

CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No. 509/TT/2019

Coram:

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

Date of Order: 13.05.2021

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 2014-19 period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of 2019-24 period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for **Asset-I:** 2 Nos. of 400 kV GIS line bays at Nizamabad (PG) for termination of Nizamabad-Yeddumailaram (Shankarpalli) 400 kV D/C line and **Asset-II:** 2 Nos. of 400 kV GIS line bays at Maheswaram (PG) for termination of Maheswaram (PG)-Mehboob Nagar 400 kV D/C Transmission Line under the "Provision of line bays for the Scheme-Connectivity lines for Maheshwaram (Hyderabad) 765/400 kV Pooling Station" in the Southern Region.

And in the matter of:

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

.....Petitioner

Vs

1. Karnataka Power Transmission Corporation Ltd.,
Kaveri Bhavan, Bangalore-560009.
2. Transmission Corporation of Andhra Pradesh Ltd.,
Vidyut Soudha, Hyderabad-500082.
3. Kerala State Electricity Board,
Vaidyuthi Bhavanam,
Pattom, Thiruvananthapuram-695004.



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.,
APEPDCL, 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-517501,
Chittoor District, Andhra Pradesh.
8. Central Power Distribution Company of Andhra Pradesh Ltd.,
Corporate Office, Mint Compound,
Hyderabad-500063, Telangana.
9. Northern Power Distribution Company of Andhra Pradesh Ltd.,
Opp. NIT Petrol Pump, Chaitanyapuri, Kazipet,
Warangal-506004, Telangana.
10. Bangalore Electricity Supply Company Ltd.,
Corporate Office, K.R.Circle,
Bangalore-560001, 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-575001, Karnataka.
14. Chamundeswari Electricity Supply Corporation Ltd.,
927, L J Avenue,
Ground Floor, New Kantharaj Urs Road,
Saraswatipuram, Mysore-570009, Karnataka.
15. Electricity Department,
Government of Goa,
Vidyuti Bhawan, Panaji, Goa-403001.



16. Transmission Corporation of Telangana Ltd.,
Vidhyut Sudha, Khairatabad,
Hyderabad-500082.
17. Tamil Nadu Transmission Corporation,
NPKRR Maaligai, 800, Anna Salai,
Chennai-600002.
18. Maheshwaram Transmission Ltd.,
F-1, Mira Corporate Suits,
1 & 2, Mathura Road, Ishwar Nagar,
New Delhi-110065.

...Respondent(s)

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

For Respondents: Shri B. Vinodh Kanna, Advocate, TANGEDCO
Ms. R. Ramalakshmi, TANGEDCO
Dr. R. Kathiravan, TANGEDCO

ORDER

The instant petition has been filed by Power Grid Corporation of India Limited, a deemed transmission licensee, for truing up of tariff from the date of commercial operation to 31.3.2019 under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “ the 2014 Tariff Regulations”) and for determination of tariff of the period from 1.4.2019 to 31.3.2024 under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) for **Asset-I:** 2 Number of 400 kV GIS line bays at Nizamabad (PG) for termination of Nizamabad-Yeddumailaram (Shankarpalli) 400 kV D/C line; and **Asset-II:** 2 Number of 400 kV GIS line bays at Maheshwaram (PG) for termination of Maheshwaram (PG)– Mehboob Nagar 400 kV D/C Transmission line (hereinafter referred to as



“transmission assets/Combined Asset”) under “Provision of line bays for the Scheme-Connectivity lines for Maheshwaram (Hyderabad) 765/400 kV Pooling Station” scheme in the Southern Region (hereinafter referred to as “the transmission project”).

2. The Petitioner has made the following prayers:

“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, 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 beneficiaries in terms of Regulation 70 (3) and (4) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019.

6) Allow the claimed the initial spares as a project as whole.

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 beneficiaries, if GST on transmission is levied at any rate in future. Further, any taxes including GST and duties including cess etc. imposed



by any statutory/Govt./municipal authorities shall be allowed to be recovered from the beneficiaries.

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

Background

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

a) The Investment Approval (IA) for implementation of the transmission project was accorded by the Board of Directors of the Petitioner's Company vide Memorandum Ref: C/CP/PA1617-08-0MIA011 dated 31.8.2016 at an estimated cost of ₹8669 lakh including an IDC of ₹496 lakh (based on April, 2016 price level). The Empowered Committee on Transmission in the 32nd meeting held on 17.1.2014, recommended for implementation of transmission lines of the subject scheme through Tariff Based Competitive Bidding (TBCB) route. The line bays at Maheswaram 765/400 kV Pooling Station and Nizamabad 765/400 kV Pooling Station for the transmission project was decided to be implemented by the Petitioner. The scope of work covered under the project is broadly as follows:

Sub-stations:

i. **Extension of Maheswaram (PG) Pooling Station**

2 Number of 400 kV GIS line bays at Maheswaram (PG) for termination of Maheswaram (PG)-Mehboob Nagar 400 kV D/C line.

ii. **Extension of Nizamabad Sub-station**

2 Number of 400 kV GIS line bays at Nizamabad (PG) for termination of Nizamabad-Yeddumailaram (Shankarpalli) 400 kV D/C line.

b) The dates of commercial operation and time over-run of the transmission assets covered in the instant petition are as under:



Assets	Scheduled date of commercial operation (SCOD)	Date of commercial operation (COD)	Time over-run
Asset-I	20.1.2018	21.10.2017	Nil
Asset-II	20.1.2018	16.12.2017	Nil

c) Transmission tariff was allowed for the transmission assets from COD to 31.3.2019 period vide order dated 9.7.2018 in Petition No. 156/TT/2017.

d) The Petitioner has submitted Auditor's Certificates dated 30.7.2019 for the transmission assets along with the IDC discharge statement.

4. The Petitioner vide affidavit dated 16.11.2020 has submitted that all the transmission assets under the transmission project have been put under commercial operation and covered in the instant petition.

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

6. The Petitioner has served the petition on the Respondents and notice of this petition has been published in the newspaper in accordance with Section 64 of the Electricity Act, 2003. No comments/objections have been received from the general public in response to the aforesaid notice published in the newspaper by the Petitioner. Tamil Nadu Generation and Distribution Corporation Ltd. (TANGEDCO), Respondent No. 4, has filed its reply vide affidavit dated 4.3.2021, in which issues of applicability and recovery of GST and sharing of transmission charges have been raised. The Petitioner vide affidavit dated 15.3.2021 has filed rejoinder to the reply of



TANGEDCO. The issues raised by TANGEDCO and clarifications given by the Petitioner have been dealt in the relevant paragraphs of this order.

7. This order is issued considering the submissions made by the Petitioner vide affidavits dated 7.10.2019 and 16.11.2020 and reply of TANGEDCO and rejoinder thereto by the Petitioner.

8. The hearing in this matter was held on 3.3.2021 through video conference and order was reserved.

9. Having heard the representatives of the Petitioner, learned counsel for TANGEDCO and after perusal of the material on record, we proceed to dispose of the petition.

TRUING UP OF ANNUAL FIXED CHARGES OF 2014-19 PERIOD

10. The Petitioner has claimed the following trued up tariff for the transmission assets for the period from date of commercial operation to 31.3.2019:

(₹ in lakh)

Particulars	Asset-I	
	2017-18 (pro-rata 162 days)	2018-19
Depreciation	60.47	148.79
Interest on Loan	55.13	127.96
Return on Equity	65.53	160.39
Interest on Working Capital	6.50	15.42
O&M Expenses	50.73	117.46
Total	238.36	570.02

(₹ in lakh)

Particulars	Asset-II	
	2017-18 (pro-rata 106 days)	2018-19
Depreciation	27.99	120.44
Interest on Loan	26.66	109.74



Return on Equity	30.45	130.70
Interest on Working Capital	3.54	13.79
O&M Expenses	33.31	117.46
Total	121.95	492.13

11. The Petitioner has claimed the following trued up Interest on Working Capital (IWC) for the transmission assets for the period from date of commercial operation to 31.3.2019:

(₹ in lakh)

Particulars	Asset-I	
	2017-18 (pro-rata 162 days)	2018-19
O&M Expenses	9.47	9.79
Maintenance Spares	17.05	17.62
Receivables	89.02	95.00
Total Working Capital	115.54	122.41
Rate of Interest (%)	12.60	12.60
Interest on Working Capital	6.50	15.42

(₹ in lakh)

Particulars	Asset-II	
	2017-18 (pro-rata 106 days)	2018-19
O&M Expenses	9.47	9.79
Maintenance Spares	17.05	17.62
Receivables	69.37	82.02
Total Working Capital	95.89	109.43
Rate of Interest (%)	12.60	12.60
Interest on Working Capital	3.54	13.79

Capital Cost

12. The capital cost of the transmission assets has been calculated in accordance with Regulation 9(3) of the 2014 Tariff Regulations. The Commission vide order dated 9.7.2018 in Petition No. 156/TT/2017 approved the transmission tariff for the transmission assets from their respective CODs to 31.3.2019 based on the admitted



capital cost as on COD and projected Additional Capital Expenditure (ACE) of the transmission assets which are as follows:

(₹ in lakh)

Assets	Capital Cost admitted as on COD	ACE for 2017-18	ACE for 2018-19	Capital Cost admitted as on 31.3.2019
Asset-I	2386.62	405.45	156.93	2949.00
Asset-II	1477.87	538.37	322.52	2338.76
Total	3864.49	943.82	479.45	5287.76

13. The details of FR apportioned approved capital cost, actual expenditure upto COD and actual ACE after COD as per the Auditor's Certificate and claimed by the Petitioner are as follows:

(₹ in lakh)

Assets	FR apportioned approved cost	Capital Cost as on COD	ACE		Capital Cost as on 31.3.2019
			2017-18	2018-19	
Asset-I	5471.61	2470.51	125.20	234.44	2830.15
Asset-II	3197.40	1493.97	558.04	320.52	2372.53

14. The total capital cost claimed as on 31.3.2019 including the ACE is within the FR apportioned approved capital cost.

Time over-run

15. The project was scheduled to be put into commercial operation on 20.1.2018 i.e. within 18 months from the date of approval of Board of Director i.e. 20.7.2016. Asset-I and Asset-II were put into commercial operation on 21.10.2017 and 16.12.2017 respectively. Thus, there is no time over-run in respect of the transmission assets.



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

16. The transmission assets were scheduled to be put into commercial operation on 20.12.2018. However, the transmission assets achieved commercial operation before the scheduled date. The Petitioner has claimed IDC for the transmission assets and has submitted the statement showing IDC claim, discharge of IDC liability as on date of commercial operation and thereafter as follows:

(₹ in lakh)

Assets	IDC as per Auditor Certificate	IDC discharged up to COD	IDC discharged		Total
			2017-18	2018-19	
Asset-I	83.89	0.00	69.92	13.97	83.89
Asset-II	39.21	23.11	1.62	14.48	39.21
Total	123.10	23.11	71.54	28.45	123.10

17. The Petitioner has submitted IDC computation statement which contains name of the loan, drawl date, loan amount, interest rate and interest claimed. The IDC is worked out based on the details given in the IDC statement. Further, the loan amount as on the date of commercial operation has been mentioned in Forms 6 and 9C. On scrutiny of the documents, certain discrepancies have been noticed such as mismatch in loan amount of IDC statement and in Forms 6 and 9C. The allowable IDC is worked out based on the information available on record and relying on loan amount as per Form 9C. The IDC claimed and considered as on the date of commercial operation and summary of discharge of IDC liability up to the date of commercial operation and thereafter for the purpose of tariff determination is as follows:



(₹ in lakh)

Assets	IDC as per Auditor Certificate (A)	IDC disallowed due to computational difference (B)	IDC allowed in the instant order (C=A-B)	IDC discharged up to COD	IDC discharged in 2017-18	IDC discharged in 2018-19
Asset-I	83.89	1.45	82.44	0.00	69.92	12.51
Asset-II	39.21	0.00	39.21	23.11	1.62	14.48

18. The details of the IEDC claimed by the Petitioner for the transmission assets as given in the following table. The Petitioner has claimed IEDC of the transmission assets as per the Auditor Certificate. The Petitioner has submitted that entire IEDC mentioned in the Auditor's Certificate is on cash basis and was paid upto the date of commercial operation. Accordingly, IEDC allowed in respect of the transmission assets is as follows:

(₹ in lakh)

Assets	IEDC claimed as per Auditor certificate	IEDC allowed as on COD
Asset-I	50.98	50.98
Asset-II	49.23	49.23
Total	100.21	100.21

Initial Spares

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

*“(d) Transmission System
Transmission line: 1.00%
Transmission sub-station (Green Field): 4.00%
Transmission sub-station (Brown Field): 6.00%
GIS Sub-station: 5.00%”*

20. The Initial Spares claimed by the Petitioner are as follows:



Assets	Particulars	Plant & Machinery Cost (A) (₹ in lakh)	Initial Spares Claimed (B) (₹ in lakh)	Ceiling Limit (%) (C)	Initial Spares Worked out (₹ in lakh)
					$D = [(A-B)*C / (100-C)]$
Asset-I	Sub-station (GIS)	2705.30	70.41	5.00	138.68
Asset-II	Sub-station (GIS)	2335.90	139.24	5.00	115.61
Total	Sub-station	5041.20	209.65		254.29

21. The Petitioner has prayed to allow Initial Spares for the project as a whole in light of the judgement of the Appellate Tribunal for Electricity (APTEL) dated 14.9.2019 in Appeal No. 74 of 2017. Based on the above judgment of APTEL, the Petitioner has prayed to allow the excess Initial Spares for Asset-II as the total claimed Initial Spares is less than the Initial Spares worked out in accordance with Regulation 13(d) of the 2014 Tariff Regulations.

22. The petitioner vide affidavit dated 16.11.2020 has submitted the following details of year-wise discharge of Initial Spares:

Assets	Type	Initial Spares allowed	Statement of discharge of Initial Spares			Total
			(₹ in lakh)			
			Up to COD	2017-18	2018-19	
Asset-I	Sub-station	70.41	0.00	62.80	7.60	70.41
Asset-II	Sub-station	139.24	0.00	51.74	87.50	139.24
Total		209.65	0.00	114.54	95.10	209.65

23. APTEL in its judgement dated 14.9.2019 in Appeal No. 74 of 2017 observed that the Commission for the purpose of prudence check may restrict the Initial Spares to the cost of the individual asset and later at the time of truing up allow Initial Spares as per the ceiling on the overall project cost. The relevant portion of the said judgement is as follows:



“18.13. We do not agree with this methodology of restricting initial spares asset / element wise as adopted by the Central Commission. The Central Commission to have a prudence check on the initial spares, being restricted based on the individual asset wise cost initially, but subsequently ought to have allowed as per the ceiling limits on the overall project cost basis during the true- up.”

24. We have considered the submissions made by the Petitioner. As per APTEL's judgement dated 14.9.2019 in Appeal No. 74 of 2017, Initial Spares are to be allowed as per the ceiling on the overall project cost. The transmission assets were put into commercial operation during the 2014-19 tariff period. Therefore, the 2014 Tariff Regulations are applicable in the instant case. Regulation 3(43) of the 2014 Tariff Regulations defines “project cost” as follows:

“(43) ‘original project cost’ means the capital expenditure incurred by the generating company or the transmission licensee, as the case may be, within the original scope of the project up to the cut-off date as admitted by the Commission;”

25. Though the transmission assets were put into commercial operation during the 2014-19 tariff period, the completion cost including ACE would be arrived at only in 2019-24 tariff period. Accordingly, the trued-up overall project cost would be available while claiming the tariff for the 2019-24 tariff period. Therefore, the Initial Spares are now being allowed on the basis of the cost of the individual assets in the 2014-19 tariff period. Thereafter, in the 2019-24 tariff period, the Initial Spares are allowed on the basis of the overall project cost when the transmission assets are combined and the overall project cost is arrived at.

26. The Initial Spares allowed for the transmission assets are as follows:



Assets	Particulars	Plant & Machinery Cost (A) (₹ in lakh)	Initial Spares Claimed (B) (₹ in lakh)	Ceiling Limit (%) (C)	Initial Spares Worked out (₹ in lakh)	Initial spares allowed (₹ in lakh)	Excess Initial Spares Disallowed in the year 2018-19 (₹ in lakh)
					D = [(A-B)*C / (100-C)]		
Asset-I	Sub-station (GIS)	2705.30	70.41	5.00	138.68	70.41	0.00
Asset-II	Sub-station (GIS)	2335.90	139.24	5.00	115.61	115.61	23.63

Capital cost allowed as on COD

27. Accordingly, the capital cost allowed as on COD is summarized as follows:

(₹ in lakh)				
Assets	Capital Cost claimed as on COD as per Auditor's Certificate	Un-discharged IDC	IDC disallowed due to computational difference	Capital Cost as on COD
1	2	3	4	5 = (2-3-4)
Asset-I	2470.51	82.44	1.45	2386.62
Asset-II	1493.97	16.10	0.00	1477.87

Additional Capital Expenditure (ACE)

28. The Commission vide order dated 9.7.2018 in Petition No. 156/TT/2017 allowed ACE of ₹1423.27 lakh for transmission assets during the 2014-19 period towards balance and retention payments and the same is summarized as follows:

(₹ in lakh)			
Particulars	ACE		Total ACE
	2017-18	2018-19	
Asset-I	405.45	156.93	562.38
Asset-II	538.37	322.52	860.89

29. The Petitioner has claimed the following ACE in the petition based on actual expenditure after necessary adjustments pertaining to un-discharged IDC and un-discharged Initial Spares:



(₹ in lakh)

Particulars	ACE		Total ACE
	2017-18	2018-19	
Asset-I	195.12	248.41	443.53
Asset-II	559.66	335.00	894.66
Total	754.78	583.41	1338.19

30. The Petitioner has claimed the ACE on account of balance and retention payments and payment towards unexecuted work in accordance with Regulation 14(1)(i) and (ii) of the 2014 Tariff Regulations.

31. The ACE claimed by the Petitioner for Asset-II is more than the ACE approved vide order dated 9.7.2018 in Petition No. 156/TT/2017. In this connection, the Petitioner vide affidavit dated 16.11.2020 has submitted that contracts were not closed and liabilities were not finalized at the time of projecting the ACE. ACE approved by the Commission vide order dated 9.7.2018 in Petition No. 156/TT/2017 was based on projections. However, in the instant true up petition, ACE is claimed on the basis of actual payments made to the contractor after receipt of final invoices and incorporating the amendments. The Petitioner has further submitted that actual ACE incurred by the Petitioner after closing of contract may happen to be higher or lower than the projected ACE prepared.

32. We have considered the submissions made by the Petitioner. ACE claimed by the Petitioner has been allowed under Regulation 14(1)(i) and (ii) of the 2014 Tariff Regulations as it is towards balance and retention payments. Further, the Commission disallowed the IDC due to computational error for Asset-I and excess Initial Spares for Asset-II from ACE in 2018-19. The details of ACE allowed during the 2014-19 tariff period for the transmission assets are as follows:



(₹ in lakh)

Assets	Particulars	ACE		Total ACE
		2017-18	2018-19	
Asset-I	ACE	125.20	234.44	442.08
	IDC Discharged	69.92	12.51	
	Total	195.12	246.96	
Asset-II	ACE	558.04	320.52	871.03
	IDC Discharged	1.62	14.48	
	<i>Less: Excess Initial Spares</i>	0.00	23.63	
	Total	559.66	311.37	

33. Accordingly, the capital cost allowed as on 31.3.2019 for the transmission assets is considered as follows:

(₹ in lakh)

Assets	Admitted Capital Cost as on 1.4.2014	Admitted ACE	Capital Cost as on 31.3.2019
		2014-19	
Asset-I	2386.62	442.08	2828.70
Asset-II	1477.87	871.03	2348.90

Debt-Equity ratio

34. The Petitioner has claimed debt-equity ratio of 70:30 as on the date of commercial operation. 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 assets as on the date of commercial operation and as on 31.3.2019 are as follows:

Asset-I	Capital Cost as on COD		Capital Cost as on 31.3.2019		
	Particulars	Amount (₹ in lakh)	% age	Amount (₹ in lakh)	% age
	Debt	1670.63	70.00	1980.09	70.00
	Equity	715.99	30.00	848.61	30.00
	Total	2386.62	100.00	2828.70	100.00



Asset-II	Capital Cost as on COD		Capital Cost as on 31.3.2019	
	Particulars	Amount (₹ in lakh)	% age	Amount (₹ in lakh)
Debt	1034.51	70.00	1644.23	70.00
Equity	443.36	30.00	704.67	30.00
Total	1477.87	100.00	2348.90	100.00

Depreciation

35. The Petitioner has claimed the capital cost of the IT equipment in Petition No. 156/TT/2017 as part of the capital cost of the sub-station. The Petitioner now at the time of truing-up for the 2014-19 period has segregated the IT equipment cost from sub-station cost. The Petitioner did not claim any capital expenditure towards "IT Equipment" in the above said petition where tariff for the transmission assets for the 2014-19 period was allowed even though there was a clear provision in the 2014 Tariff Regulations. Similar issue had come up in Petition No. 19/TT/2020 wherein the Commission vide order dated 9.5.2020 decided as follows:

"31. We have considered the submissions of the Petitioner. The instant 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 instant 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 up to 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 up to 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."

36. In accordance with above order dated 9.5.2020 in Petition No. 19/TT/2020, the depreciation is 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 (Depreciation Schedule) of the 2019 Tariff Regulations.

37. Accordingly, the Gross Block during the tariff period 2014-19 has been depreciated at weighted average of depreciation (WAROD). The WAROD has been worked out (as placed in Annexure-I) after taking into account the depreciation rates of transmission assets as prescribed in the 2014 Tariff Regulations and depreciation allowed during 2014-19 is as follows:

(₹ in lakh)

Particulars	Asset-I		Asset-II	
	2017-18 (Pro-rata 162 days)	2018-19	2017-18 (Pro-rata 106 days)	2018-19
Opening Gross Block	2386.62	2581.74	1477.87	2037.53
Additional Capitalisation	195.12	246.95	559.66	311.37
Closing Gross Block	2581.74	2828.70	2037.53	2348.90
Average Gross Block	2484.18	2705.22	1757.70	2193.22
Weighted Average Rate of Depreciation (%)	5.29	5.30	5.30	5.30
Balance useful life of the asset (Year)	25	25	25	25
Lapsed life (Year) at beginning of year	0	0	0	0



Aggregated Depreciable Value	2235.76	2434.70	1581.93	1973.90
Combined Depreciation during the year	58.35	143.43	27.05	116.29
Aggregate Cumulative Depreciation	58.35	201.77	27.05	143.34
Remaining Aggregate Depreciable Value	2177.42	2232.92	1554.88	1830.55

38. Accordingly, the depreciation approved vide order dated 9.7.2018 in Petition No. 156/TT/2017, depreciation claimed in the instant petition for the 2014-19 period and depreciation allowed after true up of the 2014-19 period for the transmission assets are as follows:

(₹ in lakh)

Particulars	Asset-I		Asset-II	
	2017-18 (pro-rata 162 days)	2018-19	2017-18 (pro-rata 106 days)	2018-19
Approved vide order dated 9.7.2018 in Petition No. 156/TT/2017	60.74	151.80	26.88	115.43
Claimed by the Petitioner in the instant petition	60.47	148.79	27.99	120.44
Allowed after true-up in this order	58.35	143.43	27.05	116.29

Interest on Loan (“IoL”)

39. The Petitioner has claimed the weighted average rate of IoL, based on its actual loan portfolio and rate of interest. IoL has been calculated based on actual interest rate, in accordance with Regulation 26 of the 2014 Tariff Regulations. IoL allowed in respect of the transmission assets is as follows:

(₹ in lakh)

Particulars	Asset-I		Asset-II	
	2017-18 (Pro-rata 162 days)	2018-19	2017-18 (Pro-rata 106 days)	2018-19
Interest on Loan				
Gross Normative Loan	1670.63	1807.22	1034.51	1426.27
Cumulative Repayments up to Previous Year	0.00	58.35	0.00	27.05
Net Loan-Opening	1670.63	1748.87	1034.51	1399.22
Additions due to ACE	136.59	172.87	391.76	217.96
Repayment during the year	58.35	143.43	27.05	116.29
Net Loan-Closing	1748.87	1778.31	1399.22	1500.89



Average Loan	1709.75	1763.59	1216.86	1450.05
Weighted Average Rate of Interest on Loan (%)	7.2304	7.2733	7.4793	7.5407
Interest on Loan	54.87	128.27	26.43	109.34

40. Accordingly, IoL approved vide order dated 9.7.2018 in Petition No. 156/TT/2017, IoL claimed in the instant petition for the 2014-19 period and IoL allowed after true up for the 2014-19 period for the transmission assets are as follows:

(₹ in lakh)

Particulars	Asset-I		Asset-II	
	2017-18 (pro-rata 162 days)	2018-19	2017-18 (pro-rata 106 days)	2018-19
Approved vide order dated 9.7.2018 in Petition No. 156/TT/2017	57.20	135.44	26.55	108.67
Claimed by the Petitioner in the instant petition	55.13	127.96	26.66	109.74
Allowed after true-up in this order	54.87	128.27	26.43	109.34

Return on Equity (“RoE”)

41. 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 they are liable to pay income tax at MAT rates and has claimed following effective tax rates for the 2014-19 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

42. The Commission vide order dated 27.4.2020 in Petition No.274/TT/2019 arrived at the effective tax rate for the Petitioner based on the notified MAT rates and the



same is given in the table below. The relevant portion of the order dated 27.4.2020 is as follows:

“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

”

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

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



44. Trued-up RoE approved on the basis of the MAT rates applicable for the respective years is as follows:

(₹ in lakh)

Particulars	Asset-I		Asset-II	
	2017-18 (Pro-rata 162 days)	2018-19	2017-18 (Pro-rata 106 days)	2018-19
Opening Equity	715.99	774.52	443.36	611.26
Additions due to ACE	58.54	74.09	167.90	93.41
Closing Equity	774.52	848.61	611.26	704.67
Average Equity	745.25	811.57	527.31	657.97
Return on Equity (Base Rate) (%)	15.500	15.500	15.50	15.50
MAT Rate for respective year (%)	21.342	21.549	21.342	21.549
Rate of Return on Equity (%)	19.705	19.758	19.705	19.758
Return on Equity	65.18	160.35	30.18	130.00

45. Accordingly, RoE approved vide order dated 9.7.2018 in Petition No. 156/TT/2017, RoE claimed in the instant petition for the 2014-19 period and allowed after true up of the 2014-19 period for the transmission assets are as follows:

(₹ in lakh)

Particulars	Asset-I		Asset-II	
	2017-18 (pro-rata 162 days)	2018-19	2017-18 (pro-rata 106 days)	2018-19
Approved vide order dated 9.7.2018 in Petition No. 156/TT/2017	67.61	168.88	29.85	128.11
Claimed by the Petitioner in the instant petition	65.53	160.39	30.45	130.70
Allowed after true-up in this order	65.18	160.35	30.18	130.00

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

46. The O&M Expenses claimed by the Petitioner for the transmission assets for 2014-19 period are as follows:

O&M Expenses Particulars	Asset-I	
	2017-18 (Pro-rata 162 days)	2018-19
2 Number 400 kV Nizamabad (PG): Yeddumailaram GIS Sub-station Bays		
400 kV GIS bays	2	2
Total O&M Expenses (₹ in lakh)	50.73	117.46

O&M Expenses	Asset-II	
Particulars	2017-18 (Pro-rata 106 days)	2018-19
2 Number 400 kV Maheshwaram (PG): Mehboobnagar GIS Sub-station Bays		
400 kV GIS bays	2	2
Total O&M Expenses (₹ in lakh)	33.31	117.46

47. Regulation 29(3) of the 2014 Tariff Regulations specifies the norms for O&M Expenses for the transmission system. Norms specified in respect of the elements covered in the transmission assets for the 2014-19 period are as follows:

Particulars	Unit of measure	2017-18	2018-19
Bays			
400 kV GIS bays	(₹ lakh per bay)	56.84	58.73

48. We have considered the submission of the Petitioner. The O&M Expenses are allowed for the transmission assets as per the norms specified in the 2014 Tariff Regulations and are as follows:

O&M Expenses	Asset-I	
Particulars	2017-18 (Pro-rata 162 days)	2018-19
Number of Bays		
2 Number 400 kV Nizamabad (PG): Yeddumailaram GIS Sub-station Bays		
400 kV GIS Bays	2	2
Total O&M Expenses (₹ in lakh)	50.46	117.46

O&M Expenses	Asset-II	
Particulars	2017-18 (Pro-rata 106 days)	2018-19
Number of Bays		
2 Number 400 kV Maheshwaram (PG): Mehboobnagar GIS Sub-station Bays		
400 kV GIS Bays	2	2
Total O&M Expenses (₹ in lakh)	33.01	117.46

49. Accordingly, the O&M Expenses approved vide order dated 9.7.2018 in Petition No. 156/TT/2017, O&M claimed in the instant petition for the 2014-19 period and allowed after true up of the 2014-19 period for the transmission assets are as follows:



(₹ in lakh)

Particulars	Asset-I		Asset-II	
	2017-18 (pro-rata 162 days)	2018-19	2017-18 (pro-rata 106 days)	2018-19
Approved vide order dated 9.7.2018 in Petition No. 156/TT/2017	50.45	117.46	33.01	117.46
Claimed by the Petitioner in the instant petition	50.73	117.46	33.31	117.46
Allowed after true-up in this order	50.46	117.46	33.01	117.46

Interest on Working Capital (IWC)

50. The Petitioner is entitled to claim IWC as per Regulation 28(1)(c) of the 2014 Tariff Regulations. The components of the working capital and the Petitioner's entitlement to interest thereon are worked out on the basis of the following:

(i) Maintenance Spares:

Maintenance spares have been worked out based on 15% of Operation and Maintenance Expenses specified in Regulation 28.

(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.

51. IWC for the 2014-19 period has been worked out as per the methodology provided in Regulation 28 of the 2014 Tariff Regulations and allowed as follows:



(₹ in lakh)

Particulars	Asset-I		Asset-II	
	2017-18 (pro-rata 162 days)	2018-19	2017-18 (pro-rata 106 days)	2018-19
Interest on Working Capital				
O&M Expenses (O&M Expenses for 1 month)	9.47	9.79	9.47	9.79
Maintenance Spares (15% of O&M Expenses)	17.05	17.62	17.05	17.62
Receivables (Equivalent to 2 months of annual fixed cost)	88.35	94.14	68.96	81.13
Total Working Capital	114.87	121.54	95.49	108.54
Rate of Interest (%)	12.60	12.60	12.60	12.60
Interest on Working Capital	6.42	15.31	3.49	13.68

52. Accordingly, IWC approved vide order dated 9.7.2018 in Petition No. 156/TT/2017, IWC claimed in the instant petition for the 2014-19 period and allowed after true up of the 2014-19 period for the transmission assets are as follows:

(₹ in lakh)

Particulars	Asset-I		Asset-II	
	2017-18 (pro-rata 162 days)	2018-19	2017-18 (pro-rata 106 days)	2018-19
Approved vide order dated 9.7.2018 in Petition No. 156/TT/2017	6.58	15.83	3.49	13.60
Claimed by the Petitioner in the instant petition	6.50	15.42	3.54	13.79
Allowed after true-up in this order	6.42	15.31	3.49	13.68

Approved Annual Fixed Charges for the 2014-19 Period

53. The trued up annual fixed charges for the transmission assets for the 2014-19 period are as follows:

(₹ in lakh)

Particulars	Asset-I	
	2017-18 (pro-rata 162 days)	2018-19
Annual Transmission Charges		
Depreciation	58.35	143.43
Interest on Loan	54.87	128.27
Return on Equity	65.18	160.35



Interest on Working Capital	6.42	15.31
O & M Expenses	50.46	117.46
Total	235.27	564.82

54. Accordingly, the Annual Transmission Charges allowed for Asset-I vide order dated 9.7.2018 in Petition No. 156/TT/2017, claimed in the instant petition for the 2014-19 period and allowed after true up of the 2014-19 period are as follows:

(₹ in lakh)

Particulars	Asset-I	
	2017-18 (pro-rata 162 days)	2018-19
Approved vide order dated 9.7.2018 in Petition No. 156/TT/2017	242.58	589.41
Claimed by the Petitioner in the instant petition	238.36	570.02
Allowed after true-up in this order	235.27	564.82

(₹ in lakh)

Particulars	Asset-II	
	2017-18 (pro-rata 106 days)	2018-19
Annual Transmission Charges		
Depreciation	27.05	116.29
Interest on Loan	26.43	109.34
Return on Equity	30.18	130.00
Interest on Working Capital	3.49	13.68
O & M Expenses	33.01	117.46
Total	120.17	486.77

55. Accordingly, the Annual Transmission Charges approved for Asset-II vide order dated 9.7.2018 in Petition No. 156/TT/2017, claimed in the instant petition for the 2014-19 period and allowed after true up of the 2014-19 period are as follows:

(₹ in lakh)

Particulars	Asset-II	
	2017-18 (pro-rata 106 days)	2018-19
Approved vide order dated 9.7.2018 in Petition No. 156/TT/2017	119.78	483.27
Claimed by the Petitioner in the instant petition	121.95	492.13
Allowed after true-up in this order	120.17	486.77



DETERMINATION OF ANNUAL FIXED CHARGES FOR 2019-24 TARIFF PERIOD

56. The Petitioner has combined Asset-I and Asset-II into one asset and has claimed consolidated single tariff for the transmission assets as provided under proviso (i) of Regulation 8(1) of the 2019 Tariff Regulations.

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

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	286.27	287.90	287.90	287.90	287.90
Interest on Loan	233.97	213.86	193.33	173.04	150.99
Return on Equity	294.89	296.63	296.63	296.63	296.63
Interest on Working Capital	16.36	16.29	16.12	15.96	15.74
O&M Expenses	94.14	97.30	100.58	103.96	107.46
Total	925.63	911.98	894.56	877.49	858.72

58. The Petitioner has claimed the following IWC for the Combined Asset for 2019-24 tariff period:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
O & M Expenses	7.85	8.11	8.38	8.66	8.96
Maintenance Spares	14.12	14.60	15.09	15.59	16.12
Receivables	113.81	112.44	110.29	108.18	105.58
Total Working Capital	135.78	135.15	133.76	132.43	130.66
Rate of Interest (%)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	16.36	16.29	16.12	15.96	15.74

Effective Date of Commercial Operation (“E-COD”)

59. The Petitioner has claimed that E-COD of the Combined Asset as 16.11.2017. Based on the capital cost and actual COD of the individual assets, the E-COD has been worked out as follows:



Assets	Capital Cost as on 31.3.2019	Actual COD	Number of days from last COD	Weightage of cost (%)	Weighted days	Effective COD (latest COD – total weighted days)
	(₹ in lakh)					
Asset-I	2828.70	21.10.2017	56	54.63	30.595	15.11.2017
Asset-II	2348.90	16.12.2017	0	45.37	0.00	
Total	5177.60				30.595	

60. The E-COD is used to determine the lapsed life of the project as a whole which works out as 1 (one) year as on 1.4.2019 (i.e. the number of completed years as on 1.4.2019 from E-COD).

Weighted Average Life (“WAL”) of the transmission project

61. The life as defined in Regulation 33 of the 2019 Tariff Regulations has been considered for determination of Weighted Average Life (WAL).

62. The Combined Asset may have multiple elements such as land, building, transmission line, sub-station and PLCC and each element may have different span of life. Therefore, the concept of WAL has been used as the useful life of the project as a whole.

63. The 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, the WAL of the transmission assets put into commercial operation during the 2014-19 period has been worked out as 24 years as shown below:

Particulars	Life (in years) (1)	Capital Cost as on 1.4.2019 (₹ in lakh) (2)	Weighted Cost (₹ in lakh) (3)= (1) x (2)	Weighted Average Life of Asset (in years) (4) = (3)/(2)
Building Civil Works	25	0.00	0.00	24.48 years



Transmission Line	35	0.00	0.00	(rounded off to 24 years)
Sub Station	25	4983.42	124585.59	
PLCC	15	103.03	1545.45	
IT Equipment (Incl. Software)	6.67	91.14	607.92	
Total		5177.60	126738.97	

64. The WAL 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. As discussed above, the E-COD of the assets is 15.11.2017 and the lapsed life of the project as a whole works out as 1 year as on 1.4.2019 (i.e. the number of completed years as on 1.4.2019 from E-COD). Accordingly, WAL has been used to determine the remaining useful life as on 31.3.2019 to be 23 years.

Capital Cost

65. Regulation 19 of the 2019 Tariff Regulations provide as follows:

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

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

- (a) *The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;*
- (b) *Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;*
- (c) *Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period;*
- (d) *Interest during construction and incidental expenditure during construction as computed in accordance with these regulations;*
- (e) *Capitalised initial spares subject to the ceiling rates in accordance with these regulations;*
- (f) *Expenditure on account of additional capitalization and de-capitalisation determined in accordance with these regulations;*
- (g) *Adjustment of revenue due to sale of infirm power in excess of fuel cost prior*



to the date of commercial operation as specified under Regulation 7 of these regulations;

- (h) Adjustment of revenue earned by the transmission licensee by using the assets before the date of commercial operation;
- (i) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;
- (j) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of the generating station but does not include the transportation cost and any other appurtenant cost paid to the railway;
- (k) Capital expenditure on account of biomass handling equipment and facilities, for co-firing;
- (l) Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;
- (m) Expenditure on account of fulfilment of any conditions for obtaining environment clearance for the project;
- (n) Expenditure on account of change in law and force majeure events; and
- (o) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.

(3) The Capital cost of an existing project shall include the following:

- (a) Capital cost admitted by the Commission prior to 1.4.2019 duly trued up by excluding liability, if any, as on 1.4.2019;
- (b) Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;
- (c) Capital expenditure on account of renovation and modernisation as admitted by this Commission in accordance with these regulations;
- (d) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;
- (e) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and
- (f) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.

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

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

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



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

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

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

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

66. The Petitioner has claimed the capital cost of ₹2830.15 lakh and ₹2372.53 lakh as on 31.3.2019 for Asset-I and Asset-II respectively as per the Auditor’s Certificates.

67. The capital cost is dealt in line with Regulation 19(3) 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 assets are clubbed together and capital cost has been considered the for the Combined Asset as per the following details:

(₹ in lakh)			
Element	Asset-I	Asset-II	Capital cost for Combined Asset
Sub-station	2717.43	2265.99	4983.43
PLCC	56.41	46.62	103.03
IT Equipment & Software	54.85	36.29	91.14
Total	2828.70	2348.90	5177.60



Initial Spares

68. As discussed earlier in this order, the transmission assets covered in the project are combined and the overall project cost is arrived at in the 2019-24 tariff period and therefore, Initial Spares are allowed during the 2019-24 tariff period on the basis of the overall project cost as per the APTEL's judgement dated 14.9.2019 in Appeal No. 74 of 2017. The capital cost as on cut-off date is considered and is based on the Auditor's Certificates.

69. Accordingly, Initial Spares allowed for the Combined Asset in the 2019-24 tariff period are as follows:

Assets	Particulars	Plant & Machinery cost up to cut-off date (excluding IDC and IEDC) (₹ in lakh)	Initial Spares Claimed (₹ in lakh)	Norms as per 2014 Tariff Regulations (%)	Initial Spares allowable as per 2014 Tariff Regulations and APTEL judgement dated 14.9.2019 (₹ in lakh)	Initial Spares allowed (₹ in lakh)	Initial spares allowed on combined transmission asset (₹ in lakh)
Asset-I	Sub-station (GIS)	2705.30	70.41	5.00	138.68	70.41	23.63
Asset-II	Sub-station (GIS)	2335.90	139.24	5.00	115.61	115.61	
Total		5041.20	209.65		254.29	186.02	

70. Thus, in compliance of APTEL's judgement dated 14.9.2019 in Appeal No. 74 of 2017, additional Initial Spares of ₹23.63 lakh for Combined Asset have been allowed.

71. Capital cost as on 1.4.2019 allowed after adjusting Initial Spares is as follows:



(₹ in lakh)

Asset	Combined Capital Cost as on 31.3.2019	Additional Initial Spares allowed as per APTEL judgement dated 14.9.2019	Combined Capital Cost as on 1.4.2019
Combined Asset	5177.60	23.63	5201.23

72. The trued-up capital cost of ₹5201.23 lakh is considered for the Combined Asset as on 1.4.2019 for working out tariff for 2019-24 tariff period.

Additional Capital Expenditure (ACE)

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

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

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

- (a) *Undischarged liabilities recognized to be payable at a future date;*
- (b) *Works deferred for execution;*
- (c) *Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 23 of these regulations;*
- (d) *Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority or order or decree of any court of law;*
- (e) *Change in law or compliance of any existing law; and*
- (f) *Force Majeure events:*

Provided that in case of any replacement of the assets, the additional capitalization shall be worked out after adjusting the gross fixed assets and cumulative depreciation of the assets replaced on account of de-capitalization.

(2) *The generating company or the transmission licensee, as the case may be shall submit the details of works asset wise/work wise included in the original scope of work along with estimates of expenditure, liabilities recognized to be payable at a future date and the works deferred for execution.*

25. Additional Capitalisation within the original scope and after the cut-off date:

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

- (a) *Liabilities to meet award of arbitration or for compliance of the directions*



- or order of any statutory authority, or order or decree of any court of law;
- (b) Change in law or compliance of any existing law;
 - (c) Deferred works relating to ash pond or ash handling system in the original scope of work;
 - (d) Liability for works executed prior to the cut-off date;
 - (e) Force Majeure events;
 - (f) Liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments; and
 - (g) Raising of ash dyke as a part of ash disposal system.

(2) In case of replacement of assets deployed under the original scope of the existing project after cut-off date, the additional capitalization may be admitted by the Commission, after making necessary adjustments in the gross fixed assets and the cumulative depreciation, subject to prudence check on the following grounds:

- (a) The useful life of the assets is not commensurate with the useful life of the project and such assets have been fully depreciated in accordance with the provisions of these regulations;
- (b) The replacement of the asset or equipment is necessary on account of change in law or Force Majeure conditions;
- (c) The replacement of such asset or equipment is necessary on account of obsolescence of technology; and
- (d) The replacement of such asset or equipment has otherwise been allowed by the Commission”

74. The Petitioner has projected ₹61.83 lakh in 2019-20 as ACE for the transmission assets on account of any un-discharged liability towards final payment/withheld payment due to contractual exigencies for works executed within the cut-off date.

75. The Commission directed the petitioner to submit the package-wise details of ACE claimed in 2019-20. In response, the Petitioner vide affidavit dated 16.11.2020 has submitted the details and the same are as follows:

Asset	FY	Vendor Name	Nature of Work	Amount in lakh
Asset-I	2019-20	L& T	Sub-station	10.02
Asset-II	2019-20	L& T	Sub-station	16.87
Asset-II	2019-20	L& T	Sub-station – Discharge of liabilities	34.15
Asset-II	2019-20	Hyosung	Discharge of liabilities	0.79

76. Further, in response to another query of the Commission whether any further ACE is expected beyond 2023-24 on account of un-discharged liability/balance retention payment beyond claimed amount, the Petitioner has submitted that as on



date no ACE is expected beyond 2023-24 on account of un-discharged liability/balance retention payment beyond the amount claimed in the petition.

77. We have considered the submissions of the Petitioner. ACE claimed by the Petitioner is allowed under Regulation 25(1)(d) of the 2019 Tariff Regulations as it is towards liabilities for works executed prior to the cut-off date. Accordingly, the capital cost approved as on 31.3.2024 for the Combined Asset is as follows:

(₹ in lakh)

Admitted Capital Cost as on 1.4.2019	Admitted ACE	Capital Cost as on 31.3.2024
	2019-20	
5201.23	61.83	5263.06

78. The capital cost as on 31.3.2024 is within the FR apportioned approved cost of ₹8669.01 lakh.

Debt-Equity ratio

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

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

Provided that:

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

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

(2) The generating company or the transmission licensee, as the case may be, shall submit the resolution of the Board of the company or approval of the competent



authority in other cases regarding infusion of funds from internal resources in support of the utilization made or proposed to be made to meet the capital expenditure of the generating station or the transmission system including communication system, as the case may be.

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

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

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

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

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

80. The debt-equity considered for the purpose of computation of tariff for the 2019-24 tariff period for the Combined Asset is as follows:

Particulars	Capital Cost as on 1.4.2019 (₹ in lakh)	%	Capital Cost as on 31.3.2024 (₹ in lakh)	%
Debt	3640.86	70.00	3684.14	70.00
Equity	1560.37	30.00	1578.92	30.00
Total	5201.23	100.00	5263.06	100.00

Depreciation

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

“33. Depreciation: (1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system or element thereof including communication system. In case of the tariff of all the units of a generating station or all elements of a transmission system including communication



system for which a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission system taking into consideration the depreciation of individual units:

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

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

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

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

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

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

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

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

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

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

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

(7) The generating company or the transmission licensee, as the case may be, shall submit the details of proposed capital expenditure five years before the completion of



useful life of the project along with justification and proposed life extension. The Commission based on prudence check of such submissions shall approve the depreciation on capital expenditure.

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

82. The IT equipment have been considered as part of the Gross Block and depreciated using weighted average rate of depreciation (WAROD). The WAROD has been worked out (as placed in Annexure-II) 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 as 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 Combined Asset is as follows:

	(₹ in lakh)				
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Gross Block	5201.23	5263.06	5263.06	5263.06	5263.06
Addition during the year 2019-24 due to projected ACE	61.83	0.00	0.00	0.00	0.00
Closing Gross Block	5263.06	5263.06	5263.06	5263.06	5263.06
Average Gross Block	5232.14	5263.06	5263.06	5263.06	5263.06
Weighted average rate of Depreciation (WAROD) (%)	5.47%	5.47%	5.47%	5.47%	5.47%
Balance useful life at the beginning of the year (Year)	23	22	21	20	19
Elapsed Life (Year) at beginning of year	1	2	3	4	5
Aggregated Depreciable Value	4718.04	4745.87	4745.87	4745.87	4745.87
Combined Depreciation during	286.20	287.83	287.83	287.83	287.83



the year					
Aggregate Cumulative Depreciation	631.32	919.15	1206.98	1494.81	1782.64
Remaining Aggregated Depreciable Value	4086.73	3826.72	3538.89	3251.06	2963.23

Interest on Loan (IoL)

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

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

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

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

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

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

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

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

(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.”*

84. The weighted average rate of IoL has been considered on the basis of rate prevailing as on 1.4.2019. The Petitioner has prayed that the change in interest rate



due to floating rate of interest applicable, if any, during the 2019-24 tariff period may be adjusted. Accordingly, the floating rate of interest, if any, shall be considered at the time of true up. Therefore, IoL has been allowed in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL allowed for the Combined Asset for the 2019-24 period is as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	3640.86	3684.14	3684.14	3684.14	3684.14
Cumulative Repayments up to Previous Year	345.12	631.32	919.15	1206.98	1494.81
Net Loan-Opening	3295.74	3052.82	2764.99	2477.16	2189.33
Additions due to ACE	43.28	0.00	0.00	0.00	0.00
Repayment during the year	286.20	287.83	287.83	287.83	287.83
Net Loan-Closing	3052.82	2764.99	2477.16	2189.33	1901.50
Average Loan	3174.28	2908.91	2621.08	2333.25	2045.42
Weighted Average Rate of Interest on Loan (%)	7.4570	7.4459	7.4810	7.5355	7.5176
Interest on Loan	236.71	216.59	196.08	175.82	153.77

Return on Equity (RoE)

85. Regulations 30 and 31 of the 2019 Tariff Regulations provide as follows:

“30. Return on Equity: (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with Regulation 18 of these regulations.

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

Provided that return on equity in respect of additional capitalization after cut-off date beyond the original scope 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.”

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

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity	1560.37	1578.92	1578.92	1578.92	1578.92
Additions due to ACE	18.55	0.00	0.00	0.00	0.00
Closing Equity	1578.92	1578.92	1578.92	1578.92	1578.92
Average Equity	1569.64	1578.92	1578.92	1578.92	1578.92
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50
MAT Rate for respective year (%)	17.472	17.472	17.472	17.472	17.472
Rate of Return on Equity (%)	18.782	18.782	18.782	18.782	18.782
Return on Equity	294.81	296.55	296.55	296.55	296.55

Operation & Maintenance Expenses (O&M Expenses)

87. The O&M Expenses claimed by the Petitioner for the Combined Asset for 2019-24 period are as follows:



	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses					
2 Number 400 kV Nizamabad (PG): Yeddumailaram GIS Sub-station Bays					
2 Number 400 kV Maheshwaram (PG): Mehboobnagar GIS Sub-station Bays					
400 kV GIS bays (Number)	4	4	4	4	4
PLCC					
Capital Cost (₹ in lakh)	103.03	103.03	103.03	103.03	103.03
2% of Capital Cost (₹ in lakh)	4.12	4.12	4.12	4.12	4.12
Total O&M Expenses claimed (₹ in lakh)	94.14	97.30	100.58	103.96	107.46

88. Regulation 35(3) and Regulation 35(4) of the 2019 Tariff Regulations provides as follows:

“35. Operation and Maintenance Expenses:

...

(3) Transmission system: (a) The following normative operation and maintenance expenses shall be admissible for the transmission system:

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<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-	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.”*

89. 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 norms for sub-station have 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.”

90. Accordingly, the O&M Expenses allowed for Combined Asset as per the norms are as follows:

	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses					
400 kV GIS					
Number of bays	4	4	4	4	4
Total O&M expense (₹ in lakh)	90.02	93.18	96.46	99.85	103.35

Interest on Working Capital (IWC)

91. Regulation 34(1)(c), 34(3) and 34(4) and Regulation 3(7) of the 2019 Tariff Regulations provides as follows:

“34. Interest on Working Capital:



(1)

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

- (i) Receivables equivalent to 45 days of annual fixed cost;
- (ii) Maintenance spares @ 15% of operation and maintenance expenses including security expenses; and
- (iii) Operation and maintenance expenses, including security expenses for one month.

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

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

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

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

(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;”

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

	(₹ in lakh)				
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	7.50	7.77	8.04	8.32	8.61



(O&M Expenses for 1 month)					
Maintenance Spares (15% of O&M Expenses)	13.50	13.98	14.47	14.98	15.50
Receivables (Equivalent to 45 days of annual transmission charges)	113.60	112.10	109.95	107.85	105.25
Total Working Capital	134.61	133.84	132.46	131.15	129.37
Rate of Interest (%)	12.05	11.25	11.25	11.25	11.25
Interest on Working Capital	16.22	15.06	14.90	14.75	14.55

Annual Fixed Charges of the 2019-24 Tariff Period

93. The transmission charges allowed for the Combined Asset for the 2019-24 tariff period are as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	286.20	287.83	287.83	287.83	287.83
Interest on Loan	236.71	216.59	196.08	175.82	153.77
Return on Equity	294.81	296.55	296.55	296.55	296.55
Interest on Working Capital	16.22	15.06	14.90	14.75	14.55
O & M Expenses	90.02	93.18	96.46	99.85	103.35
Total	923.95	909.22	891.83	874.81	856.05

Filing Fee and the Publication Expenses

94. 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

95. The Petitioner has requested to allow it to bill and recover license fee and RLDC fees and charges, separately from the Respondents. The Petitioner shall be



entitled for reimbursement of licence fee in accordance with Regulation 70(3) and 70(4) of the 2019 Tariff Regulations for the 2019-24 tariff period.

Goods and Services Tax

96. The Petitioner has submitted that if GST is levied at any rate and at any point of time in future on Charges of Transmission of Electricity, the same shall be borne and additionally paid by the respondent(s) to the Petitioner and the same shall be charged & billed separately by the Petitioner. Further additional taxes, if any, are to be paid by the Petitioner on account of demand from Government/Statutory authorities, the same may be allowed to be recovered from the beneficiaries.

97. TANGEDCO has submitted that as per the provisions of GST Act, the transmission charges are exempted from the levy of GST and even if GST is levied in future, the same should not be allowed retrospectively. TANGEDCO has further submitted that the Hon'ble High Court of Gujarat in the judgement dated 19.12.2018 in the Special Civil Appeal No. 5343 of 2018 quashed the clarification with regard to levy of GST issued in para 4(1) of the impugned Circular No.34/8/2018-GST dated 1.3.2018 by the Government of India as ultra vires the provisions of the GST Acts as well as the notifications issued thereunder and made the rule absolute. TANGEDCO has submitted that the Commission may direct the Petitioner to restrain from including the paragraph relating to GST in all the Petitions. In response, the Petitioner has submitted that the transmission charges claimed in the instant Petition are exclusive of GST and if in future, the GST is levied on the transmission charges, the same shall be charged and additionally billed by the Petitioner. The Petitioner has submitted that if



any additional taxes are to be paid on account of demand from Government of India/ Statutory Authorities, the same may be allowed to be recovered from the beneficiaries.

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

Security Expenses

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

100. 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

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

Sharing of Transmission Charges

102. TANGEDCO has submitted that the trued-up capital cost for 2014-2019 tariff period has to be shared among the beneficiaries as per the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010 (the 2010 Sharing Regulations). TANGEDCO has further submitted that Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020 (the 2020 Sharing Regulations) was notified on 4.5.2020 and came into effect on 1.11.2020 and therefore prayed that yearly transmission charges from March, 2019 to 31st October, 2020 have to be shared as per the 2010 Sharing Regulations and from November, 2020 as per the 2020 Sharing Regulations. In response, the Petitioner has submitted that after truing up and determination of transmission tariff, sharing of transmission charges of 2014-19 tariff period and 2019-24 tariff period up to 31.10.2020 shall be done as per 2010 Sharing Regulations and thereafter from 1.11.2020 onwards shall be done as per the 2020 Sharing Regulations. Further, the aspects of YTC bifurcation as raised by TANGEDCO shall be taken care of by the CTU at the time of billing after tariff determination is done by the Commission.



103. We have considered the submissions of the Petitioner and TANGEDCO. 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 2014-19 tariff period and Regulation 57 of 2019 Tariff Regulations for 2019-24 tariff period.

104. To summarise:

(a) The trued-up Annual Fixed Charges allowed for the transmission assets for 2014-19 tariff period are:

Annual Fixed Charges	(₹ in lakh)	
	2017-18 (pro-rata)	2018-19
Asset-I	235.27	564.82
Asset-II	120.17	486.77

(b) The Annual Fixed Charges allowed for the Combined Asset for 2019-24 tariff period are:

Combined Asset	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Annual Fixed Charges	923.95	909.22	891.83	874.81	856.05

105. The Annexure attached to the order form part of order.

106. This order disposes of Petition No. 509/TT/2019 in terms of the above discussion and findings.

sd/-
(Pravas Kumar Singh)
Member

sd/-
(Arun Goyal)
Member

sd/-
(I. S. Jha)
Member

sd/-
(P. K. Pujari)
Chairperson



**DETAILS OF WEIGHTED AVERAGE RATE OF DEPRECIATION FOR THE 2014-19
TARIFF PERIOD****Asset-I**

2014-19 Capital Expenditure	Combined Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	ACE (₹ in lakh)		Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)	
		2017-18	2018-19			2017-18	2018-19
Sub Station	2358.31	112.32	246.81	2717.43	5.28%	127.48	136.96
PLCC	0.00	56.41	0.00	56.41	6.33%	1.79	3.57
IT Equipment (Incl. Software)	28.31	26.39	0.15	54.85	5.28%	2.19	2.89
Total	2386.62	195.12	246.95	2828.70	Total	131.46	143.43
Average Gross Block (₹ in lakh)						2484.18	2705.22
Weighted Average Rate of Depreciation						5.29%	5.30%



Asset-II

2014-19 Capital Expenditure	Combined Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	ACE (₹ in lakh)		Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)	
		2017-18	2018-19			2017-18	2018-19
Sub Station	1446.31	508.62	311.06	2265.99	5.28%	89.79	111.43
PLCC	19.10	27.33	0.19	46.62	6.33%	2.07	2.95
IT Equipment (Incl. Software)	12.45	23.71	0.12	36.29	5.28%	1.28	1.91
Total	1477.87	559.66	311.37	2348.90	Total	93.15	116.29
Average Gross Block (₹ in lakh)						1757.70	2193.22
Weighted Average Rate of Depreciation						5.30%	5.30%



**DETAILS OF WEIGHTED AVERAGE RATE OF DEPRECIATION FOR THE 2019-24
TARIFF PERIOD****Combined Asset**

2019-24 Capital Expenditure	Combined Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Projected ACE (₹ in lakh)	Admitted Capital Cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)				
		2019-20			2019-20	2020-21	2021-22	2022-23	2023-24
Sub Station	5007.05	61.83	5068.88	5.28%	266.00	267.64	267.64	267.64	267.64
PLCC	103.03	0.00	103.03	6.33%	6.52	6.52	6.52	6.52	6.52
IT Equipment (Incl. Software)	91.14	0.00	91.14	15.00%	13.67	13.67	13.67	13.67	13.67
Total	5201.23	61.83	5263.06	Total	286.20	287.83	287.83	287.83	287.83
Average Gross Block (₹ in lakh)					5232.14	5263.06	5263.06	5263.06	5263.06
Weighted Average Rate of Depreciation					5.47%	5.47%	5.47%	5.47%	5.47%

