

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 51/TT/2020

Coram:

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

Date of Order: 27.01.2021

In the matter of:

Approval under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and truing-up of transmission tariff of the 2014-19 period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of the 2019-24 period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 in respect of **Asset-I:** 765 kV D/C Solapur–Aurangabad Transmission Line along with 2 x 240 MVAR Switchable Line Reactor with associated bays at Solapur Sub-station and **Asset-II:** 2 x 240 MVAR Switchable Line Reactor along with associated bays at Aurangabad Sub-station associated with “Inter-Regional System Strengthening Scheme for Western Region and Northern Region (Part-A)”.

And in the Matter of:

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

....Petitioner

Vs

1. Madhya Pradesh Power Management Company Ltd.,
Shakti Bhawan, Rampur,
Jabalpur - 482 008.
2. Madhya Pradesh Power Transmission Company Ltd.,
Shakti Bhawan, Rampur,
Jabalpur - 482 008.
3. Madhya Pradesh Audyogik Kendra,
Vikas Nigam (Indore) Ltd.,
3/54, Press Complex, Agra-Bombay Road,
Indore-452008.



4. Maharashtra State Electricity Distribution Co. Ltd.,
Hongkong Bank Building, 3rd floor,
M.G. Road, Fort, Mumbai-400 001.
5. Maharashtra State Electricity Transmission Co. Ltd.,
Prakashganga, 6th floor, Plot No. C-19, E-Block,
Bandra Kurla Complex, Bandra (East) Mumbai-400 051.
6. Gujarat Urja Vikas Nigam Ltd.,
Sardar Patel Vidyut Bhawan,
Race Course Road, Vadodara - 390007.
7. Electricity Department,
Government of Goa, Vidyut Bhawan, Panaji,
Near Mandvi Hotel, Goa - 403 001.
8. Electricity Department,
Administration of Daman &Diu,
Daman - 396 210.
9. DNH Power Distribution Corporation Ltd.,
Vidyut Bhawan, 66 kV Road, Near Secretariat Amli,
Silvassa - 396230.
10. Chhattisgarh State Power Transmission Co. Ltd.,
Office of the Executive Director (C&P),
State Load Despatch Building,
Dangania, Raipur – 492 013.
11. Chhattisgarh State Power Distribution Co. Ltd.,
P.O. Sunder Nagar, Dangania, Raipur,
Chhattisgarh-492 013.

...Respondents

For Petitioner : Shri S.S. Raju, PGCIL
Shri Ved Prakash Rastogi, PGCIL

For Respondents : None

ORDER

The instant petition has been filed by Power Grid Corporation of India Limited (hereinafter referred to as “the Petitioner”), a deemed transmission licensee, for truing up of tariff for the period from COD to 31.3.2019 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) and for determination of tariff for the period from 1.4.2019 to 31.3.2024 under the Central Electricity Regulatory



Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) in respect of the following assets under “Inter-Regional System Strengthening Scheme for Western Region and Northern Region (Part-A)” (hereinafter referred to as “the transmission project”):

Asset-I: 765 kV D/C Solapur–Aurangabad Transmission Line along with 2 x 240 MVAR Switchable Line Reactor with associated bays at Solapur Sub-station

Asset-II: 2 x 240 MVAR Switchable Line Reactor along with associated bays at Aurangabad Sub-station

2. The Petitioner has made the following prayers in the instant petition:

- “1) Allow the add cap for 2014-19 and 2019-24 tariff block as claimed as per Para 5 and 7 above.
- 2) Approve the trued up Transmission Tariff for 2014-19 block and transmission tariff for 2019-24 block for the assets covered under this petition, as per para 5 and 6 above.
- 3) Allow the additional RoE of 0.5 % during 2014-19 period in case of Asset1.
- 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 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 beneficiaries.
- 7) Allow the petitioner to file a separate petition before Hon’ble Commission for claiming the overall security expenses and consequential IOWC on that security expenses as mentioned at para 6.6 above.



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

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

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

Background

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

a) The Investment Approval (IA) for the transmission project was accorded by the Board of Directors of the Petitioner in its meeting dated 23.10.2013 (issued vide Memorandum No.: C/CP/Investment/Solapur dated 31.10.2013) with an estimated cost of ₹131590 lakh, including Interest during Construction of ₹7942 lakh, at 2nd quarter, 2013, price level.

b) The entire scope of the transmission project is covered in the instant petition. The details are as under:

(i) **Transmission Lines:**

Aurangabad-Solapur 765 kV D/C Line

(ii) **Sub-station Works:**

Bays extension at 765 kV Solapur and Aurangabad Sub-stations

(iii) **Reactive Compensation:**

240 MVAR, 765 kV Switchable line reactor with 950 Ohms NGR on both the ends and both circuits of Aurangabad-Solapur 765 kV D/C line.

c) As per the investment approval, the instant assets were scheduled to be put into commercial operation within 36 months from the date of investment approval. The investment approval was accorded on 23.10.2013 and hence the scheduled date of commercial operation (COD) was 23.10.2016. The date of commercial operation of Asset I and Asset II was 7.10.2015 and 25.8.2017



respectively. Hence, there was no time over-run in case of Asset I. However, there was a time over-run of 10 months and 2 days in case of Asset-II.

d) The transmission tariff in respect of Asset-I was approved by the Commission from COD i.e. 7.10.2015 to 31.3.2019 vide order dated 30.5.2016 in Petition No. 248/TT/2015 and was revised vide order dated 27.10.2016 in Petition No. 49/RP/2016 in Petition No.248/TT/2015. The tariff for Asset-II was approved by the Commission from COD i.e. 25.8.2017 to 31.3.2019 vide order dated 8.10.2018 in Petition No.103/TT/2018 as per the 2014 Tariff Regulations.

e) The trued-up tariff claimed by the Petitioner in the instant petition along with details of the tariff approved earlier by the Commission in respect of the instant transmission assets vide orders dated 30.5.2016, 27.10.2016 and 8.10.2018 in Petition No.248/TT/2015, Review Petition No.49/RP/2016 in Petition No.248/TT/2015, and Petition No. 103/TT/2018 respectively are as under:

(₹ in lakh)					
Asset	Particulars	2015-16	2016-17	2017-18	2018-19
Asset-I	Annual Fixed Charges approved vide order dated 30.5.2016 in Petition No. 248/TT/2015 and 27.10.2016 in Review Petition No. 49/RP/2016 in Petition No. 248/TT/2015	8715.55	19574.70	20198.51	19853.06
	AFC claimed by the Petitioner based on truing up in the instant petition	8735.60	18888.29	18569.25	18162.43
Asset-II	Annual Fixed Charges approved vide order dated 8.10.2018 in Petition No. 103/TT/2018	-	-	831.32	1483.01
	AFC claimed by the Petitioner based on truing up in the instant petition	-	-	800.70	1432.81

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



5. The Petitioner has served the petition on the Respondents and notice regarding the filing of this petition has also been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments or suggestions have been received from the general public in response to the notices published in the newspapers by the Petitioner. General Notice dated 12.3.2020 directing the beneficiaries/ Respondents to file reply in the matter was also posted on the Commission's website. Madhya Pradesh Power Management Company Ltd. (MPPMCL) i.e. the Respondent No. 1 has filed its reply vide affidavit dated 13.2.2020 and has raised the issues like Return on Equity (RoE) and prudence check. The Petitioner has filed its rejoinder to MPPMCL's reply vide affidavit dated 21.8.2020.

6. This order is issued after considering the submissions made by the Petitioner vide affidavits dated 1.11.2019, 23.7.2020 and 14.9.2020, reply affidavit dated 13.2.2020 of MPPMCL and Petitioner's rejoinder dated 21.8.2020.

7. The hearing in this matter was held on 24.8.2020 through video conference and order was reserved in the matter.

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

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

9. The details of the trued up transmission charges claimed by the Petitioner in respect of the transmission assets are as under:

(₹ in lakh)

Particulars	Asset-I			
	2015-16 (Pro-rata for 177 days)	2016-17	2017-18	2018-19
Depreciation	2473.92	5472.58	5578.82	5605.58



Interest on Loan	2887.27	5977.02	5411.26	4913.02
Return on Equity	2854.29	6316.21	6440.61	6490.30
Interest on Working Capital	204.58	441.73	435.18	426.72
O & M Expenses	316.66	676.08	698.62	721.85
Total	8736.72	18883.62	18564.49	18157.47

(₹ in lakh)

Asset-II		
Particulars	2017-18 (Pro-rata for 219 days)	2018-19
Depreciation	175.65	323.38
Interest on Loan	183.58	319.25
Return on Equity	196.56	363.73
Interest on Working Capital	23.47	41.40
O & M Expenses	224.28	384.80
Total	803.54	1432.56

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

(₹ in lakh)

Asset-I				
Particulars	2015-16 (Pro-rata for 177 days)	2016-17	2017-18	2018-19
O & M Expenses	54.54	56.34	58.22	60.15
Maintenance Spares	98.16	101.41	104.79	108.28
Receivables	2979.11	3114.36	3060.52	2992.46
Total	3131.81	3272.11	3223.53	3160.89
Rate of Interest (%)	13.50	13.50	13.50	13.50
Interest on Working Capital	204.58	441.73	435.18	426.72

(₹ in lakh)

Asset-II		
Particular	2017-18 (Pro-rata for 219 days)	2018-19
O & M Expenses	31.04	32.07
Maintenance Spares	55.87	57.72
Receivables	222.41	238.76
Total	309.32	328.55
Rate of Interest (%)	12.60	12.60
Interest on Working Capital	23.47	41.40



Capital Cost

11. The Commission vide orders dated 30.5.2016 and 8.10.2018 in Petition No. 248/TT/2015 and 103/TT/2018 respectively allowed capital cost as on COD and Additional Capital Expenditure (ACE) in respect of the transmission assets as under:

(₹ in lakh)

Asset	Approved Apportioned Capital Cost as per FR	Expenditure up to COD	Additional Capital Expenditure (ACE)			Total Capital Cost as on 31.3.2019
			2015-16	2017-18	2018-19	
Asset-I	121923.47	91395.01	10533.34	10603.98	2035.08	114587.41
Asset-II	9666.16	5401.18	-	963.12	300.03	6664.32

12. The details of approved capital cost, capital cost as on COD and ACE incurred up to 31.3.2019 as claimed by the Petitioner for the transmission assets are as under:

(₹ in lakh)

Asset	Apportioned approved cost as per FR/RCE	Cost as on COD	Additional Capital Expenditure				Total cost as on 31.03.19
			2015-16	2016-17	2017-18	2018-19	
Asset-I	121923.47	91395.01	10553.34	3114.21	962.81	102.72	106128.09
Asset-II	9666.16	5401.18	-	-	241.49	987.36	6630.03

13. The completion cost including ACE is within the approved apportioned capital cost. Therefore, there is no cost over-run in respect of the transmission assets.

Time Over-run

14. As stated earlier, the scheduled date of commercial operation (SCOD) of the transmission assets was 23.10.2016. As against SCOD, actual COD of the transmission assets are as under:

Asset	SCOD	COD	Time over-run
Asset-I	23.10.2016	7.10.2015	Nil
Asset-II		25.8.2017	10 months and 2 days

15. The Commission vide order dated 8.10.2018 in Petition No. 103/TT/2018 did not condone time over-run in respect of Asset-II.

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

16. The Petitioner has claimed IDC for the transmission assets and has submitted the Auditor's Certificate dated 3.8.2019 in support of the same. The Petitioner has submitted computation of IDC along with the year-wise details of the IDC discharged.

17. IDC in the previous orders dated 30.5.2016 and 8.10.2018 in Petition No. 248/TT/2015 and 103/TT/2018 for the transmission assets was allowed as ₹3531.55 lakh and ₹185.01 lakh respectively.

18. The allowable IDC has been worked out considering the information submitted by the Petitioner for the transmission assets on cash basis. The loan details submitted in Form-9C for the 2014-19 tariff period and the IDC computation sheet have been considered for the purpose of IDC calculation on cash and accrued basis. The un-discharged IDC as on COD has not been allowed on account of time over-run not condoned and computational difference.

19. The Petitioner has also included certain additional capitalisation of loans for calculation of the IDC.

20. IDC allowed based on the submissions of the Petitioner and the earlier orders dated 30.5.2016 and 8.10.2018 in Petition No. 248/TT/2015 and 103/TT/2018 is as under:



(₹ in lakh)

Asset	IDC approved in previous orders (A)	IDC claimed by Petitioner (B)	IDC disallowed due to excess claim and time over-run not condoned	IDC admissible	IDC allowed as on COD on cash basis
Asset-I	3531.55	3531.55	0.00	3531.55	2530.49
Asset-II	185.01	457.65	274.16	183.49	183.49

21. The Petitioner has also claimed IEDC of ₹460.73 lakh and ₹253.03 lakh in respect of Asset-I and Asset-II respectively and submitted Auditor's Certificate in support of the same. The Petitioner has also submitted that the entire IEDC has been discharged as on COD in respect of the transmission assets. IEDC claimed is within the percentage of hard cost and hence has been allowed after adjusting for the time over-run not condoned in the order dated 8.10.2018 in Petition No. 103/TT/2018. The details of IEDC claimed and allowed in respect of transmission assets are as under:

(₹ in lakh)

Asset	IEDC claimed	IEDC disallowed due to time over-run not condoned	IEDC allowed
Asset-I	460.73	0.00	460.73
Asset-II	253.03	94.62	158.41

Initial Spares

22. The Petitioner vide affidavit dated 23.7.2020 has submitted Form 13 which contains the break-up of Initial Spares for the transmission assets and the Petitioner has also submitted Auditor's Certificate with regard to the claim of Initial Spares. The total Initial Spares claimed by the Petitioner were within the limits prescribed under Regulation 13 of the 2014 Tariff Regulations and, therefore, the Commission vide orders dated 30.5.2016 and 8.10.2018 in Petition No. 248/TT/2015 and 103/TT/2018 respectively had allowed the same. The Petitioner has claimed the same amount for



Initial Spares in the instant petition. The details of Initial Spares claimed by the Petitioner are as follows:

Asset	Particulars	Plant & machinery cost up to cut-off date (excluding IDC and IEDC as per Auditor's Certificate) (A) (₹ in lakh)	Initial Spares Claimed (B) (₹ in lakh)	Ceiling Limit (%) (C)	Initial Spares worked out by the Petitioner
					$D = [(A-B)*C / (100-C)]$ (₹ in lakh)
Asset-I	Transmission Line	97326.29	645.88	1	976.57
	Sub-station	4652.99	240.23	6	281.67
Asset-II	Sub-station	5714.22	191.43	6	352.52

23. We have considered the submissions of the Petitioner. The details of the Initial Spares allowed are as under:

(₹ in lakh)

Asset	Particulars	Plant & Machinery Cost up to cut-off date (excluding IDC and IEDC) (₹ in lakh)	Initial Spares claimed (₹ in lakh)	Ceiling (%)	Initial Spares as per Ceiling Limit (₹ in lakh)	Initial Spares disallowed due to excess claim (₹ in lakh)	Initial Spares allowed (₹ in lakh)
Asset-I	Transmission Line	97326.29	645.88	1	976.57	0.00	645.88
	Sub-station	4432.82	240.23	6	267.61	0.00	240.23
Asset-II	Sub-station	5714.22	191.43	6	352.52	0.00	191.43

Capital Cost as on COD

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

25. Accordingly, the capital cost allowed in respect of the transmission assets as on COD is summarized as under:

(₹ in lakh)

Asset	Capital cost claimed as on COD as per Auditor's certificate (A)	Less: IDC disallowed due to computational difference and time over-run (B)	Less: Un-discharged IDC (C)	Less: IEDC disallowed due to time over-run (D)	Capital cost considered as on COD E=A-B-C-D
Asset-I	92396.07	0.00	1001.06	0.00	91,395.01
Asset-II	5771.19	274.16	0.00	94.62	5402.41

Additional Capital Expenditure (ACE)

26. The Commission vide order dated 30.5.2016 in Petition No. 248/TT/2015 had allowed ACE of ₹23192.40 lakh for Asset-I and vide order dated 8.10.2018 in Petition No. 103/TT/2018 had allowed ACE of ₹1263.15 lakh for Asset-II.

27. The Petitioner has claimed the following ACE in respect of the transmission assets and has also submitted Auditor's Certificate in support of its claim:

(₹ in lakh)

Asset	Additional Capital Expenditure			
	2015-16	2016-17	2017-18	2018-19
Asset-I	10553.34	3114.21	962.81	102.72
Asset-II	-	-	241.49	987.36

28. The cut-off date for Asset-I and Asset-II is 31.3.2018 and 31.3.2020 respectively. Thus, ACE claimed during 2015-16, 2016-17 and 2017-18 for the transmission assets is within the cut-off date. However, ACE claimed during 2018-19 is beyond the cut-off date for Asset-I.

29. It is observed that the total estimated completion cost including ACE for the 2014-19 period is within the approved cost as per FR.

30. ACE claimed by the Petitioner is allowed under Regulation 14(1)(i) and 14(1)(ii) of the 2014 Tariff Regulations as it is towards Balance and Retention payments and

works deferred for execution. The un-discharged IDC as on COD has been allowed as ACE. Accordingly, ACE allowed for the transmission assets is as follows:

(₹ in lakh)

Assets	2015-16		2016-17	2017-18	2018-19
	ACE Claimed vide Auditor's certificate	IDC Discharged	ACE claimed vide Auditor's certificate	ACE claimed vide Auditor's certificate	ACE claimed vide Auditor's certificate
Asset-I	9552.28	1001.06	3114.21	962.81	102.72
Asset-II	-	-	-	238.72	987.36

Capital Cost for the 2014-19 tariff period

31. Accordingly, the capital cost of the transmission assets considered for the 2014-19 tariff period is as follows:

(₹ in lakh)

Assets	Capital cost as on COD on cash basis	Additional Capital Expenditure(ACE) incurred				Total Capital cost as on 31.3.2019
		2015-16	2016-17	2017-18	2018-19	
Asset-I	91,395.01	10553.34	3114.21	962.81	102.72	106128.09
Asset-II	5402.41	-	-	238.72	987.36	6628.49

Debt-Equity Ratio

32. The Petitioner has claimed the debt-equity ratio of 70:30 as on COD and for ACE in respect of the transmission assets. The debt-equity ratio of 70:30 as claimed by the Petitioner in Form 6 has been considered for capital cost as on COD and ACE for 2017-18 and 2018-19 as provided under Regulation 19 of the 2014 Tariff Regulations. The same is summarised as under:

Asset-I				
Particulars	As on COD		As on 31.3.2019	
	Amount (₹ in lakh)	(%)	Amount (₹ in lakh)	(%)
Debt	63976.51	70.00	74289.67	70.00
Equity	27418.50	30.00	31838.42	30.00
Total	91395.01	100.00	106128.09	100.00

Asset-II				
Particulars	As on COD		As on 31.3.2019	
	Amount (₹ in lakh)	(%)	Amount (₹ in lakh)	(%)
Debt	3781.69	70.00	4639.94	70.00
Equity	1620.72	30.00	1988.54	30.00
Total	5402.41	100.00	6628.49	100.00

Interest on Loan (IoL)

33. The Petitioner has claimed IoL based on actual interest rates for each year during the 2014-19 tariff period. The Petitioner has submitted that the weighted average rate of IoL has been considered on the basis of the rates prevailing as on 1.4.2014 and has prayed to consider floating rate of interest applicable during the 2014-19 period, if any, during the truing up of tariff.

34. We have considered the submissions made by the Petitioner. It is observed that the SBI loan with respect to Asset-I has been deployed with floating interest rates. Accordingly, factoring the impact of floating rate of interest, IoL has been worked out based on actual interest rate, in accordance with Regulation 26 of the 2014 Tariff Regulations.

35. IoL in respect of the transmission assets has been worked out as per the following:

- i. Gross amount of loan, repayment of instalments, rate of interest and weighted average rate of interest on actual average loan have been considered as per the petition.
- ii. The repayment for the 2014-19 tariff period has been considered to be equal to the depreciation allowed for that period.

36. The trued up IoL allowed for the instant assets from COD to 31.3.2019 is as follows:

(₹ in lakh)

Asset-I				
Particular	2015-16 (Pro-rata for 177 days)	2016-17	2017-18	2018-19
Gross Normative Loan	63976.51	71363.85	73543.80	74217.77
Cumulative Repayments up to Previous Year	0.00	2468.01	7931.09	13500.40
Net Loan-Opening	63976.51	68895.84	65612.71	60717.37
Addition due to Additional Capitalization	7387.34	2179.95	673.97	71.90
Repayment during the year	2468.01	5463.08	5569.31	5596.07
Net Loan-Closing	68895.84	65612.71	60717.37	55193.20
Average Loan	66436.18	67254.28	63165.04	57955.29
Weighted Average Rate of Interest on Loan (%)	8.982	8.889	8.570	8.482
Interest on Loan	2885.84	5977.96	5413.00	4915.54

(₹ in lakh)

Asset-II		
Particular	2017-18 (Pro-rata for 219 days)	2018-19
Gross Normative Loan	3781.69	3948.79
Cumulative Repayments up to Previous Year	0.00	171.25
Net Loan-Opening	3781.69	3777.54
Addition due to Additional Capitalization	167.10	691.15
Repayment during the year	171.25	317.00
Net Loan-Closing	3777.54	4151.69
Average Loan	3779.61	3964.62
Weighted Average Rate of Interest on Loan (%)	8.071	8.066
Interest on Loan	183.03	319.77

37. Accordingly, IoL approved vide order dated 30.5.2016 in Petition No. 248/TT/2015 for Asset-I and order dated 8.10.2018 in Petition No. 103/TT/2018 for Asset-II, claimed by the Petitioner in the instant petition and trued up vide this order in respect of the transmission assets is as follows:

(₹ in lakh)

Asset	Particulars	2015-16	2016-17	2017-18	2018-19
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Asset	Particulars	2015-16	2016-17	2017-18	2018-19
Asset-I	Approved vide order dated 30.5.2016 and in Petition No. 248/TT/2015	2885.83	6266.62	6139.65	5662.69
	As claimed by the Petitioner in the instant petition	2887.27	5977.02	5411.26	4913.02
	Allowed after true-up in this order	2885.84	5977.96	5413.00	4915.54
Asset-II	Approved vide order dated 8.10.2018 and in Petition No. 103/TT/2018	-	-	194.65	339.15
	As claimed by the Petitioner in the instant petition	-	-	183.58	319.25
	Allowed after true-up in this order	-	-	183.03	319.77

Return on Equity (RoE)

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

Year	Claimed effective tax (in %)	Grossed up RoE (Base Rate/1-t) (in %)
2014-15	21.018	19.625
2015-16	21.382	19.716
2016-17	21.338	19.705
2017-18	21.337	19.704
2018-19	21.549	19.758

39. MPPMCL has submitted that the Petitioner has grossed up RoE on the basis of actual taxes paid during 2016-17 and 2017-18 and has not placed on record the assessment orders for 2016-17 and 2017-18. For 2018-19, it has grossed up RoE and has not claimed the effective tax rate based on actual taxes paid for 2018-19. MPPMCL has submitted that the Petitioner has neither submitted copy of assessment order for the FY 2014-15 and 2015-16 nor the audited accounts in respect of actual taxes paid for 2016-17 and 2017-18 has been enclosed in the instant petition. MPPMCL has further submitted that the in absence of these essential documents, it is not possible to scrutinize the claim of the Petitioner in a proper way. In response, the Petitioner vide affidavit dated 21.8.2020 has submitted that the effective rates of tax



considered for 2014-15, 2015-16, 2016-17 are based on assessment orders issued by the Income Tax authorities, for the purpose of grossing up of RoE rate and that the effective rate of tax considered for 2017-18 and 2018-19 are based on the Income-tax returns filed, for the purpose of grossing up of RoE rates. The basis of year-wise effective tax rate has been mentioned in the petition and grossed up ROE has been claimed accordingly for the 2014-19 period. The Petitioner has further submitted that a copy of the assessment orders for 2014-15 and 2015-16 has already been submitted in reply to Technical Validation letter in Petition No. 20/TT/2020 and has also placed on record a copy of the assessment order for the year 2016-17.

40. We have considered the submissions of the Petitioner and MPPMCL. It is observed that the effective rates of tax considered for 2014-15, 2015-16, 2016-17 for the purpose of grossing up of RoE rate are based on assessment orders issued by the Income Tax authorities and that the effective rate of tax considered for 2017-18 and 2018-19 are based on the Income-tax returns filed. We are satisfied with the clarifications given by the Petitioner and convinced that the Petitioner has acted prudently and has complied with the provisions of the Income Tax Act, 1961 and the provisions of the tariff regulations.

41. Further, the Commission in order dated 27.4.2020 in Petition No. 274/TT/2019 has arrived at the effective tax rate based on the notified MAT rates for the Petitioner.

The relevant portion of the order dated 27.4.2020 is as under:

“26. We are conscious that the entities covered under MAT regime are paying Income Tax as per MAT rate notified for respective financial year under IT Act, 1961, which is levied on the book profit of the entity computed as per the Section 115JB of the IT Act, 1961. The Section 115JB(2) defines book profit as net profit in the statement of Profit & Loss prepared in accordance with Schedule-III of the Companies Act, 2013, subject to some additions and deductions as mentioned in the IT Act, 1961. Since the Petitioner has been paying income tax on income computed under Section 115JB of the IT Act, 1961 as per the MAT rates of the respective financial year, the notified MAT rate for

respective financial year shall be considered as effective tax rate for the purpose of grossing up of RoE for truing up of the tariff of the 2014-19 tariff period in terms of the provisions of the 2014 Tariff Regulations. Interest imposed on any additional income tax demand as per the Assessment Order of the Income Tax authorities shall be considered on actual payment. However, penalty (for default on the part of the Assessee) if any imposed shall not be taken into account for the purpose of grossing up of rate of return on equity. Any under-recovery or over-recovery of grossed up rate on return on equity after truing up, shall be recovered or refunded to beneficiaries or the long term transmission customers/ DICs as the case may be on year to year basis.

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

Year	Notified MAT rates (inclusive of surcharge & cess)	Effective tax (in %)
2014-15	20.961	20.961
2015-16	21.342	21.342
2016-17	21.342	21.342
2017-18	21.342	21.342
2018-19	21.549	21.549

”

42. The MAT rates considered 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 tariff period in terms of provisions of the 2014 Tariff Regulations and the same are as follows:

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

43. The Petitioner has claimed additional RoE of 0.5% for Asset-I. The Commission vide order dated 27.10.2016 in Review Petition No. 49/RP/2016 in Petition No.248/TT/2015 had allowed additional RoE of 0.5% for Asset-I.

44. RoE allowed for the transmission assets is as follows:

(₹ in lakh)

Asset-I				
Particular	2015-16 (Pro-rata for 177 days)	2016-17	2017-18	2018-19
Opening Equity	27418.50	30584.50	31518.76	31807.60
Addition due to Additional Capitalization	3166.00	934.26	288.84	30.82
Closing Equity	30584.50	31518.76	31807.60	31838.42
Average Equity	29001.50	31051.63	31663.18	31823.01
Return on Equity (Base Rate) (%)	16	16	16	16
Tax Rate applicable (%)	21.342	21.342	21.342	21.549
Rate of Return on Equity (Pre-tax) (%)	20.341	20.341	20.341	20.395
Return on Equity (Pre-tax)	2852.89	6316.21	6440.61	6490.30

(₹ in lakh)

Asset-II		
Particulars	2017-18 (Pro-rata for 219 days)	2018-19
Opening Equity	1620.72	1692.33
Addition due to Additional Capitalization	71.62	296.21
Closing Equity	1692.33	1988.54
Average Equity	1656.53	1840.44
Return on Equity (Base Rate) (%)	15.5	15.5
Tax Rate applicable (%)	21.342	21.549
Rate of Return on Equity (Pre-tax) (%)	19.705	19.758
Return on Equity (Pre-tax)	195.85	363.63

45. Accordingly, RoE approved vide order dated 27.10.2016 in Review Petition No. 49/RP/2016 in Petition No.248/TT/2015 for Asset-I and order dated 8.10.2018 in Petition No. 103/TT/2018 for Asset-II, claimed by the Petitioner in the instant petition and trued up in respect of the transmission assets is shown in the table below:

(₹ in lakh)

Asset	Particulars	2015-16	2016-17	2017-18	2018-19
Asset-I	Approved vide order dated 27.10.2016 in Review Petition No. 49/RP/2016 in Petition	2839.15	6513.21	6896.98	6958.78



Asset	Particulars	2015-16	2016-17	2017-18	2018-19
	No.248/TT/2015.				
	As claimed by the Petitioner in the instant petition	2854.29	6316.21	6440.61	6490.30
	Allowed after true-up in this order	2852.89	6316.21	6440.61	6490.30
Asset-II	Approved vide order dated 8.10.2018 and in Petition No. 103/TT/2018	-	-	207.65	383.24
	As claimed by the Petitioner in the instant petition	-	-	196.56	363.73
	Allowed after true-up in this order	-	-	195.85	363.63

Depreciation

46. The Petitioner's claim towards depreciation was found to be higher than the depreciation allowed for Asset-I in order dated 30.5.2016 in Petition No. 248/TT/2015 and for Asset-II in order dated 8.10.2018 in Petition No. 103/TT/2018. The Petitioner has neither given any justification for claiming higher depreciation than that was allowed earlier in the said order nor has made any specific prayer for allowing higher depreciation in this petition.

47. The tariff from COD to 31.3.2019 in respect of Asset-I was determined vide order dated 27.10.2016 in Review Petition No. 49/RP/2016 in Petition No. 248/TT/2015 and for Asset-II in order dated 8.10.2018 in Petition No. 103/TT/2018. It is observed that the Petitioner did not claim any capital expenditure towards "IT Equipment" in the above said petition where the tariff for the transmission asset from COD to 31.3.2019 was determined, even though there was a clear provision in the 2014 Tariff Regulations providing depreciation @15% for IT Equipment. 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 for the 2014-19 tariff period.

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



“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 upto 31.3.2019, admitted by the Commission after prudence check. We are of the view that scope of truing up exercise is restricted to truing up of the capital expenditure already admitted and apportionment or reapportionment of the capital expenditure cannot be allowed at the time of truing up. Therefore, we are not inclined to consider the Petitioner’s prayer for apportionment of capital expenditure towards IT Equipment and allowing depreciation @ 15% from 1.4.2014 onwards. Accordingly, the depreciation @ 5.28% has been considered for IT Equipment as part of the substation upto 31.3.2019 while truing up the capital expenditure for the 2014-19 period. During the 2019-24 tariff period, the IT Equipment has been considered separately and depreciation has been allowed @ 15% for the balance depreciable value of IT Equipment in accordance with Regulation 33 read with Sr. No. (p) of the Appendix-I (Depreciation Schedule) of the 2019 Tariff Regulations.”

49. In line with the above order of the Commission, depreciation @5.28% has been considered for IT Equipment as part of the sub-station upto 31.3.2019 while truing up the capital expenditure for the 2014-19 period. In 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. Accordingly, the depreciation for 2014-19 period is trued up for the transmission asset as per the methodology provided in Regulation 27 of the 2014 Tariff Regulations (as placed in Annexure-I(a) and I(b)). The Weighted Average Rate of Depreciation (WAROD) has been worked out after taking into account the



depreciation rate of asset as prescribed in the 2014 Tariff Regulations and the true and correct depreciation allowed for the transmission assets is as under:

(₹ in lakh)

Asset-I				
Particular	2015-16 (Pro-rata for 177 days)	2016-17	2017-18	2018-19
Opening Gross Block	91395.01	101948.35	105062.56	106025.37
Additional Capitalization	10553.34	3114.21	962.81	102.72
Closing Gross Block	101948.35	105062.56	106025.37	106128.09
Average Gross Block	96671.68	103505.46	105543.97	106076.73
Weighted average rate of Depreciation (WAROD) (%)	5.279	5.278	5.277	5.275
Balance useful life of the asset at the beginning of year	35	35	34	33
Elapsed life at the beginning of the year	0	0	1	2
Aggregated Depreciable Value	87004.51	93154.91	94989.57	95469.06
Depreciation during the year	2468.01	5463.08	5569.31	5596.07
Aggregate Cumulative Depreciation	2468.01	7931.09	13500.40	19096.47
Remaining Aggregate Depreciable Value at the end of the year	84536.50	85223.82	81489.17	76372.59

(₹ in lakh)

Asset-II		
Particular	2017-18 (Pro-rata for 219 days)	2018-19
Opening Gross Block	5402.41	5641.13
Additional Capitalization	238.72	987.36
Closing Gross Block	5641.13	6628.49
Average Gross Block	5521.77	6134.81
Weighted average rate of Depreciation (WAROD) (%)	5.169	5.167
Balance useful life of the asset at the beginning of year	25	25
Elapsed life at the beginning of the year	0	0
Aggregated Depreciable Value	4969.59	5521.32
Depreciation during the year	171.25	317.00
Aggregate Cumulative Depreciation	171.25	488.25
Remaining Aggregate Depreciable Value at	4798.34	5033.07



the end of the year		
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50. Accordingly, the depreciation approved vide order dated 30.5.2016 in Petition No. 248/TT/2015 for Asset-I and order dated 8.10.2018 in Petition No. 103/TT/2018 for Asset-II, claimed by the Petitioner in the instant petition and trued up vide this order in respect of the transmission assets is as follows:

(₹ in lakh)					
Asset	Particulars	2015-16	2016-17	2017-18	2018-19
Asset-I	Approved vide order dated 30.5.2016 and in Petition No. 248/TT/2015	2468.01	5657.07	5986.78	6040.31
	As claimed by the Petitioner in the instant petition	2473.92	5472.58	5578.82	5605.58
	Allowed after true-up in this order	2468.01	5463.08	5569.31	5596.07
Asset-II	Approved vide order dated 8.10.2018 and in Petition No. 103/TT/2018	-	-	181.53	333.38
	As claimed by the Petitioner in the instant petition	-	-	175.65	323.38
	Allowed after true-up in this order	-	-	171.25	317.00

Operation & Maintenance Expenses (O&M Expenses)

51. Regulation 29(3) of the 2014 Tariff Regulations specifies the norms for O&M Expenses for the transmission system. The details of the O&M Expenses claimed by the Petitioner for the instant assets and allowed under Regulation 29(3) of the 2014 Tariff Regulations for the purpose of tariff are as under:

(₹ in lakh)				
Particulars	Asset-I			
	2015-16 (Pro-rata for 177 days)	2016-17	2017-18	2018-19
Sub-station Bays				
Aurangabad Ckt -1 Bay	1	1	1	1
Aurangabad Ckt -2 Bay	1	1	1	1
240 MVAR Switchable Line Reactor for Ckt #1	1	1	1	1
240 MVAR Switchable Line Reactor for Ckt -2	1	1	1	1
Norm (₹ lakh/bay)				
765 kV Sub-station Bays	87.22	90.12	93.11	96.20



Total Sub-station O&M Expenses	348.88	360.48	372.44	384.80
AC Lines (Line length in km)				
765 kV D/C Solapur - Aurangabad TL	278.55	278.55	278.55	278.55
Norm (₹ lakh/km)				
D/C Bundled with 4 or more sub-conductor)	1.10	1.13	1.17	1.21
Total Transmission Line:	305.57	315.60	326.18	337.05
Total O&M Expenses	316.50	676.08	698.62	721.85

(₹ in lakh)

Asset-II		
Particulars	2017-18 (Pro-rata for 219 days)	2018-19
Sub-station Bays		
Aurangabad:765KV Solapur -1 Bay	1	1
Aurangabad:765KV Solapur -2 Bay	1	1
Aurangabad:3X80 MVAR Switchable Line Reactor 1	1	1
Aurangabad:3X80 MVAR Switchable Line Reactor 2	1	1
Norm (₹ lakh/bay)		
765 kV Sub-station Bays	93.11	96.20
Total Sub-station O&M Expenses	372.44	384.80
Total O&M Expenses	223.46	384.80

52. Accordingly, the O&M Expenses approved vide order dated 30.5.2016 in Petition No. 248/TT/2015 for Asset-I and order dated 8.10.2018 in Petition No. 103/TT/2018 for Asset-II, claimed by the Petitioner in the instant petition and trueed up vide this order in respect of the transmission assets is as follows:

(₹ in lakh)

Asset	Particulars	2015-16	2016-17	2017-18	2018-19
Asset-I	Approved vide order dated 30.5.2016 and in Petition No. 248/TT/2015	316.50	676.08	698.62	721.85
	As claimed by the Petitioner in the instant petition	316.66	676.08	698.62	721.85
	Allowed after true-up in this order	316.50	676.08	698.62	721.85
Asset-II	Approved vide order dated 8.10.2018 and in Petition No. 103/TT/2018	-	-	223.46	384.80
	As claimed by the Petitioner in the instant petition	-	-	224.28	384.80
	Allowed after true-up in this order	-	-	223.46	384.80

Interest on Working Capital ("IWC")



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

(₹ in lakh)

Asset-I				
Particulars	2015-16 (Pro-rata for 177 days)	2016-17	2017-18	2018-19
O & M Expenses	54.54	56.34	58.22	60.15
Maintenance Spares	98.17	101.41	104.79	108.28
Receivables	3008.51	3146.57	3093.53	3025.83
Total	3161.22	3304.32	3256.54	3194.26
Rate of Interest on working capital (%)	13.5	13.5	13.5	13.5
Interest on Working Capital	206.39	446.08	439.63	431.23

(₹ in lakh)

Asset-II		
Particulars	2017-18 (Pro-rata for 219 days)	2018-19
O & M Expenses	31.04	32.07
Maintenance Spares	55.87	57.72
Receivables	221.36	237.75
Total	308.26	327.53
Rate of Interest (%)	12.6	12.6
Interest of working Capital	23.30	41.27

54. Accordingly, IWC approved vide order dated 27.10.2016 in Review Petition No. 49/RP/2016 in Petition No.248/TT/2015 for Asset-I and order dated 8.10.2018 in Petition No. 103/TT/2018 for Asset-II, claimed by the Petitioner in the instant petition and trued up vide this order in respect of the transmission assets is shown in the table below:

(₹ in lakh)

Asset	Particulars	2015-16	2016-17	2017-18	2018-19
Asset-I	Approved vide order dated 27.10.2016 in Review Petition No. 49/RP/2016 in Petition No.248/TT/2015	206.07	461.73	476.47	469.43
	As claimed by the Petitioner in the instant petition	204.58	441.73	435.18	426.72
	Allowed after true-up in this order	206.39	446.08	439.63	431.23
Asset-II	Approved vide order dated 8.10.2018 and in Petition No. 103/TT/2018	-	-	24.03	42.46
	As claimed by the Petitioner in the instant petition	-	-	23.47	41.40



Asset	Particulars	2015-16	2016-17	2017-18	2018-19
	Allowed after true-up in this order	-	-	23.30	41.27

Approved Annual Fixed Charges for the 2014-19 Tariff Period

55. Accordingly, the annual fixed charges allowed for the transmission assets after truing up for the 2014-19 tariff period are as under:

(₹ in lakh)

Asset-I				
Particulars	2015-16 (Pro-rata for 177 days)	2016-17	2017-18	2018-19
Depreciation	2468.01	5463.08	5569.31	5596.07
Interest on Loan	2885.84	5977.96	5413.00	4915.54
Return on Equity	2852.89	6316.21	6440.61	6490.30
Interest on Working Capital	206.39	446.08	439.63	431.23
O & M Expenses	316.50	676.08	698.62	721.85
Total	8729.62	18879.41	18561.18	18154.99

(₹ in lakh)

Asset-II		
Particulars	2017-18(Pro-rata for 219 days)	2018-19
Depreciation	171.25	317.00
Interest on Loan	183.03	319.77
Return on Equity	195.85	363.63
Interest on Working Capital	23.30	41.27
O & M Expenses	223.46	384.80
Total	796.90	1426.47

56. Accordingly, annual transmission charges approved vide order dated 27.10.2016 in Review Petition No. 49/RP/2016 in Petition No.248/TT/2015 for Asset-I and order dated 8.10.2018 in Petition No. 103/TT/2018 for Asset-II, as claimed by the Petitioner in the instant petition and trued up vide this order in respect of the transmission assets is shown in the table below:

(₹ in lakh)

Asset	Particulars	2015-16	2016-17	2017-18	2018-19
Asset-I	Approved vide order dated 27.10.2016 in Review Petition No. 49/RP/2016 in Petition No.248/TT/2015	8715.55	19574.70	20198.51	19853.06
	As claimed by the Petitioner in the	8736.72	18883.62	18564.49	18157.47



Asset	Particulars	2015-16	2016-17	2017-18	2018-19
	instant petition				
	Allowed after true-up in this order	8729.62	18879.41	18561.18	18154.99
Asset-II	Approved vide order dated 8.10.2018 and in Petition No. 103/TT/2018	-	-	831.32	1483.01
	As claimed by the Petitioner in the instant petition	-	-	803.54	1432.56
	Allowed after true-up in this order	-	-	796.90	1426.47

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

57. The Petitioner has submitted the tariff forms combining Assets-I and II, wherein the COD has been achieved prior to 1.4.2019, as a single asset. Accordingly, as per proviso (i) of Regulation 8(1) of the 2019 Tariff Regulations, a single tariff for the Combined Asset has been worked out for the 2019-24 tariff period.

58. 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	5962.90	5968.85	5968.85	5967.28	5944.47
Interest on Loan	4790.40	4281.28	3783.40	3285.10	2781.00
Return on Equity	6359.81	6366.16	6366.16	6366.16	6366.16
Interest on Working Capital	289.44	283.81	277.45	271.12	263.73
Operation and Maintenance	736.33	761.87	788.28	815.80	844.01
Total	18138.88	17661.97	17184.14	16705.46	16199.37

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

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
O&M expenses	61.36	63.49	65.69	67.98	70.33
Maintenance Spares	110.45	114.28	118.24	122.37	126.60
Receivables	2230.19	2177.50	2118.59	2059.58	1991.73
Total	2402.00	2355.27	2302.52	2249.93	2188.66
Rate of Interest (%)	12.05	12.05	12.05	12.05	12.05
Interest on Working	289.44	283.81	277.45	271.12	263.73



Capital					
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Effective Date of Commercial Operation (E-COD)

60. The Petitioner has claimed the E-COD of the Combined Asset as 17.11.2015. Based on the trued up admitted capital cost and actual COD of all the assets, E-COD has been worked out as follows:

Computation of Effective COD						
Asset	Actual COD	Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Weight of the cost (%)	No. of Days from last COD	Weighted Days	Effective COD (Latest COD – Total weighted Days)
Asset-I	7.10.2015	106128.09	94.12%	688.00	647.56	17.11.2015
Asset-II	25.8.2017	6628.49	5.88%	0.00	0.00	
Total			100.00			

61. E-COD is used to determine the lapsed life of the project as a whole, which works out as three (3) years 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 Asset

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

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

64. WAL has been determined based on the admitted capital cost of the individual elements as on 31.3.2019 and their respective life as stipulated in the 2019 Tariff Regulations. The element-wise life as it was defined in the 2014 Tariff Regulations prevailing at the time of actual COD of the individual asset has been ignored for this purpose. The life as defined in the 2019 Tariff Regulations has been considered for determination of WAL. Accordingly, WAL of the Combined Asset has been worked out as 34 years as shown below:

Admitted capital cost as on 31.3.2019				
Particulars	Combined capital cost as on 31.3.2019 (₹ in lakh) (a)	Life as per 2019 Regulation (Years) (b)	Weight (c)=(a) x (b) (₹ in lakh)	Weighted Avg. Life of Asset (in years) (d) = (c)/ (a)
Building	859.67	25	21491.69	
Transmission Line	100933.64	35	3532677.42	
Sub Station	10400.32	25	260007.97	
PLCC	400.42	15	6006.35	
Leasehold Land	0.00	25	0.00	
IT Equipment and software	162.53	7	1083.50	
Total	112756.58		3821266.93	33.89 Years (Rounded off to 34 years)

65. 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. Accordingly, remaining useful life of the Combined Asset as on 31.3.2019 is 31 years.

Capital Cost as on 1.4.2019

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

“19. Capital Cost: (1) *The Capital cost of the generating station or the transmission system, as the case may be, as determined by the Commission after*



prudence check in accordance with these regulations shall form the basis for determination of tariff for existing and new projects.

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

- (a) *The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;*
- (b) *Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;*
- (c) *Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period;*
- (d) *Interest during construction and incidental expenditure during construction as computed in accordance with these regulations;*
- (e) *Capitalised initial spares subject to the ceiling rates in accordance with these regulations;*
- (f) *Expenditure on account of additional capitalization and de-capitalisation determined in accordance with these regulations;*
- (g) *Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the date of commercial operation as specified under Regulation 7 of these regulations;*
- (h) *Adjustment of revenue earned by the transmission licensee by using the assets before the date of commercial operation;*
- (i) *Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*
- (j) *Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal up to the receiving end of the generating station but does not include the transportation cost and any other appurtenant cost paid to the railway;*
- (k) *Capital expenditure on account of biomass handling equipment and facilities, for co-firing;*
- (l) *Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;*
- (m) *Expenditure on account of fulfilment of any conditions for obtaining environment clearance for the project;*
- (n) *Expenditure on account of change in law and force majeure events; and*
- (o) *Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.*

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

- (a) *Capital cost admitted by the Commission prior to 1.4.2019 duly trued up by excluding liability, if any, as on 1.4.2019;*
- (b) *Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;*
- (c) *Capital expenditure on account of renovation and modernisation as admitted by this Commission in accordance with these regulations;*
- (d) *Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*
- (e) *Capital expenditure incurred towards railway infrastructure and its*

augmentation for transportation of coal up to the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and

(f) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.

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

(a) cost of approved rehabilitation and resettlement (R&R) plan of the project in conformity with National R&R Policy and R&R package as approved; and

(b) cost of the developer's 10% contribution towards Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) and Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) project in the affected area.

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

(a) The assets forming part of the project, but not in use, as declared in the tariff petition;

(b) De-capitalised Assets after the date of commercial operation on account of replacement or removal on account of obsolescence or shifting from one project to another project:

Provided that in case replacement of transmission asset is recommended by Regional Power Committee, such asset shall be 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."

67. The Petitioner vide Auditor's Certificate in respect of the transmission assets has claimed the following capital cost including projected ACE to be incurred during 2019-20:

Particulars	(₹ in lakh)			
	Approved capital cost as per IA	Capital cost claimed as on 31.3.2019	ACE claimed in 2019-20	Estimated completion capital cost
Asset-I	121923.47	106128.09	209.29	106337.38



Particulars	Approved capital cost as per IA	Capital cost claimed as on 31.3.2019	ACE claimed in 2019-20	Estimated completion capital cost
Asset-II	9666.16	6630.03	15.87	7013.14
Total	131589.63	112758.12	225.16	113350.52

68. Against the overall approved capital cost as per FR of ₹131589.63 lakh, the estimated completion capital cost is ₹113350.52 lakh. Therefore, there is no cost over-run as per the FR cost in case of the transmission assets.

69. The capital cost has been dealt with 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 Combined Asset is as follows:

(₹ in lakh)	
Element	Amount
Freehold Land	0.00
Leasehold Land	0.00
Building & Other Civil Works	859.67
Transmission Line	100933.64
Sub-station Equipment	10400.32
PLCC	400.42
IT Equipment and Software	162.53
Total	112756.58

Additional Capital Expenditure (ACE)

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

“24. Additional Capitalization within the original scope and up to 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.”*

71. The Petitioner has claimed projected ACE for the 2019-24 tariff period and submitted Auditor's Certificate in support of the same. The Petitioner has submitted that ACE claimed for the period 1.4.2019 to 31.3.2020 is on estimated basis and may vary due to final claim/ reconciliation at the time of contract closing. The Petitioner has claimed projected ACE for 2019-20 as ₹225.16 lakh in respect of the Combined Asset.



72. ACE claimed by the Petitioner is covered under Regulations 24 and 25 of the 2019 Tariff Regulations. Accordingly, the ACE allowed in respect of the transmission asset is ₹ 225.16 lakh subject to truing-up.

Capital Cost for the 2019-24 Tariff Period

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

(₹ in lakh)		
Capital cost allowed as on 1.4.2019	ACE allowed for the year 2019-20	Total estimated completion capital cost up to 31.3.2024
112756.58	225.16	112981.74

Debt-Equity Ratio

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

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

Provided that:

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

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

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



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

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

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

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

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

75. The details of the debt-equity ratio considered in respect of the Combined Asset for the purpose of computation of tariff for the 2019-24 tariff period are as follows:

Particulars	Capital cost as on 1.4.2019 (₹lakh)	(%)	Total capital cost as on 31.3.2024 (₹lakh)	(%)
Debt	78929.62	70.00	79087.23	70.00
Equity	33826.96	30.00	33894.51	30.00
Total	112756.58	100.00	112981.74	100.00

Return on Equity (RoE)

76. Regulations 30 and 31 of the 2019 Tariff Regulations provide as under:

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

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

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

Provided further that:

i. In case of a new project, the rate of return on equity shall be reduced by 1.00% for such period as may be decided by the Commission, if the generating station or transmission project is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO) or Free Governor Mode Operation (FGMO), data telemetry, communication project up to load dispatch centre or protection project based on the report submitted by the respective RLDC;

ii. in case of existing generating station, as and when any of the requirements under (i) above of this Regulation are found lacking based on the report submitted by the concerned RLDC, rate of return on equity shall be reduced by 1.00% for the period for which the deficiency continues;

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.”

77. The MAT rate applicable during 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. Accordingly, RoE allowed for the Combined Asset under Regulation 30 of the 2019 Tariff Regulations is as under:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity	33826.96	33894.51	33894.51	33894.51	33894.51
Addition due to Additional Capitalization	67.55	0.00	0.00	0.00	0.00
Closing Equity	33894.51	33894.51	33894.51	33894.51	33894.51
Average Equity	33860.73	33894.51	33894.51	33894.51	33894.51
Return on Equity (Base Rate) (%)	15.5	15.5	15.5	15.5	15.5
Tax Rate applicable (%)	17.472	17.472	17.472	17.472	17.472
Rate of Return on Equity (Pre-tax) (%)	18.782	18.782	18.782	18.782	18.782
Return on Equity (Pre-tax)	6359.72	6366.07	6366.07	6366.07	6366.07

Interest on Loan (IoL)



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

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

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

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

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

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

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

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

(6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.

(7) The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing”.

79. The weighted average rate of IoL has been considered on the basis of the rate prevailing as on 1.4.2019. The Petitioner has prayed that the change in interest rate due to floating rate of interest applicable, if any, during the 2019-24 tariff period will be adjusted. Accordingly, the floating rate of interest, if any, shall be considered at the time of truing up. In view of above, IoL has been allowed in accordance with Regulation 32 of the 2019 Tariff Regulations and the same is as follows:

(₹ in lakh)



Particular	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	78929.62	79087.23	79087.23	79087.23	79087.23
Cumulative Repayments up to Previous Year	19584.72	25547.54	31516.30	37485.06	43453.82
Net Loan-Opening	59344.90	53539.69	47570.93	41602.17	35633.41
Addition due to Additional Capitalization	157.61	0.00	0.00	0.00	0.00
Repayment during the year	5962.82	5968.76	5968.76	5968.76	5968.76
Net Loan-Closing	53539.69	47570.93	41602.17	35633.41	29664.65
Average Loan	56442.29	50555.31	44586.55	38617.79	32649.03
Weighted Average Rate of Interest on Loan (%)	8.494	8.476	8.494	8.516	8.525
Interest on Loan	4794.00	4284.85	3787.00	3288.65	2783.47

Depreciation

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

*"33. **Depreciation:** (1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system or element thereof including communication system. In case of the tariff of all the units of a generating station or all elements of a transmission system including communication system for which a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission system taking into consideration the depreciation of individual units:*

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

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

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

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

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

Provided also that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciated value shall correspond to the



percentage of sale of electricity under long-term power purchase agreement at regulated tariff:

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

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

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

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

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

(7) The generating company or the transmission licensee, as the case may be, shall submit the details of proposed capital expenditure five years before the completion of useful life of the project along with justification and proposed life extension. The Commission based on prudence check of such submissions shall approve the depreciation on capital expenditure.

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

81. The IT equipment has been considered as a part of the Gross Block and depreciated using WAROD. The WAROD has been worked out after taking into account the depreciation rates of IT and non-IT assets as prescribed in the 2019 Tariff Regulations. The salvage value of IT equipment has been considered nil, i.e. IT asset has been considered as 100 per cent depreciable. The depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and accumulated depreciation up to 31.3.2019. The details are given in Annexure-II. The depreciation allowed for the Combined Asset is as follows:



(₹ in lakh)

Particulars	2019-20	2020-21	201-22	2022-23	2023-24
Opening Gross Block	112756.58	112981.74	112981.74	112981.74	112981.74
Addition during 2019-24 due to Projected Additional Capitalisation	225.16	0.00	0.00	0.00	0.00
Closing Gross Block	112981.74	112981.74	112981.74	112981.74	112981.74
Average Gross Block	112869.16	112981.74	112981.74	112981.74	112981.74
Weighted Average Rate of Depreciation (WAROD) (%)	5.283	5.283	5.283	5.283	5.283
Balance useful life of the asset	31.00	30.00	29.00	28.00	27.00
Elapsed Life at the beginning of the year	3.00	4.00	5.00	6.00	7.00
Aggregate Depreciable Value	101598.49	101699.81	101699.81	101699.81	101699.81
Depreciation during the year	5962.82	5968.76	5968.76	5968.76	5968.76
Cumulative Depreciation up to previous year	19584.72	25547.54	31516.30	37485.06	43453.82
Aggregate Cumulative Depreciation	25547.54	31516.30	37485.06	43453.82	49422.58
Remaining Depreciable Value	76050.95	70183.52	64214.76	58246.00	52277.24

Operation & Maintenance Expenses (O&M Expenses)

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

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

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<i>Norms for sub-station Bays (₹ Lakh per bay)</i>					
765 kV	45.01	46.60	48.23	49.93	51.68
400 kV	32.15	33.28	34.45	35.66	36.91
220 kV	22.51	23.30	24.12	24.96	25.84
132 kV and below	16.08	16.64	17.23	17.83	18.46
<i>Norms for Transformers (₹ Lakh per MVA)</i>					
765 kV	0.491	0.508	0.526	0.545	0.564
400 kV	0.358	0.371	0.384	0.398	0.411
220 kV	0.245	0.254	0.263	0.272	0.282
132 kV and below	0.245	0.254	0.263	0.272	0.282
<i>Norms for AC and HVDC lines (₹ Lakh per km)</i>					
Single Circuit (Bundled Conductor with six or more sub-conductors)	0.881	0.912	0.944	0.977	1.011
Single Circuit (Bundled conductor with four sub-conductors)	0.755	0.781	0.809	0.837	0.867
Single Circuit (Twin & Triple Conductor)	0.503	0.521	0.539	0.558	0.578
Single Circuit (Single Conductor)	0.252	0.260	0.270	0.279	0.289
Double Circuit (Bundled conductor with four or more sub-conductors)	1.322	1.368	1.416	1.466	1.517



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<i>Double Circuit (Twin & Triple Conductor)</i>	0.881	0.912	0.944	0.977	1.011
<i>Double Circuit (Single Conductor)</i>	0.377	0.391	0.404	0.419	0.433
<i>Multi Circuit (Bundled Conductor with four or more sub-conductor)</i>	2.319	2.401	2.485	2.572	2.662
<i>Multi Circuit (Twin & Triple Conductor)</i>	1.544	1.598	1.654	1.713	1.773
<i>Norms for HVDC stations</i>					
<i>HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB)</i>	834	864	894	925	958
<i>Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW)</i>	1,666	1,725	1,785	1,848	1,913
<i>500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)</i>	2,252	2,331	2,413	2,498	2,586
<i>±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)</i>	2,468	2,555	2,645	2,738	2,834
<i>±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500 MW)</i>	1,696	1,756	1,817	1,881	1,947
<i>±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)</i>	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.”

83. The total O&M Expenses claimed by the Petitioner is as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Sub-station Bays					
Aurangabad Ckt #1 Bay	1	1	1	1	1
Aurangabad Ckt #2 Bay	1	1	1	1	1
240 MVAr Switchable Line Reactor for Ckt #1	1	1	1	1	1
240 MVAr Switchable Line Reactor for Ckt #2	1	1	1	1	1
Aurangabad:765KV Solapur #1 BAY	1	1	1	1	1
Aurangabad:765KV Solapur #2 BAY	1	1	1	1	1
Aurangabad:3X80 MVAR Switchable Line Reactor 1	1	1	1	1	1
Aurangabad:3X80 MVAR Switchable Line Reactor 2	1	1	1	1	1
Norm (₹ lakh/bay)					
765 kV Bay	45.01	46.60	48.23	49.93	51.68
Total Sub-station O&M	360.08	372.80	385.84	399.44	413.44
Transmission Lines					
765 kV D/C Solapur - Aurangabad TL	278.55	278.55	278.55	278.55	278.55
Norm (₹ lakh/ km)					
D/C Bundled with 4 or more sub-conductor)	1.32	1.37	1.42	1.47	1.52
Total Transmission Line:					
D/C Bundled with 4 or more sub-conductor)	368.24	381.06	394.43	408.35	422.56
Communication System					
PLCC – capital cost (₹ lakh)	400.48	400.48	400.48	400.48	400.48



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Norm (%)					
PLCC	2	2	2	2	2
Total Communication System	8.01	8.01	8.01	8.01	8.01
Total O&M Expenses	736.33	761.87	788.28	815.80	844.01

84. The Petitioner has claimed O&M Expenses separately for 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 has been specified accordingly. Accordingly, the Commission vide order dated 24.1.2021 in Petition No.126/TT/2020 has already concluded that no separate O&M Expenses can be allowed for PLCC under Regulation 35(4) of the 2019 Tariff Regulations even though PLCC is a communication system. Therefore, the Petitioner's claim for separate O&M Expenses for PLCC @2% is not allowed. The relevant portions of the order dated 24.1.2021 in Petition No.126/TT/2020 are extracted hereunder.

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

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

106. The principle adopted in this petition that PLCC is part of sub-station and accordingly no separate O&M Expenses is admissible for PLCC equipment in the 2019-24 tariff period under Regulation 35(4) of the 2019 Tariff Regulations shall be



applicable in case of all petitions where similar claim is made by the Petitioner. As already mentioned, the Commission, however, on the basis of the claim made by the Petitioner has inadvertently allowed O&M Expenses for PLCC equipment @2% of its original project cost, which is applicable for other “communication system”, for 2019-24 period in 31 petitions given in Annexure-3 of this order. Therefore, the decision in this order shall also be applicable to all the petitions given in Annexure-3. Therefore, PGCIL is directed to bring this decision to the notice of all the stakeholders in the 31 petitions given in Annexure-3 and also make revised claim of O&M Expenses for PLCC as part of the sub-station at the time of truing up of the tariff allowed for 2019-24 period in respective petitions.”

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

85. The O&M Expenses allowed as per the norms specified in the 2019 Tariff Regulations for the Combined Asset is as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Sub-station Bays					
Aurangabad Ckt #1 Bay	1	1	1	1	1
Aurangabad Ckt #2 Bay	1	1	1	1	1
240 MVAR Switchable Line Reactor for Ckt #1	1	1	1	1	1
240 MVAR Switchable Line Reactor for Ckt #2	1	1	1	1	1
Aurangabad:765KV Solapur #1 BAY	1	1	1	1	1
Aurangabad:765KV Solapur #2 BAY	1	1	1	1	1
Aurangabad:3X80 MVAR Switchable Line Reactor 1	1	1	1	1	1
Aurangabad:3X80 MVAR Switchable Line Reactor 2	1	1	1	1	1
Norm (₹ lakh/bay)					
765 kV Bay	45.01	46.60	48.23	49.93	51.68
Total Sub-station O&M	360.08	372.80	385.84	399.44	413.44
Transmission Lines					
765 kV D/C Solapur - Aurangabad TL	278.55	278.55	278.55	278.55	278.55
Norm (₹ lakh/ km)					
D/C Bundled with 4 or more sub-conductor)	1.32	1.37	1.42	1.47	1.52
Total Transmission Line:					
D/C Bundled with 4 or more sub-conductor)	368.24	381.06	394.43	408.35	422.56
Total O&M Expenses	728.32	753.86	780.27	807.79	836.00

Interest on Working Capital (IWC)

86. Regulations 34(1)(c), 34(3), 34(4) and 3(7) of the 2019 Tariff Regulations provide 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. **Definition.....**

(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;”*

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



points) for 2020-24. The components of the working capital and interest allowed thereon for the Combined Asset is as follows:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O & M Expenses	60.69	62.82	65.02	67.32	69.67
Maintenance Spares	109.25	113.08	117.04	121.17	125.40
Receivables	2229.59	2174.54	2115.69	2056.92	1991.84
Total	2399.53	2350.44	2297.75	2245.40	2186.91
Rate of Interest (%)	12.05	11.25	11.25	11.25	11.25
Interest on working capital	289.14	264.42	258.50	252.61	246.03

Annual Fixed Charges for the 2019-24 Tariff Period

88. The various components of the annual fixed charges for the Combined Asset for the 2019-24 tariff period are summarized below:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	5962.82	5968.76	5968.76	5968.76	5968.76
Interest on Loan	4794.00	4284.85	3787.00	3288.65	2783.47
Return on Equity	6359.72	6366.07	6366.07	6366.07	6366.07
Interest on Working Capital	289.14	264.42	258.50	252.61	246.03
Operation and Maintenance	728.32	753.86	780.27	807.79	836.00
Total	18134.00	17637.96	17160.59	16683.87	16200.32

Filing Fee and Publication Expenses

89. 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

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

Goods and Services Tax

91. The Petitioner has sought to recover GST on transmission charges separately from the Respondents, if at any time GST on transmission is withdrawn from negative list in future. We have considered the submission of the Petitioner. GST is not levied on transmission service at present and we are of the view that Petitioner's prayer is premature.

Security Expenses

92. The Petitioner has submitted that security expenses for the transmission assets have not been claimed in the instant petition and it would file a separate petition for claiming the overall security expenses and the consequential IWC. The Petitioner has requested to consider the actual security expenses incurred during 2018-19 for claiming estimated security expenses for 2019-20 which shall be subject to true up at the end of the year based on the actuals. The Petitioner has submitted that similar petition for security expenses for 2020-21, 2021-22, 2022-23 and 2023-24 shall be filed on a yearly basis on the basis of the actual expenses of previous year subject to true up at the end of the year on actual expenses. The Petitioner has

submitted that the difference, if any, between the estimated security expenses and actual security expenses as per the duly audited accounts may be allowed to be recovered from the beneficiaries on an early basis.

93. 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

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

Sharing of Transmission Charges

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

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

(₹ in lakh)

Asset	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-I	Annual Fixed Charges	-	8729.62	18879.41	18561.18	18154.99
Asset-II	Annual Fixed Charges	-	-	-	796.90	1426.47

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

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Annual Fixed Charges	18134.00	17637.96	17160.59	16683.87	16200.32

98. This order disposes of Petition No. 51/TT/2020.

**Sd/
(Arun Goyal)
Member**

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

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



Annexure-I(a)

Asset	2014-19	Admitted capital cost as on 1.4.2014 (₹ in lakh)	Admitted capital cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (%)	Annual Depreciation as per Regulations				
	Capital Expenditure as on 1.4.2014				2014-15 (₹ in lakh)	2015-16 (₹ in lakh)	2016-17 (₹ in lakh)	2017-18 (₹ in lakh)	2018-19 (₹ in lakh)
Asset-I	Land	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00
	Building	61.97	369.68	3.34	0.00	4.30	6.60	9.50	12.35
	Transmission Line	87650.88	100933.64	5.28	0.00	4888.83	5223.13	5310.23	5326.58
	Sub-station	3458.64	4498.97	5.28	0.00	195.57	217.21	231.72	237.55
	PLCC	126.87	228.09	6.33	0.00	9.50	10.98	12.71	14.44
	Leasehold Land	0.00	0.00	3.34	0.00	0.00	0.00	0.00	0.00
	IT Equipment and software	96.65	97.71	5.28	0.00	5.13	5.16	5.16	5.16
	TOTAL		91395.01	106128.09		0.00	5103.34	5463.08	5569.31
Average Gross Block (₹ in lakh)					0.00	96671.68	103505.46	105543.97	106076.73
Weighted Average Rate of Depreciation (%)					0	5.279	5.278	5.277	5.275



Annexure-I(b)

Asset	2014-19	Admitted capital cost as on 1.4.2014 (₹ in lakh)	Admitted capital cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (%)	Annual Depreciation as per Regulations				
	Capital Expenditure as on 1.4.2014				2014-15 (₹ in lakh)	2015-16 (₹ in lakh)	2016-17 (₹ in lakh)	2017-18 (₹ in lakh)	2018-19 (₹ in lakh)
Asset-II	Land	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00
	Building	402.45	489.99	3.34	0.00	0.00	0.00	13.4613	14.92
	Transmission Line	0.00	0.00	5.28	0.00	0.00	0.00	0	0.00
	Sub-station	4774.34	5901.35	5.28	0.00	0.00	0.00	258.355	288.11
	PLCC	160.80	172.33	6.33	0.00	0.00	0.00	10.1807	10.55
	Leasehold Land	0.00	0.00	3.34	0.00	0.00	0.00	0.00	0.00
	IT Equipment and software	64.82	64.82	5.28	0.00	0.00	0.00	3.42226	3.42
	TOTAL		5402.41	6628.49		0.00	0.00	0.00	285.419
Average Gross Block (₹ in lakh)					0.00	0.00	0.00	5521.77	6134.81
Weighted Average Rate of Depreciation (%)					0	0	0	5.17	5.17



Annexure-II

Asset	2019-24	Admitted capital cost as on 1.4.2019 (₹ in lakh)	Admitted capital cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation (%)	Annual Depreciation as per Regulations				
	Capital Expenditure as on 1.4.2019				2019-20 (₹ in lakh)	2020-21 (₹ in lakh)	2021-22 (₹ in lakh)	2022-23 (₹ in lakh)	2023-24 (₹ in lakh)
Asset	Land	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00
	Building	859.67	859.67	3.34	28.71	28.71	28.71	28.71	28.71
	Transmission Line	100933.64	101142.93	5.28	5334.82	5340.35	5340.35	5340.35	5340.35
	Sub-station	10400.32	10416.19	5.28	549.56	549.97	549.97	549.97	549.97
	PLCC	400.42	400.42	6.33	25.35	25.35	25.35	25.35	25.35
	Leasehold Land	0.00	0.00	3.34	0.00	0.00	0.00	0.00	0.00
	IT Equipment and software	162.53	162.53	15	24.38	24.38	24.38	24.38	24.38
	TOTAL	112756.58	112981.74		5962.82	5968.76	5968.76	5968.76	5968.76
Average Gross Block (₹ in lakh)					112869.16	112981.74	112981.74	112981.74	112981.74
Weighted Average Rate of Depreciation (%)					5.28%	5.28%	5.28%	5.28%	5.28%

