

CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No. 481/TT/2019

Coram:

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

Date of Order : 27.01.2021

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 the 2014-19 period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of the 2019-24 period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 of 400 kV (Quad) D/C line from NCC Generation Switchyard to Nellore Pooling Station and associated bays under "Transmission System for Connectivity for NCC Power Projects Ltd." in Southern Region.

And in the Matter of:

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

....Petitioner

Vs

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



5. Electricity Department,
Government of Pondicherry,
Pondicherry – 605001
6. Eastern Power Distribution Company of Andhra Pradesh Ltd.,
P&T Colony, Seethammadhara,
Vishakhapatnam, Andhra Pradesh
7. Southern Power Distribution Company of Andhra Pradesh Ltd.,
Srinivasasa Kalyana Mandapam Backside,
Tiruchanoor Road, Kesavayana Gunta,
Tirupati-517 501, Chittoor District, Andhra Pradesh
8. Central Power Distribution Company of Andhra Pradesh Ltd.,
Corporate Office, Mint Compound,
Hyderabad – 500 063, Telangana
9. Northern Power Distribution Company of Andhra Pradesh Ltd.,
Opp. NIT Petrol Pump, Chaitanyapuri, Kazipet,
Warangal – 506 004, Telangana
10. Bangalore Electricity Supply Company Ltd.,
Corporate Office, K.R. Circle,
Bangalore – 560 001, Karnataka
11. Gulbarga Electricity Supply Company Ltd.,
Station Main Road, Gulbarga, Karnataka
12. Hubli Electricity Supply Company Ltd.,
Navanagar, PB Road, Hubli, Karnataka
13. MESCOM Corporate Office,
Paradigm Plaza, AB Shetty Circle,
Mangalore – 575 001, Karnataka
14. Chamundeswari Electricity Supply Corporation Ltd.,
927, L J Avenue,
Ground Floor, New Kantharaj Urs Road,
Saraswatipuram, Mysore – 570 009, Karnataka
15. Electricity Department,
Government of Goa,
Vidyuti Bhawan, Panaji, Goa 403001



16. Transmission Corporation of Telangana Ltd.,
Vidhyut Sudha, Khairatabad,
Hyderabad, Telangana-500082
17. Tamil Nadu Transmission Corporation,
NPKRR Maaligai, 800, Anna Salai,
Chennai – 600 002.
18. NCC Power ProjectsLtd.,
6th Floor, NCC House,
Madhapur, Hyderabad, Telangana- 500081
- ...Respondents**

For Petitioner : Shri S.S. Raju, PGCIL
Shri B. Dash, PGCIL

For Respondents : None

ORDER

The instant petition has been filed by Power Grid Corporation of India Limited (hereinafter referred to as “the Petitioner”), a deemed transmission licensee, for truing up of the tariff for the period from COD to 31.3.2019 under Regulation 8 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) and for determination of the tariff for the period from 1.4.2019 to 31.3.2024 under Regulation 8 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) in respect of 400 kV (Quad) D/C line from NCC Generation Switchyard to Nellore Pooling Station and associated bays (hereinafter referred to as “the transmission asset”) under “Transmission System for Connectivity for NCC Power Projects Ltd.” in Southern Region (hereinafter referred to as “the transmission project”).

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 8 and 9 above.
- 2) Approve the Completion cost and additional capitalization incurred during 2014-19, also allow the projected additional capitalization during 2019-24.
- 3) Allow the Petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission as provided in Tariff Regulation 2014 and Tariff regulations 2019 as per para 10.2 and 11.0 above for respective block.
- 4) Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on publishing of notices in newspapers in terms of Regulation 70 (1) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019, and other expenditure (if any) in relation to the filing of petition.
- 5) Allow the Petitioner to bill and recover Licensee fee and RLDC fees and charges, separately from the respondents in terms of Regulation 70 (3) and (4) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019.
- 6) Allow the Petitioner to bill and adjust impact on Interest on Loan due to change in Interest rate on account of floating rate of interest applicable during 2019-24 period, if any, from the respondents.
- 7) Allow the Petitioner to file a separate petition before Hon'ble Commission for claiming the overall security expenses and consequential IOWC on that security expenses as mentioned at para 9.6 above.
- 8) Allow the Petitioner to claim the capital spares at the end of tariff block as per actual.
- 9) Allow the Petitioner to bill and recover GST on Transmission Charges separately from the respondents, if GST on transmission is levied at any rate in future. Further, any taxes including GST and duties including cess etc. imposed by any statutory/Govt./municipal authorities shall be allowed to be recovered from the beneficiaries.

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

Background

3. The brief facts of the case are as under:
 - a) The Investment Approval (IA) for the transmission project was accorded by the Board of Directors of the Petitioner Company vide Memorandum Ref: C/CP/NCC Connectivity dated 8.8.2014 at an estimated cost of ₹18875.00 lakh including IDC of ₹1140 lakh (based on February 2014 price level).



b) The scope of the instant project is as under:

Transmission Line

(i) NCC Generation Switchyard-Nellore Pooling Station 400 kV (Quad) D/C line.

Sub-station

(i) 2 Nos. 400 kV line bays at Nellore Pooling Station for termination of NCC Generation Switchyard – Nellore Pooling Station 400 kV (Quad) D/C line.

c) The transmission project was scheduled to be put into commercial operation within 30 months from the date of IA. Whole scope of the transmission project is covered under the transmission asset. Accordingly, the scheduled COD of the transmission asset was 3.2.2017, against which it was put into commercial operation on 22.3.2016. Hence, there was no time over-run in the case of the transmission asset. The tariff from the date of commercial operation to 31.3.2019 for the transmission asset was allowed vide order dated 23.5.2016 in Petition No. 262/TT/2015 in accordance with the 2014 Tariff Regulations.

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

5. The Petitioner has served the petition on the Respondents and notice has also been published in the newspaper 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 notice published in the newspaper by the Petitioner.

6. This order is issued considering the submissions made by the Petitioner in the petition dated 4.10.2019 and affidavits of the petitioner dated 4.5.2020 and 11.8.2020.

7. The hearing in this matter was held on 22.7.2020 through video conference and the order was reserved. None of the Respondents have filed any reply. Having heard the representatives of the Petitioner and perused the material 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 claimed by the Petitioner in respect of the transmission asset are as under:

(₹ in lakh)

Particulars	2015-16 (Pro-rata for 10 days)	2016-17	2017-18	2018-19
Depreciation	16.19	656.24	707.58	709.76
Interest on Loan	18.45	707.73	686.46	625.73
Return on Equity	18.08	732.23	789.04	793.61
Interest on Working Capital	1.45	57.49	59.80	58.87
O & M Expenses	4.35	167.26	172.83	178.56
Total	58.52	2320.95	2415.71	2366.53

9. The details of the trued up Interest on Working Capital (IWC) claimed by the Petitioner in respect of transmission asset is as under:

(₹ in lakh)

Particulars	2015-16 (Pro-rata for 10 days)	2016-17	2017-18	2018-19
O & M Expenses	13.49	13.94	14.40	14.88
Maintenance Spares	24.27	25.09	25.92	26.78
Receivables	362.85	386.83	402.62	394.42
Total	400.61	425.86	442.94	436.08
Rate of Interest on working capital (%)	13.5	13.5	13.5	13.5
Interest on Working Capital	1.45	57.49	59.80	58.87

Capital Cost

10. The Commission vide order dated 23.5.2016 in Petition No. 262/TT/2015 allowed capital cost as on COD and Additional Capital Expenditure (ACE) in respect of the transmission asset as under:

(₹ in lakh)

AppORTIONED approved	Expenditure up to COD	Additional Capital Expenditure	Total capital cost as on 31.3.2019
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capital cost as per FR		2015-16	2016-17	
18875.00	11277.66	188.92	2322.78	13789.36

11. The details of FR apportioned approved capital cost, capital cost as on COD and ACE up to 31.3.2019 claimed by the Petitioner are as under:

Approved Capital Cost (Apportioned) as per FR	Capital cost as on COD	Additional Capital Expenditure			Total capital cost as on 31.3.2019
		2015-16	2016-17	2017-18	
18875.00	11277.67	188.92	1839.746	82.45	13388.79

(₹ in lakh)

Interest During Construction (IDC)

12. The Petitioner has claimed IDC and has submitted the Auditor's certificate dated 30.7.2019 in support of the same. The Petitioner has submitted the statement showing IDC claim and discharge of IDC liability as on COD.

13. IDC allowed in the order dated 23.5.2016 in Petition No. 262/TT/2015 for the transmission asset was ₹430.51 lakh and the same was subject to review at the time of truing up after considering actual discharge of IDC.

14. The allowable IDC has been worked out considering the information submitted by the Petitioner for the transmission asset on cash basis. The loan details submitted in Form-9C for the 2014-19 period and the IDC computation sheet have been considered for the purpose of IDC calculation on cash and accrued basis. The undischarged IDC as on COD has been considered as ACE during the year in which it has been discharged. The Petitioner has also included certain additional capitalisation loans for calculation of IDC.

15. IDC allowed based on the submissions of the Petitioner and order dated 23.5.2016 in Petition No. 262/TT/2015 is as under:



(₹ in lakh)

IDC approved in previous order (A)	IDC Claimed by Petitioner (B)	IDC Admissible	IDC allowed as on COD on cash basis	Un-discharged IDC as on COD Discharged in year 2016-17
430.51	430.51	424.21	220.38	203.83

Incidental Expenditure During Construction (IEDC)

16. The Petitioner has claimed IEDC of ₹343.98 lakh and submitted Auditor's certificate in support of the same. The Petitioner has also submitted that the entire IEDC has been discharged as on COD in respect of the transmission asset. IEDC claimed by the Petitioner is within the percentage of Hard Cost given in the Abstract Cost Estimate and hence has been allowed. The details of IEDC claimed and allowed are as under:

(₹ in lakh)

IEDC claimed	IEDC disallowed due to time over-run not condoned	IEDC allowed
343.98	0.00	343.98

Initial spares

17. The Initial Spares claimed by the Petitioner are as under:

(₹ in lakh)

Particulars	Plant & machinery cost up to cut-off date (excluding IDC and IEDC as per auditor certificate) (A) (₹ in lakh)	Initial Spares Claimed (B) (₹ in lakh)	Ceiling Limit (%) (C)	Allowable Initial Spares Worked out
				$D = [(A-B)*C / (100-C)]$ (₹ in lakh)
Transmission Line	11059.71	105.75	1.0	110.65
Sub-station	994.60	55.61	6.0	59.94
PLCC	234.56	10.29	3.5	8.13



18. The Petitioner has submitted that the Initial Spares claimed for the transmission line and sub-station portions are within the ceiling limit except for PLCC, where there is excess claim of ₹2.16 lakh which was disallowed in order dated 23.5.2016 in Petition No. 262/TT/2015. Accordingly, the excess claim disallowed earlier has been reduced from the claimed capital cost.

19. We have considered the submissions of the Petitioner. The Initial Spares claimed by the Petitioner is the same that was allowed in order dated 23.5.2016 in Petition No. 262/TT/2015 and no fresh claim is made in the instant petition. Therefore, the Petitioner's claim is allowed for the transmission asset and are as under:

Particulars	Plant & Machinery Cost upto cut-off date (excluding IDC and IEDC) (₹ in lakh)	Initial Spares claimed (₹ in lakh)	Ceiling (%)	Initial Spares as per Ceiling (₹ in lakh)	Initial Spares allowed (₹ in lakh)
Transmission Line	11059.71	105.75	1.0	110.65	105.75
Sub-station	994.60	55.61	6.0	59.94	55.61
PLCC	234.56	10.29	3.5	8.13	8.13

Capital Cost as on COD

20. The capital cost of the transmission asset has been calculated in accordance with Regulations 9(3) of the 2014 Tariff Regulations. The Commission vide order dated 23.5.2016 in Petition No. 262/TT/2015 had approved the tariff of the transmission asset for the 2014-19 period based on the admitted capital cost as on COD and projected ACE during the 2014-19 for the transmission asset as shown under:

(₹ in lakh)				
Capital cost	Less: IDC	Less:	Less:	Capital



claimed as on COD as per Auditor's certificate (A)	disallowed due to computational difference (B)	undischarged IDC as on COD (C)	Excess Spares disallowed (D)	cost considered as on COD
11486.39	6.30	203.83	2.16	11274.11

Additional Capital Expenditure (ACE)

21. The Petitioner has claimed the following ACE and submitted Auditor certificate in support of its claim:

(₹ in lakh)

Additional Capital Expenditure (claimed)					
2015-16		2016-17		2017-18	
IDC Discharged	As per Auditor's Certificate	IDC Discharged	As per Auditor's Certificate	IDC Discharged	As per Auditor's Certificate
-	188.92	206.56	1633.19	-	82.45

22. The Petitioner has submitted that ACE in case of the transmission asset is on account of undischarged liability towards final payment or withheld payment due to contractual exigencies for works executed within the cut-off date. ACE during the years 2015-16, 2016-17, 2017-18 has been claimed under Regulation 14(1)(i) of the 2014 Tariff Regulations.

23. The Petitioner has also submitted that ACE upto 31.3.2019 has been considered in the Auditor's certificate as per actuals. Further, the Petitioner has submitted Form 5 for the transmission asset. The contract-wise details submitted by the Petitioner are as follows:

(₹ in lakh)

Party	Particulars	Outstanding Liability as on COD	Discharge				Total (2014-19)
			2015-16	2016-17	2017-18	2018-19	
Simplex	TL	181.89	16.00	95.27	70.62	0.00	181.89



KND	TL	31.95	4.00	27.95	0.00	0.00	31.95
Shashi Cables	TL	823.28	0.00	812.85	10.43	0.00	823.28
Mc Nally Bharat	SS & Assoc Works	867.44	168.92	697.12	1.40	0.00	867.44
Total		1904.56	188.92	1633.19	82.45	0.00	1904.56

24. The cut-off date for the transmission is 31.3.2019 and thus the ACE claimed is within the cut-off date.

25. The Petitioner has claimed ACE including the accrued IDC discharged during 2015-16 to 2017-18 period. It is observed that the total estimated completion cost including ACE during 2015-16 to 2017-18 period is within the FR apportioned approved cost.

26. ACE claimed by the Petitioner for 2015-16 to 2017-18 period for the transmission asset is within the cut-off date. Therefore, the same has been considered for computation of total capital cost as on 31.3.2019. The undischarged IDC as on COD has been allowed as ACE in the respective year of discharge. Accordingly, ACE allowed for the transmission asset is as follows:

Particulars	(₹ in lakh)		
	2015-16	2016-17	2017-18
ACE to the extent of Balance & Retention Payments and work deferred for execution other than IDC	188.92	1633.19	82.45
IDC Discharged	-	203.83	-
Total	188.92	1837.01	82.45

Capital cost for the tariff period 2014-19



27. Accordingly, the capital cost as on COD, ACE for the 2014-19 period and capital cost as on 31.3.2019 considered for truing up of the tariff for the 2014-19 period is as under:

(₹ in lakh)					
Debt-	Capital Cost as on COD (on cash basis)	2015-16	2016-17	2017-18	Total Capital Cost as on 31.3.2019
	11274.11	188.92	1837.01	82.45	13382.49

Equity Ratio

28. The Petitioner has claimed Debt-Equity ratio as 70:30 as on COD. Debt-Equity ratio of 70:30 is considered as provided in Regulation 19 of the 2014 Tariff Regulations. The details of Debt-Equity ratio in respect of the transmission asset as on COD and as on 31.3.2019 are as under:

Asset-I	As on COD		As on 31.3.2019	
	Amount (₹ in lakh)	(%)	Amount (₹ in lakh)	(%)
Debt	7891.88	70.00	9367.76	70.00
Equity	3382.23	30.00	4014.74	30.00
Total	11274.11	100.00	13382.49	100.00

Depreciation

29. The Petitioner has claimed depreciation considering capital expenditure of ₹11277.67 lakh as on COD for Asset-I and ACE of ₹2111.12 lakh including IDC of ₹206.56 lakh. It is observed that in Petition No. 262/TT/2015 while determining tariff of the transmission asset for 2014-19 tariff period, Petitioner had submitted capital cost of IT equipment in sub-station cost and, therefore, depreciation for IT equipment was allowed @5.28% of corresponding capital cost. The Petitioner now at the time of truing-up of tariff of 2014-19 period has segregated the IT equipment cost from sub-station cost and has considered depreciation rate for IT Equipment @15% and the salvage value for "IT Equipment" as NIL as per the 2014 Tariff Regulations. Similar



issue had come up in Petition No. 19/TT/2020 wherein the Commission vide order dated 9.5.2020 held as under:

“31. We have considered the submissions of the Petitioner. The transmission assets were put into commercial operation during the 2009-14 period and the tariff from the respective CODs to 31.3.2014 was allowed vide orders dated 30.8.2012 and 9.5.2013 in Petition No.343/2010 and Petition No. 147/TT/2011 respectively. Further, the tariff of the 2009-14 period was trued up and tariff for the 2014-19 period was allowed vide order dated 25.2.2016 in Petition No.10/TT/2015. The Petitioner did not claim any capital expenditure towards “IT Equipment” in the above said three petitions where tariff for the transmission assets for the 2009-14 period was allowed, tariff of the 2009-14 period was trued up and tariff for 2014-19 period was allowed even though there was a clear provision in the 2009 Tariff Regulations and 2014 Tariff Regulations providing depreciation @15% for IT Equipment. Having failed to make a claim as per the 2009 Tariff Regulations (the period during which COD of assets was achieved), the Petitioner has now, at the time of truing up of the tariff allowed for the 2014-19 period has apportioned a part of the capital expenditure to “IT Equipment”. The Petitioner has adopted similar methodology not only in this but in some of the other petitions listed along with the instant petition on 26.2.2020. It is observed that the Petitioner has for the first time apportioned a part of the capital expenditure towards IT Equipment and has claimed depreciation under the head “IT Equipment” @15% at the time of truing up of the tariff of 2014-19 period. Regulation 8(1) of the 2014 Tariff Regulations provides for truing up of the capital expenditure including the additional capital expenditure, incurred upto 31.3.2019, admitted by the Commission after prudence check. We are of the view that scope of truing up exercise is restricted to truing up of the capital expenditure already admitted and apportionment or reapportionment of the capital expenditure cannot be allowed at the time of truing up. Therefore, we are not inclined to consider the Petitioner’s prayer for apportionment of capital expenditure towards IT Equipment and allowing depreciation @ 15% from 1.4.2014 onwards. Accordingly, the depreciation @ 5.28% has been considered for IT Equipment as part of the sub-station upto 31.3.2019 while truing up the capital expenditure for the 2014-19 period. During the 2019-24 tariff period, the IT Equipment has been considered separately and depreciation has been allowed @ 15% for the balance depreciable value of IT Equipment in accordance with Regulation 33 read with Sr. No. (p) of the Appendix-I (Depreciation Schedule) of the 2019 Tariff Regulations.”

30. In line with the above order dated 9.5.2020, depreciation has been considered @5.28% for IT Equipment as part of the sub-station upto 31.3.2019 while truing-up the capital expenditure for the 2014-19 period. During the 2019-24 tariff period, the IT Equipment has been considered separately and depreciation has been allowed @15% for the balance depreciable value of IT Equipment in accordance with Regulation 33 read with Sr. No. (p) of the Appendix-I (Depreciation Schedule) of the 2019 Tariff Regulations.



31. The Gross Block during the tariff period 2014-19 has been depreciated at weighted average rate of depreciation (WAROD). WAROD has been worked out after taking into account the depreciation rates of assets as prescribed in the 2014 Tariff Regulations and depreciation worked out is as under:

(₹ in lakh)				
Particulars	2015-16 (Pro-rata for 10 days)	2016-17	2017-18	2018-19
Opening Gross Block	11274.11	11463.03	13300.04	13382.49
Additional Capitalisation	188.92	1837.01	82.45	0.00
Closing Gross Block	11463.03	13300.04	13382.49	13382.49
Average Gross Block	11368.57	12381.54	13341.27	13382.49
Weighted average rate of Depreciation (WAROD) (%)	5.24	5.25	5.26	5.26
Balance useful life of the asset at the beginning of the year	34.00	34.00	33.00	32.00
Aggregated Depreciable Value	10231.71	11143.38	12007.14	12044.24
Combined Depreciation during the year	16.29	650.07	701.29	703.47
Remaining Depreciable Value at the end of the year	10215.42	10477.03	10639.49	9973.12

32. The details of depreciation allowed vide order dated 23.5.2016 in Petition No.262/TT/2015, the trued up depreciation claimed by the Petitioner in the instant petition and trued up depreciation allowed in the instant order are as under:

(₹ in lakh)				
Particulars	2015-16 (Pro-rata for 10 days)	2016-17	2017-18	2018-19
Depreciation allowed vide order dated 23.5.2016 in Petition No.262/TT/2015	16.29	659.57	717.93	717.93
As claimed by the Petitioner in instant petition	16.19	656.24	707.58	709.76
Allowed after truing Up	16.29	650.07	701.29	703.47

Interest on Loan (IoL)



33. IoL has been worked out in accordance with Regulation 26 of the 2014 Tariff Regulations. The Petitioner has prayed that change in interest rates prevailing as on 1.4.2019 for respective loans shall be applicable and that the change in interest rate due to floating rate of interest applicable for the project to be claimed/ adjusted over 5 year period directly from/ with the beneficiaries.

34. We have considered the submissions of the Petitioner. IoL has been worked out based on actual interest rate in accordance with Regulation 26 of the 2014 Tariff Regulations. IoL allowed for the transmission asset is under:

(₹ in lakh)				
Particular	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Gross Normative Loan	7891.88	8024.12	9310.04	9367.76
Cumulative Repayments up to Previous Year	0.00	16.29	666.36	1367.65
Net Loan-Opening	7891.88	8007.83	8643.68	8000.11
Addition due to Additional Capitalization	132.24	1285.92	57.72	0.00
Repayment during the year	16.29	650.07	701.29	703.47
Net Loan-Closing	8007.83	8643.68	8000.11	7296.63
Average Loan	7949.85	8325.76	8321.89	7648.37
Weighted Average Rate of Interest on Loan (%)	8.629	8.498	8.253	8.193
Interest on Loan	18.74	707.54	686.83	626.64

35. The details of IoL allowed vide order dated 23.5.2016 in Petition No.262/TT/2015, the trued up IoL claimed by the Petitioner in the instant petition and trued up IoL allowed in the instant order are as follows:

(₹ in lakh)				
Particulars	2015-16	2016-17	2017-18	2018-19
IoL allowed vide order dated 23.5.2016 in Petition No.481/TT/2019	18.75	733.56	744.29	682.29
As claimed by the Petitioner in instant petition	18.45	707.73	686.46	625.73
Allowed after truing Up	18.45	707.54	686.83	626.64

Return on Equity (RoE)



36. The Petitioner has claimed RoE for the transmission asset in terms of Regulations 24 and 25 of the 2014 Tariff Regulations. The Petitioner has submitted that they are 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 (%)	Grossed up RoE [Base Rate/(1-t)] (%)
2014-15	21.018	19.624
2015-16	21.382	19.715
2016-17	21.338	19.704
2017-18	21.337	19.704
2018-19	21.549	19.757

37. The Commission vide its order dated 23.5.2016 in Petition No. 262/TT/2015 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)	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



”

38. The MAT rates 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 as under:

Year	MAT Rate (%)	Grossed up RoE [Base Rate/(1-t)](%)
2014-15	20.9605	19.610
2015-16	21.3416	19.705
2016-17	21.3416	19.705
2017-18	21.3416	19.705
2018-19	21.5488	19.758

39. Accordingly, RoE worked out for the transmission asset is as follows:

(₹ in lakh)

Particulars	2015-16 (Pro-rata for 10 days)	2016-17	2017-18	2018-19
Opening Equity	3382.23	3438.91	3990.01	4014.74
Addition due to Additional Capitalization	56.68	551.10	24.73	0.00
Closing Equity	3438.91	3990.01	4014.74	4014.74
Average Equity	3410.57	3714.46	4002.37	4014.74
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500
Tax Rate applicable (%)	21.342	21.342	21.342	21.549
Rate of Return on Equity (Pre-tax) (%)	19.705	19.705	19.705	19.758
Return on Equity (Pre-tax)	18.36	731.93	788.67	793.23

40. The details of the RoE allowed vide order dated 23.5.2016 in Petition No.262/TT/2015, the trued up RoE claimed by the Petitioner in the instant petition and trued up RoE allowed in the instant order are under:

(₹ in lakh)

Particulars	2015-16	2016-17	2017-18	2018-19
RoE allowed vide order dated 23.5.2016 in Petition No.262/TT/2015	18.28	742.85	811.17	811.17
As claimed by the Petitioner in instant petition	18.08	732.23	789.04	793.61
Allowed after truing Up	18.08	731.93	788.67	793.23

Operation & Maintenance Expenses (O&M Expenses)



41. The O&M Expenses as claimed by Petitioner and computed as per Regulation 29(4)(a) of the 2014 Tariff Regulations are the same and, therefore, allowed. The details are as under:

(₹ in lakh)

Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Norm (₹ lakh/bay)				
400 kV Bay	62.30	64.37	66.51	68.71
Number of bays				
400 kV Bay	2	2	2	2
Norms (₹ Lakh per km)				
D/C Bundled with 4 or more sub-conductor)	1.10	1.13	1.17	1.21
Line length in km				
D/C Bundled with 4 or more sub-conductor)	34	34	34	34
Total O&M Expenses (Claimed)	4.35	167.26	172.83	178.56
Total O&M Expenses (Approved)	4.35	167.26	172.83	178.56

Interest of Working Capital (“IWC”)

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

(₹ in lakh)

Particulars	2015-16 (Pro-rata for 10 days)	2016-17	2017-18	2018-19
O & M Expenses	13.49	13.94	14.40	14.88
Maintenance Spares	24.28	25.09	25.93	26.78
Receivables	361.67	385.69	401.55	393.44
Total	399.45	424.72	441.87	435.10
Rate of Interest on Working Capital (%)	13.50	13.50	13.50	13.50
Interest on working capital	1.47	57.34	59.65	58.74

43. The details of IWC allowed vide order dated 23.5.2016 in Petition No.262/TT/2015, the trued up IWC claimed by the Petitioner in the instant petition and trued up IWC allowed in the instant order are as under:

(₹ in lakh)

Particulars	2015-16	2016-17	2017-18	2018-19
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IWC allowed vide order dated 23.5.2016 in Petition No.262/TT/2015	1.47	58.41	61.88	60.77
Claimed by the Petitioner in instant petition	1.45	57.49	59.80	58.87
Allowed after truing Up	1.45	57.34	59.65	58.74

Approved Annual Fixed Charges for the 2014-19 Tariff Period

44. The trued up annual fixed charges for the transmission asset for the 2014-19 tariff period are as under:

(₹ in lakh)

Particulars	2015-16 (Pro-rata for 10 days)	2016-17	2017-18	2018-19
Depreciation	16.19	650.07	701.29	703.47
Interest on Loan	18.45	707.54	686.83	626.64
Return on Equity	18.08	731.93	788.67	793.23
Interest on Working Capital	1.45	57.34	59.65	58.74
O&M Expenses	4.35	167.26	172.83	178.56
Total	58.52	2314.14	2409.28	2360.64

45. The annual transmission charges allowed in order dated 23.5.2016 in Petition No. 262/TT/2015, trued up transmission charges claimed in instant petition and transmission charges allowed in the instant order after true up for the 2014-19 tariff period are as under:

(₹ in lakh)

Particulars	2015-16	2016-17	2017-18	2018-19
Allowed earlier in order dated 23.5.2016 in Petition No. 262/TT/2015	59.21	2361.65	2508.10	2450.72
As claimed by the Petitioner in instant petition	58.52	2320.95	2415.71	2366.53
Allowed after truing Up	58.52	2314.14	2409.28	2360.64

Determination of Annual Fixed Charges for 2019-24 Tariff Period

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

(₹ in lakh)

Particulars	2019-20	2020-21	201-22	2022-23	2023-24
Depreciation	709.76	709.76	709.76	706.53	700.56



Interest on Loan	570.45	511.52	453.56	396.01	337.78
Return on Equity	754.40	754.40	754.40	754.40	754.40
Interest on Working Capital	35.57	34.94	34.24	33.50	32.63
Operation and Maintenance	114.08	117.90	121.87	125.99	130.23
Total	2184.26	2128.52	2073.83	2016.43	1955.60

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

(₹ in lakh)					
Particulars	2019-20	2020-21	201-22	2022-23	2023-24
O&M expenses	9.51	9.83	10.16	10.50	10.85
Maintenance Spares	17.11	17.69	18.28	18.90	19.53
Receivables	268.56	262.42	255.68	248.60	240.44
Total	295.18	289.94	284.12	278.00	270.82
Rate of Interest (%)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	35.57	34.94	34.24	33.50	32.63

Weighted Average Life (WAL) of the transmission asset

48. WAL has been determined based on the admitted capital cost of individual elements as on 31.3.2019 and their respective life as specified in the 2019 Tariff Regulations. Accordingly, WAL of all the asset put into commercial operation during 2014-19 period have been worked out as 34 years as under:

Admitted Capital Cost as on 31.03.2019				(₹ in lakh)
Particulars	Capital Cost (₹ in lakh) (a)	Life as per 2019 Regulation (Years) (b)	Weight (c)=(a) x (b) (₹ in lakh)	Weighted Avg. Life of Asset (in years) (d) = (c)/ (a)
Building	291.60	25	7290.03	
Transmission Line	11732.91	35	410651.90	
Sub Station	1055.50	25	26387.40	
PLCC	241.19	15	3617.87	
Leasehold Land	0.00	25	0.00	
IT Equipment and software	61.29	7	408.62	
Total	13382.49		448355.82	33.5 years, rounded to 34



Admitted Capital Cost as on 31.03.2019				
Particulars	Capital Cost (₹ in lakh) (a)	Life as per 2019 Regulation (Years) (b)	Weight (c)=(a) x (b) (₹ in lakh)	Weighted Avg. Life of Asset (in years) (d) = (c)/ (a) years

49. The Weighted Average Life as on 1.4.2019 as determined above is applicable prospectively (i.e. for 2019-24 tariff period onwards) and no retrospective adjustment of depreciation in previous tariff period is required to be done. Accordingly, the WAL has been used to determine the remaining useful life as on 31.3.2019 to be 34 years.

Capital Cost

50. Regulation 19 of the 2019 Tariff Regulations provides as under: -

“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 ash disposal and utilization including handling and transportation facility;*
- (d) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*
- (e) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal up to the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and*
- (f) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.”*

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

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

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

- (a) The 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.”

51. The Petitioner has claimed the following capital cost:

(₹ in lakh)			
FR Apportioned Approved Capital Cost	Capital Cost claimed as on 31.3.2019	ACE claimed in 2019-20	Estimated Completion Capital Cost
18875.00	13388.79	0.00	13388.79

52. Against the overall FR apportioned approved capital cost of ₹18875 lakh, the estimated completion capital cost is ₹13388.79 lakh. Therefore, there is no cost over-run.

53. The capital cost has been dealt with in line with clause (3) of Regulation 19 of the 2019 Tariff Regulations. The element-wise capital cost (i.e. land, building, transmission line, sub-station and PLCC) as admitted by the Commission as on 31.3.2019 for the transmission asset is as follows:

(₹ in lakh)	
Element	
Free hold Land	0.00
Leasehold Land	0.00
Building & Other Civil Works	291.60
Transmission Line	11732.91
Sub-Station Equipment	1055.50
PLCC	241.19
IT Equipment and Software	61.29
Total	13382.49

54. The Petitioner has not claimed any projected ACE for 2019-24 tariff period for the transmission asset.



55. Accordingly, the capital cost considered for the 2019-24 tariff period, subject to truing up is as follows:

(₹ in lakh)		
Capital Cost allowed as on 1.4.2019	ACE allowed for the year 2019-20	Total Estimated Completion Capital Cost up to 31.3.2024
13382.49	0.00	13382.49

Debt-Equity Ratio

56. Regulation 18 of the 2019 Tariff Regulations provides as under:

“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 ACE 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.”

57. The details of the debt-equity considered for the purpose of computation of tariff for 2019-24 tariff period of the transmission asset is as under:

Particulars	Capital Cost as on 1.4.2019 (₹ in lakh)	(%)	Total Capital Cost as on 31.3.2024 (₹ in lakh)	(%)
Debt	9367.76	70.00	9367.76	70.00
Equity	4014.74	30.00	4014.74	30.00
Total	13382.49	100.00	13382.49	100.00

Depreciation

58. Regulation 33 of the 2019 Tariff Regulations provides as under:

"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.”*

59. The IT equipment has been considered as a part of the Gross Block and depreciated using WAROD. WAROD has been worked out after taking into account the depreciation rates of IT and non-IT assets as prescribed in the 2019 Tariff



Regulations. The salvage value of IT equipment has been considered nil i.e. IT asset has been considered as 100 per cent depreciable. The depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and accumulated depreciation up to 31.3.2019. The depreciation allowed for the transmission asset is as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Gross Block	13382.49	13382.49	13382.49	13382.49	13382.49
Addition during 2019-24 due to Projected Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	13382.49	13382.49	13382.49	13382.49	13382.49
Average Gross Block	13382.49	13382.49	13382.49	13382.49	13382.49
Weighted average rate of Depreciation (WAROD)	5.301	5.301	5.301	5.301	5.301
Balance Useful life at the beginning of the year	31	30	29	28	27
Aggregate Depreciable Value	12050.37	12050.37	12050.37	12050.37	12050.37
Combined Depreciation during the year	709.43	709.43	709.43	709.43	709.43
Aggregate Cumulative Depreciation	2780.55	3489.98	4199.41	4908.84	5618.27
Remaining Aggregated Depreciable Value	9269.82	8560.39	7850.97	7141.54	6432.11

Return on Equity (RoE)

60. Regulations 30 and 31 of the 2019 Tariff Regulations provide 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 project including communication project and run-of-river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run-of-river generating station with pondage:

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

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 project 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 project up to load dispatch centre or protection project 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;

iv. 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.”

61. The Petitioner has submitted that MAT rate is applicable to the Petitioner's Company. Accordingly, the MAT rate applicable during the 2019-20 has been considered for the purpose of RoE, for the tariff period 2019-24, which shall be trued up with actual tax rate in accordance with Regulation 31(3) of the 2019 Tariff Regulations. RoE allowed for the transmission asset for the 2019-24 period is as under:-

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity	4014.74	4014.74	4014.74	4014.74	4014.74
Addition due to ACE	0.00	0.00	0.00	0.00	0.00
Closing Equity	4014.74	4014.74	4014.74	4014.74	4014.74
Average Equity	4014.74	4014.74	4014.74	4014.74	4014.74
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50
Tax Rate applicable (%)	17.472	17.472	17.472	17.472	17.472
Rate of Return on Equity (Pre-tax) (%)	18.782	18.782	18.782	18.782	18.782
Return on Equity (Pre-tax)	754.05	754.05	754.05	754.05	754.05

Interest on Loan (IoL)

62. Regulation 32 of the 2019 Tariff Regulations provides as under:

“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 up to 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 project, 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”.

63. The weighted average rate of IoL has been considered on the basis of the 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 or next revision of tariff. In view of above, IoL has been worked out in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL allowed is as follows:

(₹ in lakh)					
Particular	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	9367.76	9367.76	9367.76	9367.76	9367.76
Cumulative Repayments up to Previous Year	2071.12	2780.55	3489.98	4199.41	4908.84
Net Loan-Opening	7296.63	6587.21	5877.78	5168.35	4458.92
Addition due to ACE	0.00	0.00	0.00	0.00	0.00
Repayment during the year	709.43	709.43	709.43	709.43	709.43
Net Loan-Closing	6587.21	5877.78	5168.35	4458.92	3749.49
Average Loan	6941.92	6232.49	5523.06	4813.63	4104.21
Weighted Average Rate of Interest on Loan (%)	8.234	8.227	8.234	8.251	8.246
Interest on Loan	571.63	512.73	454.80	397.15	338.43



Operation & Maintenance Expenses (O&M Expenses)

64. Regulations 35(3) and (4) of the 2019 Tariff Regulations provide as under:

“35(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
<i>Norms for sub-station Bays (₹ Lakh per bay)</i>					
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
<i>Norms for Transformers (₹ Lakh per MVA)</i>					
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
<i>Norms for AC and HVDC lines (₹ Lakh per km)</i>					
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
<i>Norms for HVDC stations</i>					
HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB)	834	864	894	925	958
Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW)	1,666	1,725	1,785	1,848	1,913
500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)	2,252	2,331	2,413	2,498	2,586
±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)	2,468	2,555	2,645	2,738	2,834
±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500 MW)	1,696	1,756	1,817	1,881	1,947
±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)	2,563	2,653	2,746	2,842	2,942



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

Provided further that:

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

65. The total O&M Expenses claimed by the Petitioner are as follows:

(₹ in lakh)



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Sub-station Bays					
400 kV	64.30	66.56	68.90	71.32	73.82
AC & HVDC Lines					
D/C Bundled with 4 or more sub-conductors	44.95	46.51	48.14	49.84	51.58
Communication System					
PLCC	4.83	4.83	4.83	4.83	4.83
Total O&M Expenses	114.07	117.90	121.87	125.99	130.22

66. The Petitioner has claimed O&M Expenses separately for the PLCC under Regulation 35(4) of the 2019 @2% of its original project cost in the instant petition and the Petitioner has made similar claim in other petitions as well. Though PLCC is a communication system, it has been considered as part of the sub-station in the 2014 and 2019 Tariff Regulations and the norms for sub-station has been specified accordingly. Accordingly, the Commission vide order dated 24.1.2021 in Petition No.126/TT/2020 has already concluded that no separate O&M Expenses can be allowed for PLCC under Regulation 35(4) of the 2019 Tariff Regulations even though PLCC is a communication system. Therefore, the Petitioner's claim for separate O&M Expenses for PLCC @2% is not allowed. The relevant portions of the order dated 24.1.2021 in Petition No.126/TT/2020 are extracted hereunder.

"103. Thus, although PLCC equipment is a communication system, it has been considered as a part of sub-station, as it is used both for protection and communication. Therefore, we are of the considered view that rightly, it was not considered for separate O&M Expenses while framing norms of O&M for 2019-24 tariff period. While specifying norms for bays and transformers, O&M Expenses for PLCC have been included within norms for O&M Expenses for sub-station. Norms of O&M Expenses @2% of the capital cost in terms of Regulation 35(4) of the 2019 Tariff Regulations have been specified for communication system such as PMU, RMU, OPGW etc. and not for PLCC equipment."

"105. In our view, granting of O&M Expenses for PLCC equipment @2% of its capital cost under Regulation 35(4) of the 2014 Tariff Regulations under the communication system head would tantamount to granting O&M Expenses twice for PLCC equipment as PLCC equipment has already been considered as part of the sub-station. Therefore, the Petitioner's prayer for grant of O&M Expenses for the



PLCC equipment @2% of its capital cost under Regulation 35(4) of the 2014 Tariff Regulations is rejected.

106. The principle adopted in this petition that PLCC is part of sub-station and accordingly no separate O&M Expenses is admissible for PLCC equipment in the 2019-24 tariff period under Regulation 35(4) of the 2019 Tariff Regulations shall be applicable in case of all petitions where similar claim is made by the Petitioner. As already mentioned, the Commission, however, on the basis of the claim made by the Petitioner has inadvertently allowed O&M Expenses for PLCC equipment @2% of its original project cost, which is applicable for other “communication system”, for 2019-24 period in 31 petitions given in Annexure-3 of this order. Therefore, the decision in this order shall also be applicable to all the petitions given in Annexure-3. Therefore, PGCIL is directed to bring this decision to the notice of all the stakeholders in the 31 petitions given in Annexure-3 and also make revised claim of O&M Expenses for PLCC as part of the sub-station at the time of truing up of the tariff allowed for 2019-24 period in respective petitions.”

67. The O&M Expenses allowed for the transmission asset is as under:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Sub-station Bays					
400 kV	64.30	66.56	68.90	71.32	73.82
AC & HVDC Lines					
D/C Bundled with 4 or more sub-conductors	44.95	46.51	48.14	49.84	51.58
Total O&M Expenses	109.25	113.07	117.04	121.16	125.40

Interest on Working Capital (IWC)

68. Regulation 34(1)(c), Regulation 34(3), Regulation 34(4) and Regulation 3(7) of the 2019 Tariff Regulations provide as under:-

“34. Interest on Working Capital:

(1) The working capital shall cover:

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

(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 project including communication project or element thereof, as the case may be, is declared under commercial operation, whichever is later:

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

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

“3. Definition- In these regulations, unless the context otherwise requires: -

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

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

(₹ in lakh)					
Particulars	2019-20	2020-21	201-22	2022-23	2023-24
O & M Expenses	9.10	9.42	9.75	10.10	10.45
Maintenance Spares	16.39	16.96	17.56	18.17	18.81
Receivables	268.00	261.58	254.84	248.16	240.70
Total	293.49	287.96	282.15	276.44	269.96
Rate of Interest (%)	12.05	11.25	11.25	11.25	11.25
Interest on working capital	35.37	32.40	31.74	31.10	30.37



Annual Fixed Charges for the 2019-24 Tariff Period

70. The transmission charges allowed for the transmission asset for the 2019-24 tariff period is as under:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	709.43	709.43	709.43	709.43	709.43
Interest on Loan	571.63	512.73	454.80	397.15	338.43
Return on Equity	754.05	754.05	754.05	754.05	754.05
Interest on Working Capital	35.37	32.40	31.74	31.10	30.37
Operation and Maintenance	109.25	113.07	117.04	121.16	125.40
Total	2179.72	2121.67	2067.06	2012.89	1957.67

Filing Fee and Publication Expenses

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

Licence Fee and RLDC Fees and Charges

72. 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 Regulations 70(3) of the 2019 Tariff Regulations for the 2019-24 tariff period.

Goods and Services Tax



73. 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. 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.

Security Expenses

74. The Petitioner has submitted that security expenses for the transmission asset are not claimed in the instant petition and it would file a separate petition for claiming the overall security expenses and the consequential IWC. 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 shall 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 per the duly audited accounts may be allowed to be recovered from the beneficiaries on a yearly basis.

75. We have considered the submissions of the Petitioner. We are of the view that the 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 in Petition No. 260/MP/2020 in accordance with the applicable provisions of the 2019 Tariff Regulations.

Capital spares

76. 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

77. The billing, collection and disbursement of the transmission charges approved 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.

78. To summarise, the trued-up Annual Fixed Charges allowed for the transmission asset in the 2014-19 tariff period are as under:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Annual Fixed Charges	0.00	58.52	2314.14	2409.28	2360.64

79. The Annual Fixed Charges allowed for the transmission asset for 2019-24 tariff period are as under:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Annual Fixed Charges	2179.72	2121.67	2067.06	2012.89	1957.67

80. This order disposes of Petition No. 481/TT/2019.



Sd/
(Arun Goyal)
Member

Sd/
(I. S. Jha)
Member



Annexure-I

Asset	2014-19	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (%)	Annual Depreciation as per Regulations				
	Capital Expenditure as on 1.4.2014				2014-15 (₹ in lakh)	2015-16 (₹ in lakh)	2016-17 (₹ in lakh)	2017-18 (₹ in lakh)	2018-19 (₹ in lakh)
Transmission asset	Land	0.00	-	0	0.00	0.00	0.00	0.00	0.00
	Building	272.75	291.60	3.34	0.00	0.26	9.66	9.74	9.74
	Transmission Line	10505.89	11,732.91	5.28	0.00	15.17	585.49	617.36	619.50
	Sub-Station	308.53	1,055.50	5.28	0.00	0.56	40.07	55.69	55.73
	PLCC	126.73	241.19	6.33	0.00	0.22	11.64	15.27	15.27
	Leasehold Land	0.00	-	3.34	0.00	0.00	0.00	0.00	0.00
	IT Equipment and software	60.21	61.29	5.28	0.00	0.09	3.21	3.24	3.24
	TOTAL	11,274.11	13,382.49			0.00	16.29	650.07	701.29
Average Gross Block (₹ in lakh)					0.00	11368.57	12381.54	13341.27	13382.49
Weighted Average Rate of Depreciation (%)					0.00	5.24	5.25	5.26	5.26



Annexure-II

Asset	2019-24	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Admitted Capital Cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation (%)	Annual Depreciation as per Regulations				
	Capital Expenditure as on 1.4.2019				2019-20 (₹ in lakh)	2020-21 (₹ in lakh)	2021-22 (₹ in lakh)	2022-23 (₹ in lakh)	2023-24 (₹ in lakh)
Asset	Land	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00
	Building	291.60	291.60	3.34	9.74	9.74	9.74	9.74	9.74
	Transmission Line	11732.91	11732.91	5.28	619.50	619.50	619.50	619.50	619.50
	Sub-Station	1055.50	1055.50	5.28	55.73	55.73	55.73	55.73	55.73
	PLCC	241.19	241.19	6.33	15.27	15.27	15.27	15.27	15.27
	Leasehold Land	0.00	0.00	3.34	0.00	0.00	0.00	0.00	0.00
	IT Equipment and software	61.29	61.29	15	9.19	9.19	9.19	9.19	9.19
	TOTAL	13382.49	13382.49		709.43	709.43	709.43	709.43	709.43
Average Gross Block (₹ in lakh)					13382.49	13382.49	13382.49	13382.49	13382.49
Weighted Average Rate of Depreciation (%)					5.30	5.30	5.30	5.30	5.30

