

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 421/TT/2019

Coram:

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

Date of Order: 09.02.2021

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 765 kV Single Circuit Kurnool-Raichur Transmission Line along with associated bay extensions at 765/400 kV Kurnool Sub-station and 765/400 kV Raichur Sub-station under "System Strengthening Scheme-XXII" in Southern Region.

And in the matter of:

Power Grid Corporation of India Ltd.,
"Saudamini", Plot No. 2,
Sector 29, Gurgaon-122001

....Petitioner

Vs

1. Karnataka Power Transmission Corporation Ltd.,
Kaveri Bhavan,
Bangalore-560 009.
2. Transmission Corporation of Andhra Pradesh Ltd.,
Vidyut Soudha,
Hyderabad-500 082.
3. Kerala State Electricity Board,
Vaidyuthi Bhavanam, Pattom,
Thiruvananthapuram-695 004.
4. Tamil Nadu Generation and Distribution Corporation Ltd.,
(Formerly Tamilnadu Electricity Board-TNEB)
NPKRR Maaligai, 800, Anna Salai,
Chennai-600 002.



5. Electricity Department,
Government of Pondicherry,
Pondicherry-605 001.
6. Eastern Power Distribution Company of Andhra Pradesh Ltd.,
P&T Colony,
Seethmmadhara, Vishakhapatnam,
Andhra Pradesh.
7. Southern Power Distribution Company of Andhra Pradesh Ltd.,
Srinivasasa Kalyana Mandapam Backside,
Tiruchanoor Road, Kesavayana Gunta,
Tirupati-517 501.
8. Central Power Distribution Company of Andhra Pradesh Ltd.,
Corporate Office, Mint Compound,
Hyderabad-500 063.
9. Northern Power Distribution Company of Andhra Pradesh Ltd.,
Opp. NIT Petrol Pump, Chaitanyapuri, Kazipet,
Warangal-506 004.
10. Bangalore Electricity Supply Company Ltd.,
Corporate Office, K. R. Circle,
Bangalore-560 001.
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.
14. Chamundeswari Electricity Supply Corporation Ltd.,
927, L J Avenue, Ground Floor,
New Kantharaj Urs Road, Saraswatipuram,
Mysore-570 009.



15. Electricity Department,
Government of Goa,
Vidyuti Bhawan, Panaji,
Goa-403 001.
16. Transmission Corporation of Telangana Ltd.,
Vidhyut Sudha, Khairatabad, Hyderabad,
Telangana-500 082.
17. Tamil Nadu Transmission Corporation,
NPKRR Maaligai, 800, Anna Salai,
Chennai-600 002.

...Respondents

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

For Respondents : Shri S. Vallinayagam, Advocate, TANGEDCO
Dr. R. Kathiravan, TANGEDCO
Smt. R. Ramalakshmi, TANGEDCO

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 the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) and determination of tariff for the period from 1.4.2019 to 31.3.2024 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) in respect of the 765 kV Single Circuit Kurnool-Raichur Transmission Line along with associated bay extensions at 765/400 kV Kurnool Sub-station and 765/400 kV Raichur Sub-station (herein after referred to as the “transmission asset”) under “System Strengthening Scheme–XXII” 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 10.2 and 11.0 above.

2) Approve the Completion cost and additional capitalization 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 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 additional RoE of 0.5 % during 2014-19 period as per para 5.5 above.

7) Allow the petitioner to bill and adjust impact on Interest on Loan due to change in Interest rate on account of floating rate of interest applicable during 2019-24 period, if any, from the respondents.

8) Allow the petitioner to file a separate petition before Hon'ble Commission for claiming the overall security expenses and consequential IOWC on that security expenses as mentioned at para 11.6 above.

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

10) Allow the Petitioner to bill and recover GST on Transmission Charges separately from the respondents, if GST on transmission is levied at any rate in future. Further, any taxes including GST and duties including cess etc. imposed by any statutory/Govt./municipal authorities shall be allowed to be recovered from the beneficiaries.

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



Background

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

(a) The Investment Approval (IA) and expenditure sanction for the transmission project was accorded by the Board of Directors of the Petitioner vide Memorandum No. C/CP/SRSS-22 dated 17.2.2014 with an estimated cost of ₹24353 lakh, including IDC of ₹1495 lakh.

(b) The scope of the transmission project is as under:

Transmission Line

(i) Kurnool (New) – Raichur 765 kV Single Circuit Line.

Sub-station

(i) Extension of 765/400 kV Sub-station at Kurnool.

(ii) Extension of 765/400 kV Sub-station at Raichur.

(c) The entire scope of the transmission project is completed and covered under the instant petition.

(d) As per IA dated 17.2.2014, the transmission asset was scheduled to be put into commercial operation within 30 months, i.e., by 16.8.2016 while it was put into commercial operation on 15.12.2015. Thus, there is no time over-run.

(e) The transmission tariff for the transmission asset from its COD, i.e., 15.12.2015 to 31.3.2019 was determined vide order dated 12.5.2016 in Petition No. 264/TT/2015 as per the 2014 Tariff Regulations. The tariff allowed in case of the transmission asset from 15.12.2015 to 31.3.2019 in order dated 12.5.2016 is being trued up in the instant petition.

(f) The transmission tariff was approved by the Commission vide order dated 12.5.2016 in Petition No. 264/TT/2015. The trued up tariff claimed by the Petitioner in respect of the transmission asset for the 2014-19 tariff period are as under:

(₹ in lakh)



Particulars	2015-16 (Pro-rata for 108 days)	2016-17	2017-18	2018-19
Annual Fixed Charges (AFC) approved vide order dated 12.5.2016 in Petition No. 264/TT/2015	1166.62	4134.91	4152.58	4057.05
Claimed by the Petitioner based on true-up in the instant petition	1165.67	4094.66	4108.59	4041.04

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

5. The Petitioner has served the petition on the Respondents and notice of this application has also been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments or suggestions have been received from the general public in response to the aforesaid notices published in the newspapers by the Petitioner. General Notice dated 14.1.2020 directing the beneficiaries/ Respondents to file reply in the matter was also posted on the Commission's website. Tamil Nadu Generation and Distribution Corporation Ltd. (TANGEDCO), i.e. Respondent No. 4, has filed its reply vide affidavit dated 20.12.2019 and has raised issues like Additional Capital Expenditure (ACE) during the 2014-19 period and de-capitalization during the 2019-24 period. The Petitioner vide affidavit dated 6.8.2020 has filed its rejoinder to the reply filed by TANGEDCO.

6. This order is issued considering the submissions made by the Petitioner in the petition dated 4.10.2019, the Petitioner's affidavits dated 4.5.2020 and 28.8.2020, the reply of TANGEDCO vide affidavit dated 20.12.2019 and the Petitioner's rejoinder thereto.



7. The hearing in this matter was held on 10.8.2020 through video conference and the order was reserved.

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

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

9. 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 108 days)	2016-17	2017-18	2018-19
Depreciation	324.37	1160.54	1198.01	1206.34
Interest on Loan	363.85	1235.86	1159.81	1063.00
Return on Equity	374.98	1339.83	1383.12	1396.46
Interest on working capital	28.56	100.26	100.85	99.61
O & M Expenses	73.91	258.17	266.80	275.63
Total	1165.67	4094.66	4108.59	4041.04

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

(₹ in lakh)

Particulars	2015-16 (Pro-rata for 108 days)	2016-17	2017-18	2018-19
O&M expenses	20.83	21.51	22.23	22.97
Maintenance Spares	37.49	38.73	40.02	41.34
Receivables	657.01	682.44	684.76	673.51
Total	715.33	742.68	747.01	737.82
Rate of Interest (%)	13.50	13.50	13.50	13.50
Interest on Working Capital	28.56	100.26	100.85	99.61

Capital Cost

11. The capital cost allowed vide order dated 12.5.2016 in Petition No. 264/TT/2015 was ₹22953.53 lakh for transmission asset as on 31.3.2019.



12. The Petitioner vide Auditor's Certificate dated 30.7.2019 has submitted the capital cost upto COD and ACE upto 31.3.2020 for the transmission asset. The details of FR approved apportioned capital cost, capital cost as on COD, ACE incurred upto 31.3.2019 as claimed by the Petitioner for the transmission asset are as under:

Approved Cost (FR)	Actual Capital Cost as on COD	Additional Capital Expenditure				(₹ in lakh)
		2015-16	2016-17	2017-18	2018-19	Total Capital Cost as on 31.3 2019
24353.00	20704.77	1032.70	783.91	288.36	27.54	22837.28

Cost Over-run

13. The completion cost including ACE in respect of transmission asset is ₹22837.28 lakh and the approved FR cost is ₹24353.00 lakh. Hence, the completion cost in respect of the transmission asset is within the approved FR cost and, therefore, there is no cost over-run.

Interest During Construction (IDC) and Incidental Expenditure During Construction (IEDC)

14. The Petitioner has claimed Interest During Construction (IDC) for the transmission assets and has submitted an Auditor's Certificate in support of the same. The Petitioner vide affidavit dated 4.5.2020 has submitted computation of IDC along with year-wise details of the IDC discharged.

15. The allowable IDC has been worked out considering the information submitted by the Petitioner for the individual assets separately on cash basis. The loan details submitted in Form-9C for the 2014-19 tariff 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.



16. Based on the information furnished by the Petitioner, the IDC considered for the transmission asset is summarized as under:

(₹ in lakh)

IDC as per Auditor's Certificate	IDC Admissible	IDC disallowed	IDC Discharged as on COD	IDC Undischarged as on COD	IDC Discharged in 2015-16	IDC Discharged in 2016-17
A	B	C=B-C	D	E=B-D	F	G
750.22	746.42	3.80	195.54	550.88	208.50	342.38

17. The Petitioner has claimed an IEDC of ₹1546.81 lakh for the transmission asset and has 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. Hence, the IEDC claimed has been allowed.

Initial Spares

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

*“(d) Transmission System
Transmission line: 1.00%
Transmission sub-station (Green Field): 4.00%
Transmission sub-station (Brown Field): 6.00%
Gas Insulated sub-station:5.00%
Communication System: 3.5%”*

19. The Petitioner has claimed the following Initial Spares for the transmission asset and submitted Auditor's certificate in support of same:

Particulars	Estimated Completion Cost (₹ in lakh)	Initial Spares claimed (₹ in lakh)	Ceiling Limit (%)	Initial Spares worked out (₹ in lakh)
	A	B	C	D= [(A-B)*C/(100-C)]
Transmission Line	19239.48	181.99	1.00	192.50
Sub-station	1266.47	66.79	6.00	76.58



20. We have considered the submissions of the Petitioner. The Initial Spares are allowable subject to ceiling specified in Regulation 13(d) of the 2014 Tariff Regulations. The Petitioner's claim of Initial Spares is within the ceiling and is accordingly allowed as under:

Particulars	Plant & Machinery Cost upto cut-off date (excluding IDC and IEDC) (₹ in lakh)	Initial Spares claimed (₹ in lakh)	Ceiling Limit (%)	Initial Spares as per ceiling limit (₹ in lakh)	Initial Spares allowed (₹ in lakh)
	A	B	C	$D = [(A-B) * C / (100-C)]$	E
Transmission Line	19239.48	181.99	1.00	192.50	181.99
Sub-station	1266.47	66.79	6.00	76.58	66.79

Capital Cost as on COD

21. Accordingly, the capital cost allowed for the transmission asset as on COD is summarized as under:

Capital Cost as on COD as per Auditor Certificate	Less: IDC as on COD due to		Capital Cost considered as on COD
	Disallowed IDC	Undischarged	
A	B	C	D=A-B-C
20704.78	3.80	550.88	20150.10

Additional Capital Expenditure (ACE)

22. The Petitioner has claimed the following ACE for the transmission asset covered in the instant petition and submitted the Auditor's Certificates in support of the same:

Period	ACE claimed (₹ in lakh)	Regulation
2015-16	1032.70	14(1)(i) & 14(1)(ii)
2016-17	783.91	
2017-18	288.36	14(2)(iv)
2018-19	27.54	
Total ACE claimed in 2014-19 period	2132.51	



23. The Petitioner has submitted that ACE incurred is on account of undischarged liability towards final payment/ withheld payment due to contractual exigencies for works executed within the cut-off date. ACE for the year 2015-16, 2016-17 and 2017-18 has been claimed under Regulation 14(1)(i) (undischarged liabilities) and Regulation 14(1)(ii) (unexecuted work) of the 2014 Tariff Regulations and is within cut-off date. ACE for the year 2018-19 has been claimed under Regulation 14(2)(iv) of the 2014 Tariff Regulations and is beyond the cut-off date.

24. TANGEDCO in its reply has submitted that the Petitioner has not submitted any details of ACE claimed such as details of assets included in the original scope of work along with estimates of expenditure, liabilities recognized to be payable in future and work deferred for execution. In response, the Petitioner in its rejoinder has submitted that details of assets included in the original scope and estimates have already been submitted in the original Petition No. 264/TT/2015 and the same has been taken into consideration by the Commission vide order dated 12.5.2016. Further, the Petitioner has submitted that the break up of liability recognized to be payable at future date and unexecuted work, has been clearly indicated in Form-7. Further, the Petitioner has submitted that ACE claimed beyond the cut-off date is on account of balance and retention payment, i.e., on account of undischarged liability. However, inadvertently, the same is claimed under Regulation 14(3)(v) instead of 14(2)(iv).

25. The Petitioner vide affidavit dated 28.8.2020 has submitted party-wise details of balance and retention payments as under:

Party Name	Particulars	Outstanding as on COD	Discharge			
			2015-16	2016-17	2017-18	2018-19
Aditya Birla Insulators	Transmission Line	11.68	0.00	11.68	0.00	0.00
KRRTPL	Transmission	529.77	42.10	293.83	193.84	0.00



	Line					
Shilpa Steel & Power	Transmission Line	574.47	267.32	294.47	12.68	0.00
Site Packages	Sub-station	44.59	0.00	17.05	0.00	27.54
Smita Conductor	Transmission Line	23.37	0.00	22.37	0.00	0.00
Techno	Sub-station/Communication system	406.84	252.25	144.50	10.08	0.00

26. We have considered the submissions of the petitioner and TANGEDCO. ACE claimed by the petitioner is on account of undischarged liability towards final payment/ withheld payment and is allowed as per Regulation 14(3)(iv) of the 2014 Tariff Regulations. The capital cost allowed as on 31.3.2019 after including ACE in respect of the transmission asset is as under:

Asset-1	Capital cost as on COD on cash basis	ACE				Total capital cost including ACE as on 31.3.2019
		2015-16	2016-17	2017-18	2018-19	
Allowed earlier in order dated 12.5.2016 in Petition No. 264/TT/2015	20130.77	1553.71	1269.05	0.00	0.00	22953.53
Claimed by the Petitioner in the instant petition	20704.77	1032.70	783.91	288.36	27.54	22837.28
Allowed after true-up in this order	20150.10	1241.20*	1126.29*	288.36	27.54	22833.49

*Includes IDC discharged

Debt-Equity Ratio

27. The Petitioner has claimed debt-equity ratio of 70:30 as on 31.3.2014 and for ACE after 31.3.2014. The debt-equity ratio is considered as provided under Regulation 19 of the 2014 Tariff Regulations. The details of the debt and equity as on the date of commercial operation and upto 31.3.2019 in respect of transmission asset considered for the purpose of tariff of the 2014-19 period is as under:



Particulars	Amount as on COD (₹ in lakh)	(%)	Amount as on 31.3.2019 (₹ in lakh)	(%)
Debt	14105.07	70.00	15983.45	70.00
Equity	6045.03	30.00	6850.04	30.00
Total	20150.10	100.00	22833.49	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 is calculated based on actual interest rate, in accordance with Regulation 26 of the 2014 Tariff Regulations.

29. We have considered the submissions of the Petitioner. The details of trued-up IoL allowed is as follows:

Particular	(₹ in lakh)			
	2015-16 (Pro-rata for 108 days)	2016-17	2017-18	2018-19
Gross Normative Loan	14105.07	14973.91	15762.32	15964.17
Cumulative Repayments upto Previous Year	0.00	323.69	1484.15	2681.96
Net Loan-Opening	14105.07	14650.22	14278.16	13282.21
Addition due to Additional Capitalization	868.84	788.40	201.85	19.28
Repayment during the year	323.69	1160.46	1197.81	1206.15
Net Loan-Closing	14650.22	14278.16	13282.21	12095.34
Average Loan	14377.65	14464.19	13780.19	12688.78
Weighted Average Rate of Interest on Loan (%)	8.56	8.54	8.42	8.38
Interest on Loan	363.10	1235.69	1159.64	1062.87

30. Accordingly, IoL approved vide order dated 12.5.2016 in Petition No. 264/TT/2015, claimed by the Petitioner in the instant petition and trued up in this order is shown in the table as under:

Particulars	(₹ in lakh)			
	2015-16	2016-17	2017-18	2018-19
Allowed earlier in order dated 12.5.2016 in Petition No. 264/TT/2015	362.12	1243.83	1180.52	1078.03
Claimed by the Petitioner in the instant petition	363.85	1235.86	1159.81	1063.00



Allowed after true-up in this order	363.10	1235.69	1159.64	1062.87
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Return on Equity (RoE)

31. The Petitioner has claimed RoE for the transmission assets in terms of Regulations 24 and 25 of the 2014 Tariff Regulations. The Petitioner has submitted that it is liable to pay income tax at MAT rates and has claimed the 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	21.018	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

32. The Petitioner has claimed additional RoE of 0.50% for transmission asset. The Commission vide order dated 12.5.2016 in Petition No. 264/TT/2015 had allowed additional RoE for the transmission asset as it was put into commercial operation within 36 months (the timeline specified in Appendix-I of the 2014 Tariff Regulations) for grant of additional RoE of 0.5%.

33. We have considered the submissions of the Petitioner. The Commission in order dated 27.4.2020 in Petition No. 274/TT/2019 has arrived at the effective tax rate for the Petitioner 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

”

34. The MAT rates as considered in order dated 27.4.2020 in Petition No. 274/TT/2019 are considered for the purpose of grossing up of the 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, which is as follows:

Year	MAT Rate (%)	Grossed up RoE [Base Rate/(1-t)] (%)
2014-15	20.961	19.610
2015-16	21.342	19.705
2016-17	21.342	19.705
2017-18	21.342	19.705
2018-19	21.549	19.758

35. Accordingly, the trued-up RoE allowed for the transmission asset is as follows:

Particulars	(₹ in lakh)			
	2015-16 (Pro-rata for 108 days)	2016-17	2017-18	2018-19
Opening Equity	6045.03	6417.39	6755.28	6841.78
Addition due to Additional Capitalization	372.36	337.89	86.51	8.26
Closing Equity	6417.39	6755.28	6841.78	6850.04
Average Equity	6231.21	6586.33	6798.53	6845.91
Return on Equity (Base Rate) (%)	16.000	16.000	16.000	16.000
Tax Rate applicable (%)	21.342	21.342	21.342	21.549
Rate of Return on Equity (Pre-tax)	20.341	20.341	20.341	20.395



Return on Equity (Pre-tax)	374.01	1339.73	1382.89	1396.22
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36. The details of RoE allowed vide order dated 12.5.2016 in Petition No. 264/TT/2015, claimed by the Petitioner in the instant petition and trued up in the instant order is shown in the table as under:

(₹ in lakh)				
Particulars	2015-16	2016-17	2017-18	2018-19
Allowed earlier in order dated 12.5.2016 in Petition No. 264/TT/2015	375.69	1355.41	1393.94	1393.94
Claimed by the Petitioner in the instant petition	374.98	1339.83	1383.12	1396.46
Allowed after true-up in this order	374.01	1339.73	1382.89	1396.22

Depreciation

37. The Petitioner has claimed depreciation considering capital expenditure of ₹20704.77 lakh as on COD and ACE of ₹2132.51 lakh during 2014-19 tariff period for the transmission asset.

38. We have considered the submission of the Petitioner. The Gross Block during the 2014-19 tariff period has been depreciated at weighted average rate of depreciation (WAROD) and working of WAROD is at Annexure-1. WAROD has been worked out after taking into account the depreciation rates of assets as prescribed in the 2014 Tariff Regulations and trued up depreciation allowed for the 2014-19 tariff period is as under:

(₹ in lakh)				
Particulars	2015-16 (Pro-rata for 108 days)	2016-17	2017-18	2018-19
Opening Gross Block	20150.10	21391.30	22517.59	22805.95
Additional Capitalisation	1241.20	1126.29	288.36	27.54
Closing Gross Block	21391.30	22517.59	22805.95	22833.49
Average Gross Block	20770.70	21954.45	22661.77	22819.72
Weighted average rate of Depreciation (WAROD) (%)	5.28	5.29	5.29	5.29
Balance useful life of the asset at the beginning of the year	35.00	35.00	34.00	33.00



Aggregated Depreciable Value	18693.63	19759.00	20395.60	20537.75
Combined Depreciation during the year	323.69	1160.46	1197.81	1206.15
Remaining Aggregated Depreciable Value	18369.94	18274.85	17713.64	16649.64

39. The details of the depreciation allowed for the transmission asset vide order dated 12.5.2016 in Petition No. 264/TT/2015, claimed by the Petitioner in the instant petition and trued up in the instant order is shown in the table as follows:

(₹ in lakh)				
Particulars	2015-16	2016-17	2017-18	2018-19
Allowed earlier in order dated 12.5.2016 in Petition No. 264/TT/2015	326.27	1176.33	1209.48	1209.48
Claimed by the Petitioner in the instant petition	324.37	1160.54	1198.01	1206.34
Allowed after true-up in this order	323.69	1160.46	1197.81	1206.15

Operation & Maintenance Expenses (O&M Expenses)

40. The details of the O&M Expenses claimed by the Petitioner for the transmission asset and allowed under Regulation 29(4)(a) of the 2014 Tariff Regulations for the purpose of tariff are as under:

(₹ in lakh)				
Particulars	2015-16 (Pro-rata for 108 days)	2016-17	2017-18	2018-19
Sub-station Bays				
765kV Kurnool:Bay-I at Kurnool (new)	1	1	1	1
765kV Raichur:Bay-I at Raichur	1	1	1	1
Norm (₹ lakh/bay)				
765 kV	87.22	90.12	93.11	96.20
Total Sub-station O&M	174.44	180.24	186.22	192.40
AC & HVDC Lines				
765kV Single Circuit Kurnool (new) - Raichur Line (Kms)	120.448	120.448	120.448	120.448
Norm (₹ lakh/km)				
Single Circuit (Bundle Conductor- 4 sub-conductors)	0.627	0.647	0.669	0.691
Total Transmission Line	75.52	77.93	80.58	83.23
Total O&M Expenses	73.76*	258.17	266.80	275.63



* Pro-rata for 108 days

41. The details of the O&M Expenses approved vide order dated 12.5.2016 in Petition No. 264/TT/2015, O&M Expenses claimed by the Petitioner in the instant petition and trued up O&M Expenses allowed in the instant order are as follows:

Particulars	(₹ in lakh)			
	2015-16	2016-17	2017-18	2018-19
Allowed earlier in order dated 12.5.2016 in Petition No. 264/TT/2015	73.96	258.17	266.80	275.63
Claimed by the Petitioner in the instant petition	73.91	258.17	266.80	275.63
Allowed after true-up in this order	73.76	258.17	266.80	275.63

Interest on Working Capital (IWC)

42. The Petitioner is entitled to claim IWC as per Regulation 28(1)(c) of the 2014 Tariff Regulations as under:

i. Maintenance spares:

Maintenance spares have been worked out based on 15% of Operation and Maintenance Expenses.

ii. O & M Expenses:

O&M Expenses have been considered for one month of the allowed O&M Expenses.

iii. Receivables:

The receivables have been worked out on the basis of 2 months of annual transmission charges as worked out above.

iv. Rate of interest on working capital:

Rate of interest on working capital is considered on normative basis in accordance with Clause (3) of Regulation 28 of the 2014 Tariff Regulations.

43. The trued-up IWC allowed for the transmission asset is as under:



(₹ in lakh)

Particulars	2015-16 (Pro-rata for 108 days)	2016-17	2017-18	2018-19
O & M Expenses	20.83	21.51	22.23	22.97
Maintenance Spares	37.49	38.73	40.02	41.34
Receivables	656.91	682.38	684.66	673.41
Total Working Capital	715.24	742.62	746.91	737.72
Rate of interest on working capital(%)	13.50	13.50	13.50	13.50
Interest on working Capital	28.49	100.25	100.83	99.59

44. The details of IWC approved vide order dated 12.5.2016 in Petition No. 264/TT/2015, claimed by the Petitioner in the instant petition and trued up in the instant order is shown in the table below:

(₹ in lakh)

Particulars	2015-16	2016-17	2017-18	2018-19
Allowed earlier in order dated 12.5.2016 in Petition No. 264/TT/2015	28.58	101.17	101.84	99.97
Claimed by the Petitioner in the instant petition	28.56	100.26	100.85	99.61
Allowed after true-up in this order	28.49	100.25	100.83	99.59

Approved Annual Fixed Charges for the 2014-19 Tariff Period

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

(₹ in lakh)

Particulars	2015-16 (Pro-rata for 108 days)	2016-17	2017-18	2018-19
Depreciation	323.69	1160.46	1197.81	1206.15
Interest on Loan	363.10	1235.69	1159.64	1062.87
Return on Equity	374.01	1339.73	1382.89	1396.22
Int. on Working Capital	28.49	100.25	100.83	99.59
Op. and Maintenance	73.76	258.17	266.80	275.63
Total	1163.06	4094.30	4107.97	4040.46

46. Accordingly, the Annual Transmission Charges approved vide order dated 12.5.2016 in Petition No. 264/TT/2015, as claimed by the Petitioner in the instant petition and approved after truing up in the instant order is shown in the table below:



Particulars	(₹ in lakh)			
	2015-16	2016-17	2017-18	2018-19
Allowed earlier in order dated 12.5.2016 in Petition No. 264/TT/2015	1166.62	4134.91	4152.58	4057.05
Claimed by the Petitioner in the instant petition	1165.67	4094.66	4108.59	4041.04
Allowed after true-up in this order	1163.06	4094.30	4107.97	4040.46

DETERMINATION OF ANNUAL FIXED CHARGES FOR THE 2019-24 TARIFF PERIOD

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

Particulars	(₹ in lakh)				
	2019-20	2020-21	201-22	2022-23	2023-24
Depreciation	1207.07	1207.07	1207.07	1207.07	1207.07
Interest on Loan	964.98	863.42	762.22	661.02	559.60
Return on Equity	1286.79	1286.79	1286.79	1286.79	1286.79
Interest on Working Capital	60.07	58.96	57.73	56.50	55.14
Operation and Maintenance	184.78	191.09	197.72	204.49	211.61
Total	3703.69	3607.33	3511.53	3415.87	3320.21

48. The Petitioner has claimed the following Interest on Working Capital for the transmission asset for the 2019-24 tariff period:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
O&M expenses	15.40	15.92	16.48	17.04	17.63
Maintenance Spares	27.72	28.66	29.66	30.67	31.74
Receivables	455.37	444.74	432.93	421.13	408.22
Total	498.49	489.32	479.07	468.84	457.59
Rate of Interest	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	60.07	58.96	57.73	56.50	55.14

Capital Cost

49. 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 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 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."*

50. The Petitioner has claimed capital cost of ₹22837.28 lakh as on 31.3.2019 for the transmission asset. Against the overall approved capital cost (as per FR) of ₹24353 lakh, the estimated completion cost including ACE is ₹22833.49 lakh as on 31.3.2019. Accordingly, the admitted capital cost of ₹22833.49 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)

51. The Petitioner has not claimed any ACE during the 2019-24 period.

52. TANGEDCO vide affidavit dated 20.12.2019 has submitted that the Petitioner has not disclosed whether transmission asset has been de-capitalised or the



transmission asset has been in use during earlier period and requested the Commission to direct the Petitioner to furnish details, if any.

53. In response, the Petitioner vide its rejoinder, has submitted that as on the date of submission of the rejoinder, there was no de-capitalisation and all assets under the instant petition are in use.

Debt-Equity Ratio

54. Regulations 18(3), (4) and (5) of the 2019 Tariff Regulations provide 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 additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this Regulation.”

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

Particulars	Capital Cost as on 1.4.2019 (₹ in lakh)	(%)	Total Capital Cost as on 31.3.2024 (₹ in lakh)	(%)
Debt	15983.45	70.00	15983.45	70.00
Equity	6850.04	30.00	6850.04	30.00
Total	22833.49	100.00	22833.49	100.00

Return on Equity (RoE)

56. 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 system including communication system and run-of-river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run-of-river generating station with pondage:

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

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.

Illustration-

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

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

(ii) In case of a generating company or a transmission licensee paying normal corporate tax including surcharge and cess:

- (a) Estimated Gross Income from generation or transmission business for FY 2019-20 is Rs 1,000 crore;
- (b) Estimated Advance Tax for the year on above is Rs 240 crore;



- (c) Effective Tax Rate for the year 2019-20 = Rs 240 Crore/Rs 1000 Crore = 24%;
- (d) Rate of return on equity = $15.50 / (1 - 0.24) = 20.395\%$.

(3) The generating company or the transmission licensee, as the case may be, shall true up the grossed up rate of return on equity at the end of every financial year based on actual tax paid together with any additional tax demand including interest thereon, duly adjusted for any refund of tax including interest received from the income tax authorities pertaining to the tariff period 2019-24 on actual gross income of any financial year. However, penalty, if any, arising on account of delay in deposit or short deposit of tax amount shall not be claimed by the generating company or the transmission licensee, as the case may be. Any under-recovery or over-recovery of grossed up rate on return on equity after truing up, shall be recovered or refunded to beneficiaries or the long term customers, as the case may be, on year to year basis.”

57. The Petitioner has submitted that MAT rate is applicable to the Petitioner's Company.

58. Accordingly, the MAT rate applicable during the year 2019-20 has been considered for the purpose of RoE, which shall be trued up with actual tax rate in accordance with Clause (3) of Regulation 31 of the 2019 Tariff Regulations. RoE allowed for the Asset for the 2019-24 tariff period is as follows:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity	6850.04	6850.04	6850.04	6850.04	6850.04
Addition due to Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Closing Equity	6850.04	6850.04	6850.04	6850.04	6850.04
Average Equity	6850.04	6850.04	6850.04	6850.04	6850.04
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
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)	1286.58	1286.58	1286.58	1286.58	1286.58

Interest on Loan (IoL)

59. 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 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”.

60. 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 the 2019-24 tariff period will be adjusted. Accordingly, the floating rate of interest, if any, shall be considered at the time of true up. In view of above, IoL has been worked out in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL allowed is follows:

Particular	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	15983.45	15983.45	15983.45	15983.45	15983.45
Cumulative Repayments upto Previous Year	3888.11	5094.98	6301.86	7508.73	8715.60
Net Loan-Opening	12095.34	10888.47	9681.59	8474.72	7267.84



Addition due to Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Repayment during the year	1206.87	1206.87	1206.87	1206.87	1206.87
Net Loan-Closing	10888.47	9681.59	8474.72	7267.84	6060.97
Average Loan	11491.90	10285.03	9078.16	7871.28	6664.41
Weighted Average Rate of Interest on Loan (%)	8.396	8.394	8.395	8.397	8.396
Interest on Loan	964.87	863.32	762.14	660.95	559.54

Depreciation

61. Regulations 33(1), (2) and (5) of the 2019 Tariff Regulations provide 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.”

“(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.”

62. We have considered the submissions of the Petitioner. The IT equipments have been considered as part of the Gross Block and depreciated using weighted average rate of depreciation (WAROD). WAROD has been worked out (refer Annexure-2) 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 equipments 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	22833.49	22833.49	22833.49	22833.49	22833.49
Addition during the year 2019-24 due to projected Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	22833.49	22833.49	22833.49	22833.49	22833.49
Average Gross Block	22833.49	22833.49	22833.49	22833.49	22833.49
Weighted average rate of Depreciation (WAROD) (%)	5.29	5.29	5.29	5.29	5.29
Balance useful life at the beginning	32.00	31.00	30.00	29.00	28.00
Aggregated Depreciable Value	20550.14	20550.14	20550.14	20550.14	20550.14
Remaining Aggregate Depreciable Value at the end of the year	15455.16	14248.29	13041.41	11834.54	10627.66
Combined Depreciation during the year	1206.87	1206.87	1206.87	1206.87	1206.87
Aggregate Cumulative Depreciation	5094.98	6301.86	7508.73	8715.60	9922.48

Operation & Maintenance Expenses (O&M Expenses)

63. Regulation 35(3)(a) of the 2019 Tariff Regulations provides 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
Norms for HVDC stations					
HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB)	834	864	894	925	958
Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW)	1,666	1,725	1,785	1,848	1,913
500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)	2,252	2,331	2,413	2,498	2,586
±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)	2,468	2,555	2,645	2,738	2,834
±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500 MW)	1,696	1,756	1,817	1,881	1,947
±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)	2,563	2,653	2,746	2,842	2,942

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

Provided further that:

- i. the operation and maintenance expenses for new HVDC bi-pole schemes commissioned after 1.4.2019 for a particular year shall be allowed pro-rata on the basis of normative rate of operation and maintenance expenses of similar HVDC bi-pole scheme for the corresponding year of the tariff period;*
- ii. the O&M expenses norms for HVDC bi-pole line shall be considered as Double Circuit quad AC line;*
- iii. the O&M expenses of ±500 kV Mundra-Mohindergarh HVDC bipole scheme (2000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ±500 kV Talchar-Kolar HVDC bi-pole scheme (2000 MW);*
- iv. the O&M expenses of ±800 kV Champa-Kurukshetra HVDC bi-pole scheme (3000 MW) shall be on the basis of the normative O&M expenses for ±800 kV, Bishwanath-Agra HVDC bi-pole scheme;*
- v. the O&M expenses of ±800 kV, Alipurduar-Agra HVDC bi-pole scheme (3000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ±800 kV, Bishwanath-Agra HVDC bi-pole scheme; and*
- vi. the O&M expenses of Static Synchronous Compensator and Static Var Compensator shall be worked at 1.5% of original project cost as on commercial operation which shall be escalated at the rate of 3.51% to work out*



the O&M expenses during the tariff period. The O&M expenses of Static Synchronous Compensator and Static Var Compensator, if required, may be reviewed after three years.

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

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

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

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

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

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Sub-station Bays					
765kV Kurnool:Bay-I at Kurnool (new)	1	1	1	1	1
765kV Raichur:Bay-I at Raichur	1	1	1	1	1
Norm (₹ lakh/bay)					
765kV	45.01	46.60	48.23	49.93	51.68
Total Sub-station O&M Expenses	90.02	93.20	96.46	99.86	103.36
AC & HVDC Lines					
765kV Single Circuit Kurnool (new) - Raichur Line	120.448	120.448	120.448	120.448	120.448
Norm (₹ lakh/KM)					
Single Circuit (Bundle Conductor- 4 sub-c)	0.755	0.781	0.809	0.837	0.867
Total Transmission Line	90.94	94.07	97.44	100.81	104.43
Communication System					
PLCC (₹ in lakh)	191.02	191.02	191.02	191.02	191.02
Norms (%)	2.00	2.00	2.00	2.00	2.00
Total Communication System	3.82	3.82	3.82	3.82	3.82
Total O&M Expenses	184.78	191.09	197.72	204.50	211.61

65. The Petitioner has claimed O&M Expenses separately for the PLCC under Regulation 35(4) of the 2019 Tariff Regulations @2% of its original project cost in the instant petition. 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 Tariff Regulations and the 2019 Tariff Regulations and the O&M expense 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.”



Therefore, the Petitioner's claim for separate O&M Expenses for PLCC @2% is not allowed.

66. The O&M Expenses allowed for the transmission asset as per Regulation 35(3) of the 2019 Tariff Regulations are as under:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Sub-station Bays					
765kV Kurnool:Bay-I at Kurnool (new)	1	1	1	1	1
765kV Raichur:Bay-I at Raichur	1	1	1	1	1
Norm (₹ lakh/bay)					
765kV	45.01	46.60	48.23	49.93	51.68
Total Sub-station O&M	90.02	93.20	96.46	99.86	103.36
AC & HVDC Lines					
765kV Single Circuit Kurnool (new) - Raichur Line	120.448	120.448	120.448	120.448	120.448
Norm (₹ lakh/KM)					
Single Circuit (Bundle Conductor- 4 sub-c)	0.755	0.781	0.809	0.837	0.867
Total Transmission Line	90.94	94.07	97.44	100.81	104.43
Total O&M Expenses	180.96	187.27	193.90	200.67	207.79

Interest on Working Capital (IWC)

67. Regulations 34(1)(c), (3) and (4) and 3(7) of the 2019 Tariff Regulations provide as follows:

“34. *Interest on Working Capital: (1) The working capital shall cover:*

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

(i) Receivables equivalent to 45 days of annual fixed cost;

(ii) Maintenance spares @ 15% of operation and maintenance expenses including security expenses; and

(iii) Operation and maintenance expenses, including security expenses for one month.”

(3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2019 or as on 1st April of the year during the tariff period 2019-24 in which the generating station or a unit thereof or the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later:



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

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

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

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

68. The Petitioner has submitted that it has claimed IWC for the 2019-24 period considering the SBI Base Rate plus 350 basis points as on 1.4.2019. The Petitioner has considered the rate of IWC as 12.05%.The IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The rate of IWC considered is 12.05% (SBI 1 year 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 is as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O & M Expenses	15.08	15.61	16.16	16.72	17.32
Maintenance Spares	27.14	28.09	29.09	30.10	31.17
Receivables	454.82	443.70	431.90	420.12	407.22
Total	497.04	487.39	477.14	466.94	455.70
Rate of Interest (%)	12.05	11.25	11.25	11.25	11.25
Interest of working capital	59.89	54.83	53.68	52.53	51.27

Annual Fixed Charges for the 2019-24 Tariff Period

69. The transmission charges allowed for the transmission asset for the 2019-24 tariff period are summarised as under:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	1206.87	1206.87	1206.87	1206.87	1206.87
Interest on Loan	964.87	863.32	762.14	660.95	559.54
Return on Equity	1286.58	1286.58	1286.58	1286.58	1286.58
Interest on Working Capital	59.89	54.83	53.68	52.53	51.27



Operation and Maintenance	180.96	187.27	193.90	200.67	207.79
Total	3699.17	3598.87	3503.17	3407.61	3312.05

Filing Fee and Publication Expenses

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

71. The Petitioner has claimed RLDC fees and charges and the licence fee. 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.

Security Expenses

72. 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 will be filed on 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.

73. 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.

Goods and Services Tax

74. The Petitioner has submitted that, if GST is levied at any point of time in future on charges on transmission of electricity, the same shall be borne and additionally paid by the Respondent(s) and the same shall be charged and billed separately by the Petitioner. Further, additional taxes, if any, are to be paid by the Petitioner on account of demand from Govt./ Statutory authorities, the same may be allowed to be recovered from the beneficiaries.

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

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 the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010 or the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020, as applicable, as provided in Regulation 43 of the 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 for the 2014-19 tariff period are as under:

Particulars	(₹ in lakh)			
	2015-16 (Pro-rata for 108 days)	2016-17	2017-18	2018-19
AFC	1163.06	4094.30	4107.97	4040.46

79. The Annual Fixed Charges allowed for the Asset for the 2019-24 tariff period in this order are as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
AFC	3699.17	3598.87	3503.17	3407.61	3312.05

80. This order disposes of Petition No. 421/TT/2019.

**Sd/
(Arun Goyal)
Member**

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

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



Annexure – 1

2014-19 Capital Expenditure as on COD	Admitted Capital Cost as on COD (₹ in lakh)	ACE (₹ in lakh)				Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depre- ciatio n (%)	Annual Depreciation as per Regulations			
		2015-16	2016-17	2017-18	2018-19			2015-16 (₹ in lakh)	2016-17 (₹ in lakh)	2017-18 (₹ in lakh)	2018-19 (₹ in lakh)
Building	37.11	0.38	0.64	0.00	0.00	38.13	3.34	1.25	1.26	1.27	1.27
Transmission Line	19466.71	758.48	953.16	206.51	0.00	21,384.86	5.28	1047.99	1093.19	1123.80	1129.25
Sub Station	644.04	292.50	170.94	81.85	27.54	1,216.87	5.28	41.73	53.97	60.64	63.53
PLCC	0.00	189.47	1.55	0.00	0.00	191.02	6.33	6.00	12.04	12.09	12.09
TOTAL	20,147.86	1,240.83	1,126.29	288.36	27.54	22,830.88		1096.96	1160.46	1197.81	1206.15
Average Gross Block (₹ in lakh)								20770.70	21954.45	22661.77	22819.72
Weighted Average Rate of Depreciation (%)								5.28	5.29	5.29	5.29



Annexure – 2

2019-24 Capital Expenditure as on 1.4.2019	Combined admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (%)	Annual Depreciation as per Regulations				
				2019-20 (₹ in lakh)	2020-21 (₹ in lakh)	2021-22 (₹ in lakh)	2022-23 (₹ in lakh)	2023-24 (₹ in lakh)
Building	38.13	38.13	3.34	1.27	1.27	1.27	1.27	1.27
Transmission Line	21384.86	21384.86	5.28	1129.25	1129.25	1129.25	1129.25	1129.25
Sub Station	1216.87	1216.87	5.28	64.26	64.26	64.26	64.26	64.26
PLCC	191.02	191.02	6.33	12.09	12.09	12.09	12.09	12.09
TOTAL	22830.88	22830.88		1206.87	1206.87	1206.87	1206.87	1206.87
		Average Gross Block (₹ in lakh)		22833.49	22833.49	22833.49	22833.49	22833.49
		Weighted Average Rate of Depreciation (%)		5.29	5.29	5.29	5.29	5.29

