitted Capital Cost as on COD (₹ in lakh)	ACE (₹ in lakh)		Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)
Capital Expenditure		2018-19	Total			2018-19
Sub-station	1889.83	0.00	0.00	1889.83	5.28%	99.87
Total	1889.83	0.00	0.00	1889.83		99.87
Average Gross Block (₹ in lakh)						1889.83
Weighted Average Rate of Depreciation (in %)						5.28%



Annexure-II

2019-24 Capital Expenditure	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Projected ACE (₹ in lakh)				Admitted Capital Cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)				
		2019-20	2020-21	2022-23	Total			2019-20	2020-21	2021-22	2022-23	2023-24
Sub Station	1889.83	214.35	17.46	3.21	235.02	2124.85	5.28%	105.44	111.56	112.02	112.11	112.19
Total	1889.83	214.35	17.46	3.21	235.02	2124.85		105.44	111.56	112.02	112.11	112.19
							Average Gross Block (₹ in lakh)	1997.00	2112.91	2121.64	2123.24	2124.85
							Weighted Average Rate of Depreciation (in %)	5.28%	5.28%	5.28%	5.28%	5.28%

