

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 289/TT/2019

Coram:

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

Date of Order: 28.02.2022

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 the 2014-19 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of the 2019-24 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 of Provision of Spare ICTs and Reactors for Southern Region forming part of Provision of Spare ICTs and Reactors for Eastern, Northern, Southern and Western Region.

And in the matter of:

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

.....Petitioner

Versus

1. Karnataka Power Transmission Corporation Limited,
Kaveri Bhavan,
Bangalore-560009.
2. Transmission Corporation of Andhra Pradesh Limited,
Vidyut Soudha,
Hyderabad-500082.
3. Kerala State Electricity Board,
Vaidyuthi Bhavanam, Pattom,
Thiruvananthapuram-695004.
4. Tamil Nadu Generation and Distribution Corporation Limited,
(Formerly Tamil Nadu Electricity Board-TNEB),
NPKRR Maaligai, 800, Anna Salai,
Chennai-600002.



5. Electricity Department,
Government of Pondicherry,
Pondicherry-605001.
6. Eastern Power Distribution Company of Andhra Pradesh Limited,
P&T Colony, Seethmmadhara, Vishakhapatnam,
Andhra Pradesh.
7. Southern Power Distribution Company of Andhra Pradesh Limited,
Srinivasasa Kalyana Mandapam Backside, Tiruchanoor Road,
Kesavayana Gunta, Tirupati,
Chittoor District, Andhra Pradesh-517501.
8. Central Power Distribution Company of Andhra Pradesh Limited,
Corporate Office, Mint Compound,
Hyderabad-500063 (Telangana).
9. Northern Power Distribution Company of Andhra Pradesh Limited,
Opposite NIT Petrol Pump, Chaitanyapuri, Kazipet,
Warangal-506004 (Telangana).
10. Bangalore Electricity Supply Company Limited,
Corporate Office, K. R. Circle,
Bangalore-560001 (Karnataka).
11. Gulbarga Electricity Supply Company Limited,
Station Main Road, Gulbarga,
Karnataka.
12. Hubli Electricity Supply Company Limited,
Navanagar, PB Road, Hubli,
Karnataka.
13. MESCOM Corporate Office,
Paradigm Plaza, AB Shetty Circle,
Manglore-575001 (Karnataka).
14. Chamundeswari Electricity Supply Corporation Limited,
927, L J Avenue, Ground Floor, New Kantharaj URS Road,
Saraswatipuram,
Mysore-570009 (Karnataka).
15. Electricity Department,
Government of Goa,
Vidyuti Bhawan,
Panaji, Goa-403001.
16. Transmission Corporation of Telangana Limited,
Vidhyut Sudha, Khairatabad,
Hyderabad-500082.

.....Respondent(s)



For Petitioner : Shri S. S. Raju, PGCIL
Shri D. K. Biswal, PGCIL
Shri A. K. Verma, PGCIL
Shri V. P. Rastogi, PGCIL

For Respondents : None

ORDER

The Petitioner, Power Grid Corporation of India Limited, has filed the instant petition for truing-up of transmission tariff of the 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 for determination of transmission tariff for the period from 1.4.2019 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 the following transmission assets covered under Provision of Spare ICTs and Reactors for Southern Region (hereinafter referred to as “the transmission project”) forming part of Provision of Spare ICTs and Reactors for Eastern, Northern, Southern and Western Region Provision of Spare ICTs and Reactors for Southern Region (hereinafter referred to as “the transmission scheme”):

Asset-I: 400 kV, 80 MVAR Spare Reactor at Gooty Sub-station; and

Asset-II: 315 MVA, 400/220 kV 3-Phase Spare Transformer initially planned at Madurai Sub-station but later diverted to Hyderabad Sub-station.

(Hereinafter, Asset-I and Asset-II are collectively referred to as “the combined transmission assets”).

2. The Petitioner has made the following prayers in this 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 5 and 6 above.



- 2) *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 19 as per para 5 and 6 above for respective block.*
- 3) *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.*
- 4) *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.*
- 5) *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.*
- 6) *Allow the Petitioner to file a separate petition before the Hon'ble Commission for claiming the overall security expenses and consequential IOWC on that security expenses as mentioned at para 6.6 above.*
- 7) *Allow the Petitioner to claim the capital spares at the end of tariff block as per actual.*
- 8) *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 the Hon'ble Commission deems fit and appropriate under the circumstances of the case and in the interest of justice”

3. **Backdrop of the case**

a) The Petitioner was entrusted with the implementation of the transmission project and proposal related thereto was approved by the Southern Region constituents during the 13th Southern Regional Power Committee held on 11.5.2010.

b) Investment Approval (I.A.) for the transmission scheme was accorded by the Board of Directors of the Petitioner's company (in its 255th meeting held on 2.8.2011) vide Memorandum No. C/CP/Spare ICTs & Reactors dated 4.8.2011 at an estimated cost (based on 1st Quarter 2011 Price Level) as follows:



- i. Spare Transformers in Northern Region - ₹3843.00 lakh including IDC of ₹104.00 lakh;
 - ii. Spare Transformers and Reactor in Eastern Region - ₹7777.00 lakh including IDC of 210.00 lakh;
 - iii. *Spare Transformer and Reactor in Southern Region - ₹1890.00 lakh including IDC of ₹51.00 lakh; and*
 - iv. Spare Transformers and Reactors in Western Region - ₹6409.00 lakh including IDC of ₹173.00 lakh.
- c) As per I.A., the broad scope of works covered under the transmission scheme was as follows:

Part-I: Spare Transformers in Northern Region

Number of Spare Transformers	Proposed Locations
3 numbers 315 MVA, 400/220/33 kV ICTs	Lucknow S/S (U.P.) Bhiwadi (Rajasthan) Hissar (Haryana)

Part-II: Spare Transformers/ Reactors in Eastern Region

Number of Spare Transformers/ Reactors	Proposed Locations
4 numbers 315 MVA, 400/220/33 kV ICTs	Biharshariff (Bihar), Durgapur (WB), Jamshedpur (Jharkhand), Rourkela (Orissa)
2 numbers 160 MVA, 220/132 kV ICT	Baripada (Orissa), Siliguri (WB)
1 number 50 MVA, 132/66 kV ICT	Gangtok (Sikkim)
1 number 80 MVAR Shunt Reactor	Rourkela (Orissa)

Part-III: Spare Transformers/ Reactors in Southern Region

Numbers of Spare Transformers/ Reactors	Proposed Locations
1 number 315 MVA, 400/220/33 kV ICTs	Madurai (Tamil Nadu)
1 number 80 MVAR Shunt Reactor	Gooty (A.P.)

Part-IV: Spare Transformers/ Reactors in Western Region

Numbers of Spare Transformers/ Reactors	Proposed Locations
4 numbers 315 MVA, 400/220/33 kV ICTs	Dehgam (Gujarat) Jabalpur (M.P.) Pune (Maharashtra) Raipur (Chhattisgarh)
1 number 80 MVAR Shunt Reactor	Wardha (Maharashtra)
1 number 1245 MVAR Shunt Reactor	Itarsi (M.P.)

- d) Petition No. 47/TT/2013 was filed by the Petitioner seeking approval of the transmission tariff of 315 MVA, 400/220/33 KV 3-phase Spare Transformer at Madurai SS* (anticipated COD: 1.2.2013) and 400 kV, 80 MVAR Spare reactor at Gooty SS* (COD: 1.1.2013) from their anticipated COD/ COD to 31.3.2014.



Provisional tariff for the same was allowed by the Commission vide order dated 18.3.2013 in Petition No. 47/TT/2013 (Docket No. 24/TT/2013).

(* Assets names are as filed by the Petitioner vide affidavit dated 16.1.2013 in Petition No. 47/TT/2013)

e) The Petitioner vide affidavit dated 1.7.2015 had inter-changed the asset description *vis-à-vis* that in Petition No. 47/TT/2013 as follows:

Assets names as filed vide affidavit dated 16.1.2013 in Petition No. 47/TT/2013	Assets description changed vide affidavit dated 1.7.2015 in Petition No. 47/TT/2013
400 kV, 80 MVAR Spare reactor at Gooty SS	Asset-I: 400 kV, 80 MVAR Spare Reactor at Gooty Sub-station
315 MVA, 400/220/33 KV 3-phase Spare Transformer at Madurai SS	Asset-II: 315 MVA, 400/220/33 kV 3-Phase Spare Transformer initially planned at Madurai Sub-station but later diverted to Hyderabad Sub-station

f) The transmission tariff of Asset-I and Asset-II from their respective COD of 1.1.2013 and 1.3.2013 to 31.3.2014 was allowed vide order dated 21.12.2015 in Petition No. 47/TT/2013. Vide this order the time over-run of 2 months in the commissioning of Asset-II was condoned. There was no time over-run in the commissioning of Asset-I.

g) The transmission tariff of Asset-I and Asset-II for the 2009-14 period was trued-up vide order dated 21.10.2016 in Petition No. 145/TT/2016 and vide this order, one combined tariff for the 2014-19 tariff period was also approved for the combined transmission assets.

h) The Petitioner vide affidavit dated 19.7.2021 has submitted that the scope of work covered under the transmission project is complete and is covered in this petition.

4. The Respondents are distribution licensees, transmission licensee, power utilities and power departments, which are procuring transmission services from the Petitioner, mainly beneficiaries of Southern Region.

5. The Petitioner has served the petition on the Respondents and notice regarding filing of this petition has been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments or objections have been received from



the general public in response to the aforesaid notices published in the newspapers. None of the respondents have filed any reply in this matter.

6. This order is issued considering the submissions made by the Petitioner in the petition vide affidavit dated 10.8.2019 and the Petitioner affidavit dated 19.7.2021 filed in response to technical validation letter.

7. The hearing in this matter was held on 3.8.2021 through video conference and the order was reserved. Having heard the representatives of the Petitioner and after perusal of the materials on record, we proceed to dispose of the petition.

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

8. The details of the trued-up transmission charges as claimed by the Petitioner (vide affidavit dated 19.7.2021) for the combined transmission assets are as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	83.67	83.67	83.67	83.67	83.67
Interest on Loan	88.57	80.75	72.96	65.03	57.46
Return on Equity	93.23	93.68	93.68	93.68	93.93
Interest on Working Capital	6.11	5.94	5.76	5.58	5.41
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Total	271.58	264.04	256.07	247.96	240.47

9. The details of the trued-up Interest on Working Capital (IWC) as claimed by the Petitioner (vide affidavit dated 19.7.2021) for the combined transmission assets are as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Maintenance Spares	0.00	0.00	0.00	0.00	0.00
Receivables	45.26	44.01	42.68	41.33	40.08
Total Working Capital	45.26	44.01	42.68	41.33	40.08
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	6.11	5.94	5.76	5.58	5.41



Capital Cost

10. The capital cost of the transmission project has been calculated in accordance with the Regulation 9(3) of the 2014 Tariff Regulations.

11. The Petitioner has submitted that final transmission tariff based on admitted capital cost of ₹1584.60 lakh as on 1.4.2014 as well as 31.3.2019 [in view of no Additional Capital Expenditure (ACE) during the 2014-19 period] for the combined transmission assets had been approved by the Commission vide order dated 21.10.2016 in Petition No. 145/TT/2016 for the 2014-19 tariff period. The said details as submitted are as follows:

(₹ in lakh)			
Approved Cost	Admitted Capital Cost as on 31.3.2014	ACE during 2014-19 period	Admitted Capital Cost as on 31.3.2019
1890.00	1584.60	0.00	1584.60

12. Based on the Auditor's Certificates (as submitted in Petition No. 145/TT/2016), the Petitioner has claimed ₹1584.60 as the capital cost as on 1.4.2014.

13. We have considered the submissions and claim of the Petitioner. The admitted capital cost of ₹1584.60 as on 31.3.2014 for the combined transmission assets has been considered for working out the true up tariff for the 2014-19 tariff period.

ADDITIONAL CAPITAL EXPENDITURE

14. The Petitioner vide affidavit dated 19.7.2021 has submitted that no ACE was incurred during the 2014-19 period.

15. Therefore, the details of the capital cost considered for the true up of tariff for the 2014-19 tariff period are as follows:

(₹ in lakh)	
Capital Cost (as on 1.4.2014)	Capital Cost (as on 31.3.2019)
1584.60	1584.60



Debt-Equity Ratio

16. As per Regulation 19(3) of the 2014 Tariff Regulations, the debt-equity ratio allowed by the Commission for determination of tariff for the period ending on 31.3.2014 shall be considered. Accordingly, the details of the debt-equity ratio as on 1.4.2014 and 31.3.2019 for the combined transmission assets are as follows:

Funding	(₹ in lakh)			
	Capital Cost (as on 1.4.2014) (₹ in lakh)	(in %)	Capital Cost (as on 31.3.2019) (₹ in lakh)	(in %)
Debt	1109.22	70.00	1109.22	70.00
Equity	475.38	30.00	475.38	30.00
Total	1584.60	100.00	1584.60	100.00

Depreciation

17. The Petitioner vide affidavit dated 19.7.2021 has submitted that inadvertently the cumulative depreciation till 31.3.2014 has been considered as ₹90.64 lakh while filing this petition. Also, the tariff forms for the 2014-19 period have been revised considering cumulative depreciation till 31.3.2014 as allowed vide order dated 21.10.2016 in Petition No. 145/TT/2016.

18. We have considered the submissions of the Petitioner. The Gross Block during the 2014-19 period for the combined transmission assets has been depreciated at Weighted Average Rate of Depreciation (WAROD). WAROD at Annexure-I has been worked out after taking into account the depreciation rates of assets as specified in the 2014 Tariff Regulations and the details of the trued-up depreciation allowed during the 2014-19 period is as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Block (A)	1584.60	1584.60	1584.60	1584.60	1584.60
ACE (B)	0.00	0.00	0.00	0.00	0.00
Closing Gross Block (C)=(A+B)	1584.60	1584.60	1584.60	1584.60	1584.60
Average Gross Block (D)=[(A+C)/2]	1584.60	1584.60	1584.60	1584.60	1584.60
Weighted Average Rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28	5.28	5.28



Balance useful life of the asset (Year)	24	23	22	21	20
Elapsed Life of the asset (Year)	1	2	3	4	5
Depreciable Value	1426.14	1426.14	1426.14	1426.14	1426.14
Remaining Depreciable Value at the beginning of the year	1336.05	1252.38	1168.72	1085.05	1001.38
Combined Depreciation during the year	83.67	83.67	83.67	83.67	83.67
Cumulative Depreciation at the end of the year	173.76	257.42	341.09	424.76	508.42
Remaining Depreciable Value at the end of the year	1252.38	1168.72	1085.05	1001.38	917.72

19. Depreciation for the combined transmission assets as allowed vide order dated 21.10.2016 in Petition No. 145/TT/2016, claimed by the Petitioner in the instant petition and trued-up in the instant order is as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 21.10.2016 in Petition No. 145/TT/2016	83.67	83.67	83.67	83.67	83.67
Claimed by Petitioner in the instant petition	83.67	83.67	83.67	83.67	83.67
Approved after true-up in this order	83.67	83.67	83.67	83.67	83.67

Interest on Loan (IoL)

20. The Petitioner has claimed Weighted Average Rate of Interest (WAROI) on loan based on its actual loan portfolio and rate of interest. Accordingly, IoL has been calculated based on actual interest rate in accordance with Regulation 26 of the 2014 Tariff Regulations. The trued-up IoL allowed for the combined transmission assets for the 2014-19 tariff period is as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	1109.22	1109.22	1109.22	1109.22	1109.22
Cumulative repayments up to Previous Year	90.09	173.76	257.42	341.09	424.76
Net Loan-Opening	1019.13	935.46	851.80	768.13	684.46
Additions	0.00	0.00	0.00	0.00	0.00
Repayment during the year	83.67	83.67	83.67	83.67	83.67
Net Loan-Closing	935.46	851.80	768.13	684.46	600.80
Average Loan	977.30	893.63	809.96	726.30	642.63
Weighted Average Rate of Interest on Loan (in %)	9.0628	9.0359	9.0075	8.9543	8.9411



Interest on Loan	88.57	80.75	72.96	65.03	57.46
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21. IoL for the combined transmission asset as allowed vide order dated 21.10.2016 in Petition No. 145/TT/2016, claimed by the Petitioner in the instant petition and trued-up in the instant order is as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 21.10.2016 in Petition No. 145/TT/2016	88.57	81.02	73.43	65.82	58.21
Claimed by Petitioner in the instant petition	88.57	80.75	72.96	65.03	57.46
Approved after true-up in this order	88.57	80.75	72.96	65.03	57.46

Return on Equity (RoE)

22. The Petitioner has claimed RoE for the combined transmission asset 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 effective tax rates for the 2014-19 tariff period as follows:

Year	Claimed effective tax rate (in %)	Grossed-up RoE (in %) [(Base Rate)/(1-t)]
2014-15	21.02	19.625
2015-16	21.38	19.715
2016-17	21.34	19.705
2017-18	21.34	19.705
2018-19	21.55	19.758

23. The Commission in order dated 27.4.2020 in Petition No. 274/TT/2019 had arrived at the effective tax rates for the Petitioner based on the notified MAT rates and the same is as follows:

Year	Notified MAT rates (in %) (inclusive of surcharge & cess)	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

24. MAT rates as allowed vide order dated 27.4.2020 in Petition No. 274/TT/2019 for the purpose of grossing up of rate of RoE for truing up of the tariff of the 2014-19



period, in terms of the provisions of the 2014 Tariff Regulations, are considered in the instant case which are as follows:

Year	Notified MAT rates (in %) (inclusive of surcharge & cess)	Base rate of RoE (in %)	Grossed up RoE (in %) [(Base Rate)/(1-t)]
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

25. The Petitioner has claimed RoE for the 2014-19 period after grossing up the RoE @15.50% with Effective Tax rates (based on MAT rates) each year. RoE is trued-up on the basis of MAT rates applicable in the respective years and is approved for the combined transmission assets for the 2014-19 tariff period as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity (A)	475.38	475.38	475.38	475.38	475.38
Additions (B)	0.00	0.00	0.00	0.00	0.00
Closing Equity (C) = (A+B)	475.38	475.38	475.38	475.38	475.38
Average Equity (D)= [(A+C)/2]	475.38	475.38	475.38	475.38	475.38
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (in %)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (in %)	19.610	19.705	19.705	19.705	19.758
Return on Equity	93.22	93.68	93.68	93.68	93.92

26. RoE for the combined transmission assets as allowed vide order dated 21.10.2016 in Petition No. 145/TT/2016, claimed by the Petitioner in the instant petition and trued-up in the instant order is as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 21.10.2016 in Petition No. 145/TT/2016	93.22	93.22	93.22	93.22	93.22
Claimed by Petitioner in the instant petition	93.23	93.68	93.68	93.68	93.93
Approved after true-up in this order	93.22	93.68	93.68	93.68	93.92



Operation & Maintenance Expenses (O&M Expenses)

27. The Petitioner has submitted that the transmission assets covered under instant petition are approved as regional spares and kept as cold spare. Hence, no O&M Expenses have been claimed for bays.

28. We have considered the submissions of the Petitioner and in view of no claim pertaining to the O&M Expenses for the combined transmission assets for the 2014-19 tariff period, no O&M Expenses have been approved.

Interest on Working Capital

29. IWC has been worked out as per the methodology provided in Regulation 28 of the 2014 Tariff Regulations and the trued-up IWC approved for the combined transmission assets is as follows:

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses (1 month of O&M expenses) [A]	0.00	0.00	0.00	0.00	0.00
Maintenance Spares (15% of O&M Expenses) [B]	0.00	0.00	0.00	0.00	0.00
Receivables (Equivalent to 2 months of annual fixed cost) [C]	45.26	44.01	42.68	41.33	40.08
Total Working Capital [D] = (A+B+C)	45.26	44.01	42.68	41.33	40.08
Rate of Interest (in %) [E]	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital [F] = (DxE)	6.11	5.94	5.76	5.58	5.41

30. IWC for the combined transmission assets as allowed vide order dated 21.10.2016 in Petition No. 145/TT/2016, claimed by the Petitioner in the instant petition and trued-up in the instant order is as follows:

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 21.10.2016 in Petition No. 145/TT/2016	6.11	5.94	5.76	5.59	5.41
Claimed by Petitioner in the instant petition	6.11	5.94	5.76	5.58	5.41
Approved after true-up in this order	6.11	5.94	5.76	5.58	5.41



Approved Annual Fixed Charges for the 2014-19 Tariff Period

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

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	83.67	83.67	83.67	83.67	83.67
Interest on Loan	88.57	80.75	72.96	65.03	57.46
Return on Equity	93.22	93.68	93.68	93.68	93.92
Interest on Working Capital	6.11	5.94	5.76	5.58	5.41
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Total	271.57	264.03	256.06	247.96	240.46

32. Accordingly, the Annual Transmission Charges as allowed vide order dated 21.10.2016 in Petition No. 145/TT/2016, claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 21.10.2016 in Petition No. 145/TT/2016	271.57	263.84	256.08	248.29	240.51
Claimed by Petitioner in the instant petition	271.58	264.04	256.07	247.96	240.47
Approved after true-up in this order	271.57	264.03	256.06	247.96	240.46

DETERMINATION OF ANNUAL FIXED CHARGES FOR 2019-24 TARIFF PERIOD

33. The details of the transmission charges for the combined transmission assets for the 2019-24 tariff period as claimed by the Petitioner vide affidavit dated 19.7.2021 are as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	83.67	83.67	83.67	83.67	83.67
Interest on Loan	50.07	42.60	35.13	27.82	20.56
Return on Equity	89.29	89.29	89.29	89.29	89.29
Interest on Working Capital	8.27	8.35	8.41	8.50	8.55
O&M Expenses	112.77	116.87	120.96	125.37	129.47
Total	344.07	340.78	337.46	334.65	331.54



34. The details of IWC for the combined transmission assets for the 2019-24 tariff period as claimed by the Petitioner vide affidavit dated 19.7.2021 are as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	9.40	9.74	10.08	10.45	10.79
Maintenance Spares	16.92	17.53	18.14	18.81	19.42
Receivables	42.30	42.01	41.60	41.26	40.76
Total Working Capital	68.62	69.28	69.82	70.52	70.97
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	8.27	8.35	8.41	8.50	8.55

Capital Cost

35. 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 tried 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.”*

36. The Petitioner has submitted that the capital cost admitted by the Commission as on 31.3.2019 is ₹1584.60 lakh and same has been considered for computation of tariff for the 2019-24 period. Also, no ACE has been projected during the 2019-24 tariff period.

37. We have considered the submissions of the Petitioner and note that the capital cost of ₹1584.60 lakh has been admitted by the Commission as on 31.3.2019 in this order and, accordingly, the same has been considered as the opening capital cost as on 1.4.2019 for determination of tariff in accordance with Regulation 19 of the 2019 Tariff Regulations.

38. In view of the above, the capital cost of the combined transmission assets as on 31.3.2024 is approved as follows:

(₹ in lakh)	
Capital Cost (as on 1.4.2019)	Capital Cost (as on 31.3.2024)
1584.60	1584.60

Debt-Equity Ratio

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

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

Provided that:

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



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

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

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

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

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

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

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

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

40. The debt-equity ratio for the 2019-24 period is allowed as per Regulation 18(3) of the 2019 Tariff Regulations. The debt-equity considered on normative basis as per the details submitted by the Petitioner for the purpose of computation of tariff for the 2019-24 tariff period is as follows:



Funding	Capital Cost (as on 1.4.2019) (₹ in lakh)	(in %)	Capital Cost (as on 31.3.2024) (₹ in lakh)	(in %)
Debt	1109.22	70.00	1109.22	70.00
Equity	475.38	30.00	475.38	30.00
Total	1584.60	100.00	1584.60	100.00

Depreciation

41. 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.”*

42. The depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and accumulated depreciation up to 31.3.2019. WAROD at Annexure-II has been worked out as per the rates of depreciation prescribed in the 2019 Tariff Regulations. The depreciation approved for the combined transmission assets for the 2019-24 tariff period is as follows:



(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Gross Block (A)	1584.60	1584.60	1584.60	1584.60	1584.60
ACE (B)	0.00	0.00	0.00	0.00	0.00
Closing Gross Block (C)=(A+B)	1584.60	1584.60	1584.60	1584.60	1584.60
Average Gross Block (D)=[(A+C)/2]	1584.60	1584.60	1584.60	1584.60	1584.60
Weighted average rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28	5.28	5.28
Balance useful life at the beginning of the year (Year)	19	18	17	16	15
Lapsed life of the asset at the beginning of the year (Year)	6	7	8	9	10
Depreciable Value	1426.14	1426.14	1426.14	1426.14	1426.14
Depreciation during the year	83.67	83.67	83.67	83.67	83.67
Cumulative Depreciation	592.09	675.76	759.43	843.09	926.76
Remaining Depreciation Value at the end of the year	834.05	750.38	666.71	583.05	499.38

Interest on Loan

43. 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.”*

44. WAROI on loan has been considered on the basis of rate prevailing as on 1.4.2019. The Petitioner has prayed that the change in interest rate due to floating rate of interest applicable, if any, during the 2019-24 tariff period will be adjusted. Accordingly, the floating rate of interest, if any, shall be considered at the time of true up. Therefore, IoL has been allowed in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL approved for the combined transmission assets for the 2019-24 tariff period is as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	1109.22	1109.22	1109.22	1109.22	1109.22
Cumulative Repayments up to Previous Year	508.42	592.09	675.76	759.43	843.09
Net Loan-Opening	600.80	517.13	433.46	349.79	266.13
Additions	0.00	0.00	0.00	0.00	0.00
Repayment during the year	83.67	83.67	83.67	83.67	83.67
Net Loan-Closing	517.13	433.46	349.79	266.13	182.46
Average Loan	558.96	475.30	391.63	307.96	224.29
Weighted Average Rate of Interest on Loan (in %)	8.9577	8.9642	8.9710	9.0347	9.1665
Interest on Loan	50.07	42.61	35.13	27.82	20.56

Return on Equity

45. Regulations 30 and 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 on account of emission



control system, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system or in the absence of actual loan portfolio of the generating station or the transmission system, the weighted average rate of interest of the generating company or the transmission licensee, as the case may be, as a whole shall be considered, subject to ceiling of 14%.

Provided further that:

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

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

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

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

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

Rate of pre-tax return on equity = Base rate / (1-t)

Where “t” is the effective tax rate in accordance with clause (1) of this Regulation and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act



applicable for that financial year to the company on pro-rata basis by excluding the income of non-generation or non-transmission business, as the case may be, and the corresponding tax thereon. In case of generating company or transmission licensee paying Minimum Alternate Tax (MAT), "t" shall be considered as MAT rate including surcharge and cess.

Illustration-

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

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

(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."

46. The Petitioner has submitted that it is liable to pay Income Tax at MAT rate specified under the Taxation laws (Amendment) Ordinance 2019. Further, RoE has been calculated @19.758% after grossing up the RoE with MAT rate of 21.5488% based on the rate prescribed under Regulation 31(2) of the 2019 Tariff Regulations for the 2019-24 tariff period. As per Regulation 31(3) of the 2019 Tariff Regulations, the grossed-up rate of RoE at the end of every financial year shall be trued-up 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 IT authorities pertaining to the 2019-24 tariff period on actual gross income. However, any penalty arising on account of delay in deposit or short deposit of tax amount shall not be claimed by it. Any under-recovery or over-recovery of grossed-up rate on RoE after



truing up shall be recovered or refunded to beneficiaries or the long term customers on yearly basis. The Petitioner has further submitted that any adjustment due to additional tax demand including interest duly adjusted for any refund of tax including interest received from IT authorities shall be recoverable/ adjustable during the 2019-24 tariff period on yearly basis on receipt of Income Tax assessment order.

47. We have considered the submissions of the Petitioner. MAT rate applicable in 2019-20 has been considered for the purpose of RoE, which shall be trued-up with actual tax rate in accordance with Regulation 31(3) of the 2019 Tariff Regulations. RoE allowed for the combined transmission assets for the 2019-24 tariff period is as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity (A)	475.38	475.38	475.38	475.38	475.38
Additions (B)	0.00	0.00	0.00	0.00	0.00
Closing Equity (C) = (A+B)	475.38	475.38	475.38	475.38	475.38
Average Equity (D)= [(A+C)/2]	475.38	475.38	475.38	475.38	475.38
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472	17.472
Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782	18.782
Return on Equity	89.29	89.29	89.29	89.29	89.29

Operation & Maintenance Expenses

48. Regulation 35(3)(a) of the 2019 Tariff Regulations provides 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 (Rs 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 (Rs 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 (Rs Lakh per km)					
Single Circuit (Bundled Conductor with six or more sub-conductors)	0.881	0.912	0.944	0.977	1.011
Single Circuit (Bundled conductor with four sub-conductors)	0.755	0.781	0.809	0.837	0.867
Single Circuit (Twin & Triple Conductor)	0.503	0.521	0.539	0.558	0.578
Single Circuit (Single Conductor)	0.252	0.260	0.270	0.279	0.289
Double Circuit (Bundled conductor with four or more sub-conductors)	1.322	1.368	1.416	1.466	1.517
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 (Rs. 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 (2500 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."

49. O&M Expenses as claimed by the Petitioner for the 2019-24 period are as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
(400 kV sub-station ICT, 315 MVA Capacity)					
Normative Rate of O&M as per the 2019 Tariff Regulations	0.358	0.371	0.384	0.398	0.411
Number of Units	1.00	1.00	1.00	1.00	1.00
Total O&M Expenses	112.77	116.87	120.96	125.37	129.47

50. We have considered the submissions of the Petitioner. The Petitioner has claimed O&M Expenses for the combined transmission assets as per the normative O&M Expenses rates provided in Regulation 35(3)(a) of the 2019 Tariff Regulations. The Commission vide order dated 24.1.2021 in Petition No. 136/TT/2020 had dealt with the issue relating to O&M Expenses for spares ICTs. The relevant portion of the order dated 24.1.2021 is as follows:



“28. We are also not convinced with the Petitioner’s clarification that it has not claimed O&M Expenses for the 2014-19 tariff period since the 2019 Tariff Regulations provide for O&M Expenses for transformers based on their rating. The norms specified in the 2019 Tariff Regulations are for transmission elements that are in regular use and not for spares which are used only in case of any eventualities. As already stated earlier, the „assets in use as spares” are being granted tariff only on the basis of consent and approval of the concerned Regional Power Committee and as these assets are not being in regular use, we are of the view that O&M Expenses cannot be granted to the transmission assets. Accordingly, O&M Expenses are not allowed for the Combined Asset for the 2019-24 tariff period. We also feel that it is pertinent to mention here that disallowance of O&M Expenses for the Combined Asset does not mean that they do not need any maintenance and the consequent expenditure. The Combined Asset requires maintenance and the expenditure involved in maintaining them would be miniscule compared to the O&M Expenses in respect of transformers put to regular use. We are also of the view that the Petitioner should meet this expenditure from the O&M Expenses allowed for the regular ICTs installed at Mandola and Ludhiana in Northern Region. In case, the expenses are unusually high and cannot be met from the O&M Expenses allowed for the regular ICTs, the Petitioner may approach the Commission with certification of O&M Expenses from RPC at the time of true-up.”

51. In view of the foregoing findings, as the combined transmission assets is a spare ICT, O&M Expenses for the same are not allowed.

Interest on Working Capital

52. Regulations 34(1)(c), 34(3), 34(4) and 3(7) of the 2019 Tariff Regulations provided 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 ...

(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;”

53. The Petitioner has submitted that it has computed IWC for the 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 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 1.4.2021 of 7.00% plus 350 basis points).

54. We have considered the submissions of the Petitioner. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations and the components of the working capital and interest allowed thereon for the combined transmission assets for the 2019-24 tariff period are as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Working Capital for O&M Expenses (1 month of O&M Expenses) [A]	0.00	0.00	0.00	0.00	0.00
Maintenance Spares (15% of O&M Expenses) [B]	0.00	0.00	0.00	0.00	0.00
Working Capital for Receivables (Equivalent to 45 days of annual transmission charges) [C]	27.83	26.95	25.99	25.08	24.10
Total Working Capital [D] = [A+B+C]	27.83	26.95	25.99	25.08	24.10
Rate of Interest (in %) [E]	12.05	11.25	10.50	10.50	10.50
Interest on Working Capital [F] = [DxE]	3.35	3.03	2.73	2.63	2.53

Annual Fixed Charges of the 2019-24 Tariff Period

55. The transmission charges of the combined transmission assets for the 2019-24 tariff period are as follows:



(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	83.67	83.67	83.67	83.67	83.67
Interest on Loan	50.07	42.61	35.13	27.82	20.56
Return on Equity	89.29	89.29	89.29	89.29	89.29
Interest on Working Capital	3.35	3.03	2.73	2.63	2.53
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Total	226.38	218.59	210.81	203.41	196.04

Filing Fee and Publication Expenses

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

Licence Fee & RLDC Fees and Charges

57. The Petitioner shall be entitled for reimbursement of licence fee in accordance with Regulation 70(4) of the 2019 Tariff Regulations for the 2019-24 tariff period. The Petitioner shall also be entitled for recovery of RLDC fee and charges in accordance with Regulation 70(3) of the 2019 Tariff Regulations for the 2019-24 tariff period.

Goods and Services Tax

58. 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.

59. 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

60. The Petitioner has submitted that security expenses for the combined transmission assets are not claimed in the instant petition and it would file a separate petition for claiming the overall security expenses and the consequential IWC.

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

Capital Spares

62. 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

63. 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 and with effect from 1.11.2020 (after repeal of the 2010 Sharing Regulations), sharing of transmission charges is governed by the 2020 Sharing Regulations. Accordingly, the liabilities of DICs for arrears of the transmission charges determined through this order shall be computed DIC-wise in accordance with the provisions of respective Tariff Regulations and Sharing Regulations and shall be recovered from the concerned DICs through Bills under Regulation 15(2)(b) of the



2020 Sharing Regulations. Billing, collection and disbursement of the transmission charges for subsequent period shall be governed in terms of provisions of the 2020 Sharing Regulations as provided in Regulation 57 of the 2019 Tariff Regulations.

64. To summarise:

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

(₹ in lakh)				
2014-15	2015-16	2016-17	2017-18	2018-19
271.57	264.03	256.06	247.96	240.46

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

(₹ in lakh)				
2019-20	2020-21	2021-22	2022-23	2023-24
226.38	218.59	210.81	203.41	196.04

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

66. This order disposes of Petition No. 289/TT/2019 in terms of above discussions and findings.

**sd/
(P. K. Singh)
Member**

**sd/
(Arun Goyal)
Member**

**sd/
(I. S. Jha)
Member**

**sd/
(P. K. Pujari)
Chairperson**



ANNEXURE-I

2014-19	Combined Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	Projected Additional Capitalisation (₹ 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)				
		2014-15	2015-16	2016-17	2017-18	2018-19	Total			2014-15	2015-16	2016-17	2017-18	2018-19
Capital Expenditure														
Sub Station	1584.60	0.00	0.00	0.00	0.00	0.00	0.00	1584.60	5.28%	83.67	83.67	83.67	83.67	83.67
Total	1584.60	0.00	0.00	0.00	0.00	0.00	0.00	1584.60		83.67	83.67	83.67	83.67	83.67
								Average Gross Block (₹ in lakh)		1584.60	1584.60	1584.60	1584.60	1584.60
								Weighted Average Rate of Depreciation (in %)		5.28%	5.28%	5.28%	5.28%	5.28%

Annexure-II

2019-24	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Projected Additional Capitalisation (₹ 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	2021-22	2022-23	2023-24	Total			2019-20	2020-21	2021-22	2022-23	2023-24
Capital Expenditure														
Sub Station	1584.60	-	-	-	-	-	-	1584.60	5.28%	83.67	83.67	83.67	83.67	83.67
Total	1584.60	-	-	-	-	-	-	1584.60		83.67	83.67	83.67	83.67	83.67
								Average Gross Block (₹ in lakh)		1584.60	1584.60	1584.60	1584.60	1584.60
								Weighted Average Rate of Depreciation (in %)		5.28%	5.28%	5.28%	5.28%	5.28%

