

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 218/TT/2020**

**Coram:**

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

**Date of Order: 10.07.2021**

**In the matter of:**

Approval under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and truing-up of transmission tariff of 2014-19 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of 2019-24 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 **Asset A:** Procurement of 3 Numbers Spare Converter Transformers (234 MVA, 1-ph, 3 winding) at Bhadrawati HVDC Back to Back Station under "Installation of Transformer and Procurement of Spare Converter Transformer at Bhadrawati HVDC Back to Back Station" in Western Region.

**And in the matter of:**

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

**.....Petitioner**

**Versus**

1. Madhya Pradesh Power Management Company Ltd.,  
Shakti Bhawan, Rampur, Jabalpur-482008.
2. Madhya Pradesh Power Transmission Company Ltd.,  
Shakti Bhawan, Rampur, Jabalpur-482008.
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, 3<sup>rd</sup> Floor,  
M.G. Road, Fort, Mumbai-400001.
5. Maharashtra State Electricity Transmission Co. Ltd.,  
Prakashganga, 6<sup>th</sup> Floor, Plot No. C-19, E-Block,  
Bandra Kurla Complex, Bandra (East) Mumbai-400051.



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-403001.
8. Electricity Department,  
Administration of Daman & Diu, Daman-396210.
9. DNH Power Distribution Corporation Ltd.,  
Vidyut Bhawan, 66 kV Road, Near Secretariat Amla,  
Silvassa-396230.
10. Chhattisgarh State Power Transmission Co. Ltd.,  
State Load Despatch Building,  
Dangania, Raipur-492013.
11. Chhattisgarh State Power Distribution Co. Ltd.,  
P. O. Sunder Nagar, Dangania, Raipur,  
Chhattisgarh-492013.

.....Respondent(s)

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

**For Respondent:** Shri Anindya Kumar Khare, MPPMCL

### **ORDER**

The instant petition has been filed by the Petitioner, Power Grid Corporation of India Ltd., a deemed transmission licensee, for trueing up of transmission tariff of 2014-19 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) and determination of tariff for the period from 1.4.2019 to 31.3.2024 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) in respect of the transmission asset “Procurement of 3 Numbers Spare Converter Transformers



(234 MVA, 1-ph, 3 winding) at Bhadrawati HVDC Back to Back Station” under “Installation of Transformer and Procurement of Spare Converter Transformer at Bhadrawati HVDC Back to Back Station” (hereinafter referred to as “the transmission project”) in Western Region.

2. The Petitioner has made the following prayers in this Petition:

*“1) Allow the addcap for 2014-19 and 2019-24 tariff block as claimed as per Para 5.9 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 8.3 and 9.1 above.*

*3) Allow the petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before Hon'ble Commission as provided in Tariff Regulation 2014 and Tariff regulations 2019 as per para 9.1 and 10.1 above for respective block.*

*4) Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on publishing of notices in newspapers in terms of Regulation 70 (1) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019, and other expenditure ( if any) in relation to the filing of petition.*

*5) Allow the petitioner to bill and recover Licensee fee and RLDC fees and charges, separately from the beneficiaries in terms of Regulation 70 (3) and (4) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019.*

*6) Allow the 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 9.7 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”*



### 3. Backdrop of the case

a) The Investment Approval (I.A.) for the transmission project was accorded by the Board of Directors (BOD) of the Petitioner company in its 290<sup>th</sup> meeting held on 27.8.2013 and the Memorandum was issued on 28.8.2013 for ₹135.65 crore, including an IDC of ₹6.64 crore (based on April 2013 price level). Subsequently, approval for the Revised Cost Estimate (RCE) was approved by BOD of the Petitioner company vide Memorandum No: C/CP/RCE/Spare Tr. Bhadrawati dated 11.3.2016 for an estimated cost of ₹169.02 crore, including IDC of ₹9.55 crore (based on August 2015 price level) in its 326<sup>th</sup> Meeting held on 9.3.2016.

b) As per I.A., the scope of the transmission project is as follows:

**Sub-station:**

- i. Spare Converter Transformers (234 MVA, 1-ph 3 winding): 3 Numbers
- ii. Installation of 1X250 MVA, 400/220 kV ICT at Bhadrawati HVDC Back to Back Station;

c) The entire scope of the transmission project is not covered in the instant petition.

d) The tariff of the remaining asset (Installation of 1X250 MVA, 400/220 kV ICT at Bhadrawati HVDC Back to Back Station) is claimed in Petition No. 223/TT/2020. Initially, the Petitioner had filed Petition No. 56/TT/2015 for determination of tariff for 1x315 MVA, 400/220 kV ICT at Bhadravati HVDC back to back station. The Commission vide order dated 29.7.2016 in Petition No. 56/TT/2015 held as follows:

*“18. In the light of above decision, we are of the view that installation of ICT of 315 MVA capacity transformer to meet requirements of 2 MVA load is not a prudent decision on the part of the petitioner as almost entire capacity of the transformer would remain unutilized. Accordingly, the petitioner’s prayer for grant of tariff for 315 MVA ICT at Bhadravati back to back Sub-station is rejected. The petitioner is advised to shift the 315 MVA ICT to some other location where its capacity could be fully utilized and approach the Commission for tariff.”*

e) The transmission tariff for the transmission asset for 2014-19 period was determined vide order dated 2.8.2019 in Petition No. 270/TT/2018. As per I.A.,



the scheduled date of commercial operation of the transmission asset was 27.8.2015 against which it was commissioned on 22.3.2018 and thus there was time over-run of 938 days which was not condoned by the Commission vide order dated 2.8.2019.

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

5. The Petitioner has served the petition on the Respondents and notice regarding filing of this petition has been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments or suggestions have been received from the general public in response to the aforesaid notices published in the newspapers by the Petitioner. Madhya Pradesh Power Management Company Ltd. (MPPMCL), Respondent No. 1, has filed its reply vide affidavit dated 29.2.2020 and has raised issues of grossing up of RoE and effect of CGST. The Petitioner has submitted its rejoinder vide affidavit dated 23.9.2020.

6. This order is issued considering the submissions made by the Petitioner in the petition vide affidavit dated 4.12.2019, Petitioner's affidavit dated 23.9.2020 and 15.1.2021 filed in compliance of Record of Proceedings dated 7.9.2020 and Technical Validation letter dated 8.1.2021 respectively, MPPMCL's reply vide affidavit dated 29.2.2020 and Petitioner's rejoinder to MPPMCL's reply filed vide affidavit dated 23.9.2020.

7. The issues raised by MPPMCL and the clarifications given by the Petitioner are considered in the relevant portions of this order.



8. The hearing in this matter was held on 6.4.2021 through video conference and the order was reserved. Having heard the representatives of the Petitioner, MPPMCL and after perusal of the materials on record, we proceed to dispose of the petition.

**Truing up of Annual Fixed Charges for 2014-19 Tariff Period**

9. The details of the trued-up transmission charges claimed by the Petitioner for 2014-19 tariff period in respect of the transmission asset are as follows:

Particulars	(₹ in lakh)	
	2017-18	2018-19
Depreciation	13.58	533.76
Interest on Loan	14.10	537.41
Return on Equity	15.28	602.56
Interest on Working Capital	0.92	35.90
O&M Expenses	0.00	0.00
<b>Total</b>	<b>43.88</b>	<b>1709.63</b>

10. The details of the trued-up Interest on Working Capital (IWC) claimed by the Petitioner for 2014-19 tariff period in respect of the transmission asset are as follows:

Particulars	(₹ in lakh)	
	2017-18	2018-19
O&M Expenses	0.00	0.00
Maintenance Spares	0.00	0.00
Receivables	266.95	284.94
Total Working Capital	266.95	284.94
Rate of Interest (in %)	12.60	12.60
<b>Interest on Working Capital</b>	<b>0.92</b>	<b>35.90</b>

**Capital Cost**

11. The capital cost of the transmission asset has been calculated in accordance with the Regulation 9(3) of the 2014 Tariff Regulations. The Commission vide order dated 2.8.2019 in Petition No. 270/TT/2018 had admitted the capital cost as on COD and ACE as follows:



(₹ in lakh)

Capital Cost allowed as on COD	ACE (as admitted)		Capital cost as on 31.3.2019
	2017-18	2018-19	
9366.39*	138.94	2108.20	11613.53

\*Disallowed IDC and IEDC due to time over-run not condoned, adjusted from Capital Cost as on COD

12. The details of apportioned approved capital cost, actual capital cost as on COD, Additional Capital Expenditure (ACE) during 2014-19 period and total capital cost as on 31.3.2019, claimed by the Petitioner are as follows:

(₹ in lakh)

Apportioned Approved Capital Cost (as per RCE)	Actual Capital Cost as on COD	ACE		Total Capital Cost as on 31.3.2019
		2017-18	2018-19	
14264.47	9366.39**	138.94	1320.64	10825.97

\*\*The Petitioner has claimed this cost after deducting IDC and IEDC of ₹513.87 lakh and ₹255.23 lakh respectively which were earlier disallowed on account of time over-run not condoned

13. We have considered the submissions of the Petitioner. It is observed that the estimated completion cost of the transmission asset as on 31.3.2019 including the ACE is within the apportioned approved cost as per RCE.

#### **Time Over-run**

14. As per I.A., the scheduled date of commercial operation of the transmission asset was 27.8.2015 against which it achieved COD on 22.3.2018. Thus, there was time over-run of 938 days which was not condoned by the Commission vide order dated 2.8.2019 in Petition No. 270/TT/2018.

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

15. The Petitioner has claimed IDC for the transmission asset and has submitted the statement showing IDC claim, discharge of IDC liability as on COD. Accordingly,



based on the information furnished by the Petitioner, IDC considered is summarised as follows:

(₹ in lakh)			
IDC as per Auditor Certificate	IDC Disallowed due to time over-run	IDC claimed as on COD (as allowed in CERC Order)	IDC Allowed as on COD
516.11	513.87	2.24	2.24

16. The Petitioner has submitted that entire IEDC mentioned in the Auditor Certificate is on cash basis and is paid up to COD. IEDC as per the Auditor Certificate is within the percentage of hard cost as indicated in the abstract cost estimate. However, considering that the time over-run of 938 days has not been condoned, IEDC considered for the purpose of tariff calculation are as follows:

(₹ in lakh)			
IEDC as per Auditor Certificate	IEDC disallowed due to time over-run not condoned	IEDC claimed as on COD (as allowed in CERC Order)	IEDC allowed
453.59	255.23	198.36	198.36

### Initial Spares

17. The Petitioner has claimed the following Initial Spares under sub-station (SS) head in respect of the transmission asset covered in the instant petition:

(₹ in lakh)				
Particulars	Plant & Machinery cost up to cut-off date (excluding IDC and IEDC) (A)	Initial Spares claimed (B)	Ceiling limit (in %) (C)	Initial Spares worked out
				$D = [(A-B)*C / (100-C)]$
Sub-station	11165.89	37.87	6.0	710.30

18. We have considered the submissions of the Petitioner. Initial Spares are allowable subject to the ceiling specified in Regulation 13(d) of the 2014 Tariff Regulations. The Petitioner's claim of Initial Spares is within the ceiling specified in





Regulation 13(d) of the 2014 Tariff Regulations. Accordingly, Initial Spares allowed for 2014-19 period are as follows:

Particulars	Plant & Machinery cost up to cut-off date (excluding IDC and IEDC) (A)	Initial Spares claimed by the Petitioner (B)	Ceiling limit (in %) (C)	Initial Spares worked out	Initial Spares allowed in this order
				$D = [(A-B)*C / (100-C)]$	
Sub-station	11165.89	37.87	6.0	710.30	37.87

### Capital Cost as on COD

19. Accordingly, the capital cost allowed as on COD is summarised as follows:

Capital Cost claimed as allowed in previous CERC Order as on COD	Capital Cost allowed as on COD
9366.39	9366.39

### Additional Capital Expenditure (ACE)

20. The cut-off date for the transmission asset is 31.3.2021 as per Regulation 3(13) of the 2014 Tariff Regulations. The Commission vide order dated 2.8.2019 in Petition No. 270/TT/2018 had allowed ACE of ₹2247.14 lakh in respect of the transmission asset for 2014-19 period towards discharge of liability to the extent of unexecuted work. The Petitioner in the instant petition has claimed ACE as follows:

ACE Claimed	
2017-18	2018-19
138.94	1320.64

21. The Petitioner has submitted that ACE incurred in respect of the transmission asset is on account of un-discharged liability towards final payment/ withheld payment due to contractual exigencies for works executed within cut-off date. Further, ACE



within cut-off date has been claimed under Regulations 14(1)(i) and 14(1)(ii) of the 2014 Tariff Regulations. ACE claimed by the Petitioner is as follows:

(₹ in lakh)

Particulars	Regulation	ACE claimed	
		2017-18	2018-19
Balance and retention payments for liabilities other than IDC	14(1)(i)	22.18	439.67
Works deferred for execution	14(1)(ii)	116.76	880.97
<b>Total ACE</b>		<b>138.94</b>	<b>1320.64</b>

22. Further, the Petitioner vide affidavit dated 23.9.2020 has submitted the package-wise break-up as follows:

(₹ in lakh)

Vendor Details	2017-18	2018-19
<b>Balance and retention payments for liabilities other than IDC</b>		
Alstom Grid UK Limited	0.00	271.75
GE T&D India Limited	22.18	167.92
<b>Works deferred for execution</b>		
Alstom Grid UK Limited	0.00	551.73
GE T&D India Limited	116.76	329.23
<b>Total</b>	<b>138.94</b>	<b>1320.63</b>

23. We have considered the submissions made by the Petitioner and the claim has been verified from the Auditor Certificates. ACE claimed by the Petitioner has been allowed under Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations which pertains to un-discharged liabilities recognized to be payable at a future date and liabilities toward works deferred for execution respectively. Accordingly, the capital cost considered for true-up of transmission tariff of 2014-19 tariff period after including ACE in respect of the transmission asset is as follows:

(₹ in lakh)

Capital Cost allowed as on COD	ACE allowed		Capital Cost allowed as on 31.3.2019
	2017-18	2018-19	
9366.39	138.94	1320.64	10825.97



### Debt-Equity Ratio

24. The debt-equity ratio has been considered in accordance with Regulation 19 of the 2014 Tariff Regulations. The details of the debt-equity ratio as on COD and 31.3.2019 considered for the purpose of tariff computation for 2014-19 period are as follows:

Particulars	(₹ in lakh)			
	Capital cost as on COD	(in %)	Total cost as on 31.3.2019	(in %)
Debt	6556.47	70.00	7578.18	70.00
Equity	2809.92	30.00	3247.79	30.00
<b>Total</b>	<b>9366.39</b>	<b>100.00</b>	<b>10825.97</b>	<b>100.00</b>

### Depreciation

25. The Gross Block during 2014-19 tariff period has been depreciated at Weighted Average Rate of Depreciation (WAROD). WAROD at Annexure-I has been worked out after taking into account the depreciation rates of assets as specified in the 2014 Tariff Regulations and trued-up depreciation allowed is as follows:

Particulars	(₹ in lakh)	
	2017-18 (Pro-rata 10 days)	2018-19
Opening Gross Block	9366.39	9505.33
ACE	138.94	1320.64
Closing Gross Block	9505.33	10825.97
Average Gross Block	9435.86	10165.65
Weighted average rate of Depreciation (WAROD) (in %)	5.25	5.25
Balance useful life of the asset (Year)	25	25
Lapsed useful life at the beginning of the year (Year)	0	0
Depreciable Value	8492.27	9149.08
<b>Depreciation during the year</b>	<b>13.58</b>	<b>533.76</b>
Cumulative Depreciation	13.58	547.34
Remaining Depreciable Value	8478.69	8601.74

26. The details of the depreciation allowed vide order dated 2.8.2019 in Petition No. 270/TT/2018, claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:



(₹ in lakh)

Particulars	2017-18 (Pro-rata 10 days)	2018-19
Allowed vide order dated 2.8.2019 in Petition No. 270/TT/2018	13.58	552.21
Claimed by the Petitioner in the instant petition	13.58	533.76
Approved after true-up in this order	13.58	533.76

### **Interest on Loan (IoL)**

27. The Petitioner has claimed the weighted average rate of IoL based on its actual loan portfolio and rate of interest. Accordingly, IoL has been calculated based on actual interest rate submitted by the Petitioner in accordance with Regulation 26 of the 2014 Tariff Regulations. Trued-up IoL allowed in respect of the transmission asset is as follows:

(₹ in lakh)

Particulars	2017-18 (Pro-rata 10 days)	2018-19
Gross Normative Loan	6556.47	6653.73
Cumulative Repayments up to Previous Year	0.00	13.58
Net Loan-Opening	6556.47	6640.14
Additions	97.26	924.45
Repayment during the year	13.58	533.76
Net Loan-Closing	6640.14	7030.84
Average Loan	6598.31	6835.49
Weighted Average Rate of Interest on Loan (in %)	7.7998	7.8621
<b>Interest on Loan</b>	<b>14.10</b>	<b>537.41</b>

28. The details of IoL allowed vide order dated 2.8.2019 in Petition No. 270/TT/2018, claimed by the Petitioner in the instant petition and trued-up in the instant order is as follows:

(₹ in lakh)

Particulars	2017-18 (Pro-rata 10 days)	2018-19
Allowed vide order dated 2.8.2019 in Petition No. 270/TT/2018	14.18	556.78
Claimed by the Petitioner in the instant petition	14.10	537.41



Approved after true-up in this order	14.10	537.41
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**Return on Equity (RoE)**

29. The Petitioner has claimed RoE for the transmission asset in terms of Regulations 24 and 25 of the 2014 Tariff Regulations. The Petitioner has submitted that it is liable to pay income tax at Minimum Alternate Tax (MAT) rates and has claimed the following effective tax rates for 2014-19 tariff period:

Year	Claimed effective tax rate (in %)	Grossed-up RoE [(Base Rate)/(1-t)] (in %)
2017-18	21.337	19.705
2018-19	21.549	19.758

30. MPPMCL has submitted that the Petitioner has grossed-up RoE on the basis of actual taxes paid during 2016-17 and 2017-18. For 2018-19, it has been grossed-up on the basis of applicable rate of MAT, surcharge and cess. The Petitioner has not placed on record the assessment orders for 2016-17 and 2017-18. The Petitioner has not claimed the grossed-up RoE on the basis of actual taxes paid for the year 2018-19. MPPMCL has further submitted that the Petitioner has not finalized its income tax assessment order for the years 2016-17, 2017-18 and 2018-19 yet and has not placed on record the copies of assessment orders for 2014-15 and 2015-16. The Petitioner has also not submitted audited accounts in respect of actual taxes paid for 2016-17 and 2017-18.

31. In response, the Petitioner has submitted that the assessment orders for years 2014-15, 2015-16 and 2016-17 have been issued by the Income Tax Department and the Income Tax returns for the years 2017-18 and 2018-19 have been filed. The Petitioner has further submitted that basis of year wise effective tax rate and grossed-up RoE trued-up for the 2014-19 tariff period has been mentioned in the instant petition. The Petitioner has further submitted that the assessment order for the 2014-



15 and 2015-16 have already been filed in response 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 along with the rejoinder.

32. The Petitioner has further submitted that so far it has been granted trued-up tariff of 2014-19 period by the Commission in various matters vide orders dated 18.4.2020, 27.4.2020, 23.4.2020 and 16.4.2020 in Petition Nos. 247/TT/2019, 274/TT/2019, 245/TT/2019 and 307/TT/2019 respectively for the transmission asset(s) wherein effective tax rate for 2014-19 tariff period based on notified MAT rates has been considered for grossing-up of rate of RoE.

33. In view of the above, the Petitioner has submitted that grossed-up RoE (in %) and effective tax rate for 2014-19 tariff period has already been allowed by the Commission. Further, the Petitioner requested the Commission to allow its claim of the differential tariff on account of the trued-up RoE based on effective tax rate calculated as above and Income-tax assessment/ re-assessment for 2014-15, 2015-16, 2016-17, 2017-18 and 2018-19 on receipt of the respective assessment orders.

34. We have considered the submissions of the Petitioner and MPPMCL. The Commission vide order dated 2.2.2021 in Petition No. 312/TT/2020 has already dealt with the issue raised by MPPMCL. In terms of our findings in Petition No. 312/TT/2020, we do not find merit in the submissions by MPPMCL and the same are accordingly rejected.

35. The Commission vide order dated 27.4.2020 in Petition No. 274/TT/2019 has arrived at the effective tax rate based for the Petitioner based on the notified MAT rates the same is given in the table as follows:



Year	Notified MAT rates (in %) (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

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

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

37. The details of trued-up RoE allowed in respect of the transmission asset are as follows:

Particulars	₹ in lakh	
	2017-18 (Pro-rata 10 days)	2018-19
Opening Equity	2809.92	2851.60
Additions	41.68	396.19
Closing Equity	2851.60	3247.79
Average Equity	2830.76	3049.69
Return on Equity (Base Rate) (in %)	15.500	15.500
MAT Rate for respective year (in %)	21.342	21.549
Rate of Return on Equity (in %)	19.705	19.758
<b>Return on Equity</b>	<b>15.28</b>	<b>602.56</b>

38. The details of RoE allowed vide order dated 2.8.2019 in Petition No. 270/TT/2018, RoE claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

Particulars	₹ in lakh	
	2017-18 (Pro-rata 10 days)	2018-19
Allowed vide order dated 2.8.2019 in Petition	15.21	621.21



No. 270/TT/2018		
Claimed by the Petitioner in the instant petition	15.28	602.56
Approved after true-up in this order	15.28	602.56

**Operation & Maintenance Expenses (O&M Expenses)**

39. The Petitioner has not claimed any O&M Expenses for the transmission asset. Accordingly, we have not granted any O&M Expenses for the transmission asset.

**Interest on Working Capital (IWC)**

40. IWC has been worked out as per the methodology provided under Regulation 28 of the 2014 Tariff Regulations and the trued-up IWC allowed for the transmission asset for 2014-19 tariff period are as follows:

Particulars	(₹ in lakh)	
	2017-18 (Pro-rata 10 days)	2018-19
O&M Expenses (O&M Expenses for 1 month)	0.00	0.00
Maintenance Spares (15% of O&M Expenses)	0.00	0.00
Receivables (Equivalent to 2 months of annual fixed cost)	266.99	284.94
<b>Total Working Capital</b>	<b>266.99</b>	<b>284.94</b>
Rate of Interest (in %)	12.60	12.60
<b>Interest on Working Capital</b>	<b>0.92</b>	<b>35.90</b>

41. The details of IWC allowed vide order dated 2.8.2019 in Petition No. 270/TT/2018, claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

Particulars	(₹ in lakh)	
	2017-18 (Pro-rata 10 days)	2018-19
Allowed vide order dated 2.8.2019 in Petition No. 270/TT/2018	0.92	37.11
Claimed by the Petitioner in the instant petition	0.92	35.90
Approved after true-up in this order	0.92	35.90





### **Approved Annual Fixed Charges for 2014-19 Tariff Period**

42. The trued-up Annual Fixed Charges (AFC) approved for the transmission asset for 2014-19 tariff period are as follows:

Particulars	(₹ in lakh)	
	2017-18 (Pro-rata 10 days)	2018-19
Depreciation	13.58	533.76
Interest on Loan	14.10	537.41
Return on Equity	15.28	602.56
Interest on Working Capital	0.92	35.90
O&M Expenses	0.00	0.00
<b>Total</b>	<b>43.89</b>	<b>1709.63</b>

43. Accordingly, the Annual Transmission Charges allowed vide order dated 2.8.2019 in Petition No. 270/TT/2018, claimed by the Petitioner in the instant petition and approved after truing up in the instant order is as follows:

Particulars	(₹ in lakh)	
	2017-18 (Pro-rata 10 days)	2018-19
Allowed vide order dated 2.8.2019 in Petition No. 270/TT/2018	43.89	1767.32
Claimed by the Petitioner in the instant petition	43.88	1709.63
Approved after true-up in this order	43.89	1709.63

### **Determination of Annual Fixed Charges for 2019-24 Tariff Period**

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

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	591.19	614.37	614.37	614.37	614.37
Interest on Loan	561.58	540.28	491.89	443.28	393.60
Return on Equity	637.23	664.46	664.46	664.46	664.46
Interest on Working Capital	37.87	38.79	38.46	38.16	37.72
O&M Expenses	251.32	260.44	269.57	279.40	288.52
<b>Total</b>	<b>2079.19</b>	<b>2118.34</b>	<b>2078.75</b>	<b>2039.67</b>	<b>1998.67</b>



45. The details of IWC claimed by the Petitioner for 2019-24 tariff period are as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	20.94	21.70	22.46	23.28	24.04
Maintenance Spares	37.70	39.07	40.44	41.91	43.28
Receivables	255.64	261.17	256.28	251.47	245.74
<b>Total Working Capital</b>	<b>314.28</b>	<b>321.94</b>	<b>319.18</b>	<b>316.66</b>	<b>313.06</b>
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
<b>Interest on Working Capital</b>	<b>37.87</b>	<b>38.79</b>	<b>38.46</b>	<b>38.16</b>	<b>37.72</b>

### **Capital Cost**

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

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

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

- (a) *The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;*
- (b) *Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;*
- (c) *Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period;*
- (d) *Interest during construction and incidental expenditure during construction as computed in accordance with these regulations;*
- (e) *Capitalised initial spares subject to the ceiling rates in accordance with these regulations;*
- (f) *Expenditure on account of additional capitalization and de-capitalisation determined in accordance with these regulations;*
- (g) *Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the date of commercial operation as specified under Regulation 7 of these regulations;*
- (h) *Adjustment of revenue earned by the transmission licensee by using the assets before the date of commercial operation;*
- (i) *Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*
- (j) *Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of the generating station but does not include the transportation cost and any other appurtenant cost paid to the railway;*



- (k) Capital expenditure on account of biomass handling equipment and facilities, for co-firing;*
- (l) Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;*
- (m) Expenditure on account of fulfilment of any conditions for obtaining environment clearance for the project;*
- (n) Expenditure on account of change in law and force majeure events; and*
- (o) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.*

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

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

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

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

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

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

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



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

*(c) In case of hydro generating stations, any expenditure incurred or committed to be incurred by a project developer for getting the project site allotted by the State Government by following a transparent process;*

*(d) Proportionate cost of land of the existing project which is being used for generating power from generating station based on renewable energy; and*

*(e) Any grant received from the Central or State Government or any statutory body or authority for the execution of the project which does not carry any liability of repayment.”*

47. The Petitioner has claimed capital cost of ₹10825.97 lakh as on 31.3.2019 for the transmission asset. The same has been worked out by the Commission as on 31.3.2019 and considered as the opening capital cost as on 1.4.2019 for determination of tariff in accordance with Regulation 19 of the 2019 Tariff Regulations.

#### **Additional Capital Expenditure (ACE)**

48. Regulation 24 of the 2019 Tariff Regulations provides as follows:

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

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

*(a) Undischarged liabilities recognized to be payable at a future date;*

*(b) Works deferred for execution;*

*(c) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 23 of these regulations;*

*(d) Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority or order or decree of any court of law;*

*(e) Change in law or compliance of any existing law; and*

*(f) Force Majeure events:*

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

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



49. The Petitioner has claimed projected ACE for 2019-24 tariff period. ACE claimed is within the cut-off date and is claimed under Regulation 24(1)(a) of the 2019 Tariff Regulations for the transmission asset on account of un-discharged liability towards final payment/ withheld payment due to contractual exigencies for works. The Petitioner has claimed the capital cost as on 31.3.2024 as follows:

(₹ in lakh)

Capital Cost claimed as on 1.4.2019	Projected ACE 2019-20	Capital Cost claimed as on 31.3.2024
10825.97	966.48	11792.45

50. Further, the Petitioner vide affidavit dated 23.9.2020 has submitted the package-wise breakup as follows:

(₹ in lakh)

Vendor Details	2019-20
<b>Balance and retention payments for liabilities other than IDC</b>	
Alstom Grid UK Limited	532.72
GE T&D India Limited	282.67
<b>Works deferred for execution</b>	
Alstom Grid UK Limited	151.09
GE T&D India Limited	0.00
<b>Total</b>	<b>966.48</b>

51. ACE claimed on account of balance and retention payments is allowed under Regulation 24(1)(a) of the 2019 Tariff Regulations. Thus, the Commission has calculated the capital cost as on 31.3.2024 of ₹11792.45 lakh and observes that the same is within the apportioned approved capital cost (as per RCE) of ₹14264.47 lakh. Therefore, the capital cost considered for determination of transmission of 2019-24 tariff period after including ACE in respect of the transmission asset is as follows:

(₹ in lakh)

Capital Cost as on 1.4.2019	Admitted ACE 2019-20	Capital Cost as on 31.3.2024
10825.97	966.48	11792.45



## **Debt-Equity Ratio**

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

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

*Provided that:*

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

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

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

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

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

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

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

*(5) Any expenditure incurred or projected to be incurred on or after 1.4.2019 as may be admitted by the Commission as 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.”

53. The details of debt-equity considered for the purpose of computation of tariff for 2019-24 tariff period is as follows:

Particulars	(₹ in lakh)			
	Capital Cost as on 1.4.2019	(in %)	Capital Cost as on 31.3.2024	(in %)
Debt	7578.18	70.00	8254.71	70.00
Equity	3247.79	30.00	3537.73	30.00
<b>Total</b>	<b>10825.97</b>	<b>100.00</b>	<b>11792.45</b>	<b>100.00</b>

### **Depreciation**

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

**“33. Depreciation:** (1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission project or element thereof including communication project. In case of the tariff of all the units of a generating station or all elements of a transmission project including communication project 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 project 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 project, 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 project, weighted average life for the generating station of the transmission project shall be applied. Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis.

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

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

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

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



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

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

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

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

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

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

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

55. The Gross Block during the 2019-24 tariff period has been depreciated at WAROD. WAROD at Annexure-II has been worked out after taking into account the depreciation rates of assets as specified in the 2019 Tariff Regulations and depreciation allowed is as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Depreciation</b>					
Opening Gross Block	10825.97	11792.45	11792.45	11792.45	11792.45
Addition during the year 2019-24 due to projected ACE	966.48	0.00	0.00	0.00	0.00
Closing Gross Block	11792.45	11792.45	11792.45	11792.45	11792.45
Average Gross Block	11309.21	11792.45	11792.45	11792.45	11792.45
Weighted average rate of Depreciation (WAROD) (in %)	5.23	5.21	5.21	5.21	5.21
Balance useful life of the asset (Year)	24	23	22	21	20
Lapsed useful life at the beginning of the year (Year)	1	2	3	4	5
Depreciable Value	10178.29	10613.20	10613.20	10613.20	10613.20





<b>Depreciation during the year</b>	<b>591.19</b>	<b>614.37</b>	<b>614.37</b>	<b>614.37</b>	<b>614.37</b>
Cumulative Depreciation	1138.53	1752.90	2367.27	2981.64	3596.01
Remaining Depreciable Value	9039.76	8860.30	8245.93	7631.56	7017.19

### **Interest on Loan (IoL)**

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

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

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

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

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

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

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

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

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

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

57. The Petitioner has submitted that IoL has been calculated on the basis of interest rate prevailing as on 1.4.2019 for respective loans. The change in interest rate due to floating rate of interest applicable, if any, for the project needs to be claimed/



adjusted over the tariff block of 5 years directly from/ with the beneficiaries. For the purpose of the supporting documents for rate of interest, a compendium of floating rates of interest of various loans during 2014-19 tariff period has been submitted along with the truing up petition of 400 kV D/C Korba-Raipur Transmission Line, namely, Petition No. 244/TT/2019.

58. We have considered the submission of the Petitioner. The weighted average rate of IoL has been considered on the basis of rate prevailing as on 1.4.2019. The floating rate of interest, if any, shall be considered at the time of true up. Therefore, IoL has been allowed in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL approved for the transmission asset for 2019-24 tariff period is as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	7578.18	8254.71	8254.71	8254.71	8254.71
Cumulative Repayments up to Previous Year	547.34	1138.53	1752.90	2367.27	2981.64
Net Loan-Opening	7030.84	7116.18	6501.81	5887.44	5273.07
Additions	676.54	0.00	0.00	0.00	0.00
Repayment during the year	591.19	614.37	614.37	614.37	614.37
Net Loan-Closing	7116.18	6501.81	5887.44	5273.07	4658.71
Average Loan	7073.51	6809.00	6194.63	5580.26	4965.89
Weighted Average Rate of Interest on Loan (in %)	7.9392	7.9348	7.9405	7.9437	7.9260
<b>Interest on Loan</b>	<b>561.58</b>	<b>540.28</b>	<b>491.88</b>	<b>443.28</b>	<b>393.60</b>

### **Return on Equity (RoE)**

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

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

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



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

*Provided further that:*

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

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

*iii. in case of a thermal generating station, with effect from 1.4.2020:*

*a) rate of return on equity shall be reduced by 0.25% in case of failure to achieve the ramp rate of 1% per minute;*

*b) an additional rate of return on equity of 0.25% shall be allowed for every incremental ramp rate of 1% per minute achieved over and above the ramp rate of 1% per minute, subject to ceiling of additional rate of return on equity of 1.00%:*

*Provided that the detailed guidelines in this regard shall be issued by National Load Dispatch Centre by 30.6.2019.”*

**“31. Tax on Return on Equity:** (1) *The base rate of return on equity as allowed by the Commission under Regulation 30 of these regulations shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in respect of the financial year in line with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee, as the case may be. The actual tax paid on income from other businesses including deferred tax liability (i.e. income from business other than business of generation or transmission, as the case may be) shall be excluded for the calculation of effective tax rate.*

(2) *Rate of return on equity shall be rounded off to three decimal places and shall be computed as per the formula given below:*

$$\text{Rate of pre-tax return on equity} = \text{Base rate} / (1-t)$$

*Where “t” is the effective tax rate in accordance with clause (1) of this Regulation and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the company on pro-rata basis by excluding the income of non-generation or non-transmission business, as the case may be, and the corresponding tax thereon. In case of generating*



company or transmission licensee paying Minimum Alternate Tax (MAT), “t” shall be considered as MAT rate including surcharge and cess.

**Illustration-**

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

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

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

- (a) Estimated Gross Income from generation or transmission business for FY 2019-20 is Rs 1,000 crore;
- (b) Estimated Advance Tax for the year on above is Rs 240 crore;
- (c) Effective Tax Rate for the year 2019-20 = Rs 240 Crore/Rs 1000 Crore = 24%;
- (d) Rate of return on equity =  $15.50 / (1 - 0.24) = 20.395\%$ .

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

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

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity	3247.79	3537.73	3537.73	3537.73	3537.73
Additions	289.94	0.00	0.00	0.00	0.00
Closing Equity	3537.73	3537.73	3537.73	3537.73	3537.73
Average Equity	3392.76	3537.73	3537.73	3537.73	3537.73
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472	17.472



Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782	18.782
Return on Equity	637.23	664.46	664.46	664.46	664.46

### **Operation & Maintenance Expenses (O&M Expenses)**

61. The O&M Expenses claimed by the Petitioner for the transmission asset are as follows:

O&M Expenses	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Sub-station</b>					
400 kV 234 MVA Transformer at Bhadrawati					
Number of Units	3	3	3	3	3
Norms (₹ lakh/MVA)	0.358	0.371	0.384	0.398	0.411
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>251.32</b>	<b>260.44</b>	<b>269.57</b>	<b>279.40</b>	<b>288.52</b>

62. Regulation 35(3)(a) of the 2019 Tariff Regulations provide as follows:

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

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<i>Norms for sub-station Bays (₹ Lakh per bay)</i>					
765 kV	45.01	46.60	48.23	49.93	51.68
400 kV	32.15	33.28	34.45	35.66	36.91
220 kV	22.51	23.30	24.12	24.96	25.84
132 kV and below	16.08	16.64	17.23	17.83	18.46
<i>Norms for Transformers (₹ Lakh per MVA)</i>					
765 kV	0.491	0.508	0.526	0.545	0.564
400 kV	0.358	0.371	0.384	0.398	0.411
220 kV	0.245	0.254	0.263	0.272	0.282
132 kV and below	0.245	0.254	0.263	0.272	0.282
<i>Norms for AC and HVDC lines (₹ Lakh per km)</i>					
Single Circuit (Bundled Conductor with six or more sub-conductors)	0.881	0.912	0.944	0.977	1.011
Single Circuit (Bundled conductor with four sub-conductors)	0.755	0.781	0.809	0.837	0.867
Single Circuit (Twin & Triple Conductor)	0.503	0.521	0.539	0.558	0.578
Single Circuit (Single Conductor)	0.252	0.260	0.270	0.279	0.289
Double Circuit (Bundled conductor with four or more sub-conductors)	1.322	1.368	1.416	1.466	1.517
Double Circuit (Twin & Triple Conductor)	0.881	0.912	0.944	0.977	1.011
Double Circuit (Single Conductor)	0.377	0.391	0.404	0.419	0.433
Multi Circuit (Bundled Conductor with four or more sub-conductor)	2.319	2.401	2.485	2.572	2.662



Multi Circuit (Twin & Triple Conductor)	1.544	1.598	1.654	1.713	1.773
Norms for HVDC stations					
HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB)	834	864	894	925	958
Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW)	1,666	1,725	1,785	1,848	1,913
500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)	2,252	2,331	2,413	2,498	2,586
±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)	2,468	2,555	2,645	2,738	2,834
±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500 MW)	1,696	1,756	1,817	1,881	1,947
±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)	2,563	2,653	2,746	2,842	2,942

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

*Provided further that:*

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

*(b) The total allowable operation and maintenance expenses for the transmission system shall be calculated by multiplying the number of sub-station bays, transformer capacity of the transformer (in MVA) and km of line*



*length with the applicable norms for the operation and maintenance expenses per bay, per MVA and per km respectively.*

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

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

63. The Petitioner has claimed O&M Expenses for the transmission asset as per the normative O&M Expenses rates provided in Regulation 35(3)(a) of the 2019 Tariff Regulations. The Commission vide order dated 24.1.2021 in Petition No. 136/TT/2020 had dealt with the issue relating to O&M Expenses for spares ICTs. The relevant portion of the order dated 24.1.2021 is as follows:

*“28. We are also not convinced with the Petitioner’s clarification that it has not claimed O&M Expenses for the 2014-19 tariff period since the 2019 Tariff Regulations provide for O&M Expenses for transformers based on their rating. The norms specified in the 2019 Tariff Regulations are for transmission elements that are in regular use and not for spares which are used only in case of any eventualities. As already stated earlier, the ‘assets in use as spares’ are being granted tariff only on the basis of consent and approval of the concerned Regional Power Committee and as these assets are not being in regular use, we are of the view that O&M Expenses cannot be granted to the transmission assets. Accordingly, O&M Expenses are not allowed for the Combined Asset for the 2019-24 tariff period. We also feel that it is pertinent to mention here that disallowance of O&M Expenses for the Combined Asset does not mean that they do not need any maintenance and the consequent expenditure. The Combined Asset requires maintenance and the expenditure involved in maintaining them would be miniscule compared to the O&M Expenses in respect of transformers put to regular use. We are also of the view that the Petitioner should meet this expenditure from the O&M Expenses allowed for the regular ICTs installed at Mandola and Ludhiana in Northern Region. In case, the expenses are unusually high and cannot be met from the O&M Expenses allowed for the regular ICTs, the Petitioner may approach the Commission with certification of O&M Expenses from RPC at the time of true-up.”*

64. In view of the above, since the transmission asset in the instant petition is an spare ICT, O&M Expenses are not allowed.

#### **Interest on Working Capital (IWC)**

65. Regulations 34(1)(c), 34(3), 34(4) and Regulation 3(7) of the 2019 Tariff Regulations specify 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 fixed cost;*
- ii. Maintenance spares @ 15% of operation and maintenance expenses including security expenses; and*
- iii. Operation and maintenance expenses, including security expenses for one month”*

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

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

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

*“3. Definitions ...*

*(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;”*

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

	(₹ in lakh)				
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses (O&M Expenses for 1 month)	0.00	0.00	0.00	0.00	0.00
Maintenance Spares (15% of	0.00	0.00	0.00	0.00	0.00





O&M Expenses)					
Receivables (Equivalent to 45 days of annual transmission cost)	223.39	227.43	221.38	215.30	208.51
<b>Total Working Capital</b>	<b>223.39</b>	<b>227.43</b>	<b>221.38</b>	<b>215.30</b>	<b>208.51</b>
Rate of Interest (in %)	12.05	11.25	11.25	11.25	11.25
<b>Interest on Working Capital</b>	<b>26.92</b>	<b>25.59</b>	<b>24.90</b>	<b>24.22</b>	<b>23.46</b>

### **Annual Fixed Charges of 2019-24 Tariff Period**

67. The transmission charges allowed for the transmission asset for 2019-24 tariff period are as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	591.19	614.37	614.37	614.37	614.37
Interest on Loan	561.58	540.28	491.88	443.28	393.60
Return on Equity	637.23	664.46	664.46	664.46	664.46
Interest on Working Capital	26.92	25.59	24.90	24.22	23.46
O&M Expenses	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>1816.92</b>	<b>1844.70</b>	<b>1795.61</b>	<b>1746.32</b>	<b>1695.88</b>

### **Filing Fee and the Publication Expenses**

68. The Petitioner has claimed prayed for 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 & RLDC Fees and Charges**

69. The Petitioner has prayed for reimbursement of licence fee in accordance with Regulation 70(4) of the 2019 Tariff Regulations for 2019-24 tariff period. The Petitioner has also prayed for recovery of RLDC fee and charges in accordance with Regulation 70(3) of the 2019 Tariff Regulations for 2019-24 tariff period. The prayer is allowed in accordance with the 2019 Tariff Regulations.



### **Goods and Services Tax**

70. MPPMCL has submitted that the demand of the Petitioner for CGST is premature and need not be considered at this juncture. In response, the Petitioner has submitted that under CGST Act, 2017 has been implemented w.e.f. 1.7.2017. The Govt. of India has exempted the charges of transmission of electricity vide Notification No. 12/2017-Central Tax (Rate) dated 28.6.2017 at Sl. No. 25 under the heading 9969 "Transmission or distribution of electricity by an electric transmission or distribution utility" by giving applicable GST rate NIL. Hence, the transmission charges as indicated at para 4 and 5 of the instant petition are exclusive of GST. Further, if GST is levied at any rate and at any point of time in future on charge of transmission of electricity, the same shall be borne and additional paid by the Respondent(s) to the Petitioner and the same shall be charged and billed separately by the Petitioner. Further additional taxes, if any are to be paid by the Petitioner on account of demand from Government/ Statutory authorities the same may be allowed to be recovered from the beneficiaries.

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

### **Security Expenses**

72. The Petitioner has submitted that security expenses for the transmission asset are not claimed in the instant petition and it would file a separate petition for claiming the overall security expenses and the consequential IWC. The Petitioner has requested to consider the actual security expenses incurred during 2018-19 for claiming estimated security expenses for 2019-20 which shall be subject to true up at the end of the year based on the actuals. The Petitioner has submitted that similar



petition for security expenses for 2020-21, 2021-22, 2022-23 and 2023-24 shall be filed on a yearly basis on the basis of the actual expenses of previous year subject to true up at the end of the year on actual expenses. The Petitioner has submitted that the difference, if any, between the estimated security expenses and actual security expenses as per the audited accounts may be allowed to be recovered from the beneficiaries on a yearly basis.

73. We have considered the submissions of the Petitioner. We are of the view that the Petitioner should claim security expenses for all the transmission asset 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**

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

#### **Sharing of Transmission Charges**

75. With effect from 1.7.2011, sharing of transmission charges for inter-State transmission systems was governed by the provisions of the 2010 Sharing Regulations. However, with effect from 1.11.2020, the 2010 Sharing Regulations has been repealed and sharing is governed by the provisions of the 2020 Sharing Regulations. Accordingly, the liabilities of DICs for arrears of transmission charges determined through this order shall be computed DIC-wise in accordance with the provisions of respective Tariff Regulations and shall be recovered from the concerned



DICs through Bill 2 under Regulation 15(2)(b) of the 2020 Sharing Regulations. Billing, collection and disbursement of transmission charges for subsequent period shall be recovered in terms of provisions of the 2020 Sharing Regulations as provided in Regulation 57 of the 2019 Tariff Regulations.

76. To summarise:

a) The trued-up AFC approved for the transmission asset for 2014-19 tariff period is as follows:

(₹ in lakh)	
2017-18 (Pro-rata 10 days)	2018-19
43.89	1709.63

b) AFC allowed for the transmission asset for 2019-24 tariff period in this order is as follows:

(₹ in lakh)				
2019-20	2020-21	2021-22	2022-23	2023-24
1816.92	1844.70	1795.61	1746.32	1695.88

77. Annexure-I and Annexure-II given hereinafter shall form part of the order.

78. This order disposes of Petition No. 218/TT/2020 in terms of the above discussions and findings.

sd/-  
**(Pravas Kumar Singh)**  
Member

sd/-  
**(Arun Goyal)**  
Member

sd/-  
**(I. S. Jha)**  
Member

sd/-  
**(P. K. Pujari)**  
Chairperson



## ANNEXURE-I

2014-19 Capital Expenditure	Admitted Capital Cost as on 1.4.2014/COD (₹ in lakh)	ACE (₹ in lakh)			Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)	
		2017-18	2018-19	Total			2017-18	2018-19
Land - Freehold	-	-	-	-	-	-	-	-
Land - Leasehold	-	-	-	-	-	3.34%	-	-
Building Civil Works	122.45	-	63.32	63.32	185.77	3.34%	4.09	5.15
Transmission Line	-	-	-	-	-	5.28%	-	-
Sub Station	9243.94	138.94	1257.32	1396.26	10640.20	5.28%	491.75	528.61
PLCC	-	-	-	-	-	6.33%	-	-
IT Equipment (Incl. Software)	-	-	-	-	-	15.00%	-	-
<b>Total</b>	<b>9366.39</b>	<b>138.94</b>	<b>1320.64</b>	<b>1459.58</b>	<b>10825.97</b>		<b>495.84</b>	<b>533.76</b>
<b>Average Gross Block (₹ in lakh)</b>							<b>9435.86</b>	<b>10165.65</b>
<b>Weighted Average Rate of Depreciation</b>							<b>5.25%</b>	<b>5.25%</b>



## ANNEXURE-II

2019-24 Capital Expenditure	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Projected ACE (₹ in lakh)		Admitted Capital Cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)				
		2019-20	Total			2019-20	2020-21	2021-22	2022-23	2023-24
Land - Freehold	-	-	-	-	-	-	-	-	-	-
Land - Leasehold	-	-	-	-	3.34%	-	-	-	-	-
Building Civil Works & Colony	185.77	240.61	240.61	426.38	3.34%	10.22	14.24	14.24	14.24	14.24
Transmission Line	-	-	-	-	5.28%	-	-	-	-	-
Sub Station	10640.20	725.87	725.87	11366.07	5.28%	580.97	600.13	600.13	600.13	600.13
PLCC	-	-	-	-	6.33%	-	-	-	-	-
IT Equipment (Incl. Software)	-	-	-	-	15.00%	-	-	-	-	-
<b>Total</b>	<b>10825.97</b>	<b>966.48</b>	<b>966.48</b>	<b>11792.45</b>		<b>591.19</b>	<b>614.37</b>	<b>614.37</b>	<b>614.37</b>	<b>614.37</b>
<b>Average Gross Block (₹ in lakh)</b>						<b>11309.21</b>	<b>11792.45</b>	<b>11792.45</b>	<b>11792.45</b>	<b>11792.45</b>
<b>Weighted Average Rate of Depreciation</b>						<b>5.23%</b>	<b>5.21%</b>	<b>5.21%</b>	<b>5.21%</b>	<b>5.21%</b>

