

CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No. 496/TT/2019

Coram :

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

Date of Order: 28.8.2020

In the matter of

Approval under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and truing up of transmission tariff of 2014-19 period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff for 2019-24 period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2019 of Augmentation of Hosur Sub-station by 1X315 MVA, 400/220 kV, Transformer and associated bays under System Strengthening Scheme-XIV in Southern Region.

And in the matter of

Power Grid Corporation of India Limited
"Saudamini", Plot No.2,
Sector-29, Gurgaon -122 001

.... Petitioner

Versus

1. Karnataka Power Transmission Corporation Ltd. (KPTCL),
Kaveri Bhavan,
Bangalore - 560 009
2. Transmission Corporation of Andhra Pradesh Ltd. (APTRANSCO),
Vidyut Soudha,
Hyderabad- 500082
3. Kerala State Electricity Board (KSEB)
Vaidyuthi Bhavanam Pattom,
Thiruvananthapuram - 695 004
4. Tamil Nadu Generation and Distribution Corporation Ltd (TANGEDCO),
(Formerly Tamil Nadu Electricity Board -TNEB)
NPKRR Maaligai, 800, Anna Salai,
Chennai - 600 002



5. Electricity Department,
Government of Goa
Vidyuti Bhawan, Panaji,
Goa 403001
6. Electricity Department,
Government of Pondicherry,
Pondicherry – 605 001
7. Eastern Power Distribution Company of Andhra Pradesh Limited (APEPDCL),
P&T Colony, Seethmmadhara,
Vishakhapatnam
8. Southern Power Distribution Company of Andhra Pradesh Limited (APSPDCL),
Srinivasasa Kalyana Mandapam Backside,
Tiruchanoor Road, Kesavayana Gunta, Tirupati-517 501
9. Central Power Distribution Company of Andhra Pradesh limited (APCPDCL),
Corporate Office, Mint Compound,
HYDERABAD - 500 063
10. Northern Power Distribution Company of Andhra Pradesh Limited (APNPDCL),
Opp. NIT Petrol Pump, Chaitanyapuri,
Kazipet, WARANGAL - 506 004
11. Bangalore Electricity Supply Company Ltd. (BESCOM),
Corporate Office, K.R.Circle,
BANGALORE - 560 001, Karnataka
12. Gulbarga Electricity Supply Company Ltd. (GESCOM),
Station Main Road,
Gulbarga, Karnataka
13. Hubli Electricity Supply Company Ltd. (HESCOM),
Navanagar, PB Road,
Hubli, Karnataka
14. Mangalore Electricity Supply Company Ltd. (MESCOM),
Corporate Office, Paradigm Plaza, AB Shetty Circle,
Mangalore - 575001, Karnataka
15. Chamundeswari Electricity Supply Corporation Ltd. (CESC),
927, L J Avenue Ground Floor,
New Kantharaj Urs Road, Saraswatipuram,
Mysore - 570 009, Karnataka
16. Transmission Corporation of Telangana Limited,
Vidhyut Soudha, Khairatabad,
Hyderabad-500082
17. Tamil Nadu Transmission Corporation Limited,
NPKRR Maaligai, 800,
Anna Salai, Chennai - 600 002

...Respondent



Parties present:

For Petitioner: Shri S. S. Raju, PGCIL
Shri A. K. Verma, PGCIL
Shri V. P. Rastogi, PGCIL
Shri B. Dash, PGCIL

For Respondent: None

ORDER

The present petition has been filed by Power Grid Corporation of India Ltd. (hereinafter referred to as “the Petitioner”), a deemed transmission licensee for truing up of the tariff of the 2014-19 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) and for determination of tariff of the 2019-24 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) for Augmentation of Hosur Sub-station by 1X315 MVA, 400/220 kV, Transformer and associated bays (hereinafter referred as “the transmission asset”) under “System Strengthening Scheme-XIV in Southern Region” (hereinafter referred as “the transmission project”).

2. The Petitioner has made the following prayers:

- “1) Approve the trued-up Transmission Tariff for the tariff block 2014-19 and transmission tariff for 2019-24 block for the assets covered under this petition.*
- 2) Allow the Completion cost additional capitalisation incurred during 2014-19.*
- 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 Regulations 2014 and Tariff Regulations 2019.*
- 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 file a separate petition before the Commission for claiming the overall security expenses and consequential IWC on that security expenses.
- 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 withdrawn from negative list at any time 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 Commission deems fit and appropriate under the circumstances of the case and in the interest of justice.”

Background

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

(i) The Investment Approval (IA) for the transmission project was accorded by the Board of Directors of the Petitioner company vide Memorandum No. C/CP/SRSS-XIV dated 27.12.2011 at an estimated cost of ₹29733 lakh, which included IDC of ₹16447 lakh (based on 3rd quarter, 2011 price level).

(ii) The Revised Cost Estimate (RCE) for the transmission project was approved vide Memorandum of Ref: C/CP/RCE-SR dated 23.2.2015 at an estimated cost of ₹34679 lakh, including IDC of ₹3690 lakh (based on August, 2014 price level).

(iii) The Petitioner vide affidavit dated 17.8.2020 has submitted the following details of petitions filed under the “System Strengthening Scheme-XIV in Southern Region”:

Name of Asset	Actual COD	Petition No.
Augmentation of Hosur Substation by 1x315 MVA 400/220 kV Transformer and associated bays.	1.3.2014	496/TT/2019 (Instant petition)
400 kV Dharmapuri (Salem New)– Somanahalli 400kV D/C Quad Line along with Bay Extensions at Dharmapuri (Salem New) and Somanahalli Substations.	30.03.2019	53/TT/2020



(iv) The instant asset was declared under commercial operation on 1.3.2014 and there is no time over-run in case of the instant asset.

(v) The transmission tariff from the date of commercial operation to 31.3.2014 for instant asset was initially allowed vide order dated 15.2.2016 in Petition No. 281/TT/2013.

(vi) The transmission tariff of the instant asset from the COD to 31.3.2014 was trued up and tariff for the 2014-19 tariff period was approved vide order dated 22.8.2016 in Petition no. 96/TT/2016.

(vii) The Commission vide order dated 22.8.2016 in petition no. 96/TT/2016 admitted the ₹1665.12 lakh as Capital Cost as on 31.3.2014.

4. The respondents are distribution licensees and power departments, who are procuring transmission service from the Petitioner, mainly beneficiaries of Southern Region.

5. The Petitioner has served a copy of the petition upon the respondents and notice of this application 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 public in response to the notice in newspaper. No reply to the petition has been filed by any Respondent in the matter.

6. The Petition was heard on 31.7.2020 and the Commission reserved the order in the Petition, by granting time to Respondents to file their reply by 24.8.2020 and Petitioner to file rejoinder, if any, by 31.8.2020. None of the Respondents have filed reply in the instant petition.

7. Having heard the representatives of the Petitioner present at the hearing and perused the material on record, we proceed to dispose of the petition.



8. This order has been issued after considering the main petition dated 5.10.2019 and Petitioner's affidavit dated 17.8.2020.

Analysis and Decision

Truing-Up Of Annual Fixed Charges of 2014-19 Tariff Period

9. The Petitioner has submitted the information as required under the 2014 Tariff Regulations for truing up of annual fixed charges for 2014-19 tariff period. The tariff for 2014-19 tariff period has been trued up as discussed in the subsequent paragraphs.

10. The Commission vide Order dated 22.8.2016 in petition no. 96/TT/2016 had approved the following transmission tariff for 2014-19 tariff period:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	93.99	105.57	110.20	110.20	110.20
Interest on Loan	101.74	106.18	102.26	92.79	83.47
Return on Equity	105.72	118.82	124.16	124.16	124.16
Interest on Working Capital	17.27	18.28	18.77	18.92	19.08
O&M Expenses	186.93	193.13	199.55	206.16	213.01
Total	505.65	541.98	554.95	552.23	549.92

11. The details of the trued-up transmission charges claimed by the Petitioner are as under:-

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	93.87	102.29	103.89	103.89	103.89
Interest on Loan	101.62	102.09	94.58	84.46	75.51
Return on Equity	105.67	115.61	117.34	117.34	117.65
Interest on Working Capital	17.26	18.03	18.29	18.42	18.60
O&M Expenses	186.93	193.13	199.55	206.16	213.01
Total	505.35	531.15	533.65	530.27	528.66



12. The details of the trued-up interest on working capital claimed by the Petitioner are as under: -

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	28.04	28.97	29.93	30.92	31.95
O&M expenses	15.58	16.09	16.63	17.18	17.75
Receivables	84.23	88.53	88.94	88.38	88.11
Total	127.85	133.59	135.50	136.48	137.81
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%
Interest on Working Capital	17.26	18.03	18.29	18.42	18.60

Capital Cost as on 1.4.2014

13. The Petitioner has claimed the following capital cost incurred up to COD and Additional Capital Expenditure (ACE) up to 31.3.2019:

(₹ in lakh)					
Apportioned approved cost as per FR	Apportioned approved cost as per RCE	Expenditure up to 31.3.2014 (on cash basis)	ACE 2014-19		Cost as on 31.3.2019
			2014-15	2015-16	
2080.00	2164.00	1665.12	259.35**	60.48	1984.95

**ACE as per Auditor Certificate (₹202.84 lakh) + Accrual IDC (₹61.06 lakh) - Excess Initial Spares (₹4.55 lakh)

14. The capital cost of ₹1665.12 lakh admitted by the Commission as on 31.3.2014 has been considered as opening capital cost as on 1.4.2014 for determination of tariff in accordance with the Regulation 9 of the 2014 Tariff Regulations.

Initial Spares

15. The Petitioner has claimed the initial spares in respect of the instant asset as per the following details:

(₹ in lakh)					
Particulars	Estimated Completion Cost (A)	Initial Spares Claimed (B)	Ceiling Limit (%) (C)	Initial Spares Worked out	Excess Initial Spares
				$D = \frac{[(A-B)*C]}{100-C}$	
S/S	1832.58	50.25	2.5	45.70	4.55

16. The Petitioner has adjusted the amount of excess initial spares from the Additional Capital Expenditure (ACE) for the year 2014-15.



17. The Petitioner, vide RoP of the hearing dated 31.7.2020, was directed to furnish discharge details of amount of Initial spares during the tariff period 2014-19.

18. In response, the Petitioner vide affidavit dated 17.8.2020 has submitted the following discharge details of amount of Initial Spares:

Particulars	Total spares Claimed	Expenditure on initial Spares Upto COD and included in auditor certificate upto COD (01.03.2014)	₹ in lakh)	
			Actual Expenditure on initial spares in 2013-14 (Add cap)	Actual Expenditure on initial spares in 2014-15 (Add cap)
Substation	50.25	4.19	39.81	6.25

19. The Petitioner further submitted that the expenditure on initial spares included in the auditor certificate as per actual cash expenditure incurred viz. a) the initial spares discharged upto COD included in the cost upto COD as per auditor certificate and b) discharged after COD has been included in the additional capital expenditure of the respective year in auditor certificate. The Petitioner has prayed to allow the initial spares as indicated in the table under paragraph 18 above as expenditure on initial spares.

20. We have considered the submission of the Petitioner and noted that vide order dated 22.8.2016 in petition no. 96/TT/2016, Initial spares for an amount of ₹ 50.25 lakh as claimed by the Petitioner were allowed after considering the Plant & Machinery cost up to the cut-off date (excluding IDC and IEDC) of ₹ 2110.46 lakh. In the instant petition, lower Additional Capital Expenditure during 2014-19 tariff period has been claimed by the Petitioner against the projected capital expenditure allowed earlier. Accordingly, initial spares allowed in respect of the instant asset are as under:



Plant & Machinery cost upto cut-off date (excluding IDC and IEDC) (₹ in lakh)	Norms as per the 2009 Tariff Regulations (in %)	Initial Spares as per the norms of the 2014 Tariff Regulations (₹ in lakh)	Initial Spares allowed in Order dated 22.8.2016 in petition no. 96/TT/2016 (₹ in lakh)	Excess Initial Spares (reduced from ACE of 2014-15) (₹ in lakh)
1832.58	2.5	45.70	50.25	4.55

Additional Capital Expenditure (ACE)

21. The Commission vide Order dated 22.8.2016 in the petition no. 96/TT/2016 approved ACE of ₹263.90 lakh and ₹181.44 lakh during the FY 2014-15 and 2015-16, respectively, totalling to ACE of ₹445.34 lakh during 2014-19 tariff period.

22. The Petitioner in the instant petition has claimed the following ACE based on actual expenditure during 2014-19 tariff period :

(₹ in lakh)	
ACE 2014-19	
2014-15	2015-16
259.35**	60.48

***ACE as per Auditor Certificate (₹202.84 lakh) + Accrual IDC(₹61.06 lakh)-Excess Initial Spares of (₹4.55 lakh)*

23. The Petitioner has submitted that the instant asset has been commissioned on 1.3.2014 and accordingly, cut-off dated is 31.3.2017. Thus, ACE claimed during 2014-15 and 2015-16 is within cut-off date. The Petitioner has claimed ACE during 2014-19 tariff period under Regulation 14(1)(i) and 14(1)(ii) of the 2014 Tariff Regulations.

24. We have considered the submissions of the Petitioner. ACE claimed for the instant asset during 2014-15 and 2015-16 is within the cut-off date. The Petitioner has submitted that ACE claimed is on account of undischarged liability towards final payment/ withheld payment due to contractual exigencies for works executed and payment made within the cut-off date. Accordingly, ACE claimed for 2014-19 tariff period is allowed under Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations.



25. The total capital cost allowed as on 31.3.2019 based on approved ACE is as under:-

Capital Cost as on 1.4.2014	Approved ACE		Total Capital Cost as on 31.3.2019
	2014-15	2015-16	
1665.12	259.35	60.48	1984.95

(₹ in lakh)

Debt-Equity Ratio

26. The Petitioner has claimed debt-equity ratio as on 31.3.2014 as approved by the Commission in its order dated 22.8.2016 in Petition No. 96/TT/2016. The same has been considered as opening debt-equity ratio as on 1.4.2014. The details of the debt-equity ratio considered by the Commission are as under:

Particulars	Amount (₹ in lakh)	(%)
Debt	1165.58	70.00
Equity	499.54	30.00
Total	1665.12	100.00

27. The debt-equity ratio of 70:30 has been considered for ACE allowed during 2014-19 tariff period in accordance to Regulation 19(3) of the 2014 Tariff Regulations. The details of the debt and equity as on 1.4.2014 and 31.3.2019 considered for the purpose of tariff for the 2014-19 tariff period are as under:

Particulars	Capital cost as on 1.4.2014 (₹ in lakh)	%	Total capital cost as on 31.3.2019 (₹ in lakh)	%
Funding				
Debt	1165.58	70.00	1389.46	70.00
Equity	499.54	30.00	595.49	30.00
Total	1665.12	100.00	1984.95	100.00

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. Accordingly, IOL has been calculated based on



actual interest rate submitted by the Petitioner, in accordance with the Regulation 26 of the 2014 Tariff Regulations. IOL worked out is as under:

(₹ in lakh)

Particulars	Asset				
	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	1165.58	1347.13	1389.46	1389.46	1389.46
Cumulative Repayment upto previous Year	6.75	100.62	202.91	306.80	410.68
Net Loan-Opening	1158.83	1246.51	1186.55	1082.67	978.78
Addition due to Additional Capitalization	181.55	42.34	0.00	0.00	0.00
Repayment during the year	93.87	102.29	103.89	103.89	103.89
Net Loan-Closing	1246.51	1186.55	1082.67	978.78	874.89
Average Loan	1202.67	1216.53	1134.61	1030.72	926.83
Weighted Average Rate of Interest on Loan (%)	8.4493%	8.3922%	8.3356%	8.1939%	8.1471%
Interest on Loan	101.62	102.09	94.58	84.46	75.51

29. The details of IoL approved earlier vide order dated 22.8.2016 in Petition No. 96/TT/2016, claimed by the Petitioner in the instant petition and trued up in the instant order are shown in the table below:

(₹ in lakh)

Particular	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 22.8.2016 in Petition No. 96/TT/2016	101.74	106.18	102.26	92.79	83.47
Claimed by the Petitioner in the instant petition	101.62	102.09	94.58	84.46	75.51
Allowed after true-up in this order	101.62	102.09	94.58	84.46	75.51

Return on Equity (ROE)

30. The Petitioner is entitled for Return on equity for the instant assets in terms of Regulation 24 and 25 of the 2014 Tariff Regulations. The Petitioner has submitted that it is liable to pay income tax at MAT rates and has claimed following effective tax rates for the 2014-19 tariff period: -

Year	Claimed effective tax (in %)	Grossed up ROE (Base Rate/1-t) (in %)
2014-15	21.02	19.625
2015-16	21.38	19.715



Year	Claimed effective tax (in %)	Grossed up ROE (Base Rate/1-t) (in %)
2016-17	21.34	19.705
2017-18	21.34	19.705
2018-19	21.55	19.758

31. The Commission in order dated 27.4.2020 in Petition No.274/TT/2019 has arrived at the effective tax rate based on the notified MAT rates. The relevant portion of the order dated 27.4.2020 is as under:

“26. We are conscious that the entities covered under MAT regime are paying Income Tax as per MAT rate notified for respective financial year under IT Act, 1961, which is levied on the book profit of the entity computed as per the Section 115JB of the IT Act, 1961. The Section 115JB(2) defines book profit as net profit in the statement of Profit & Loss prepared in accordance with Schedule-III of the Companies Act, 2013, subject to some additions and deductions as mentioned in the IT Act, 1961. Since the Petitioner has been paying income tax on income computed under Section 115JB of the IT Act, 1961 as per the MAT rates of the respective financial year, the notified MAT rate for respective financial year shall be considered as effective tax rate for the purpose of grossing up of RoE for truing up of the tariff of the 2014-19 tariff period in terms of the provisions of the 2014 Tariff Regulations. Interest imposed on any additional income tax demand as per the Assessment Order of the Income Tax authorities shall be considered on actual payment. However, penalty (for default on the part of the Assessee) if any imposed shall not be taken into account for the purpose of grossing up of rate of return on equity. 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 transmission customers/ DICs as the case may be on year to year basis.

27. Accordingly, following effective tax rates based on notified MAT rates are considered for the purpose of grossing up of rate of return on equity:

Year	Notified MAT rates (inclusive of surcharge & cess) (in %)	Effective tax (in %)
2014-15	20.9605	20.9605
2015-16	21.3416	21.3416
2016-17	21.3416	21.3416
2017-18	21.3416	21.3416
2018-19	21.5488	21.5488

32. The same MAT rates as considered in the above order 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.

Year	Notified MAT rates (inclusive of surcharge & cess) (in %)	Base Rate of ROE (in %)	Grossed up ROE (Base Rate/1-t) (in %)
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Year	Notified MAT rates (inclusive of surcharge & cess) (in %)	Base Rate of ROE (in %)	Grossed up ROE (Base Rate/1-t) (in %)
2014-15	20.9605	15.50	19.610
2015-16	21.3416	15.50	19.705
2016-17	21.3416	15.50	19.705
2017-18	21.3416	15.50	19.705
2018-19	21.5488	15.50	19.758

33. The Petitioner has claimed ROE for the 2014-19 tariff period after grossing up the ROE of 15.50% with Effective Tax rates (based on MAT rates) each year as per the above said Regulation. ROE is trued up on the basis of the MAT rate applicable in the respective years and is allowed as follows:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	499.54	577.35	595.49	595.49	595.49
Addition due to Additional Capitalization	77.81	18.14	0.00	0.00	0.00
Closing Equity	577.35	595.49	595.49	595.49	595.49
Average Equity	538.44	586.42	595.49	595.49	595.49
Return on Equity (Base Rate) (%)	15.50%	15.50%	15.50%	15.50%	15.50%
MAT rate for the Respective year (%)	20.9605%	21.3416%	21.3416%	21.3416%	21.5488%
Rate of Return on Equity (Pre-tax) (%)	19.610%	19.705%	19.705%	19.705%	19.758%
Return on Equity (Pre-tax)	105.59	115.55	117.34	117.34	117.66

34. The details of RoE approved earlier vide order dated 22.8.2016 in Petition No. 96/TT/2016, claimed by the Petitioner in the instant petition and trued up in the instant order is shown in the table under:

(₹ in lakh)					
Particular	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 22.8.2016 in Petition No. 96/TT/2016	105.72	118.82	124.16	124.16	124.16
Claimed by the Petitioner in the instant petition	105.72	118.82	124.16	124.16	124.16
Allowed after true-up in this order	105.59	115.55	117.34	117.34	117.66

Depreciation



35. The depreciation has been worked out as per the methodology provided in Regulation 27 of the 2014 Tariff Regulations. The Gross Block during the tariff period 2014-19 has been depreciated at weighted average rate of depreciation (WAROD) and working of WAROD is given at Annexure-1. The WAROD has been worked out after taking into account the depreciation rates of assets as prescribed in the 2014 Tariff Regulations and depreciation allowed during 2014-19 tariff period is as under:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	1665.12	1924.47	1984.95	1984.95	1984.95
Additional Capital expenditure	259.35	60.48	0.00	0.00	0.00
Closing Gross Block	1924.47	1984.95	1984.95	1984.95	1984.95
Average Gross Block	1794.80	1954.71	1984.95	1984.95	1984.95
Weighted Average Rate of Depreciation (WAROD) (%)	5.2299%	5.2331%	5.2338%	5.2338%	5.2338%
Elapsed life at the beginning of the year	0	1	2	3	4
Depreciable Value	1615.32	1759.24	1786.46	1786.46	1786.46
Depreciation	93.87	102.29	103.89	103.89	103.89
Remaining Depreciable Value at the beginning of the year	1608.57	1658.62	1583.55	1479.66	1375.77

36. The details of the depreciation approved earlier vide order dated 22.8.2016 in Petition No. 96/TT/2016, claimed by the Petitioner in the instant petition and trued up in the instant order are shown in the table below:

(₹ in lakh)					
Particular	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 22.8.2016 in Petition No. 96/TT/2016	93.99	105.57	110.20	110.20	110.20
Claimed by the Petitioner in the instant petition	93.87	102.29	103.89	103.89	103.89
Allowed after true-up in this order	93.87	102.29	103.89	103.89	103.89

Operation and Maintenance Expenses (O&M Expenses)

37. As stated above, the instant transmission system includes 1x315 MVA, 400/220 kV Transformer along with associated 1 no. 400 kV & 1 no. 220 kV bays and 2 nos. 220 kV feeder bays. The Regulation 29(3) of the 2014 Tariff Regulations specifies the norms for O&M Expenses for the transmission system.



38. The Petitioner has claimed the same O&M Expenses for the instant transmission system for the 2014-19 tariff period as approved by the Commission vide order dated 22.8.2016 in Petition No. 96/TT/2016. The Petitioner's claim is as per the norms specified in the 2014 Tariff Regulations. Hence, it is allowed and the details are as follows:-

(₹ in lakh)					
Particulars (O&M Expenses)	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 22.8.2016 in Petition No. 96/TT/2016	186.93	193.13	199.55	206.16	213.01
Claimed by the Petitioner in the instant petition	186.93	193.13	199.55	206.16	213.01
Allowed after true-up in this order	186.93	193.13	199.55	206.16	213.01

Interest on Working Capital (IWC)

39. The Petitioner is entitled for IWC as per Regulation 28 of the 2014 Tariff Regulations. The IWC allowed as per the methodology provided in the Regulation 28 of the 2014 Tariff Regulations is as under: -

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	28.04	28.97	29.93	30.92	31.95
O&M expenses	15.58	16.09	16.63	17.18	17.75
Receivables	84.21	88.52	88.94	88.38	88.11
Total	127.83	133.58	135.50	136.48	137.81
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%
Interest on Working Capital	17.26	18.03	18.29	18.43	18.60

40. The details of IWC approved earlier vide order dated 22.8.2016 in Petition No. 96/TT/2016, IWC claimed by the Petitioner in the instant petition and trued up in the instant order for the 2014-19 tariff period is shown as under: -

(₹ in lakh)					
Particulars (IWC)	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 22.8.2016 in Petition No. 96/TT/2016	17.27	18.28	18.77	18.92	19.08
Claimed by the Petitioner in the instant petition	17.26	18.03	18.29	18.42	18.60
Allowed after true-up in this order	17.26	18.03	18.29	18.43	18.60



Annual Transmission Charges allowed for 2014-19 Tariff Period

41. The trued up annual fixed charges for the transmission assets for the tariff period 2014-19 are summarised below: -

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	93.87	102.29	103.89	103.89	103.89
Interest on Loan	101.62	102.09	94.58	84.46	75.51
Return on Equity	105.59	115.55	117.34	117.34	117.66
Interest on Working Capital	17.26	18.03	18.29	18.43	18.60
O&M Expenses	186.93	193.13	199.55	206.16	213.01
Total	505.26	531.10	533.65	530.27	528.67

DETERMINATION OF ANNUAL FIXED CHARGES FOR 2019-24 TARIFF PERIOD

42. The Petitioner has claimed the following transmission charges for the 2019-24 tariff period: -

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	103.89	103.89	103.89	103.89	103.89
Interest on Loan	67.25	58.75	50.24	41.74	33.24
Return on Equity	111.84	111.84	111.84	111.84	111.84
Interest on Working Capital	13.52	13.74	13.95	14.18	14.38
O&M Expenses	212.53	220.13	227.85	235.99	243.98
Total	509.03	508.35	507.77	507.64	507.33

43. The details of the interest on working capital claimed by the Petitioner are as under: -

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Maintenance Spares	31.88	33.02	34.18	35.40	36.60
O&M expenses	17.71	18.34	18.99	19.67	20.33
Receivables	62.59	62.67	62.60	62.59	62.38
Total	112.18	114.03	115.77	117.66	119.31
Rate of Interest	12.05%	12.05%	12.05%	12.05%	12.05%
Interest on Working Capital	13.52	13.74	13.95	14.18	14.38

Capital Cost

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

“(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 up to the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and*
- (f) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.”*



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

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

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

- (a) *The assets forming part of the project, but not in use, as declared in the tariff petition;*
- (b) *De-capitalised 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 decapitalised only after its redeployment;

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

45. The admitted capital cost of ₹1984.95 lakh as on 31.3.2019 as trued up in above paragraphs is considered as the capital cost as on 1.4.2019 for the purpose of determination of tariff for the 2019-24 tariff period.

Additional Capital Expenditure (ACE)

46. Regulations 24 and Regulation 25 of the 2019 Tariff Regulations provide as under:

"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 obsolescence of technology; and*

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

47. The Petitioner has not claimed/ projected any Additional Capital Expenditure during 2019-24 tariff period.

48. Accordingly, the capital cost considered as on 1.4.2019 are as under:



(₹ in lakh)

Capital Cost as on 1.4.2019	ACE claimed	Total Capital Cost as on 31.3.2024
	2019-24	
1984.95	Nil	1984.95

Debt-Equity Ratio

49. Debt-equity ratio for the 2019-24 tariff period is allowed as per Regulation 18(3) of the 2019 Tariff Regulations. Accordingly, admitted debt-equity ratio as on 31.3.2019 has been considered as the debt-equity ratio as on 1.4.2019 for the purpose of determination of tariff for the 2019-24 tariff period and the same has been summarized as under: -

Particulars	Capital cost as on 1.4.2019 (₹ in lakh)	%	Total cost as on 31.3.2024 (₹ in lakh)	%
Funding				
Debt	1389.46	70.00	1389.46	70.00
Equity	595.49	30.00	595.49	30.00
Total	1984.95	100.00	1984.95	100.00

Return on Equity (ROE)

50. Regulation 30 and Regulation 31 of the 2019 Tariff Regulations specify as under:-

“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 runoff 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 runoff river generating station with pondage:

Provided that return on equity in respect of additional capitalization after cut-off date beyond the original scope excluding additional capitalization due to Change in Law, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system;

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.

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.

(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."

51. The Petitioner has submitted that MAT rate is applicable to the Petitioner's company. Accordingly, the 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. The ROE allowed is as under:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity	595.49	595.49	595.49	595.49	595.49
Addition due to Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Closing Equity	595.49	595.49	595.49	595.49	595.49
Average Equity	595.49	595.49	595.49	595.49	595.49
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%	15.50%
MAT rate for the Financial year 2019-20	17.4720%	17.4720%	17.4720%	17.4720%	17.4720%
Rate of Return on Equity (Pre-tax)	18.782%	18.782%	18.782%	18.782%	18.782%
Return on Equity (Pre-tax)	111.84	111.84	111.84	111.84	111.84

Interest on Loan (IOL)

52. Regulation 32 of the 2019 Tariff Regulations provides that:

“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.*

(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.”

53. The weighted average rate of IOL 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 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 2019 Tariff Regulations. IOL allowed for the instant asset is as under:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	1389.46	1389.46	1389.46	1389.46	1389.46
Cumulative Repayment upto previous Year	514.74	618.63	722.52	826.40	930.29
Net Loan-Opening	874.72	770.83	666.95	563.06	459.17
Addition due to ACE	0.00	0.00	0.00	0.00	0.00
Repayment during the year	103.89	103.89	103.89	103.89	103.89
Net Loan-Closing	770.83	666.95	563.06	459.17	355.28
Average Loan	822.78	718.89	615.00	511.11	407.23
Weighted Average Rate of Interest on Loan (%)	8.1723%	8.1704%	8.1674%	8.1635%	8.1582%
Interest on Loan	67.24	58.74	50.23	41.72	33.22

Depreciation

54. Regulation 33 of the 2019 Tariff Regulations provide that:-

"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 decapitalized asset during its useful services.”

55. The Gross Block during the tariff period 2019-24 has been depreciated at weighted average rate of depreciation (WAROD) and working of WAROD is given in Annexure-2. The weighted average rate of depreciation (WAROD) has been worked



out after taking into account the depreciation rates of assets as prescribed in the 2019 Tariff Regulations and depreciation allowed during 2019-24 tariff period is as under:-

(₹ in lakh)

Particulars	Asset-I				
	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Gross Block	1984.95	1984.95	1984.95	1984.95	1984.95
Additional Capital expenditure	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	1984.95	1984.95	1984.95	1984.95	1984.95
Average Gross Block	1984.95	1984.95	1984.95	1984.95	1984.95
Weighted Average Rate of Depreciation (WAROD) (%)	5.2338%	5.2338%	5.2338%	5.2338%	5.2338%
Elapsed life at the beginning of the year	5	6	7	8	9
Depreciable value	1786.46	1786.46	1786.46	1786.46	1786.46
Depreciation	103.89	103.89	103.89	103.89	103.89
Remaining Depreciable Value	1271.72	1167.83	1063.94	960.05	856.16

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

56. Regulation 35(3)(a) of the 2019 Tariff Regulations specifies the norms for the O&M Expenses for the transmission system and it is as follows:-

“(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
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



Particulars	2019- 20	2020-21	2021-22	2022-23	2023- 24
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)	834.00	864.00	894.00	925.00	958.00
Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW)	1,666.00	1,725.00	1,785.00	1,848.00	1,913.00
500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)	2,252.00	2,331.00	2,413.00	2,498.00	2,586.00
±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)	2,468.00	2,555.00	2,645.00	2,738.00	2,834.00
±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500 MW)	1,696.00	1,756.00	1,817.00	1,881.00	1,947.00
±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)	2,563.0	2,653	2,746.00	2,842.00	2,942.00

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.”

57. The Petitioner has claimed O&M Expenses for 2019-24 tariff period as under:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
220kV Bay					
220 kV bays (Nos.)	3.00	3.00	3.00	3.00	3.00
O&M Claimed (A) (₹ in lakh)	67.53	69.90	72.36	74.88	77.52
400kV Bay					
400 kV Bay (No.)	1.00	1.00	1.00	1.00	1.00
O&M Claimed (B) (₹ in lakh)	32.15	33.28	34.45	35.66	36.91
315 MVA 400/220kV ICT					
315 MVA, 400/220 kV Transformer at Vapi (No.)	1.00	1.00	1.00	1.00	1.00
O&M Claimed (C) (₹ in lakh)	112.77	116.87	120.96	125.37	129.47
Communication System					
Cost of Communication System (₹ in lakh)	4.08	4.08	4.08	4.08	4.08
O&M Claimed (D) (₹ in lakh)	0.08	0.08	0.08	0.08	0.08
Total					
O&M Expenses Claimed (₹ in lakh) (A)+(B)+(C)+(D)	212.53	220.13	227.85	235.99	243.98

58. We have considered the submissions of the Petitioner. The O&M expenses has been worked out as per the as per the norms specified in the 2019 Tariff Regulations and allowed as under:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
3 nos. 220kV Bay (A)	67.53	69.90	72.36	74.88	77.52
1 no. 400kV Bay (B)	32.15	33.28	34.45	35.66	36.91



1 no. 315MVA 400/220kV ICT (C)	112.77	116.87	120.96	125.37	129.47
Communication System (D)	0.08	0.08	0.08	0.08	0.08
Total O&M Expenses (A)+(B)+(C)+(D)	212.53	220.13	227.85	235.99	243.98

Interest on Working Capital (IWC)

59. Regulation 34(1)(c), Regulation 34(3), Regulation 34(4) and Regulation 3(7) of the 2019 Tariff Regulations 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 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.”

- iv. **“3.Definitions – In these regulations, unless the context otherwise requires:-**

...

(7) ‘Bank Rate’ means the one year marginal cost of lending rate (MCLR) of the State Bank of India issued from time to time plus 350 basis points;”

60. The Petitioner has submitted that it has computed IWC for 2019-24 tariff period considering the SBI Base Rate plus 350 basis points as on 1.4.2019. The Petitioner has considered the rate of interest on working capital as 12.05%.

61. The IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The Rate of Interest (ROI) on working capital considered is 12.05% (SBI



1 year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20, whereas, ROI for 2020-21 onwards has been considered as 11.25% (SBI 1 year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points). The components of the working capital and interest thereon allowed is as under:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Maintenance Spares	31.88	33.02	34.18	35.40	36.60
O&M expenses	17.71	18.34	18.99	19.67	20.33
Receivables	62.58	62.38	62.31	62.29	62.25
Total	112.18	113.75	115.48	117.36	119.18
Rate of Interest on working capital	12.05%	11.25%	11.25%	11.25%	11.25%
Interest on Working Capital	13.52	12.80	12.99	13.20	13.41

Annual Fixed Charges for the 2019-24 Tariff Period

62. The transmission charges allowed for the instant transmission assets for the 2019-24 tariff period are summarised as under:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	103.89	103.89	103.89	103.89	103.89
Interest on Loan	67.24	58.74	50.23	41.72	33.22
Return on Equity	111.84	111.84	111.84	111.84	111.84
Interest on Working Capital	13.52	12.80	12.99	13.20	13.41
O&M Expenses	212.53	220.13	227.85	235.99	243.98
Total	509.02	507.39	506.80	506.65	506.34

Filing Fee and Publication Expenses

63. The Petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses, in terms of Regulation 70(1) of the 2019 Tariff Regulations. 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.

License fee and RLDC Fees and Charges

64. The Petitioner has requested to allow to bill and recover License fee and RLDC fees and charges, separately from the Respondents. The Petitioner shall be entitled

for reimbursement of licence fee and RLDC fees and charges in accordance with Clause (3) and (4) of Regulation 70 of the 2019 Tariff Regulations.

Security Expenses

65. The Petitioner has submitted that security expenses for the instant 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. The Petitioner has requested to consider the actual security expenses incurred during 2018-19 for claiming estimated security expenses for 2019-20 which shall be subject to true up at the end of the year based on the actuals. The Petitioner has submitted that similar petition for security expenses for 2020-21, 2021-22, 2022-23 and 2023-24 will be filed on a yearly basis on the basis of the actual expenses of previous year subject to true up at the end of the year on actual expenses. The Petitioner has submitted that the difference, if any, between the estimated security expenses and actual security expenses as the audited accounts may be allowed to be recovered from the beneficiaries on a yearly basis.

66. We have considered the submissions of the Petitioner. We are of the view that Petitioner should claim security expenses for all the transmission assets in one petition. It is observed that the Petitioner has already filed the Petition No. 260/MP/2020 claiming consolidated security expenses on projected basis for the 2019-24 tariff period on the basis of actual security expenses incurred in 2018-19. Therefore, security expenses will be dealt with Petition No. 260/MP/2020 in accordance with the appropriate provisions of the 2019 Tariff Regulations.

Goods and Services Tax

67. The Petitioner has sought to recover GST on transmission charges separately from the Respondents, if at any time GST on transmission is withdrawn from negative list in future. Further additional taxes, if any, are to be paid by the Petitioner on

account of demand from Govt. / Statutory authorities, the same may be allowed to be recovered from the beneficiaries.

68. We have considered the submission of the Petitioner. GST is not levied on transmission service at present and we are of the view that Petitioner's prayer is premature.

Capital Spares

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

Sharing of Transmission Charges

70. The billing, collection and disbursement of the transmission charges approved in this order shall be governed by the provisions of Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010, as amended from time to time as provided in Regulation 43 of 2014 Tariff Regulations for the 2014-19 tariff period and Regulation 57 of the 2019 Tariff Regulations for the 2019-24 tariff period.

71. To summarise, the trued-up Annual Fixed Charges allowed for the instant asset after true-up for the 2014-19 tariff period are as under:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Annual Fixed Charges	505.26	531.10	533.65	530.27	528.67

72. The Annual Fixed Charges allowed for the 2019-24 tariff period in this order are as under:

(₹ in lakh)



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Annual Fixed Charges	509.02	507.39	506.80	506.65	506.34

73. This order disposes of Petition No. 496/TT/2019.

Sd/-
(Arun Goyal)
Member

Sd/-
(I. S. Jha)
Member



Annexure-1

	Capital cost as on 01.04.2014	Additional capitalisation						Admitted Cost as 31.3.2019	Rate of Depreciation as per Regulation	Depreciation as per Regulation				
		2014-15	2015-16	2016-17	2017-18	2018-19	Total			2014-15	2015-16	2016-17	2017-18	2018-19
Building & Other Civil Works	47.50	2.01	0.00	0.00	0.00	0.00	2.01	49.51	3.34%	1.62	1.65	1.65	1.65	1.65
Sub-Station Equipments	1613.69	257.17	60.48	0.00	0.00	0.00	317.65	1931.34	5.28%	91.99	100.38	101.97	101.97	101.97
PLCC	3.94	0.17	0.00	0.00	0.00	0.00	0.17	4.11	6.33%	0.25	0.26	0.26	0.26	0.26
Total	1665.12	259.35	60.48	0.00	0.00	0.00	319.83	1984.95		93.87	102.29	103.89	103.89	103.89
Average Gross Block (₹ in lakh)										1794.80	1954.71	1984.95	1984.95	1984.95
Weighted Average Rate of Depreciation										5.2299%	5.2331%	5.2338%	5.2338%	5.2338%

Annexure-2

(Rs. in Lacs)

Particulars	Admissible Capital Cost as on 1.04.2019	Projected Additional capitalisation						Estimated Completion Cost as 31.03.2024	Rate of Depreciation as per Regulation	Depreciation as per Regulation				
		2019-20	2020-21	2021-22	2022-23	2023-24	Total			2019-20	2020-21	2021-22	2022-23	2023-24
Building & Other Civil Works	49.51	0.00	0.00	0.00	0.00	0.00	0.00	49.51	3.34%	1.65	1.65	1.65	1.65	1.65
Sub-Station Equipments	1,931.34	0.00	0.00	0.00	0.00	0.00	0.00	1,931.34	5.28%	101.97	101.97	101.97	101.97	101.97
PLCC	4.11	0.00	0.00	0.00	0.00	0.00	0.00	4.11	6.33%	0.26	0.26	0.26	0.26	0.26
Total	1,984.95	0.00	0.00	0.00	0.00	0.00	0.00	1,984.95		103.89	103.89	103.89	103.89	103.89
Average Gross Block (₹ in lakh)										1,984.95	1,984.95	1,984.95	1,984.95	1,984.95
Weighted Average Rate of Depreciation										5.2338%	5.2338%	5.2338%	5.2338%	5.2338%