

**CENTRAL ELECTRICITY REGULATORY COMMISSION**

**NEW DELHI**

**Petition No. 95/TT/2020**

**Coram:**

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

**Date of Order : 20.08.2020**

**In the Matter of:**

Approval under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and truing up of the transmission tariff of the 2014-19 period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2014 and determination of transmission tariff of the 2019-24 period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for Combined Asset consisting of **Asset-I:** Farakka–Baharampur 400 kV D/C transmission line with 01 No. 400 kV line bay at Baharampur Sub-station and 02 Nos 400 kV line bays at Farakka (Sub-station of NTPC); **Asset-II:** LILO of Farakka-Jeerat 400 kV S/C line at Sagardighi (WPDCL) Sub-station with associated line bays; **Asset-III:** 01 No. 125 MVar Bus Reactor and 01 No. 400 kV line bay at Baharampur Sub-station under the Eastern Region Strengthening Scheme-XV (ERSS-XV) in the Eastern Region.

**And in the Matter of:**

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

**.... Petitioner**

**Vs**

1. Bihar State Power (Holding) Company Ltd.  
(Formerly Bihar State Electricity Board -BSEB)  
Vidyut Bhavan, Bailey Road, Patna-800001.
2. West Bengal State Electricity Distribution Company Ltd.  
Bidyut Bhawan, Bidhan Nagar,  
Block DJ, Sector-II, Salt Lake City,  
Calcutta-700091.
3. Grid Corporation of Orissa Ltd.  
Shahid Nagar, Bhubaneswar-751007.



4. Jharkhand State Electricity Board  
In front of Main Secretariat,  
Doranda, Ranchi-834002.

5. Damodar Valley Corporation  
DVC Tower, Maniktala,  
Civic Centre, VIP road, Calcutta-700054.

6. Power Department  
Govt. of Sikkim, Gangtok-737101.

...Respondents

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

**For Respondent** : None

### **ORDER**

The instant petition has been filed by Power Grid Corporation of India Limited (hereinafter referred to as “the Petitioner”), a deemed transmission licensee, for truing up of the tariff of the 1.4.2014 to 31.3.2019 period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) and for determination of tariff for 1.4.2019 to 31.3.2024 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) in respect of the following assets (hereinafter collectively referred to as “the transmission assets/ Combined Asset”) under the Eastern Region Strengthening Scheme-XV (ERSS-XV) in the Eastern Region (hereinafter referred to as “the transmission scheme”):

**Asset-I:** Farakka–Baharampur 400 kV D/C transmission line with 01 no. 400 kV line bay at Baharampur Sub-station and 02 Nos. 400 kV line bays at Farakka (Sub-station of NTPC);

**Asset-II:** LILO of Farakka-Jeerat 400 kV S/C line at Sagardighi (WPDCL) Sub-station with associated line bays;



**Asset-III:** 01 no. 125 MVAr Bus Reactor and 01 no. 400 kV line bay at Baharampur Sub-station.

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

*“1) Approve the trued-up Transmission Tariff for 2014-19 block and transmission tariff for 2019-24 block for the assets covered under this petition, as per para 9.1 and 10.0 above.*

*2) Approve the Completion cost and additional capitalization incurred during 2014-19.*

*3) Allow the petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission as provided in Tariff Regulation 2014 and Tariff regulations 2019 as per para 9.1 and 10.0 above for respective block.*

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

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

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

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

*8) Allow the petitioner to claimed Initial Spares project as whole.*

*9) 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 10.6 above.*

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

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



## **Background**

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

a) The Investment Approval (IA) for implementation of “Eastern Region Strengthening Scheme-XV (ERSS-XV) in the Eastern Region” was accorded by Board of Directors of the Petitioner Company in 327<sup>th</sup> meeting held on 2.4.2016 vide the Memorandum Ref: C/CP/ERSS-XV dated 5.4.2016 at an estimated cost of ₹45111 lakh including IDC of ₹2673 lakh based on October, 2015 price level. The transmission scheme was discussed and ratified by the regional constituents in the 17<sup>th</sup> Standing Committee Meeting of ER held on 25.5.2015. Further, the scheme was discussed and ratified in the 30<sup>th</sup> Eastern Regional Power Committee (ERPC) meeting held on 26.6.2015. The scope of work under the “Eastern Region Strengthening Scheme-XV (ERSS-XV)” in the Eastern Region is as under:

### **Transmission Lines**

- i. Farakka - Baharampur 400 kV D/C (Twin HTLS) line - 80 km
- ii. Removal of the existing LILO of Farakka- Jeerat S/C line at Baharampur- 3 km
- iii. LILO of Farakka - Jeerat 400 kV S/C line at Sagardighi- 15 km
- iv. LILO of Sagardighi - Subhasgram 400 kV S/C line at Jeerat-1.03 km

### **Sub-stations**

- i. Extension at 400/220 kV Farakka Sub-station of NTPC  
-2 nos. 400 kV line bays for Farakka-Baharampur 400 kV D/C (HTLS) line
- ii. Extension at 400/220 kV Sagardighi Sub-station of West Bengal  
-2 nos. 400 kV line bays for LILO of Farakka-Jeerat 400 kV S/C line (formed after removal of the existing LILO of Farakka-Jeerat S/C line at Baharampur) at Sagardighi
- iii. Extension at 400/200 kV Jeerat Sub-station of West Bengal  
-2 nos. 400 kV GIS line bays for LILO of Sagardighi-Subhasgram 400 kV S/C line at Jeerat
- iv. Extension at 400 kV Baharampur Sub-station\*  
-2 nos. 400 kV line bays for termination of Farakka-Baharampur 400 kV D/C (HTLS) line and
- v. -125 MVAr bus reactor at 400 kV at Baharampur Sub-station  
Extension at 400 kV Subhasgram Sub-station  
- Conversion of 50 MVAr fixed line reactor at Subhasgram end of Sagaradighi  
- Subhasgram 400 kV S/C line to switchable line reactor



(\*2 nos. of 400 kV line bays released after removal of existing LILO of Farakka - Jeerat 400 kV S/c line at Baharampur are proposed to be utilized for connection of one existing bus reactor which is presently connected to one end of the bus due to space constraint & one new bus reactor mentioned above.)

b) The date of commercial operation of the instant transmission assets along with the time over-run are as under:

Asset	Asset nomenclature in order dated 12.9.2019 in Petition No. 259/TT/2018	Asset Details	SCOD	COD	Time over-run	Time over-run condoned
Asset-I	Asset-I	Farakka– Baharampur 400 kV D/C transmission line with 01 No. 400 kV line bay at Baharampur Sub-station and 02 nos. 400 kV line bays at Farakka (Sub-station of NTPC)	2.4.2018	3.9.2018	154 days	Yes (154 days)
Asset-II	Asset-II	LILO of Farakka– Jeerat 400 kV S/C line at Sagardighi (WPDCL) Sub-station with associated line bays		7.8.2018	127 days	Yes (127 days)
Asset-III	Asset-IV	01 No. 125 MVAR Bus Reactor and 01 No. 400 kV line bay at Baharampur Sub-station		30.3.2018	Nil	-

c) The LILO of 400 kV S/C Farakka-Jeerat Transmission line at Baharampur was put under commercial operation on 1.9.2013 alongwith the 400 kV D/C Baharampur-Bheramara T/L, 1 no. 80 MVAR bus reactor and associated line bays and reactor bay at Baharampur associated with inter-connection of electrical grid of India and Bangladesh (Indian Portion). The tariff for the same was approved vide order dated 11.8.2014 in Petition No.101/TT/2013 for the period from COD of 1.9.2013 to 31.3.2014. The tariff for the 2009-14 was trued up and the tariff for the 2014-19 period was allowed vide order dated 31.1.2017 in Petition No.558/TT/2017. The Petitioner has claimed truing up of the tariff of



the 2014-19 tariff period and the determination of tariff of the 2019-24 in Petition No.171/TT/2020, which is under consideration by the Commission.

d) The Petitioner vide affidavit dated 29.5.2020 has submitted that de-capitalisation of ₹352.55 lakh has been done in “Inter-connection between India and Bangladesh Electrical Grids for India portion in Eastern Region” in Petition No. 171/TT/2020 (hereinafter referred to as “the Indo-Bangla Project”).

e) The corresponding re-capitalisation of ₹352.55 lakh has been done in the instant Asset-I of project under ERSS-XV.

f) The entire scope of work of the subject project is not covered under the instant petition. The tariff for the Asset-I, Asset-II and Asset-III for the 2014-19 period was approved vide order dated 12.9.2019 in Petition No. 259/TT/2018.

g) The AFC approved by the Commission vide order dated 12.9.2019 in Petition No. 259/TT/2018 and that claimed by the Petitioner after true-up in respect of the instant assets for the 2014-19 period are as under:

(₹ in lakh)			
Asset	Particulars	2017-18	2018-19
Asset-I	Annual Fixed Charges (AFC) approved vide order dated 12.9.2019 in Petition No. 259/TT/2018	--	2248.38
	AFC claimed based on truing up in the instant petition	--	2225.90
Asset-II	AFC approved vide order dated 12.9.2019 in Petition No. 259/TT/2018	--	493.92
	AFC claimed based on truing up in the instant petition	--	487.30
Asset-III	AFC approved vide order dated 12.9.2019 in Petition No. 259/TT/2018	1.24	253.86
	AFC claimed based on truing up in the instant petition	1.26	295.50*

\* The Petitioner has claimed O&M Expenses for the bay which has been made a part of Asset-III on removal of the LILO of the Farakka-Jeerat at Bahrapur besides the bay which was originally part of the asset.



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

5. The Petitioner has served the petition on the Respondents and notice of this application has been published in the newspaper in accordance with Section 64 of the Electricity Act, 2003. No comments/ objections have been received from the general public in response to the aforesaid notice published in the newspaper by the Petitioner. None of the Respondents have filed any reply to the petition. The hearing in this matter was held on 19.5.2020 through video conference and the order was reserved.

6. Having heard the representatives of the Petitioner and perused the material on record, we proceed to dispose of the petition. This order is issued considering the submissions made in the Petition and affidavits dated 12.3.2020, 15.5.2020 and 29.5.2020.

#### **Truing Up of Annual Fixed Charges of the 2014-19 Period**

7. The details of the transmission charges claimed by the Petitioner in respect of the instant assets are as under:

(₹ in lakh)

Particulars	Asset-I	Asset-II	Asset-III	
	2018-19 (Pro-rata)	2018-19 (Pro-rata)	2017-18 (Pro-rata)	2018-19
Depreciation	642.46	125.72	0.28	59.55
Interest on Loan	633.62	109.35	0.27	50.07
Return on Equity	743.39	140.34	0.31	66.78
Interest on Working Capital	49.72	12.73	0.04	10.86
O&M Expenses	156.71	99.16	0.36	108.24
<b>Total</b>	<b>2225.90</b>	<b>487.30</b>	<b>1.26</b>	<b>295.50</b>



8. The details of Interest on Working Capital (IWC) claimed by the Petitioner in respect of the instant assets are as under:

(₹ in lakh)

Particulars	Asset-I	Asset-II	Asset-III	
	2018-19 (Pro-rata)	2018-19 (Pro-rata)	2017-18 (Pro-rata)	2018-19
O&M Expenses	22.70	12.73	5.54	11.45
Maintenance Spares	40.86	22.91	9.98	20.61
Receivables	644.81	125.09	38.38	54.11
Total Working Capital	708.37	160.73	53.90	86.17
Rate of Interest (%)	12.20	12.20	12.60	12.60
<b>Interest on Working Capital</b>	<b>49.72</b>	<b>12.73</b>	<b>0.04</b>	<b>10.86</b>

### Time over-run

9. As stated above in paragraph 3(b) above, there was time over-run of 154 days and 127 days in case of Assets-I and II respectively. The Commission vide order dated 12.9.2019 in Petition No. 259/TT/2018 held that time over-run was due to right of way issues and was beyond the control of the Petitioner and, therefore, condoned time over-run of 154 days and 127 days for Asset-I and Asset-II respectively.

### Capital Cost

10. The details of FR approved apportioned capital cost, estimated expenditure upto COD and actual ACE incurred during period 2018-19 as claimed by the Petitioner are as under:

(₹ in lakh)

Asset	Apportioned Approved Capital Cost	Actual Capital Cost as on COD	Actual ACE 2018-19	Total Capital Cost as on 31.3.2019
Asset-I	28811.54	19577.49	3691.63	23269.12
Asset-II	5736.61	3009.33	1310.60	4319.93
Asset-III	1649.95	992.83	307.18	1300.01
<b>Total</b>	<b>36198.10</b>	<b>23579.65</b>	<b>5309.41</b>	<b>28889.06</b>





11. We have considered the submissions of the Petitioner and it is observed that the estimated capital cost of the instant assets as on 31.3.2019, including the ACE is within the apportioned approved capital cost. Therefore, there is no cost over-run.

**Interest During Construction (IDC) and Incidental Expense During Construction (IEDC)**

12. There was time over-run in respect of Asset-I and Asset-II under the instant petition, which was fully condoned and, therefore, there is no disallowance of IDC.

13. The Petitioner has claimed IDC of the transmission assets covered in the petition and has submitted the statement showing IDC claim and discharge of IDC liability as on COD. Accordingly, the IDC details are considered for the purpose of tariff calculation as under:

(₹ in lakh)				
Asset	IDC as per Auditor Certificate	IDC Discharged up to COD	IDC discharged during 2018-19	IDC to be discharged during 2019-20
Asset-I	896.84	299.97	582.68	14.19
Asset-II	176.02	154.51	6.41	15.10
Asset-III	47.54	8.11	39.43	0.00
<b>Total</b>	<b>1120.40</b>	<b>462.59</b>	<b>628.52</b>	<b>29.29</b>

14. The Petitioner vide Auditor Certificates dated 21.11.2019 has also claimed IEDC for the instant assets as per the tabulation given below. The Petitioner has claimed IEDC as on the date of commercial operation. Further, the Petitioner has submitted that the entire IEDC claimed is paid up to COD of the assets. Hence, the entire amount of IEDC has been allowed. Accordingly, the IEDC details considered for the purpose of tariff calculation in respect of the instant assets are as under:



(₹ in lakh)

Asset	IEDC allowed vide order dated 12.9.2019 in Petition No. 259/TT/2018	IEDC claimed as per Auditor Certificate	IEDC considered as on COD	IEDC discharged up to COD
Asset-I	65.64	65.64	65.64	65.64
Asset-II	26.19	26.19	26.19	26.19
Asset-III	17.29	17.29	17.29	17.29
<b>Total</b>	<b>109.12</b>	<b>109.12</b>	<b>109.12</b>	<b>109.12</b>

**Initial Spares**

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

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

16. The Petitioner has prayed to allow the claimed Initial Spares for the project as a whole. The Initial Spares claimed by the Petitioner are as under:

(₹ in lakh)

Asset	Capital Cost (A)		Spares limit (%) (B)		Initial Spares worked out and claimed by the Petitioner (C)		Spares permissible $D = [(A-C) * B / (100-B)]$	
	TL	SS	TL	SS	TL	SS	TL	SS
Asset-I	20539.39	2567.25	1.0	6.0	198.00	110.24	205.47	156.83
Asset-II	2590.72	1727.00	1.0	6.0	25.00	88.45	25.92	104.59
Asset-III	0.00	1258.18	1.0	6.0	0.00	68.45	0.00	75.94

17. The Initial Spares discharge statement as submitted by the Petitioner for the instant assets is as under:

(₹ in lakh)

Asset	Initial Spares claimed		Initial Spares discharge							
			Upto COD		2018-19		2019-20		2020-21	
	TL	SS	TL	SS	TL	SS	TL	SS	TL	SS
Asset-I	198.00	110.24	178.20	99.22	9.80	5.02	5.00	3.00	5.00	3.00



Asset-II	25.00	88.45	22.50	79.61	1.50	4.84	1.00	3.00	0.00	1.00
Asset-III	0.00	68.45	0.00	61.61	0.00	3.84	0.00	3.00	0.00	0.00

18. We have considered the submissions of the Petitioner. The Appellate Tribunal for Electricity (APTEL) in its judgement dated 14.9.2019 in Appeal No. 74 of 2017 has held as under:

*“The Central Commission to have a prudence check on the initial spares, being restricted based on the individual asset wise cost initially, but subsequently ought to have allowed as per the ceiling limits on the overall project cost basis during the true-up.”*

19. As per APTEL’s judgement dated 14.9.2019 in Appeal No. 74 of 2017, the Initial Spares are to be allowed as per the ceiling limits on the overall project cost. In the instant case, the transmission project is not complete with respect to its defined scope. Hence, Initial Spares are allowed for the instant assets for the 2014-19 tariff period on the basis of the cost of the individual asset taking into consideration the norms specified in the 2014 Tariff Regulations and the same will be allowed on the basis of the overall project cost after all the assets covered in the instant transmission project are put into commercial operation.

20. As per the 2014 Tariff Regulations, the allowable limit for Initial Spares for the transmission line and transmission sub-station are 1.00% and 6.00% respectively. The details of the Initial Spares allowed are as under:

Asset	Type	Capital Cost (₹ in lakh)	Initial Spares claimed (₹ in lakh)	Norms as per 2014 Tariff Regulations (%)	Initial Spares allowable as per Norms (₹ in lakh)	Excess Initial Spares (₹ in lakh)	Allowed in order dated 12.9.2019 (₹ in lakh)	Allowed in instant order (₹ in lakh)
		A	B	C	$D = (A-B) * C / (100-C)$	E=B-D		
Asset-I	Sub-station	2376.04	110.24	6.00	144.63	--	104.11	110.24
Asset-II		1727.00	88.45	6.00	104.59	--	88.45	88.45



Asset-III		1285.18	68.45	6.00	77.66	--	68.45	68.45
<b>Total</b>		<b>5388.22</b>	<b>267.14</b>		<b>326.88</b>	--	<b>261.01</b>	<b>267.14</b>

Asset	Type	Capital Cost (₹ in lakh)	Initial Spares claimed (₹ in lakh)	Norms as per 2014 Tariff Regulations (%)	Initial Spares allowable as per Norms (₹ in lakh)	Excess Initial Spares (₹ in lakh)	Allowed in order dated 12.9.2019 (₹ in lakh)	Allowed in instant order
		A	B	C	$D = \frac{(A-B) \times C}{100-C}$	E=B-D		
Asset-I	Transmission Line	20378.05	198.00	1.00	203.84	--	198.00	198.00
Asset-II		2590.72	25.00	1.00	25.92	--	25.00	25.00
<b>Total</b>		<b>22968.77</b>	<b>223.00</b>		<b>229.76</b>	--	<b>223.00</b>	<b>223.00</b>

21. The Petitioner's claim is within the ceiling and hence, the Initial Spares are allowed as claimed.

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

22. The capital cost of the existing project has been calculated in accordance with Regulation 9(3) and Regulation 9(6) of 2014 Tariff Regulations. The Commission vide order dated 12.9.2019 in Petition No. 259/TT/2018 had allowed capital cost as on COD of ₹22520.29 lakh and projected ACE of ₹5865.34 lakh for determination of tariff for the 2014-19 period for the transmission assets covered under instant petition as shown under:

Asset	Apportioned approved Capital Cost as per FR	Admitted Capital Cost as on COD	Admitted ACE	Total admitted Capital Cost as on 31.3.2019
			2018-19	
Asset-I	28811.54	18597.25	4298.50	22895.75
Asset-II	5736.61	2976.48	1257.56	4234.04
Asset-III	1649.95	946.56	309.28	1255.84
<b>Total</b>	<b>36198.10</b>	<b>22520.29</b>	<b>5865.34</b>	<b>28385.63</b>

23. The details of the capital cost as on COD tried up after adjustment of IDC are as under:



(₹ in lakh)

Asset	Capital Cost claimed as on COD (accrual basis) (A)	Un-discharged IDC (B)	Capital Cost allowed as on COD (C) = (A-B)
Asset-I	19224.94*	596.87	18628.07
Asset-II	3009.33	21.51	2987.82
Asset-III	992.83	39.43	953.40
<b>Total</b>	<b>23227.10</b>	<b>657.81</b>	<b>22569.29</b>

\*Excluding ₹352.55 lakh re-capitalised from “Interconnection between India and Bangladesh Electrical Grids for India portion in the Eastern Region” after de-capitalising from Petition No. 171/TT/2020. The same has been allowed in the ACE in paragraph 30.

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

24. The Commission had allowed ACE of ₹5865.34 lakh for transmission assets covered under instant petition in 2014-19 towards balance and retention payments vide order dated 12.9.2019 in Petition No. 259/TT/2018.

25. The Petitioner has claimed ACE of ₹5937.93 lakh incurred during 2018-19 on account of undischarged liability towards final payment/ withheld payment due to contractual exigencies for works executed within the cut-off date under Regulation 14(1)(i) and 14(1)(ii) of the 2014 Tariff Regulations.

26. The details of the ACE claimed are as under:

Asset	Period	ACE claimed (₹ in lakh)	Justification	Regulation
Asset-I	2018-19	582.68	IDC Discharged after COD	14(1)(i)
		3691.63	Balance & Retention Payment including undischarged Spares (₹14.82 lakh)	14(1)(i)
	<b>Total - A</b>	<b>4274.31</b>		
Asset-II	2018-19	6.41	IDC Discharged after COD	14(1)(i)
		1310.60	Balance & Retention Payment including undischarged Spares (₹6.34 lakh)	14(1)(i)
	<b>Total - B</b>	<b>1317.01</b>		
Asset-III	2018-19	39.43	IDC Discharged after COD	14(1)(i)
		307.18	Balance & Retention Payment including undischarged Spares (₹3.84 lakh)	14(1)(i)
	<b>Total - C</b>	<b>346.61</b>		
<b>Total (A+B+C)</b>		<b>5937.93</b>		



27. In response to the Commission's query regarding variation in ACE approved vide order dated 12.9.2019 in Petition No. 259/TT/2018 and that claimed in the instant petition for 2018-19, the Petitioner vide affidavit dated 15.5.2020 has submitted that ACE approved in order dated 12.9.2019 was based on projections. While projecting ACE, contracts were not closed, and liabilities had not been finalized. However, in the instant petition, ACE is claimed based on actual payments made to the contractor after receipt of final invoices from the contractor and incorporating the amendments. The Petitioner has further submitted that the payments were made after submission of invoice and after reconciliation in accordance with contractual clause(s) as per provisions of contract(s) though the works got executed up to COD/ cut-off date. Thus, such estimates are revised while filing the petition for true-up of tariff.

28. We have considered the submissions made by the Petitioner. The ACE claimed by the Petitioner has been allowed under Regulation 14(1)(i) of the 2014 Tariff Regulations as it is towards balance and retention payments. The entitled un-discharged IDC liability as well as Initial Spares un-discharged as on COD have been allowed as ACE during the year of its discharge. The ACE allowed for the transmission assets from COD to 31.3.2019 is as under:

Asset	(₹ in lakh)		
	ACE 2018-19	IDC discharged during 2018-19	Total ACE (including discharged IDC) 2018-19
Asset-I	3691.63	582.68	4274.31
Asset-II	1310.60	6.41	1317.01
Asset-III	307.18	39.43	346.61
<b>Total</b>	<b>5309.41</b>	<b>628.52</b>	<b>5937.93</b>

29. The details of the capital cost and ACE allowed as on 31.3.2019 are as under:



(₹ in lakh)

Asset	Admitted Capital Cost as on COD	ACE (including IDC discharged)	Total Capital Cost as on 31.3.2019
		2018-19	
Asset-I	18628.07	4626.86*	23254.93
Asset-II	2987.82	1317.01	4304.83
Asset-III	953.40	346.61	1300.01
<b>Total</b>	<b>22569.29</b>	<b>6290.48</b>	<b>28859.77</b>

\*₹352.55 lakh re-capitalised as ACE in the instant petition after de-capitalising from “Interconnection between India and Bangladesh Electrical Grids for India portion in the Eastern Region” as the tariff on the same amount would be serviced in Petition No.171/TT/2020 for proportionate period.

### Debt-Equity ratio

30. The debt-equity ratio has been considered in accordance with Regulation 19(1), (3) and (5) of the 2014 Tariff Regulations. The debt and equity allowed for individual assets for determination of tariff for the period ending 31.3.2014 has been considered as opening debt and equity of the project as on 1.4.2014. The debt and equity ratio of 70:30 has been considered for ACE allowed during the 2014-19 period in accordance with Regulation 19(3) of the 2014 Tariff Regulations.

31. In response to the Commission’s query regarding actual equity infused for ACE during 2014-19, the Petitioner vide affidavit dated 15.5.2020 has submitted that the equity infused for ACE during 2014-19 is 30% for the given transmission assets.

32. The details of Debt-Equity in respect of the instant assets as on COD and as on 31.3.2019 are as under:

### For Asset-I

Particulars	Capital Cost as on COD (₹ in lakh)	(%)	ACE during 2014-19 (₹ in lakh)	(%)	Total Capital Cost as on 31.3.2019 (₹ in lakh)	(%)
Debt	13039.65	70.00	3238.80	70.00	16278.45	70.00
Equity	5588.42	30.00	1388.06	30.00	6976.48	30.00
<b>Total</b>	<b>18628.07</b>	<b>100.00</b>	<b>4626.86</b>	<b>100.00</b>	<b>23254.93</b>	<b>100.00</b>



### For Asset-II

Particulars	Capital Cost as on COD (₹ in lakh)	(%)	ACE during 2014-19 (₹ in lakh)	(%)	Total Capital Cost as on 31.3.2019 (₹ in lakh)	(%)
Debt	2091.47	70.00	921.91	70.00	3013.38	70.00
Equity	896.35	30.00	395.10	30.00	1291.45	30.00
<b>Total</b>	<b>2987.82</b>	<b>100.00</b>	<b>1317.01</b>	<b>100.00</b>	<b>4304.83</b>	<b>100.00</b>

### For Asset-III

Particulars	Capital Cost as on COD (₹ in lakh)	(%)	ACE during 2014-19 (₹ in lakh)	(%)	Total Capital Cost as on 31.3.2019 (₹ in lakh)	(%)
Debt	667.38	70.00	242.63	70.00	910.01	70.00
Equity	286.02	30.00	103.98	30.00	390.00	30.00
<b>Total</b>	<b>953.40</b>	<b>100.00</b>	<b>346.61</b>	<b>100.00</b>	<b>1300.01</b>	<b>100.00</b>

### Interest on Loan (IoL)

33. The Petitioner has claimed 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. IoL allowed in respect of the instant assets is as under:

Particulars	(₹ in lakh)			
	Asset-I	Asset-II	Asset-III	
	2018-19 (Pro-rata)	2018-19 (Pro-rata)	2017-18 (Pro-rata)	2018-19
Gross Normative Loan	13039.65	2091.47	667.38	667.38
Cumulative Repayments up to Previous Year	93.07	0.00	0.00	0.28
Net Loan-Opening	12946.58	2091.47	667.38	667.10
Additions	3238.80	921.91	0.00	242.63
Repayment during the year	637.00	125.66	0.28	59.49
Net Loan-Closing	15548.38	2887.72	667.10	850.24
Average Loan	14247.48	2489.60	667.24	758.67
Weighted Average Rate of Interest on Loan (%)	7.6648	6.7646	7.4021	6.5997
Interest on Loan	628.29	109.35	0.27	50.07





34. The details of IoL approved vide order dated 12.9.2019 in Petition No. 259/TT/2018, IoL claimed by the Petitioner and as trued up in the instant order is shown in the table below:

Particulars	(₹ in lakh)			
	Asset-I 2018-19 (Pro-rata)	Asset-II 2018-19 (Pro-rata)	Asset-III 2017-18 (Pro-rata)    2018-19	
Approved vide order dated 12.9.2019 in Petition No. 259/TT/2018	627.12	120.06	0.27	54.87
Claimed by the Petitioner in the instant petition	633.62	109.35	0.27	50.07
Allowed after true-up in this order	628.29	109.35	0.27	50.07

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

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

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

36. The Commission, vide 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. The relevant portion of the order dated 27.4.2020 is as under:

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



1961 as per the MAT rates of the respective financial year, the notified MAT rate for respective financial year shall be considered as effective tax rate for the purpose of grossing up of RoE for truing up of the tariff of the 2014-19 tariff period in terms of the provisions of the 2014 Tariff Regulations. Interest imposed on any additional income tax demand as per the Assessment Order of the Income Tax authorities shall be considered on actual payment. However, penalty (for default on the part of the Assessee) if any imposed shall not be taken into account for the purpose of grossing up of rate of return on equity. Any under-recovery or over-recovery of grossed up rate on return on equity after truing up, shall be recovered or refunded to beneficiaries or the long term transmission customers/ DICs as the case may be on year to year basis.

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

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

”

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

<b>Year</b>	<b>Notified MAT rates (inclusive of surcharge &amp; cess) (in %)</b>	<b>Base rate of RoE (in %)</b>	<b>Grossed up RoE (Base Rate/1-t) (in %)</b>
2014-15	20.9605	15.50	19.610
2015-16	21.3416	15.50	19.705
2016-17	21.3416	15.50	19.705
2017-18	21.3416	15.50	19.705
2018-19	21.5488	15.50	19.758

38. The Petitioner has claimed RoE for the 2014-19 period after grossing up RoE of 15.50% with Effective Tax rates (based on MAT rates) each year as per Regulations 24 and 25 of the 2014 Tariff Regulations. The Petitioner has also claimed additional RoE @0.5 % for the instant Asset-I as per the liberty given to approach the



Commission at the time of truing up vide order dated 12.9.2019 in Petition No. 259/TT/2018.

39. The Petitioner vide affidavit dated 29.5.2020 has submitted that the requisite certificate is yet to be issued by ERPC and has prayed to allow its submission upon its issuance at a later stage. As the Petitioner has not submitted the RPC/NPC certificate, we are not inclined to grant additional RoE of 0.5% for Asset-I. RoE is trued up on the basis of the MAT rate applicable in the respective years and is allowed as under:

(₹ in lakh)

Particulars	Asset-I	Asset-II	Asset-III	
	2018-19 (Pro-rata)	2018-19 (Pro-rata)	2017-18 (Pro-rata)	2018-19
Opening Equity	5588.42	896.35	286.02	286.02
Additions	1388.06	395.10	0.00	103.98
Closing Equity	6976.48	1291.45	286.02	390.00
Average Equity	6282.45	1093.90	286.02	338.01
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500
MAT Rate for respective year (%)	21.549	21.549	21.342	21.549
Rate of Return on Equity (%)	19.758	19.758	19.705	19.758
Return on Equity	714.15	140.33	0.31	66.78

40. The details of RoE approved vide order dated 12.9.2019 in Petition No. 259/TT/2018, RoE claimed by the Petitioner and as trued up in the instant order is shown in the table below:

(₹ in lakh)

Particulars	Asset-I	Asset-II	Asset-III	
	2018-19 (Pro-rata)	2018-19 (Pro-rata)	2017-18 (Pro-rata)	2018-19
Approved vide order dated 12.9.2019 in Petition No. 259/TT/2018	702.21	137.72	0.31	64.78
Claimed by the Petitioner in the instant petition	743.39	140.34	0.31	66.78
Allowed after true-up in this order	714.15	140.33	0.31	66.78



## Depreciation

41. The Petitioner's claim towards depreciation in this petition was found to be higher than the depreciation allowed for the transmission assets in order dated 12.9.2019 in Petition No. 259/TT/2018. The Petitioner has neither given any justification for claiming higher depreciation than that allowed earlier in order dated 12.9.2019 nor made any specific prayer for allowing higher depreciation in this petition. Similar issue had come up in Petition No. 19/TT/2020 wherein the Commission vide order dated 9.5.2020 decided as under:

*"31. We have considered the submissions of the Petitioner. The instant assets were put into commercial operation during the 2009-14 period and the tariff from the respective CODs to 31.3.2014 was allowed vide orders dated 30.8.2012 and 9.5.2013 in Petition No.343/2010 and Petition No. 147/TT/2011 respectively. Further, the tariff of the 2009-14 period was trued up and tariff for the 2014-19 period was allowed vide order dated 25.2.2016 in Petition No.10/TT/2015. The Petitioner did not claim any capital expenditure towards "IT Equipment" in the above said three petitions where tariff for the instant assets for the 2009-14 period was allowed, tariff of the 2009-14 period was trued up and tariff for 2014-19 period was allowed even though there was a clear provision in the 2009 Tariff Regulations and 2014 Tariff Regulations providing depreciation @15% for IT Equipment. Having failed to make a claim as per the 2009 Tariff Regulations(the period during which COD of assets was achieved), the Petitioner has now, at the time of truing up of the tariff allowed for the 2014-19 period has apportioned a part of the capital expenditure to "IT Equipment". The Petitioner has adopted similar methodology not only in this but in some of the other petitions listed along with the instant petition on 26.2.2020. It is observed that the Petitioner has for the first time apportioned a part of the capital expenditure towards IT Equipment and has claimed depreciation under the head "IT Equipment" @15% at the time of truing up of the tariff of 2014-19 period. Regulation 8(1) of the 2014 Tariff Regulations provides for truing up of the capital expenditure including the additional capital expenditure, incurred up to 31.3.2019, admitted by the Commission after prudence check. We are of the view that scope of truing up exercise is restricted to truing up of the capital expenditure already admitted and apportionment or reapportionment of the capital expenditure cannot be allowed at the time of truing up. Therefore, we are not inclined to consider the Petitioner's prayer for apportionment of capital expenditure towards IT Equipment and allowing depreciation @ 15% from 1.4.2014 onwards. Accordingly, the depreciation @ 5.28% has been considered for IT Equipment as part of the sub-station up to 31.3.2019 while truing up the capital expenditure for the 2014-19 period. During the 2019-24 tariff period, the IT Equipment has been considered separately and depreciation has been allowed @ 15% for the balance depreciable value of IT Equipment in accordance with Regulation 33 read with Sr. No. (p) of the Appendix-I (Depreciation Schedule) of the 2019 Tariff Regulations."*



42. In line with above order of the Commission, the calculation of weighted average rate of depreciation (WAROD) is placed in Annexure-I. The Gross Block during the tariff period 2014-19 has been depreciated at WAROD (Annexure-I). The WAROD has been worked out after taking into account the depreciation rates of assets as prescribed in the 2014 Tariff Regulations and depreciation allowed is as under:

(₹ in lakh)

Particulars	Asset-I	Asset-II	Asset-III	
	2018-19 (Pro-rata)	2018-19 (Pro-rata)	2017-18 (Pro-rata)	2018-19
Opening Gross Block	18628.07	2987.82	953.40	953.40
Additional Capitalization	4626.86	1317.01	0.00	346.61
Closing Gross Block	23254.93	4304.83	953.40	1300.01
Average Gross Block	20941.50	3646.33	953.40	1126.71
Weighted average rate of Depreciation (WAROD) (%)	5.29	5.31	5.28	5.28
Balance useful life of the asset	34.00	32.00	25.00	25.00
Elapsed life of the asset	0.00	0.00	0.00	0.00
Aggregated Depreciable Value	18847.35	3281.69	858.06	1014.03
<b>Combined Depreciation during the year</b>	<b>637.00</b>	<b>125.66</b>	<b>0.28</b>	<b>59.49</b>
Aggregate Cumulative Depreciation	730.07	125.66	0.28	59.77
Remaining Aggregate Depreciable Value	18117.28	3156.03	857.78	954.27

43. The details of depreciation approved vide order dated 12.9.2019 in Petition No. 259/TT/2018, depreciation claimed by the Petitioner and as tried up in the instant order is shown in the table below:

(₹ in lakh)

Particulars	Asset-I	Asset-II	Asset-III	
	2018-19 (Pro-rata)	2018-19 (Pro-rata)	2017-18 (Pro-rata)	2018-19
Approved vide order dated 12.9.2019 in Petition No. 259/TT/2018	630.84	124.11	0.27	58.14
Claimed by the Petitioner in the instant petition	642.46	125.72	0.28	59.55
Allowed after true-up in this order	637.00	125.66	0.28	59.49



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

44. The O&M Expenses claimed by the Petitioner for Asset-I and Asset-II for 2018-19 and for Asset-III for 2017-18 and 2018-19 are as under:

Particulars	(₹ in lakh)			
	Asset-I 2018-19 (Pro-rata)	Asset-II 2018-19 (Pro-rata)	Asset-III	
			2017-18 (Pro-rata)	2018-19
Claimed by the Petitioner in the instant Petition	156.71	99.16	0.36	108.24

45. Regulation 29(3) of the 2014 Tariff Regulations specifies the norms for O&M Expenses for the transmission system. The norms specified in respect of the elements covered in the instant assets are as under:

Element	Norms for 2017-18	Norms for 2018-19
Double Circuit (Twin & Triple Conductor) AC Line	₹0.78 lakh/ km	₹0.806 lakh/ km
400 kV Sub-station	₹66.51 lakh/ bay	₹68.71 lakh/ bay

46. We have considered the submissions of the Petitioner. The O&M Expenses allowed for Asset-I, Asset-II and Asset-III under Regulation 29(3) of the 2014 Tariff Regulations are as under:

Details	(₹ in lakh)	
	2017-18 (Pro-rata)	2018-19 (Pro-rata)
<b>Asset -I</b>		
3 Nos. 400 kV Conventional Bays	-	118.60
400 kV D/C transmission line (Line Length – 82.2 km)	-	38.12
<b>Total</b>	-	<b>156.71</b>
<b>Asset -II</b>		
2 Nos. 400 kV Conventional Bays	-	89.23
LILO of 400 kV S/C (Line Length – 19.0 km)	-	9.94
<b>Total</b>	-	<b>99.17</b>
		<b>2018-19</b>
<b>Asset -III</b>		
2 Nos. 400 kV Conventional Bays	0.36	108.24
<b>Total</b>	<b>0.36</b>	<b>108.24</b>



47. The details of the O&M Expenses approved vide order dated 12.9.2019 in Petition No. 259/TT/2018, claimed by the Petitioner and as trued up in the instant order is shown in the table below:

Particulars	(₹ in lakh)			
	Asset-I 2018-19 (Pro-rata)	Asset-II 2018-19 (Pro-rata)	Asset-III 2017-18 (Pro-rata)      2018-19	
Approved vide order dated 12.9.2019 in Petition No. 259/TT/2018	235.78	99.17	0.36	68.71
Claimed by the Petitioner in the instant petition	156.71	99.16	0.36	108.24
Allowed after true-up in this order	156.71	99.17	0.36	108.24

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

48. IWC has been worked out as per the methodology provided in Regulation 28 of the 2014 Tariff Regulations and is allowed as under:

Particulars	(₹ in lakh)			
	Asset-I 2018-19 (Pro-rata)	Asset-II 2018-19 (Pro-rata)	Asset-III 2017-18 (Pro-rata)      2018-19	
O & M Expenses	22.70	12.73	5.54	11.45
Maintenance Spares	40.86	22.91	9.98	20.61
Receivables	632.97	125.07	38.23	54.10
Total Working Capital	696.53	160.71	53.75	86.17
Rate of Interest (%)	12.20	12.20	12.60	12.60
<b>Interest on Working Capital</b>	<b>48.89</b>	<b>12.73</b>	<b>0.04</b>	<b>10.86</b>

49. The details of IWC approved vide order dated 12.9.2019 in Petition No. 259/TT/2018, IWC claimed by the Petitioner and trued up in the instant order is shown in the table below:

Particulars	(₹ in lakh)			
	Asset-I 2018-19 (Pro-rata)	Asset-II 2018-19 (Pro-rata)	Asset-III 2017-18 (Pro-rata)      2018-19	
Approved vide order dated 12.9.2019 in Petition No. 259/TT/2018	52.43	12.87	0.04	7.35
Claimed by the Petitioner in the instant petition	49.72	12.73	0.04	10.86
Allowed after true-up in this order	48.89	12.73	0.04	10.86



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

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

(₹ in lakh)

Particulars	Asset-I	Asset-II	Asset-III	
	2018-19 (Pro-rata)	2018-19 (Pro-rata)	2017-18 (Pro-rata)	2018-19
Depreciation	637.00	125.66	0.28	59.49
Interest on Loan	628.29	109.35	0.27	50.07
Return on Equity	714.15	140.33	0.31	66.78
Interest on Working Capital	48.89	12.73	0.04	10.86
O & M Expenses	156.71	99.17	0.36	108.24
<b>Total</b>	<b>2185.05</b>	<b>487.25</b>	<b>1.26</b>	<b>295.44</b>

51. Accordingly, the Annual Transmission Charges as approved earlier, claimed by the Petitioner and approved after truing up in the instant order is shown in the table below:

(₹ in lakh)

Particulars	Asset-I	Asset-II	Asset-III	
	2018-19 (Pro-rata)	2018-19 (Pro-rata)	2017-18 (Pro-rata)	2018-19
Approved vide order dated 12.9.2019 in Petition No. 259/TT/2018	2248.38	493.92	1.24	253.86
Claimed by the Petitioner in the instant petition	2225.90	487.30	1.26	295.50
Allowed after true-up in this order	2185.05	487.25	1.26	295.44

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

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

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	1556.55	1585.05	1585.05	1585.05	1585.05
Interest on Loan	1460.41	1367.66	1245.97	1124.00	1000.37
Return on Equity	1656.54	1686.95	1686.95	1686.95	1686.95
Interest on Working Capital	84.30	84.48	83.14	81.82	80.29
O&M Expenses	321.64	332.69	344.12	355.92	368.11
<b>Total</b>	<b>5079.44</b>	<b>5056.83</b>	<b>4945.23</b>	<b>4833.74</b>	<b>4720.77</b>





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

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	26.80	27.72	28.68	29.66	30.68
Maintenance Spares	48.25	49.90	51.62	53.39	55.22
Receivables	624.52	623.44	609.69	595.94	580.42
Total Working Capital	699.57	701.06	689.99	678.99	666.32
Rate of Interest (%)	12.05	12.05	12.05	12.05	12.05
<b>Interest on Working Capital</b>	<b>84.30</b>	<b>84.48</b>	<b>83.14</b>	<b>81.82</b>	<b>80.29</b>

#### **Effective Date of Commercial Operation (E-COD)**

54. The Petitioner has stated that E-COD of the Combined Asset is considered as 23.8.2018. However, based on the trued up capital cost and actual COD of the 3 individual assets, the E-COD has been worked out as 22.8.2018 and is as under:

Asset	Trued-up Capital Cost as on 31.3.2019 (₹ in lakh)	COD	No. of days from COD of Asset from COD of Project	Weight of cost	Weighted days
Asset-I	23254.93	3.9.2018	0	80.58%	0
Asset-II	4304.83	7.8.2018	27	14.92%	4.03
Asset-III	1300.01	30.3.2018	157	4.50%	7.07
<b>Total</b>	<b>28859.77</b>			<b>100.00%</b>	<b>11.10</b>
<b>Effective COD - 22.8.2018</b>					

#### **Weighted Average Life (WAL) of the instant assets**

55. WAL has been determined based on the trued up capital cost of individual elements as on 31.3.2019 and their respective life as specified in the 2019 Tariff Regulations. Accordingly, WAL of the instant assets put into commercial operation during the 2014-19 period has been worked out as 33 years as shown as under:

Particulars	Life (in years) (1)	Trued-up Capital Cost as on 31.3.2019 (₹ in lakh) (2)	Weighted Cost (₹ in lakh) (3) = (1) *(2)	Weighted Average Life of Asset (in years) (4) = (3)/(2)
Building Civil Works & Colony	25	0.00	0.00	
Transmission Line	35	23429.92	820047.25	



Sub-Station	25	5054.81	126370.16	
PLCC	15	371.40	5571.03	
IT Equipment (Incl. Software)	6	3.64	21.84	
<b>Total</b>		<b>28859.77</b>	<b>952010.28</b>	32.99 years (rounded off to 33 years)

### **Capital Cost as on 1.4.2019**

56. Regulation 19 of the 2019 Tariff Regulations provide as under:

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

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

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



*Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.*

- (3) *The Capital cost of an existing project shall include the following:*
- (a) Capital cost admitted by the Commission prior to 1.4.2019 duly trued up by excluding liability, if any, as on 1.4.2019;*
  - (b) Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;*
  - (c) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*
  - (d) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*
  - (e) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal up to the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and*
  - (f) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.”*
- (4) *The capital cost in case of existing or new hydro generating station shall also include:*
- (a) cost of approved rehabilitation and resettlement (R&R) plan of the project in conformity with National R&R Policy and R&R package as approved; and*
  - (b) cost of the developer’s 10% contribution towards Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) and Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) project in the affected area.*
- (5) *The following shall be excluded from the capital cost of the existing and new projects:*
- (a) The assets forming part of the project, but not in use, as declared in the tariff petition;*
  - (b) De-capitalised Assets after the date of commercial operation on account of replacement or removal on account of obsolescence or shifting from one project to another project:*
- Provided that in case replacement of transmission asset is recommended by Regional Power Committee, such asset shall be decapitalised only after its redeployment;*
- Provided further that unless shifting of an asset from one project to another is of permanent nature, there shall be no de-capitalization of the concerned assets.*
- (c) In case of hydro generating stations, any expenditure incurred or committed to be incurred by a project developer for getting the project site allotted by the State Government by following a transparent process;*
  - (d) Proportionate cost of land of the existing project which is being used for generating power from generating station based on renewable energy; and*
  - (e) Any grant received from the Central or State Government or any statutory body or authority for the execution of the project which does not carry any liability of repayment.”*



57. The Petitioner, as per the Auditor Certificates dated 3.9.2018, 7.8.2018 and 30.3.2018, has claimed capital cost of ₹28889.06 lakh as on 31.3.2019 for the Combined Asset. The capital cost of ₹28859.77 lakh has been worked out by the Commission as on 31.3.2019 and the same has been 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)**

58. Regulation 24 of the 2019 Tariff Regulations provides as under:

***“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.”*

59. The Petitioner has claimed ACE of ₹1079.29 lakh during the 2019-24 tariff period for the Combined Asset under Regulation 24(1)(a) and 24(1)(b) of the 2019 Tariff Regulations. The Petitioner has claimed capital cost as on 31.3.2024 as under:



(₹ in lakh)

Asset	Apportioned approved Capital Cost as per FR	Total Capital Cost as on 1.4.2019	Projected ACE	Total Capital Cost as on 31.3.2024
			2019-20	
Asset-I	28811.54	23254.93	814.19	24069.12
Asset-II	5736.61	4304.83	215.10	4519.93
Asset-III	1649.95	1300.01	50.00	1350.01
<b>Total</b>	<b>36198.10</b>	<b>28859.77</b>	<b>1079.29</b>	<b>29939.06</b>

60. The Petitioner has claimed ACE on account of undischarged liabilities towards final/withheld payment due to contractual exigencies for executed works within the cut-off date under Regulation 24(1)(a) and 24(1)(b) of the 2019 Tariff Regulations for the 2019-24 period.

61. Further the Petitioner has also submitted that no ACE is incurred in case of the instant assets on account of any undischarged liability towards final payment/withheld payment due to contractual exigencies for works executed after the cut-off date.

62. We have considered the submission made by the Petitioner. The ACE claimed by the Petitioner has been allowed under Regulation 24(1)(a) and 24(1)(b) of the 2019 Tariff Regulations. The entitled un-discharged IDC liability as well as amount of Initial Spares un-discharged has been allowed as ACE during the expected year of its discharge. The ACE allowed is summarized as under:

(₹ in lakh)

Asset	ACE	Accrual IDC Discharged	ACE	Total ACE for 2019-24
	2019-20	2019-20	2020-21	
Asset-I	792.00	14.19	8.00	814.19
Asset-II	199.00	15.10	1.00	215.10
Asset-III	50.00	0.00	0.00	50.00
<b>Total</b>	<b>1041.00</b>	<b>29.29</b>	<b>9.00</b>	<b>1079.29</b>

63. Accordingly, the capital cost considered for the 2019-24 tariff period is as under:

(₹ in lakh)

Asset	Admitted Capital Cost as on 1.4.2019	Admitted ACE		Total Capital Cost as on 31.3.2024
		2019-20	2020-21	
Asset-I	23254.93	806.19	8.00	24069.12



Asset-II	4304.83	214.10	1.00	4519.93
Asset-III	1300.01	50.00	0.00	1350.01
<b>Combined Asset</b>	<b>28859.77</b>	<b>1070.29</b>	<b>9.00</b>	<b>29939.06</b>

### **Debt-Equity ratio**

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

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

Provided that:

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

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

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

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

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

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





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

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

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

Particulars	Capital Cost as on 1.4.2019 (₹ in lakh)	%	ACE during 2019-24 (₹ in lakh)	%	Capital Cost as on 31.3.2024 (₹ in lakh)	%
Debt	20201.84	70.00	755.50	70.00	20957.34	70.00
Equity	8657.93	30.00	323.79	30.00	8981.72	30.00
<b>Total</b>	<b>28859.77</b>	<b>100.00</b>	<b>1079.29</b>	<b>100.00</b>	<b>29939.06</b>	<b>100.00</b>

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

66. Regulation 30 and Regulation 31 of the 2019 Tariff Regulations provides as under:

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

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

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

Provided further that:

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



or protection system based on the report submitted by the respective RLDC;

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

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

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

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

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

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

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

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

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

#### **Illustration-**

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

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

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





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

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

67. The Petitioner has submitted that MAT rate is applicable to the Petitioner's company. Accordingly, the 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 Combined Asset is as under:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity	8657.93	8979.02	8981.72	8981.72	8981.72
Additions	321.09	2.70	0.00	0.00	0.00
Closing Equity	8979.02	8981.72	8981.72	8981.72	8981.72
Average Equity	8818.47	8980.37	8981.72	8981.72	8981.72
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50
MAT Rate for respective year (%)	17.472	17.472	17.472	17.472	17.472
Rate of Return on Equity (%)	18.782	18.782	18.782	18.782	18.782
<b>Return on Equity</b>	<b>1656.24</b>	<b>1686.65</b>	<b>1686.90</b>	<b>1686.90</b>	<b>1686.90</b>

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

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

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



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

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

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

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

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

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

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

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

69. The weighted average rate of IoL has been considered on the basis of rate prevailing as on 1.4.2019. The Petitioner has prayed that the change in interest rate due to floating rate of interest applicable, if any, during the 2019-24 tariff period will be adjusted. Accordingly, the floating rate of interest, if any, shall be considered at the time of true up. Therefore, IoL has been allowed in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL has been allowed as under:

	(₹ in lakh)				
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	20201.84	20951.04	20957.34	20957.34	20957.34
Cumulative Repayments up to Previous Year	915.50	2471.81	4056.61	5641.64	7226.68



Net Loan-Opening	19286.34	18479.24	16900.74	15315.70	13730.66
Additions	749.20	6.30	0.00	0.00	0.00
Repayment during the year	1556.31	1584.80	1585.04	1585.04	1585.04
Net Loan-Closing	18479.24	16900.74	15315.70	13730.66	12145.62
Average Loan	18882.79	17689.99	16108.22	14523.18	12938.14
Weighted Average Rate of Interest on Loan (%)	7.7351	7.7325	7.7379	7.7426	7.7356
<b>Interest on Loan</b>	1460.60	1367.89	1246.43	1124.47	1000.84

### **Depreciation**

70. Regulation 33(1), (2) and (5) of the 2019 Tariff Regulations provides as under:

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

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

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

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

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

71. The IT equipment has been considered as a part of the Gross Block and depreciated using weighted average rate of depreciation (WAROD) (Annexure-II). WAROD has been worked out after taking into account the depreciation rates of IT and non-IT assets as prescribed in the 2019 Tariff Regulations. The salvage value of



IT equipment has been considered nil, i.e. IT asset has been considered as 100 per cent depreciable. The calculation of WAROD for the 2019-24 period is placed in Annexure-II. The depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and accumulated depreciation upto 31.3.2019. The depreciation allowed for the Combined Asset is as under:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Gross Block	28859.77	29930.06	29939.06	29939.06	29939.06
Addition during the year 2019-24 due to projected Additional Capitalisation	1070.29	9.00	0.00	0.00	0.00
Closing Gross Block	29930.06	29939.06	29939.06	29939.06	29939.06
Average Gross Block	29394.92	29934.56	29939.06	29939.06	29939.06
Weighted average rate of Depreciation (WAROD) (%)	5.29%	5.29%	5.29%	5.29%	5.29%
Balance useful life at the beginning of the year	33.00	32.00	31.00	30.00	29.00
Elapsed life of the asset	0.00	1.00	2.00	3.00	4.00
Aggregated Depreciable Value	26455.79	26941.47	26945.52	26945.52	26945.52
<b>Combined Depreciation during the year</b>	<b>1556.31</b>	<b>1584.80</b>	<b>1585.04</b>	<b>1585.04</b>	<b>1585.04</b>
Aggregate Cumulative Depreciation	2471.81	4056.61	5641.64	7226.68	8811.72
Remaining Aggregated Depreciable Value	23983.98	22884.86	21303.87	19718.84	18133.80

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

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

(₹ in lakh)					
Name of the Asset	2019-20	2020-21	2021-22	2022-23	2023-24
7 No of 400 kV bays	225.05	232.96	241.15	249.62	258.37
101.2 km D/C Twin/Triple Conductor Transmission Line	89.16	92.30	95.54	98.87	102.31
PLCC	7.43	7.43	7.43	7.43	7.43
<b>Total O&amp;M expenses</b>	<b>321.64</b>	<b>332.69</b>	<b>344.12</b>	<b>355.92</b>	<b>368.11</b>

73. The norms specified under Regulation 35(3)(a) of the 2019 Tariff Regulations provides that:



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

<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
<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	0.260	0.270	0.279	0.289
Double Circuit (Bundled conductor with four or more sub-	1.322	1.368	1.416	1.466	1.517
Double Circuit (Twin & Triple Conductor)	0.881	0.912	0.944	0.977	1.011
Double Circuit (Single Conductor)	0.377	0.391	0.404	0.419	0.433
Multi Circuit (Bundled Conductor with four or more sub-conductor)	2.319	2.401	2.485	2.572	2.662
Multi Circuit (Twin & Triple Conductor)	1.544	1.598	1.654	1.713	1.773
<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 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  $\pm 500$  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.*

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





74. We have considered the submissions of the Petitioner. The O&M Expenses has been worked out as per the norms specified in the 2019 Tariff Regulations and the same is as follows:

	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
<b>O&amp;M Expenses</b>					
<b>Sub-station Bays</b>					
7 No. of 400 kV bays					
Norms (₹ lakh/Bay)	32.15	33.28	34.45	35.66	36.91
Total	225.05	232.96	241.15	249.62	258.37
<b>Transmission line</b>					
101.2 km D/C Twin/Triple Conductor					
Norms (₹ lakh/km)	0.881	0.912	0.944	0.977	1.011
Total	89.16	92.29	95.53	98.87	102.31
PLCC @ 2% of original Capital Cost	7.43	7.43	7.43	7.43	7.43
<b>Total O&amp;M expenses allowed (₹ in lakh)</b>	<b>321.63</b>	<b>332.68</b>	<b>344.11</b>	<b>355.92</b>	<b>368.11</b>

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

75. Regulation 34(1)(c), Regulation 34(3), Regulation 34(4) and Regulation 3(7) of the 2019 Tariff Regulations provide as under:

#### ***“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;”

76. The Petitioner has submitted that it has computed IWC for the 2019-24 period considering the SBI Base Rate plus 350 basis points as on 1.4.2019. The Petitioner has considered the rate of IWC as 12.05%. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. 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 one-year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points). The components of the working capital and interest thereon allowed is as under:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	26.80	27.72	28.68	29.66	30.68
Maintenance Spares	48.25	49.90	51.62	53.39	55.22
Receivables	624.48	622.70	609.05	595.31	579.81
Total Working Capital	699.52	700.33	689.34	678.36	665.70
Rate of Interest (%)	12.05	11.25	11.25	11.25	11.25
<b>Interest on Working Capital</b>	84.29	78.79	77.55	76.32	74.89

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

77. The transmission charges allowed for the instant Combined Asset for the 2019-24 tariff period are summarised as under:





(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	1556.31	1584.80	1585.04	1585.04	1585.04
Interest on Loan	1460.60	1367.89	1246.43	1124.47	1000.84
Return on Equity	1656.24	1686.65	1686.90	1686.90	1686.90
Interest on Working Capital	84.29	78.79	77.55	76.32	74.89
O & M Expenses	321.64	332.68	344.11	355.92	368.11
<b>Total</b>	<b>5079.07</b>	<b>5050.80</b>	<b>4940.03</b>	<b>4828.65</b>	<b>4715.78</b>

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

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

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

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

### **Goods and Services Tax**

80. 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



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

### **Security Expenses**

82. The Petitioner has submitted that security expenses for the instant assets are not claimed in the instant petition and it would file a separate petition for claiming the overall security expenses and the consequential IWC. The Petitioner has requested to consider the actual security expenses incurred during 2018-19 for claiming estimated security expenses for 2019-20 which shall be subject to true up at the end of the year based on the actuals. The Petitioner has submitted that similar petition for security expenses for 2020-21, 2021-22, 2022-23 and 2023-24 shall be filed on a yearly basis on the basis of the actual expenses of previous year subject to true up at the end of the year on actual expenses. The Petitioner has submitted that the difference, if any, between the estimated security expenses and actual security expenses as per the audited accounts may be allowed to be recovered from the beneficiaries on a yearly basis.

83. We have considered the submissions of the Petitioner. We are of the view that the Petitioner should claim security expenses for all the transmission assets in one petition. The Commission observes 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

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

### Sharing of Transmission Charges

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

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

Particulars	Asset-I	Asset-II	Asset-III	
	2018-19 (Pro-rata)	2018-19 (Pro-rata)	2017-18 (Pro-rata)	2018-19
Annual Fixed Charges	2185.05	487.25	1.26	295.44

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

Combined Asset	Annual Fixed Charges				
	2019-20	2020-21	2021-22	2022-23	2023-24
Annual Fixed Charges	5079.07	5050.80	4940.03	4828.65	4715.78

87. This order disposes of Petition No. 95/TT/2020.

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

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

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



**Asset-I**

2014-19	Admitted Capital Cost as on COD (₹ in lakh)	Additional Capitalization (₹ 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)
Capital Expenditure		2018-19			2018-19
Transmission Line	17373.65	3503.95	20877.60	5.28%	1,009.83
Sub Station	1531.45	615.98	2147.44	5.28%	97.12
PLCC	75.52	153.72	229.23	6.33%	9.65
IT Equipment (Incl. Software)	0.00	0.66	0.66	5.28%	0.02
<b>Total</b>	<b>18980.62</b>	<b>4274.31</b>	<b>23254.93</b>	<b>Total</b>	<b>1,116.62</b>
			<b>Average Gross Block (₹ in lakh)</b>		<b>21117.78</b>
			<b>Weighted Average Rate of Depreciation</b>		<b>5.29%</b>

**Asset-II**

2014-19	Admitted Capital Cost as on COD (₹ in lakh)	Additional Capitalization (₹ 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)
Capital Expenditure		2018-19			2018-19
Transmission Line	2046.15	506.29	2552.44	5.28%	121.40
Sub Station	892.03	716.56	1608.59	5.28%	66.02
PLCC	49.64	92.51	142.15	6.33%	6.07
IT Equipment (Incl. Software)	0.00	1.65	1.65	5.28%	0.04
<b>Total</b>	<b>2987.82</b>	<b>1317.01</b>	<b>4304.83</b>	<b>Total</b>	<b>193.53</b>
			<b>Average Gross Block (₹ in lakh)</b>		<b>3646.33</b>
			<b>Weighted Average Rate of Depreciation</b>		<b>5.31%</b>



**Asset-III**

2014-19	Admitted Capital Cost as on COD (₹ in lakh)	Additional Capitalization (₹ 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)	
		2018-19			2017-18	2018-19
Capital Expenditure						
Sub Station	953.40	345.28	1298.68	5.28%	50.34	59.45
<b>Total</b>	<b>953.40</b>	<b>346.61</b>	<b>1300.01</b>	<b>Total</b>	<b>50.34</b>	<b>59.49</b>
			<b>Average Gross Block (₹ in lakh)</b>		<b>953.40</b>	<b>1126.71</b>
			<b>Weighted Average Rate of Depreciation</b>		<b>5.28%</b>	<b>5.28%</b>



2019-24 Capital Expenditure	Combined Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Projected Additional Capitalization (₹ 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	2020-21	2021-22	2022-23	2023-24			2019-20	2020-21	2021-22	2022-23	2023-24
Transmission Line	23430.04	669.07	5.75	0.00	0.00	0.00	24104.86	5.28%	1,254.77	1,272.58	1,272.74	1,272.74	1,272.74
Sub Station	5054.71	401.06	3.25	0.00	0.00	0.00	5459.02	5.28%	277.48	288.15	288.24	288.24	288.24
PLCC	371.38	0.16	0.00	0.00	0.00	0.00	371.54	6.33%	23.51	23.52	23.52	23.52	23.52
IT Equipment (Incl. Software)	3.64	0.00	0.00	0.00	0.00	0.00	3.64	15.00%	0.55	0.55	0.55	0.55	0.55
<b>Total</b>	<b>28859.77</b>	<b>1070.29</b>	<b>9.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>29939.06</b>	<b>Total</b>	<b>1,556.31</b>	<b>1,584.80</b>	<b>1,585.04</b>	<b>1,585.04</b>	<b>1,585.04</b>
							<b>Average Gross Block (₹ in lakh)</b>		<b>29939.92</b>	<b>29934.56</b>	<b>29939.06</b>	<b>29939.06</b>	<b>29939.06</b>
							<b>Weighted Average Rate of Depreciation</b>		<b>5.29%</b>	<b>5.29%</b>	<b>5.29%</b>	<b>5.29%</b>	<b>5.29%</b>

