

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 2/TT/2023**

**Coram:**

**Shri Jishnu Barua, Chairperson  
Shri Arun Goyal, Member  
Shri P. K. Singh, Member**

**Date of Order: 11.04.2024**

**In the matter of:**

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for truing up of transmission tariff of the 2014-19 tariff period and determination of transmission tariff of 2019-24 tariff period for Asset A1: Sub-station extension for 400/200 kV ICT at Bhadrawati HVDC Back-to-Back Station and Asset A2: 400/220 kV 250 MVA transformer shifted from Moga Sub-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 Limited,  
"Saudamini", Plot No. 2,  
Sector 29, Gurgaon-122001 (Haryana).

**...Petitioner**

**Vs.**

1. Tamil Nadu Generation and Distribution Corporation Limited (TANGEDCO),  
(Formerly Tamil Nadu Electricity Board-TNEB),  
NPKRR Maaligai, 800, Anna Salai, Chennai-600002.
2. Kerala State Electricity Board (KSEB),  
Vaidyuthi Bhavanam,  
Pattom, Thiruvananthapuram-695004.
3. Electricity Department,  
Government of Pondicherry,  
Pondicherry-605001.
4. Eastern Power Distribution Company of Andhra Pradesh Limited (APEPDCL),  
P&T Colony, Seethmmadhara,  
Vishakhapatnam, Andhra Pradesh.



5. Southern Power Distribution Company of Andhra Pradesh Limited (APSPDCL), Srinivasasa Kalyana Mandapam Backside, Tiruchanoor Road, Kesavayana Gunta, Tirupati-517501, Chittoor District, Andhra Pradesh.
6. Southern Power Distribution Company of Telangana Limited (TSSPDCL), 6-1-50, Corporate Office, Mint Compound, Hyderabad-500063, Telangana.
7. Northern Power Distribution Company of Telangana Limited (TSNPDCL), Opp. NIT Petrol Pump, Chaitanyapuri, Kazipet, Warangal-506004, Telangana.
8. Bangalore Electricity Supply Company Limited (BESCOM), Corporate Office, K.R.Circle, Bangalore-560001, Karanataka.
9. Gulbarga Electricity Supply Company Limited (GESCOM), Station Main Road, Gulbarga, Karnataka.
10. Hubli Electricity Supply Company Limited (HESCOM), Navanagar, PB Road, Hubli, Karnataka.
11. MESCOM Corporate Office, Paradigm Plaza, AB Shetty Circle, Mangalore-575001, Karnataka.
12. Chamundeswari Electricity Supply Corporation Limited (CESC), 927, L J Avenue, Ground Floor, New Kantharaj Urs Road, Saraswatipuram, Mysore-570009, Karnataka.

...Respondent(s)

**For Petitioner** : Shri Zafrul Hasan, PGCIL  
Shri Mohd. Mohsin, PGCIL  
Shri Pankaj Sharma, PGCIL

**For Respondents** : None

### **ORDER**

Power Grid Corporation of India Limited has filed the instant petition for truing up of the transmission tariff approved for the 2017-19 period under the Central Electricity Regulatory Commission (Terms and Conditions of tariff) Regulations, 2014 and determination of tariff of the 2019-24 tariff period under the Central Electricity



Regulatory Commission (Terms and Conditions of Tariff) Regulations 2019 in respect of Asset A1: Sub-station extension for 400/200 kV ICT at Bhadrawati HVDC Back-to-Back Station and Asset A2: 400/220 kV 250 MVA transformer shifted from Moga Sub-station (hereinafter referred to as the “transmission assets”) under “Installation of Transformer and Procurement of Spare Converter Transformer” at Bhadrawati HVDC Back to Back Station (hereinafter referred to as “transmission project”) in Western and Southern Region.

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

*“1) Condone the delay in filing the petition.*

*2) Allow the DOCP cost and addcap for 2014-19 and 2019-24 tariff block as claimed in the instant petition.*

*3) 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 6 and 7 above.*

*4) 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 and 9 above for respective block.*

*5) 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.*

*6) 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.*

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

*8) Allow the Petitioner to claim the overall security expenses and consequential IOWC on that security expenses separately.*

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



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

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

### **Background**

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

- a. The Investment Approval (IA) for implementation of the transmission project was accorded by the Board of Directors of the Petitioner's company in its 290<sup>th</sup> meeting held on 27.8.2013 and communicated vide Memorandum Ref. No.: C/CP/Investment/WR-273, dated 28.8.2013, at an estimated cost of ₹13565 lakh, including IDC of ₹664 lakh, based on April 2013 price level.
- b. The Revised Cost Estimate (RCE) for the transmission project was accorded by Board of Directors of the Petitioner company in its 326<sup>th</sup> meeting held on 9.3.2016 and communicated vide Memorandum Ref. No. C/CP/RCE/Spare Tr. Bhadrawati dated 11.3.2016 with an estimated cost of ₹16902 lakh including IDC of ₹955 lakh, based on August 2015 price level.
- c. The scope of the work as per IA is as follows:  
**Sub-station:**
  - Installation of 1x315 MVA, 400/220 kV ICT at Bhadrawati HVDC back-to-back station
  - Spare convertor transformers (234 MVA, 1-Ph 3 windings): 3 numbers
- d. The Petitioner was directed to shift the 315 MVA ICT to some other location where its capacity could be fully utilized and then after approaching the Commission for the tariff vide order dated 29.7.2016 in Petition No. 56/TT/2015. Accordingly, the Petitioner shifted the 315 MVA ICT to Daltanganj Sub-station, and the Commission determined the tariff



of the said transformer vide order dated 21.11.2019 in Petition No. 105/TT/2018 and was trued up vide order dated 2.1.2024 in Petition No. 372/TT/2020, under ERSS-III. Therefore, the installation of 1x315 MVA, 400/220 kV ICT at the Bhadrawati HVDC back-to-back station is not part of the transmission project.

- e. The entire scope of the transmission project has been completed and is covered under the following petitions:

<b>Assets</b>	<b>Description</b>	<b>COD</b>	<b>Remarks</b>
Asset-A	Procurement of 3 Numbers Spare Converter Transformers (234 MVA, 1-ph, 3 winding) at Bhadrawati HVDC back-to-back station.	22.3.2018	Tariff for 2014-19 period was determined vide order dated 2.8.2019 in Petition No: 270/TT/2018, and truing up of the 2014-19 tariff period and tariff for 2019-24 has been determined vide order dated 10.7.2021 in Petition No. 218/TT/2020.
Asset-B	Installation of 1x315 MVA, 400/220 kV ICT at Bhadrawati HVDC back-to-back station	19.3.2015	The tariff was disallowed vide order 29.7.2016 in Petition No. 56/TT/2015
Asset-C	Installation of 1x250 MVA, 400/220 kV ICT at Bhadrawati HVDC back-to-back station	8.9.2017**	Tariff was determined vide order dated 27.5.2022 in Petition No. 223/TT/2020. (covered in the instant petition)

*\*\* The transmission asset was shifted from the Moga Sub-station on 8.9.2017 and it is considered as the date of capitalization at the Bhadrawati Sub-station*

- f. As per IA, the transmission assets were scheduled to be put into commercial operation within 24 months from the date of approval of the Board of Directors (27.8.2013), i.e., by 26.8.2015. Subsequently, after the issuance of RCE, the execution of the transmission project was revised to May 2018. The Commission vide order dated 27.5.2022 in Petition No. 223/TT/2020 allowed the re-capitalization of the 250 MVA, 400/220/33 kV ICT (shifted from the Moga Sub-station to the Bhadrawati HVDC Sub-station) with effect from 8.9.2017.
- g. The Commission, vide order dated 27.5.2022 in Petition No. 223/TT/2020, approved the tariff for the following assets for the 2014-19 tariff period:

<b>Assets</b>	<b>COD</b>
Asset-A1: Sub-station extension for 400/200 kV ICT at Bhadrawati HVDC back-to-back station	8.9.2017
Asset-A2: 400/200 kV, 250 MVA shifted transformer from Moga Sub-station (*)	8.9.2017



\* Re-capitalization of 250 MVA, 400/220/33 kV ICT (Shifted from Moga Sub-station under Chamera I project to Bhadrawati HVDC Sub-station) has been done. Tariff for Asset-A2 was allowed vide order dated 27.5.2022 in Petition No. 223/TT/2020.

4. The Petitioner has submitted that it has deducted the depreciated cost of ₹101.83 lakh towards diverted 250 MVA ICT from the Additional Capitalization Expenditure (ACE) in 2018-19 and has considered the same in the capital cost as on COD of Asset-A1.

5. The transmission tariff approved for the 2017-19 period for Asset-A1 and Asset-A2 and the trued-up transmission tariff claimed by the Petitioner for the 2017-19 period for Asset-A1 and Asset-A2 in the instant petition are as follows:

Particulars	(₹ in lakh)	
	2017-18	2018-19
The tariff approved vide order dated 27.5.2022 in Petition No. 223/TT/2020 for Asset-A1	135.84	260.66
The trued-up tariff claimed by the Petitioner in the instant petition for Asset-A1	143.48	265.27
The tariff approved vide order dated 27.5.2022 in Petition No. 223/TT/2020 for Asset-A2	60.15	110.32
The trued-up tariff claimed by the Petitioner in the instant petition for Asset-A2	63.12	112.57

6. The transmission tariff claimed by the Petitioner for the 2019-24 tariff period for Asset-A1 and Asset-A2 in the instant petition are as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
AFC claimed for Asset-A1	226.84	223.83	220.15	216.51	212.91
AFC claimed for Asset-A2	201.70	205.10	208.49	197.98	176.00

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

8. 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 notice published in the newspapers by the Petitioner. No reply was received from any of the Respondents.

9. The hearing in this matter was held on 27.9.2023, and the order was reserved. This order is issued considering the submissions made by the Petitioner in the petition and the subsequent affidavit dated 25.9.2023. Having heard the learned counsels for the Petitioner and perused the material on record, we proceed to dispose of the petition.

10. The Petitioner has submitted that there is a delay in filing the instant petition and has prayed to condone the same.

11. As per Regulation 9(2) of the 2019 Tariff Regulations, the Petitioner is required to file the tariff petitions for truing up the tariff of the existing assets by 31.10.2019. The Commission, in an order dated 28.10.2019 in Petition No. 331/MP/2019, relaxed the provisions of Regulation 9(2) of the 2019 Tariff Regulations and permitted the Petitioner to file the tariff petitions for truing up of the tariff of the existing assets for the 2014-19 period and determination of tariff for the 2019-24 period by 31.1.2020, where the final orders for the 2014-19 period had already been issued. In matters where the tariff for the 2014-19 tariff period was not issued, the Commission observed that the petitions for truing up of the 2014-19 tariff period and determination of tariff for the 2019-24 tariff period shall be filed by the Petitioner within three months from the date of issue of the final order for the 2014-19 tariff period.

12. In the instant case, the tariff order for the transmission assets for the 2014-19 tariff period was approved vide order dated 27.5.2022 in Petition No. 223/TT/2020. As



per the order dated 28.10.2019 in Petition No. 331/MP/2019, the Petitioner was required to file the truing up petition within three months from the issuance of the tariff order, i.e., by 26.8.2022. However, the Petitioner has filed the instant petition on 8.9.2022. There is a marginal delay of 12 days in filing the petition and we condone the same. However, the Petitioner is directed to file the truing up petitions in future within the time specified in the tariff regulations.

### **TRUING UP OF THE 2014-19 TARIFF**

13. The Petitioner has sought truing-up of the tariff allowed vide order dated 27.5.2022 in Petition No. 223/TT/2020 for the transmission assets for the 2017-19 period on account of the following two reasons:

- i) Revision in capital cost as on COD and actual ACE in case of Asset-A1.
- ii) Revision in Weighted Average Rate of Depreciation (WAROD) on account of variation in asset class-wise bifurcation.

14. The Petitioner has claimed the following trued-up tariff for the transmission assets for the 2017-19 tariff period:

(₹ in lakh)		
<b>Asset-A1</b>		
<b>Particulars</b>	<b>2017-18 (pro-rata for 205 days)</b>	<b>2018-19</b>
Depreciation	30.52	56.78
Interest on Loan	34.32	61.70
Return on Equity	37.18	70.49
O&M Expenses	37.35	68.71
Interest on Working Capital	4.11	7.59
<b>Total</b>	<b>143.48</b>	<b>256.27</b>





(₹ in lakh)

<b>Asset-A2</b>		
<b>Particulars</b>	<b>2017-18 (pro-rata for 205 days)</b>	<b>2018-19</b>
Depreciation	21.87	38.94
Interest on Loan	0.00	0.00
Return on Equity	39.92	71.27
O&M Expenses	0.00	0.00
Interest on Working Capital	1.33	2.36
<b>Total</b>	<b>63.12</b>	<b>112.57</b>

15. The details of the trued-up Interest on Working Capital (IWC) claimed by the Petitioner in respect of the transmission assets for the 2017-19 tariff period are as follows:

(₹ in lakh)

<b>Particulars</b>	<b>2017-18 (pro-rata for 205 days)</b>	<b>2018-19</b>
O&M Expenses	5.54	5.73
Maintenance spares	9.98	10.31
Receivables	42.58	44.21
Total working capital	58.10	60.25
Rate of interest (in %)	12.60	12.60
<b>Interest on working capital</b>	<b>7.32</b>	<b>7.59</b>

(₹ in lakh)

<b>Particulars</b>	<b>2017-18 (pro-rata for 205 days)</b>	<b>2018-19</b>
O&M Expenses	0.00	0.00
Maintenance spares	0.00	0.00
Receivables	18.73	18.76
Total working capital	18.73	18.76
Rate of interest (in %)	12.60	12.60
<b>Interest on working capital</b>	<b>1.33</b>	<b>2.36</b>

### **Capital Cost**

16. The admitted capital cost of the transmission assets in an order dated 27.5.2022 in Petition No. 223/TT/2020 is as follows:



(₹ in lakh)

Assets	RCE Apporportioned approved cost	Expenditure up to COD (As claimed)	Capital cost allowed as on COD	ACE 2014-2019 (admitted by the Commission)		Estimated completion cost (as allowed)
				2017-18	2018-19	
				Asset-A1	2637.22	
Asset-A2	-	737.56*	737.56*	0.00	0.00	737.56

\*Gross block value as on the date of re-capitalisation.

17. The Petitioner has claimed the following capital cost as on COD and ACE in 2017-18 and 2018-19 as per the Auditor's Certificate dated 8.7.2022:

(₹ in lakh)

Assets	Apporportioned cost as per RCE	Approved capital expenditure up to COD	Capital cost claimed now	ACE 2014-2019 (revised claimed)		Capital cost (as on 31.9.2019)
				2017-18	2018-19	
				Asset-A1	2637.22	
Asset-A2	-	737.56	737.56	0.00	0.00	737.56

18. The Commission, in an order dated 27.5.2022 in Petition No. 223/TT/2020, gave the following directions to the Petitioner:

*"16. Accordingly, taking into consideration the submissions of the Petitioner, CEA Energisation Certificate, and RLDC Charging Certificate, we approve the COD of the instant transmission asset as 8.9.2017. The Petitioner has not submitted CMD certificate as required under Grid Code and the Petitioner is directed to submit the same at the time of truing-up."*

....

*"22. The Petitioner has submitted justification for variation which has been duly approved by the Board of Directors of the Petitioner. It is observed that the cost variation is mainly on account of Civil Works and sub-station equipment's like: Switchgear (CT, PT, Circuit Breaker, and Isolator, etc.), Transformers, Control, Relay & Protection Panel and Bus bars/conductors/Insulators. The capital cost on part of Bus bars/ conductors/ Insulators increased from ₹39 lakh as per FR to total actual cost of ₹227.94 due to increase in award cost compared to FR and PV resulting in an overall increase of ₹188.94 lakh i.e (-) 484.46 % which is quite higher in percentage. The cost variation is allowed subject to furnishing of the detailed justification of cost variation towards Bus bars/Insulators along with valid documentary evidence in support of cost variation at the time of truing by the Petitioner"*

19. In compliance with the Commission's direction, the Petitioner has submitted the CMD certificate as required under the Grid Code in the case of Asset-A1. As regards the cost variation, the Petitioner has submitted that the main reason for the cost variation towards bus bars/ conductors/ insulators is due to the installation of 66 kV



cable (about 4.8 km) to connect the 250 MVA ICT with associated equipment, which was not envisaged at the time of FR estimation. The cost details are as follows:

Particulars	Quantity	Amount (₹ in lakh)
66 kV 1C X 185 sq. mm Aluminum conductor with armouring / 1C X 120 sq. mm Cu with termination kit	4.8 km	
Supply		144.64
F&I		4.18
Service		79.12
<b>Total Bus bar Equipment's/Conductor/Insulator Cost</b>		<b>227.94</b>

20. We have considered the submissions of the Petitioner. The main reason submitted by the Petitioner for the cost variation towards bus bars/ conductors/ insulators is due to the installation of 66 kV cable (about 4.8 km) to connect the 250 MVA ICT, and the Petitioner has also submitted the LoA and the supply and erection details. The cost increase is due to the installation of the 66 kV cable, which was not envisaged at the time of FR. Therefore, we approve the variation of capital cost on the part of bus bars/ conductors/ insulators.

### **Re-capitalisation of Asset-A2**

21. We have considered the decapitalisation details of Asset-A2 approved in an order dated 27.5.2022 in Petition No. 223/TT/2020, which are as follows:

(₹ in lakh)					
Year of de-capitalisation	Equipment proposed to be de-capitalised	Year of capitalisation	Original book value	Debt-equity ratio	Cumulative depreciation as on 1.4.2014
2017-18	250 MVA, 400/220 kV ICT	1994-95	737.56	51.09:48.91	461.18

### **Interest During Construction ("IDC")**

22. The Petitioner has claimed IDC of ₹101.90 lakh for Asset-A1 and has submitted the Auditor's Certificate dated 8.7.2022 in support of the same. The Petitioner has



submitted the statement showing the IDC claim and discharge of IDC liability as on COD and thereafter. The details of the same are as follows:

(₹ in lakh)

Asset	IDC as per Auditor's Certificate	IDC discharged up to COD	IDC discharged during 2017-18	IDC discharged during 2018-19
Asset-A1	101.90	86.95	13.20	1.75

23. The Commission, in its order dated 27.5.2022 in Petition No. 223/TT/2022, has approved the IDC of ₹100.27 lakh for the 2017-19 period, i.e., ₹86.63 lakh has been allowed as IDC discharged up to COD and ₹13.22 lakh and ₹0.43 lakh as un-discharged IDC in 2017-18 and 2018-19 respectively.

24. The Petitioner has submitted an IDC computation statement, which contains the name of the loan, drawl date, loan amount, interest rate, and interest claimed. The IDC is worked out on the basis of the details given in the IDC statement. Further, the loan amount as on COD has been mentioned in Form-6 and Form-9C. The allowable IDC has been worked out based on the information available on record and relying on the loan amount as per Form-9C. The IDC is considered as on COD, and the summary of discharge of IDC liability up to COD and, thereafter, for the purpose of tariff determination is as follows:

(₹ in lakh)

IDC claimed by the Petitioner (as per Auditor's Certificate)	IDC allowable	IDC Discharged as on COD	Un-discharged portion of entitled IDC as on COD	IDC discharged during 2017-18	IDC discharged during 2018-19
101.90	101.9	86.95	14.95	13.20	1.75

25. The Petitioner has claimed IEDC of ₹58.64 lakh for Asset-A1. The Petitioner has claimed IEDC as on COD, which is within the percentage of hard cost as indicated in the abstract cost estimate. Hence, the entire amount of IEDC claimed has been



allowed. Accordingly, IEDC considered for the purpose of tariff calculation is as follows:

(₹ in lakh)		
Asset	IEDC claimed by the Petitioner (as per Auditor's Certificate)	IEDC allowed on cash basis as on COD
Asset-A1	58.64	58.64

### **Initial Spares**

26. The Petitioner has submitted the details of the Initial Spares based on the revised Auditor's Certificate, and the cost of Initial Spares claimed is within the norm under the 2014 Tariff Regulations.

27. The Petitioner has not claimed any Initial Spares for Asset-A2 and has claimed Initial Spares for only Asset-A1, and the same is as follows:

(₹ in lakh)						
Asset	Particulars	Plant & machinery cost up to cutoff date (A)	Initial Spares claimed (B)	Ceiling limit (in %) (C)	Initial Spares worked out	Excess Initial Spares
					$D = [(A-B)*C / (100-C)]$	
Asset-A1	Sub-station	752.73	36.33	6	45.73	0

28. We have considered the submissions of the Petitioner. The Petitioner has claimed the Initial Spares as per the 2014 Tariff Regulations, and the same was also approved in an order dated 27.5.2022 in Petition No. 223/TT/2022. Initial Spares in respect of the transmission assets are allowed as per the percentage of the plant and machinery cost as on the cut-off date.

### **Capital Cost as on COD**

29. Accordingly, the capital cost allowed as on COD under Regulation 9(2) of the 2014 Tariff Regulations is as follows:

(₹ in lakh)			
Asset	Capital cost claimed as on COD (A)	Un-discharged IDC as on COD (B)	Capital cost allowed as on COD (D=A-B)
Asset-A1	1122.09	14.95	1107.14



(₹ in lakh)

Asset	Original COD	Date of re-capitalisation	Original book value of the asset being re-capitalised	Corresponding cumulative depreciation
Asset-A2	19.5.1994	8.9.2017	737.56	461.18

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

30. The cut-off date for the transmission assets is 31.3.2020. The Petitioner has claimed ACE of ₹12.11 lakh for 2017-18 and ₹111.99 lakh for 2018-19 in respect of Asset-A1 (on accrual basis). The Petitioner has submitted that ACE incurred in 2017-18 and 2018-19 is on account of un-discharged liability towards final payment/withheld payment due to contractual exigencies for works executed within the cut-off date. The Petitioner has claimed the same under Regulation 14(1)(i) (undischarged liabilities recognized to be payable at a future date) of the 2014 Tariff Regulations.

31. We have considered the Petitioner’s submissions. Undischarged IDC as on COD has been allowed as ACE during the year of discharge. ACE claimed by the Petitioner has been allowed under Regulation 14(1)(i) of the 2014 Tariff Regulations which pertains to un-discharged liabilities recognized to be payable at a future date. Accordingly, ACE allowed for 2017-18 and 2018-19 is as follows:

(₹ in lakh)

Asset-A1	Regulations	2017-18	2018-19
Particulars			
Balance and retention payments for liabilities other than IDC	14(1)(i)	12.11	111.99
IDC discharged after COD	14(1)(i)	13.20	1.75
<b>Total ACE</b>		<b>25.31</b>	<b>113.74</b>

### **Capital Cost for the 2014-19 Tariff Period**

32. The capital cost allowed as on 31.3.2019 after including ACE in respect of the transmission assets is as follows:



(₹ in lakh)

Particulars	Capital cost as on COD considered for tariff calculation	ACE allowed during 2017-19	Total estimated completion cost up to 31.3.2019
Asset-A1	1107.14	139.05	1246.19
Asset-A2	737.56	-	737.56

### Debt-Equity Ratio

33. The Petitioner has considered the debt-equity ratio of 70:30 as on COD for Asset-A1 and 51.09:48.91 as on COD for Asset-A2.

Asset-A1	Amount as on COD (₹ in lakh)	(in %)	Amount as on 31.3.2019 (₹ in lakh)	(in %)
Debt	775.00	70.00	872.33	70.00
Equity	332.14	30.00	373.86	30.00
<b>Total</b>	<b>1107.14</b>	<b>100.00</b>	<b>1246.19</b>	<b>100.00</b>

Asset-A2	Amount as on COD (₹ in lakh)	(in %)	Amount as on 31.3.2019 (₹ in lakh)	(in %)
Debt	376.82	51.09	376.82	51.09
Equity	360.74	48.91	360.74	48.91
<b>Total</b>	<b>737.56</b>	<b>100.00</b>	<b>737.56</b>	<b>100.00</b>

34. The Commission has considered the normative debt-equity ratio for Asset-A1 and Asset-A2 as submitted by the Petitioner.

### Depreciation

35. Depreciation has been allowed as per the methodology provided in Regulation 27 of the 2014 Tariff Regulations. The gross block as on COD has been depreciated at the Weighted Average Rate of Depreciation (WAROD). WAROD is worked out considering the depreciation rates of the transmission assets prescribed in the 2014 Tariff Regulations and the depreciation allowed during the 2014-19 tariff period. Asset-A1 completed 12 years after the 2014-19 tariff period, and Asset-A2 completed 12



years in 2007. Therefore, the remaining depreciable value has been spread across the balance useful life in accordance with Regulation 27(5) of the 2014 Tariff Regulations.

36. Details of depreciation allowed for the transmission assets are as follows:

(₹ in lakh)

	Particulars	Asset-A1		Asset-A2	
		2017-18 (pro-rata 205 days)	2018-19	2017-18 (pro-rata 205 days)	2018-19
<b>A</b>	Opening Gross Block	1107.14	1132.45	737.56	737.56
<b>B</b>	ACE	25.31	113.74	0.00	0.00
<b>C</b>	Closing Gross Block (A+B)	1132.45	1246.19	737.56	737.56
<b>D</b>	Average Gross Block [(A+C)/2]	1119.80	1189.32	737.56	737.56
<b>E</b>	Average Gross Block (90% depreciable assets)	1119.80	1189.32	663.80	663.80
<b>F</b>	Average Gross Block (100% Depreciable assets)	0.00	0.00	0.00	0.00
<b>G</b>	Depreciable value (excluding IT equipment and software) (E*90%)	1007.82	1070.39	663.80	663.80
<b>H</b>	Depreciable value of IT Equipment and software	0.00	0.00	0.00	0.00
<b>I</b>	Total Depreciable value (G+H)	1007.82	1070.39	663.80	663.80
<b>J</b>	Weightage Average Rate of Depreciation (WAROD) (in %)	4.85	4.77	-	-
<b>K</b>	Elapsed useful life at the beginning of the year (Year)	0	0	19	20
<b>L</b>	Balance useful life at the beginning of the year (Year)	25	25	6	5
<b>M</b>	Depreciation during the year (D*J)	<b>30.52</b>	<b>56.78</b>	<b>18.97</b>	<b>36.73</b>
<b>N</b>	Aggregate Cumulative Depreciation at the end of the Year	30.52	87.31	480.15	516.88
<b>O</b>	Remaining Aggregate Depreciable value at the end of the year (I-N)	977.29	983.08	183.66	146.93

### Interest on Loan ("IoL")

37. The Petitioner has claimed the weighted average rate of IoL based on its actual loan portfolio and rate of interest. Accordingly, IoL is calculated based on the actual interest rate in accordance with Regulation 26 of the 2014 Tariff Regulations. The Petitioner has not claimed any IoL for Asset-A2. Hence, the IoL calculated in accordance with Regulation 26 of the 2014 Tariff Regulations is as follows:





(₹ in lakh)

<b>Asset-A1</b>			
	<b>Particulars</b>	<b>2017-18 (pro-rata for 205 days)</b>	<b>2018-19</b>
A	Gross Normative Loan	775.00	792.72
B	Cumulative Repayments up to Previous Year	0.00	30.52
C	Net Loan-Opening (A-B)	775.00	762.19
D	Addition due to ACE	17.72	79.62
E	Repayment during the year	30.52	56.78
F	Net Loan-Closing (C+D-E)	762.19	785.03
G	Average Loan (C+F)/2	768.59	773.61
H	Weighted Average Rate of Interest on Loan (in %)	7.949	7.976
I	<b>Interest on Loan (G*H)</b>	<b>34.32</b>	<b>61.70</b>

### **Return on Equity (“RoE”)**

38. The Petitioner has claimed RoE for the transmission assets in terms of Regulation 25 of the 2014 Tariff Regulations. The Petitioner has submitted that it is required to adjust the grossed up rate of RoE at the end of every financial year based on actual tax paid as per Regulation 25(3) of the 2014 Tariff Regulations in the truing up a petition for the 2014-19 tariff period. The Petitioner is liable to pay income tax at MAT rates and has claimed the following effective tax rates for the 2014-19 tariff period as follows:

<b>Year</b>	<b>Claimed effective tax rate (in %)</b>	<b>Grossed up RoE [(Base Rate)/(1-t)] (in %)</b>
2014-15	20.961	19.610
2015-16	21.342	19.705
2016-17	21.342	19.705
2017-18	21.342	19.705
2018-19	21.549	19.758

39. The Commission, in an order dated 27.4.2020 in Petition No. 274/TT/2019, had arrived at the effective tax rate for the Petitioner based on the notified MAT rates, and the same is as follows:

<b>Year</b>	<b>Notified MAT rates (inclusive of surcharge &amp; cess) (in %)</b>	<b>Effective tax (in %)</b>
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



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

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

41. The Petitioner has claimed RoE for the 2014-19 period after grossing up the RoE @15.50% with effective tax rates (based on MAT rates) each year as per the above-mentioned Regulation. RoE is trued-up on the basis of MAT rates applicable in the respective years and is approved for the transmission project for the 2014-19 tariff period as follows:

(₹ in lakh)

	Particulars	Asset-A1		Asset-A2	
		2017-18 (Pro-rata 205 days)	2018-19	2017-18 (Pro-rata 205 days)	2018-19
<b>A</b>	Opening Equity	332.14	339.74	360.71	360.71
<b>B</b>	Addition due to ACE	7.59	34.12	0.00	0.00
<b>C</b>	Closing Equity (A+B)	339.74	373.86	360.71	360.71
<b>D</b>	Average Equity (A+C)/2	335.94	356.80	360.71	360.71
<b>E</b>	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50
<b>F</b>	Tax Rate applicable (in %)	21.342	21.549	21.342	21.549
<b>G</b>	Rate of Return on Equity (Pre-tax)	19.705	19.758	19.705	19.758
<b>H</b>	<b>Return on Equity (Pre-tax) (D*G)</b>	<b>37.18</b>	<b>70.49</b>	<b>39.92</b>	<b>71.27</b>

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

42. The Petitioner has not claimed O&M Expense for Asset-A2. The Petitioner has claimed the O&M Expenses approved in an order dated 27.5.2022 in Petition No.



223/TT/2022 for Asset-A1 for the 2014-19 tariff period. We approve O&M Expenses claimed by the Petitioner for Asset-A1, and it is as follows:

(₹ in lakh)

Asset-A1		
Particulars	2017-18 (pro-rata for 205 days)	2018-19
O&M Expenses	37.35	68.71

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

43. The Petitioner has claimed IWC as per Regulation 28(1)(c) of the 2014 Tariff Regulations. The trued-up IWC allowed for Asset-A1 and Asset-A2 for the 2014-19 tariff period is as follows:

(₹ in lakh)

Particulars	Asset-A1		Asset-A2	
	2017-18 (pro-rata 205 days)	2018-19	2017-18 (pro-rata 205 days)	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	5.54	5.73	0.00	0.00
Working Capital for Maintenance Spares (15% of O&M Expenses)	9.98	10.31	0.00	0.00
Working Capital for Receivables (Equivalent to 2 months of annual fixed cost /annual transmission charges)	42.58	44.21	17.85	18.39
Total Working Capital	58.10	60.25	17.85	18.39
Rate of Interest for working capital	12.60	12.60	12.60	12.60
<b>Interest on working capital</b>	<b>4.11</b>	<b>7.59</b>	<b>1.26</b>	<b>2.32</b>

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

44. Accordingly, annual transmission charges approved for Asset-A1 and Asset-A2 after truing up for the 2014-19 tariff period are as follows:

(₹ in lakh)

Particulars	Asset-A1		Asset-A2	
	2017-18 (pro-rata 205 days)	2018-19	2017-18 (pro-rata 205 days)	2018-19
Depreciation	30.52	56.78	18.97	36.73
Interest on Loan	34.32	61.70	0.00	0.00
Return on Equity	37.18	70.49	39.92	71.27
O&M Expenses	37.35	68.71	0.00	0.00



Particulars	Asset-A1		Asset-A2	
	2017-18 (pro-rata 205 days)	2018-19	2017-18 (pro-rata 205 days)	2018-19
Interest on Working Capital	4.11	7.59	1.26	2.32
<b>Total</b>	<b>143.48</b>	<b>265.28</b>	<b>60.16</b>	<b>110.32</b>

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

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

(₹ in lakh)

Asset-A1					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	58.87	59.04	59.04	59.04	59.04
Interest on Loan	61.06	56.46	51.63	46.80	41.98
Return on Equity	70.50	70.79	70.79	70.79	70.79
O&M Expenses	32.15	33.28	34.45	35.66	36.91
Interest on Working capital	4.26	4.26	4.24	4.22	4.19
<b>Total AFC</b>	<b>226.84</b>	<b>223.83</b>	<b>220.15</b>	<b>216.51</b>	<b>212.91</b>

(₹ in lakh)

Asset-A2					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	38.94	38.94	38.94	24.99	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	67.75	67.75	67.75	67.75	67.75
O&M Expenses	89.50	92.75	96.00	99.50	102.75
Interest on Working capital	5.51	5.66	5.80	5.74	5.50
<b>Total AFC</b>	<b>201.70</b>	<b>205.10</b>	<b>208.49</b>	<b>197.98</b>	<b>176.00</b>

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

(₹ in lakh)

Asset-A1					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	2.68	2.77	2.87	2.97	3.08
Maintenance Spares	4.82	4.99	5.17	5.35	5.54
Receivables	27.89	27.60	27.14	26.69	26.18
<b>Total Working Capital</b>	<b>35.39</b>	<b>35.36</b>	<b>35.18</b>	<b>35.01</b>	<b>34.80</b>
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
<b>Interest on Working Capital</b>	<b>4.26</b>	<b>4.26</b>	<b>4.24</b>	<b>4.22</b>	<b>4.19</b>

(₹ in lakh)

Asset-A2					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	7.46	7.73	8.00	8.29	8.56



<b>Asset-A2</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Maintenance Spares	13.43	13.91	14.40	14.93	15.41
Receivables	24.80	25.29	25.70	24.41	21.64
<b>Total Working Capital</b>	<b>45.69</b>	<b>46.93</b>	<b>48.10</b>	<b>47.63</b>	<b>45.61</b>
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
<b>Interest on Working Capital</b>	<b>5.51</b>	<b>5.66</b>	<b>5.80</b>	<b>5.74</b>	<b>5.50</b>

### **Capital Cost**

47. 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 asset 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 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 asset forming part of the project, but not in use, as declared in the tariff petition;*
- (b) De-capitalised Asset 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 asset.*

- (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.”*



48. The Petitioner has submitted the capital cost for Asset-A1 and Asset-A2 for the 2019-24 tariff period as follows:

Assets	RCE apporportioned cost	Expenditure as on 31.3.2019	Projected ACE 2019-24 (as per Auditor's Certificate)					Cost as on 31.3.2024
			2019-20	2020-21	2021-22	2022-23	2023-24	
			Asset-A1	2637.22	1246.19	10.14	0.00	
Asset-A2	-	737.56	-	-	-	-	-	737.56

49. The trued-up capital cost as on 31.3.2019 for Asset-A1 and Asset-A2 has been considered as the opening capital cost as on 1.4.2019 for Asset-A1 and Asset-A2. The capital cost has been dealt with in line with Regulation 19(3) of the 2019 Tariff Regulations. Accordingly, the trued-up capital cost of ₹1246.19 lakh for Asset-A1 and ₹737.56 for Asset-A2 is considered as admitted capital cost as on 1.4.2019 for working out the tariff for the 2019-24 tariff period.

**Additional Capital Expenditure (“ACE”)**

50. The Petitioner has claimed ACE of ₹10.14 lakh in 2019-20 in the case of Asset-A1 under Regulation 24(1)(a) and has submitted that the same is incurred within the cut-off date and the completed cost is within the RCE cost of ₹2637.22 lakh.

51. We have considered the submissions of the Petitioner. The ACE claimed by the Petitioner for Asset-A1 towards undischarged liability is allowed under Regulation 24(1)(a) of the 2019 Tariff Regulations.

**Capital cost allowed as on 31.3.2024**

52. The capital cost of Asset-A1 and Asset-A2 considered for the 2019-24 tariff period, subject to truing-up, is as follows:

Assets	Capital cost as on 1.4.2019	Approved Add Cap 2019-24					Cost as on 31.3.2024
		2019-20	2020-21	2021-22	2022-23	2023-24	
		Asset-A1	1246.19	10.14	0.00	0.00	
Asset-A2	737.56	-	-	-	-	-	737.56



## **Debt-Equity Ratio**

53. Regulations 18 of the 2019 Tariff Regulations provides as follows:

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

Provided that:

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

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

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

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

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

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

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

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

(6) Any expenditure incurred for the emission control system during the tariff period as may be admitted by the Commission as additional capital expenditure for determination of supplementary tariff, shall be serviced in the manner specified in clause (1) of this Regulation.”





54. The details of the debt-equity ratio considered for the purpose of computation of transmission tariff for the 2019-24 tariff period are as follows:

Asset-A1	Capital cost as on 1.4.2019 (₹ in lakh)	(in %)	Capital cost as on 31.3.2024 (₹ in lakh)	(in %)
Debt	872.33	70.00	879.43	70.00
Equity	373.86	30.00	376.90	30.00
<b>Total</b>	<b>1246.19</b>	<b>100.00</b>	<b>1256.33</b>	<b>100.00</b>
Asset-A2	Capital cost as on 1.4.2019 (₹ in lakh)	(in %)	Capital cost as on 31.3.2024 (₹ in lakh)	(in %)
Debt	376.84	51.09	516.29	70.00
Equity	360.72	48.91	221.27	30.00
<b>Total</b>	<b>737.56</b>	<b>100.00</b>	<b>737.56</b>	<b>100.00</b>

### Depreciation

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

**“33. Depreciation:** (1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system or element thereof including communication system. In case of the tariff of all the units of a generating station or all elements of a transmission system including communication system for which a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission system taking into consideration the depreciation of individual units: Provided that effective date of commercial operation shall be worked out by considering the actual date of commercial operation and installed capacity of all the units of the generating station or capital cost of all elements of the transmission system, for which single tariff needs to be determined.

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

(3) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset: Provided that the salvage value for IT equipment and software shall be considered as NIL and 100% value of the assets shall be considered depreciable;

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

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



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

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

*(5) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-I to these regulations for the Asset-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 asset*

*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.*

*(9) Where the emission control system is implemented within the original scope of the generating station and the date of commercial operation of the generating station or unit thereof and the date of operation of the emission control system are the same, depreciation of the generating station or unit thereof including the emission control system shall be computed in accordance with Clauses (1) to (8) of this Regulation.*

*(10) Depreciation of the emission control system of an existing or a new generating station or unit thereof where the date of operation of the emission control system is subsequent to the date of commercial operation of the generating station or unit thereof, shall be computed annually from the date of operation of such emission control system based on straight line method, with salvage value of 10%, over a period of*

- a) twenty-five years, in case the generating station or unit thereof is in operation for fifteen years or less as on the date of operation of the emission control system; or*
- b) balance useful life of the generating station or unit thereof plus fifteen years, in case the generating station or unit thereof is in operation for more than fifteen years as on the date of operation of the emission control system; or*
- c) ten years or a period mutually agreed by the generating company and the beneficiaries, whichever is higher, in case the generating station or unit thereof has completed its useful life.”*



56. We have considered the submissions of the Petitioner. WAROD has been worked out considering the depreciation rates of IT and non-IT assets as prescribed in the 2019 Tariff Regulations and given in Annexure-II. The salvage value of IT equipment has been considered nil, i.e., IT assets have been considered 100% depreciable. The depreciation allowed in respect of the transmission assets for the 2019-24 tariff period is as follows:

(₹ in lakh)

Asset-A1						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Gross Block	1246.19	1256.33	1256.33	1256.33	1256.33
B	Addition during the year 2019-24 due to projected ACE	10.14	0.00	0.00	0.00	0.00
C	Closing Gross Block (A+B)	1256.33	1256.33	1256.33	1256.33	1256.33
D	Average Gross Block (A+C)/2	1251.26	1256.33	1256.33	1256.33	1256.33
E	Average Gross Block (90% depreciable assets)	1251.26	1256.33	1256.33	1256.33	1256.33
F	Average Gross Block (100% depreciable assets)	0.00	0.00	0.00	0.00	0.00
G	Depreciable value (excluding IT equipment and software) (E*90%)	1126.13	1130.70	1130.70	1130.70	1130.70
H	Depreciable value of IT equipment and software (F*100%)	0.00	0.00	0.00	0.00	0.00
I	Total Depreciable Value (G+H)	1126.13	1130.70	1130.70	1130.70	1130.70
J	Weighted average rate of Depreciation (WAROD) (in %)	4.70	4.70	4.70	4.70	4.70
K	Lapsed useful life at the beginning of the year (Year)	1	2	3	4	5
L	Balance useful life at the beginning of the year (Year)	24	23	22	21	20
M	<b>Depreciation during the year (D*J)</b>	<b>58.86</b>	<b>59.03</b>	<b>59.03</b>	<b>59.03</b>	<b>59.03</b>
N	Cumulative Depreciation at the end of the year	146.13	205.16	264.19	323.23	382.26
O	Remaining Aggregate Depreciable Value at the end of the year	980.01	925.54	866.50	807.47	748.44

(₹ in lakh)

Asset-A2						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Gross Block	737.56	737.56	737.56	737.56	737.56
B	Addition during the year 2019-24 due to projected ACE	0.00	0.00	0.00	0.00	0.00
C	Closing Gross Block (A+B)	737.56	737.56	737.56	737.56	737.56
D	Average Gross Block (A+C)/2	737.56	737.56	737.56	737.56	737.56
E	Average Gross Block (90% depreciable assets)	737.56	737.56	737.56	737.56	737.56
F	Average Gross Block (100%	0.00	0.00	0.00	0.00	0.00



<b>Asset-A2</b>						
	<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
	depreciable assets)					
G	Depreciable value (excluding IT equipment and software) (E*90%)	663.80	663.80	663.80	663.80	663.80
H	Depreciable value of IT equipment and software (F*100%)	0.00	0.00	0.00	0.00	0.00
I	Total Depreciable Value (G+H)	663.80	663.80	663.80	663.80	663.80
J	Lapsed useful life at the beginning of the year (Year)	21	22	23	24	25
K	Balance useful life at the beginning of the year (Year)	4	3	2	1	0
<b>L</b>	<b>Depreciation during the year</b>	<b>36.73</b>	<b>36.73</b>	<b>36.73</b>	<b>36.73</b>	<b>0.00</b>
M	Cumulative Depreciation at the end of the year	553.61	590.34	627.07	663.80	663.80
N	Remaining Aggregate Depreciable Value at the end of the year	110.19	73.46	36.73	0.00	0.00

### **Interest on Loan (“IoL”)**

57. 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 decapitalization of asset, 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.*



(5a) The rate of interest on loan for installation of emission control system shall be the weighted average rate of interest of actual loan portfolio of the emission control system or in the absence of actual loan portfolio, the weighted average rate of interest of the generating company 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”.

58. The weighted average rate of IoL approved in the order dated 27.5.2022 in Petition No. 223/TT/2020 is considered for Asset-A1.

59. IoL has been worked out in accordance with Regulation 32 of the 2019 Tariff Regulations. The Petitioner has prayed that the change in interest rate due to the floating rate of interest applicable, if any, during the 2019-24 tariff period will be adjusted. The change in rate of interest, if any, shall be considered at the time of true-up. IoL allowed in respect of the transmission assets for the 2019-24 tariff period is as follows:

		(₹ in lakh)				
		<b>Asset-A1</b>				
	<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
A	Gross Normative Loan	872.33	879.43	879.43	879.43	879.43
B	Cumulative Repayments up to Previous Year	87.26	146.12	204.93	263.74	322.54
C	Net Loan-Opening (A-B)	785.07	733.31	674.50	615.70	556.89
D	Addition due to ACE	7.10	0.00	0.00	0.00	0.00
E	Repayment during the year	58.86	58.81	58.81	58.81	58.81
F	Net Loan-Closing (C+D-E)	733.31	674.50	615.70	556.89	498.08
G	Average Loan (C+F)/2	759.19	703.90	645.10	586.29	527.49
H	Weighted Average Rate of Interest on Loan (in %)	8.04	8.02	8.01	7.99	7.97
I	<b>Interest on Loan (G*H)</b>	<b>61.0</b>	<b>56.48</b>	<b>51.66</b>	<b>46.85</b>	<b>42.05</b>

### **Return on Equity (“RoE”)**

60. Regulation 30 and Regulation 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 cutoff 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 or in the absence of actual loan portfolio of the generating station or the transmission system, the weighted average rate of interest of the generating company or the transmission licensee, as the case may be, as a whole shall be considered, subject to ceiling of 14%.

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.

(3) The return on equity in respect of additional capitalization on account of emission control system shall be computed at the base rate of one year marginal cost of lending rate (MCLR) of the State Bank of India as on 1st April of the year in which the date of operation (ODe) occurs plus 350 basis point, subject to ceiling of 14%;

**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:



*Rate of pre-tax return on equity = 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:*

*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.”*

61. The Petitioner has submitted that the MAT rate is applicable to it. As per Regulation 31(3) of the 2019 Tariff Regulations, the grossed-up rate of RoE at the end of every financial year shall be trued up 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 IT authorities pertaining to the 2019-24 tariff period on actual gross income of any financial year. However, penalty, if any, arising on account of the 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 RoE after truing up shall be recovered



or refunded to the beneficiaries or the long-term customers, as the case may be on a year-to-year basis. The Petitioner has further submitted that adjustment due to any additional tax demand, including interest duly adjusted for any refund of tax, including interest received from IT authorities, shall be recoverable /adjustable during the tariff period 2019-24 on a year-to-year basis on receipt of Income Tax assessment Order.

62. We have considered the Petitioner’s submissions. The MAT rate applicable in the year 2019-20 has been considered for the purpose of RoE, which shall be trued up with the actual tax rate in accordance with Regulation 31(3) of the 2019 Tariff Regulations. RoE allowed with respect to the transmission assets for the 2019-24 tariff period is as follows:

(₹ in lakh)

Asset-A1						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Equity	373.86	376.90	376.90	376.90	376.90
B	Addition due to ACE	3.04	0.00	0.00	0.00	0.00
C	Closing Equity (A+B)	376.90	376.90	376.90	376.90	376.90
D	Average Equity (A+C)/2	375.38	376.90	376.90	376.90	376.90
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50	15.50
F	Tax Rate applicable (in %)	17.472	17.472	17.472	17.472	17.472
G	Rate of Return on Equity (Pre-tax)	18.782	18.782	18.782	18.782	18.782
H	<b>Return on Equity (Pre-tax) (D*G)</b>	<b>70.50</b>	<b>70.79</b>	<b>70.79</b>	<b>70.79</b>	<b>70.79</b>

(₹ in lakh)

Asset-A2						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Equity	360.71	360.71	360.71	360.71	221.27
B	Addition due to ACE	0.00	0.00	0.00	0.00	0.00
C	Closing Equity (A+B)	360.71	360.71	360.71	360.71	221.27
D	Average Equity (A+C)/2	360.71	360.71	360.71	360.71	221.27
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50	15.50
F	Tax Rate applicable (in %)	17.472	17.472	17.472	17.472	17.472
G	Rate of Return on Equity (Pre-tax)	18.782	18.782	18.782	18.782	18.782
H	<b>Return on Equity (Pre-tax) (D*G)</b>	<b>67.75</b>	<b>67.75</b>	<b>67.75</b>	<b>67.75</b>	<b>41.56</b>

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

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





(₹ in lakh)

O&M Expenses	2019-20	2020-21	2021-22	2022-23	2023-24
Asset-A1	32.15	33.28	34.45	35.66	36.91
Asset-A2	89.50	92.75	96.00	99.50	102.75

64. Regulation 35(3)(a) of the 2019 Tariff Regulations provides as follows:

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

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Norms for sub-station Bays (₹ Lakh per bay)</b>					
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
<b>Norms for Transformers (₹ Lakh per MVA)</b>					
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
<b>Norms for AC and HVDC lines (₹ Lakh per km)</b>					
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	0.26	0.27	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
<b>Norms for HVDC stations</b>					
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	2,563	2,653	2,746	2,842	2,942



<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
<i>bipole scheme (Rs Lakh) (3000 MW)</i>					

*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  $\pm 500$  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  $\pm 500$  kV Talchar-Kolar HVDC bi-pole scheme (2000 MW);*
- iv. the O&M expenses of  $\pm 800$  kV Champa-Kurukshetra HVDC bi-pole scheme (3000 MW) shall be on the basis of the normative O&M expenses for  $\pm 800$  kV, Bishwanath-Agra HVDC bi-pole scheme;*
- v. the O&M expenses of  $\pm 800$  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  $\pm 800$  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.*

65. We have considered the Petitioner's submission. The O&M Expenses approved for the transmission assets under Regulation 35(3)(a) of the 2019 Tariff Regulations for the 2019-24 tariff period is as follows:

	(₹ in lakh)				
<b>O&amp;M Expenses</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Asset-A1 1 Number 400 kV ICT bay at Bhadrawati Sub-station	32.15	33.28	34.45	35.66	36.91
Asset-A2 250 MVA ICT at Bhadrawati Sub- station	89.50	92.75	96.00	99.50	102.75



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

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

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

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

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

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

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

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

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

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

67. The Petitioner submitted that it computed IWC for the 2019-24 period considering the SBI Base Rate plus 350 basis points as on COD of the transmission project. The Petitioner has considered the rate of IWC as 12.05% for the complete tariff period.

68. 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, 11.25% (SBI 1-year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) for 2020-21 and 10.50%



(SBI 1-year MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points) for 2021-24. The components of the working capital and interest allowed thereon are as follows:

(₹ in lakh)

<b>Asset-A1</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Working Capital for O&M Expenses (O&M Expenses for one month)	2.68	2.77	2.87	2.97	3.08
Working Capital for Maintenance Spares (15% of O&M Expenses)	4.82	4.99	5.17	5.35	5.54
Working Capital for Receivables (Equivalent to 45 days of annual fixed cost /annual transmission charges)	27.89	27.56	27.07	26.62	26.18
<b>Total Working Capital</b>	<b>35.39</b>	<b>35.33</b>	<b>35.11</b>	<b>34.95</b>	<b>34.79</b>
Rate of Interest for working capital (in %)	12.05	11.25	10.50	10.50	12.00
<b>Interest on working capital</b>	<b>4.26</b>	<b>3.97</b>	<b>3.69</b>	<b>3.67</b>	<b>4.17</b>

(₹ in lakh)

<b>Asset-A2</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Working Capital for O&M Expenses (O&M expenses for one month)	7.46	7.73	8.00	8.29	8.56
Working Capital for Maintenance Spares (15% of O&M expenses)	13.43	13.91	14.40	14.93	15.41
Working Capital for Receivables (Equivalent to 45 days of annual fixed cost /annual transmission charges)	24.52	25.01	25.43	25.88	18.37
<b>Total Working Capital</b>	<b>45.41</b>	<b>46.65</b>	<b>47.83</b>	<b>49.09</b>	<b>42.35</b>
Rate of Interest for working capital (in %)	12.05	11.25	10.50	10.50	12.00
<b>Interest on working capital</b>	<b>5.47</b>	<b>5.24</b>	<b>5.01</b>	<b>5.14</b>	<b>5.08</b>

### Annual Fixed Charges for 2019-24 Tariff Period

69. The transmission charges allowed in respect of the transmission assets for the 2019-24 tariff period is as follows:

(₹ in lakh)

<b>Asset-A1</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Depreciation	58.86	59.03	59.03	59.03	59.03
Interest on Loan	61.06	56.48	51.66	46.85	42.05
Return on Equity	70.50	70.79	70.79	70.79	70.79
O&M Expenses	32.15	33.28	34.45	35.66	36.91
Interest on Working Capital	4.26	3.97	3.68	3.67	4.17
<b>Total</b>	<b>226.84</b>	<b>223.32</b>	<b>219.39</b>	<b>215.77</b>	<b>212.73</b>



(₹ in lakh)

<b>Asset-A2</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Depreciation	36.73	36.73	36.73	36.73	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	67.75	67.75	67.75	67.75	
O&M Expenses	89.50	92.75	96.00	99.50	102.75
Interest on Working Capital	5.47	5.24	5.01	5.14	5.08
<b>Total</b>	<b>199.45</b>	<b>202.47</b>	<b>205.49</b>	<b>209.12</b>	<b>149.39</b>

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

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

### **Licence Fee and RLDC Fees and Charges**

71. The Petitioner shall be entitled to 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 to recovery of RLDC fees and charges in accordance with Regulations 70(3) of the 2019 Tariff Regulations for the 2019-24 tariff period.

### **Goods and Services Tax**

72. The Petitioner has submitted that if GST is levied at any rate and at any point of time in future on charges of transmission of electricity, the same shall be borne and additionally paid by the Respondent(s) to the Petitioner and the same shall be charged 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.

73. We have considered the Petitioner's submissions. Since GST is not levied on transmission service at present, the Petitioner's prayer is premature.



## **Security Expenses**

74. The Petitioner has submitted that security expenses in respect of transmission assets are not claimed in the instant petition, and it would file a separate petition for claiming the overall security expenses and consequential IWC.

75. We have considered the above submissions of Petitioner. The Petitioner has claimed consolidated security expenses for all the transmission assets owned by it on a projected basis for the 2019-24 tariff period on the basis of actual security expenses incurred in 2018-19 in Petition No. 260/MP/2020. The said petition has already been disposed of by the Commission vide order dated 3.8.2021. Therefore, the Petitioner's prayer in the instant petition for allowing it to file a separate petition for claiming the overall security expenses and consequential IWC has become infructuous.

## **Capital Spares**

76. 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**

77. The Commission, in an order dated 27.5.2022 in Petition No. 223/TT/2020, has held as follows:

*"76. We have considered the submissions of the Petitioner and MPPMCL. It is observed that in the 34th meeting held on 11.8.2018 it was agreed that depreciated cost of the 250 MVA ICT at Bhadravathi Sub-station shifted from Moga sub-station and bay equipment cost will be shared by Southern Region beneficiaries. The relevant portion of the minutes of the meeting dated 11.8.2018 is extracted hereunder:*

*"18.13 250 MVA ICT at Bhadravathi Substation shifted from Moga Substation PGCIL vide letter dated 26.7.2018 (refer Annexure-XXIX) had informed that out of two (2) nos. dismantled 250 MVA ICT at Moga S/S, one (1) no. ICT had been diverted to Bhadravathi S/S. As agreed in 31st SRPC Meeting held on 25.2.2017, the said diverted ICT was proposed to be provided at Bhadravathi at zero cost. However, in Review Petition No. 182/MP/2017, Hon'ble CERC*



*has denied this ICT as regional spare. Therefore, instead of zero cost, depreciated cost of diverted ICT and bay equipment cost needs to be shared by Southern Region beneficiaries.  
TCC recommended for approval.  
SRPC approved TCC recommendation.”*

*“77. In view of the above, the tariff approved in the instant order for the depreciated cost of the diverted ICTs and bay equipment shall be recovered on monthly basis in accordance with Regulation 43 of the 2014 Tariff Regulations and shall be shared by the Southern Region beneficiaries and long term transmission customers in accordance with the Central Electricity Regulatory Commission (Sharing of Inter State Transmission Charges and Losses) Regulations, 2010 as amended from time to time.”*

78. As per the above decision of the Commission, the 250 MVA ICT is part of the regional component of SR. Accordingly, the transmission charges approved in this order for the transmission assets for the 2017-19 period and the 2019-24 tariff period shall be shared by the Southern Region beneficiaries and the Long Term Transmission Customers as per the applicable Sharing Regulations as provided under Regulation 43 of the 2014 Tariff Regulations and Regulation 57 of the 2019 Tariff Regulations respectively.

79. To summarise:

- (a) AFC allowed in respect of the transmission assets for the 2014-19 tariff period in this order are as follows:

(₹ in lakh)

AFC	Asset-A1		Asset-A2	
	2017-18 (pro-rata 205 days)	2018-19	2017-18 (pro-rata 205 days)	2018-19
	143.48	265.28	60.16	110.32

- (b) AFC allowed in respect of the transmission assets for the 2019-24 tariff period in this order are as follows:

(₹ in lakh)

AFC	2019-20	2020-21	2021-22	2022-23	2023-24
Asset-A1	226.84	223.32	219.39	215.77	212.73
Asset-A2	199.45	202.47	205.49	209.12	149.39



80. The Annexure given hereinafter form part of the order.

81. This order disposes of Petition No. 2/TT/2023 in terms of the above findings and discussions.

sd/-  
**(P. K. Singh)**  
**Member**

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

sd/-  
**(Jishnu Barua)**  
**Chairperson**





**Annexure-I****For Asset-A1:**

(₹ in lakh)

Capex	Admitted capital cost as on COD	ACE		Admitted capital cost as on 31.3.2024	Depreciation Rate (in %)	Annual Depreciation	
		2017-18	2018-19			2017-18	2018-19
Building	238.76	14.96	112.37	366.16	3.34	8.23	10.33
Sub-station	868.31	10.35	1.37	880.03	5.28	46.12	46.43
PLCC	0.00	0.00	0.00	0.00	5.28	0.00	0.00
IT Equipment	0.00	0.00	0.00	0.00	6.33	0.00	0.00
<b>Total</b>	<b>1107.14</b>	<b>25.31</b>	<b>113.74</b>	<b>1246.19</b>		<b>54.35</b>	<b>56.78</b>
<b>Avg. Gross Block</b>						<b>1119.80</b>	<b>1189.32</b>
<b>WAROD (in %)</b>						<b>4.85</b>	<b>4.77</b>

**For Asset-A2:**

(₹ in lakh)

Capex	Admitted Capital Cost as on COD	ACE		Admitted Capital Cost as on 31.3.2024	Depreciation Rate (in %)	Annual Depreciation	
		2017-18	2018-19			2017-18	2018-19
Building	0.00	0.00	0.00	0.00	3.34	0.00	0.00
Sub-station	737.56	0.00	0.00	737.56	5.28	38.94	38.94
PLCC	0.00	0.00	0.00	0.00	6.33	0.00	0.00
IT Equipment	0.00	0.00	0.00	0.00	15.00	0.00	0.00
<b>Total</b>	<b>737.56</b>	<b>0.00</b>	<b>0.00</b>	<b>737.56</b>		<b>38.94</b>	<b>38.94</b>
<b>Avg. Gross Block</b>						<b>737.56</b>	<b>737.56</b>
<b>WAROD (in %)</b>						<b>5.28</b>	<b>5.28</b>



**Annexure-II**

(₹ in lakh)

Capex	Admitted capital cost as on COD	Projected ACE					Admitted capital cost as on 31.3.2024	Depreciation Rate (in %)	Annual Depreciation				
		2019-20	2020-21	2021-22	2022-23	2023-24			2019-20	2020-21	2021-22	2022-23	2023-24
Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34	0.00	0.00	0.00	0.00	0.00
Transmission Line	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.28	0.00	0.00	0.00	0.00	0.00
Sub-station	737.56	0.00	0.00	0.00	0.00	0.00	737.56	5.28	38.94	38.94	38.94	38.94	38.94
PLCC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.33	0.00	0.00	0.00	0.00	0.00
IT Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.00	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>737.56</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>737.56</b>		<b>38.94</b>	<b>38.94</b>	<b>38.94</b>	<b>38.94</b>	<b>38.94</b>
								<b>Avg. Gross Block</b>	<b>737.56</b>	<b>737.56</b>	<b>737.56</b>	<b>737.56</b>	<b>737.56</b>
								<b>WAROD (in %)</b>	<b>5.28</b>	<b>5.28</b>	<b>5.28</b>	<b>5.28</b>	<b>5.28</b>

