

CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No. 483/TT/2019

Coram:

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

Date of Order : 05.06.2020

In the Matter of:

Approval under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations 1999 and truing up of transmission tariff of 2014-19 period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2014 and determination of transmission tariff of 2019-24 period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2019 of Combined Asset consisting of Asset-I: 160 MVA, 220/132 kV, 3-Phase Auto Transformer at Kopili, Asset-II: 132 kV S/C Kopili-Khandong Transmission Line along with associated bays, Asset-III: 100 MVA, 220/132 kV, 3-Phase Auto Transformer and associated bays at Dimapur Sub-station, Asset-IV: LILO of 132 kV Dimapur-Kohima Transmission Line in North Eastern Region.

And in the Matter of:

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

.....Petitioner

Versus

1. Assam Electricity Grid Corporation Limited
Bijulee Bhawan, Paltan Bazar,
Guwahati - 781001, Assam
2. Meghalaya Energy Corporation Limited
Short Round Road, "Lumjingshai"
Shillong - 793001, Meghalaya



Order in Petition No.483/TT/2019

3. Government of Arunachal Pradesh
Itanagar, Arunachal Pradesh
4. Power and Electricity Department
Government of Mizoram
Aizawl, Mizoram
5. Manipur State Electricity Distribution Company Limited
Keishampat, Imphal
6. Department of Power
Government of Nagaland
Kohima, Nagaland
7. Tripura State Electricity Corporation Limited
Vidyut Bhawan, North Banamalipur,
Agartala, Tripura (W) - 799001, Tripura

....Respondent(s)

Parties present:

For Petitioner: Shri Shri S.S. Raju, PGCIL
Shri Zafrul Hasan, PGCIL
Shri Anshul Garg, PGCIL
Shri V.K. Singh, PGCIL
Shri Amit K. Jain, PGCIL

For Respondent: None

ORDER

The present petition has been filed by Power Grid Corporation of India Limited (hereinafter referred to as “the Petitioner”), a deemed transmission licensee, for truing-up of tariff under Regulation 8 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) for the period from 1.4.2014 to 31.3.2019 and for determination of tariff under Regulation 8 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the



2019 Tariff Regulations”) for the period from 1.4.2019 to 31.3.2024 in respect of the Combined Asset consisting of Asset-I: 160 MVA, 220/132 kV, 3-Phase Auto Transformer at Kopili, Asset-II: 132 kV S/C Kopili-Khandong Transmission Line along with associated bays, Asset-III: 100 MVA, 220/132 kV, 3-Phase Auto Transformer and associated bays at Dimapur Sub-station, Asset-IV: LILO of 132 kV Dimapur-Kohima Transmission Line in the North Eastern Region.

2. The Petitioner has made the following prayers:

“i. Approve the trued-up Transmission Tariff for 2014-19 block and transmission tariff for 2019-24 block for the assets covered under this petition.

ii. Allow the claimed Capital Cost, actual additional capitalization during 2014-19 and projected additional capitalisation during 2019-24.

iii. 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.

iv. 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.

v. 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.

vi. 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.

vii. 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.

viii. Allow the Petitioner to claim the capital spares at the end of tariff block as per actual.



ix. 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 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 administrative/Investment Approval and expenditure sanction to the transmission project was accorded by the Board of Directors of PGCIL vide their letter C/CP/MisLink-NER dated 29.5.2006 at an estimated cost of ₹5893 lakh including IDC of ₹222 lakh based on 2nd Quarter 2005 price level. The Revised Cost Estimate (RCE) was approved in the Board meeting of PGCIL held on 7.7.2011. The RCE of the project, based on 3rd quarter 2010 price level, works out to ₹8171 lakh (including IDC of ₹519 lakh). The scope of work covered broadly includes:

Transmission line

- i. Kopili-Khandong 132 kV, S/C (second circuit) (Zebra Conductor)
- ii. LILO of 132 kV Dimapur (Nagaland)-Kohima (Nagaland) S/C line at Dimapur (Powergrid)
- iii. Augmentation of 220/132 kV transformer capacity at Kopili by addition of 160 MVA, (single phase units of 53.3 MVA) transformer
- iv. Augmentation of transformer capacity at Dimapur Sub-station (Powergrid) by 1X100 MVA, 220/132 kV transformer

b) The date of commercial operation of the assets along with time over-run covered in the instant petition are as follows:

Asset	Name of Assets	COD	Time over-run	Time over-run condoned
Asset I	160 MVA, 220/132 kV, 3-Phase Auto Transformer at Kopili	1.2.2010	4 months	4 months
Asset II	132 kV S/C Kopili-Khandong Transmission Line along with associated bays	1.11.2010	13 months	13 months



Asset	Name of Assets	COD	Time over-run	Time over-run condoned
Asset III	100 MVA, 220/132 kV, 3-Phase Auto Transformer and associated bays	1.1.2011	15 months	8 months
Combined Asset-A (Assets-I+II+III)				
Asset IV	LILO of 132 kV Dimapur-Kohima Transmission Line	1.4.2011	18 months	18 months
Combined Asset-B (Combined Asset-A + Asset-IV)				

c) The Commission vide its order dated 28.12.2011 in Petition No. 347/2010 and order dated 9.7.2012 in Petition No. 31/TT/2011 had approved the capital cost of the transmission assets as on date of commercial operation as mentioned below:-

Admitted as on date of commercial operation	Amount (₹ in lakh)	Percentage (%)
Asset I		
Debt	1293.87	70.00
Equity	554.51	30.00
Capital Cost	1848.38	100.00
Combined Asset I & II		
Debt	2359.80	70.00
Equity	1011.34	30.00
Capital Cost	3371.14	100.00
Combined Asset I, II & III		
Debt	3968.55	70.00
Equity	1700.81	30.00
Capital Cost	5669.36	100.00
Combined Asset I, II, III & IV		
Debt	4747.76	70.00
Equity	2034.75	30.00
Capital Cost	6782.51	100.00

d) The Commission had allowed additional capital expenditure of ₹58.58 lakh in 2009-10, ₹131.93 lakh in 2010-11, ₹78.38 lakh in 2011-12 and ₹98.09 lakh in 2012-13 for Asset I; ₹274.00 lakh in 2010-11, ₹354.01 lakh in 2011-12 and ₹98.09 lakh in 2012-13 for Combined Asset I and Asset II in order in Petition No. 347/2010.



e) The Commission vide its order dated 9.7.2012 in Petition No. 31/TT/2011 had allowed an additional capital expenditure of ₹245.07 lakh in 2010-11 for Combined Asset A, and ₹571.50 lakh in 2011-12 and ₹148.09 lakh in 2012-13 for Combined Asset B. The tariff determined by the Commission are as follows:-

a. By order dated 28.12.2011 in Petition No. 347/2010:

(₹ in lakh)

Asset I		
Particulars	2009-10 (pro-rata: 1.2.2010 to 31.3.2010)	2010-11 (pro-rata: 1.4.2010 to 31.10.2011)
Depreciation	16.52	60.77
Interest on Loan	19.76	70.57
Return on Equity	16.41	60.35
Interest on Working Capital	1.62	5.94
O & M Expenses	10.48	38.78
Total	64.79	236.41

(₹ in lakh)

Combined Asset I and Asset II				
Particulars	2010-11	2011-12	2012-13	2013-14
Depreciation	77.36	202.24	214.19	216.78
Interest on Loan	88.20	218.93	214.30	197.81
Return on Equity	76.66	200.44	212.30	214.87
Interest on Working Capital	7.36	18.80	19.57	19.79
O & M Expenses	63.24	160.43	169.63	179.33
Total	312.82	800.84	829.99	828.58

b. By order dated 9.7.2012 in Petition No. 31/TT/2011:

(₹ in lakh)

Combined Asset A	
Particulars	2010-11 (pro-rata: 1.1.2011 to 31.3.2011)
Depreciation	76.56
Interest on Loan	88.09



Combined Asset A	
Particulars	2010-11 (pro-rata: 1.1.2011 to 31.3.2011)
Return on Equity	75.94
Interest on Working Capital	7.42
O & M Expenses	54.56
Total	302.56

(₹ in lakh)

Combined Asset B			
Particulars	2011-12	2012-13	2013-14
Depreciation	374.07	393.11	397.02
Interest on Loan	413.07	400.98	369.74
Return on Equity	370.68	389.55	393.43
Interest on Working Capital	37.00	38.31	38.68
O & M Expenses	289.38	305.96	323.46
Total	1484.2	1527.91	1522.33

f) The transmission tariff was allowed for the instant assets for 2014-19 period vide order dated 15.2.2016 in Petition No. 529/TT/2014. The trued-up tariff claimed by the Petitioner is as follows:

(₹ in lakh)

Asset	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Combined Asset-B	AFC approved vide order dated 15.2.2016	1489.48	1469.57	1444.12	1419.05	1394.40
	AFC claimed based on truing up	1522.61	1497.75	1468.79	1440.42	1414.94

4. The instant petition is filed for truing up of transmission tariff of the 2014-19 period under Regulation 8 of the 2014 Tariff Regulations and determination of transmission tariff of 2019-24 period under Regulation 8 the 2019 Tariff Regulations.



5. The respondents are distribution licensees and power departments, who are procuring transmission service from the Petitioner, mainly beneficiaries of the North Eastern Region.

6. The Petitioner has served the petition on the respondents and notice of this petition has been published in the newspaper in accordance with Section 64 of the Electricity Act 2003. No comments/objections have been received from the public in response to the notice in the newspaper. None of the respondents have filed any reply to the petition.

7. The hearing in this matter was held on 26.2.2020 and the Commission reserved its Order in the Petition.

8. This order is issued considering the submissions made by the Petitioner in the petition dated 3.10.2019 and the Petitioner's affidavit dated 25.2.2020.

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

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

9. The Petitioner has submitted the information as required under the 2014 Tariff Regulations for truing up of annual fixed charges for the 2014-19 period.

10. The details of the transmission charges claimed by the Petitioner are as under:-

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	424.62	425.22	425.22	425.22	425.62
Interest on Loan	325.19	287.44	248.84	210.22	172.01
Return on Equity	431.24	433.89	433.67	433.67	435.28
Interest on Working Capital	43.64	43.40	43.07	42.76	42.53



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses	297.92	307.80	317.99	328.55	339.50
Total	1522.61	1497.75	1468.79	1440.42	1414.94

11. The details of the Interest on Working Capital claimed by the Petitioner are as under:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses	24.83	25.65	26.50	27.38	28.29
Maintenance Spares	44.69	46.17	47.70	49.28	50.93
Receivables	253.77	249.63	244.80	240.07	235.82
Total Working Capital	323.29	321.45	319.00	316.73	315.04
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on working capital	43.64	43.40	43.07	42.76	42.53

12. The tariff for 2014-19 period has been trued up as discussed in the subsequent paragraphs.

Weighted Average Life (WAL) of the Assets

13. The Petitioner has submitted that the Capital Cost of the sub-station approved as on the date of commercial operation and thereafter for the 2014-19 period included the cost of IT equipment. However, the IT equipment cost has been separated from the sub-station cost while filing the petition for truing-up of tariff for the 2014-19 period. This issue is discussed in paragraphs 25 to 27 of this order. Since the Weighted Average Life (WAL) has to be determined considering the cost as on date of commercial operation, the same has to be revisited in this case. Hence, the Capital Cost of IT equipment, as submitted by the Petitioner, is considered and adjusted from the sub-station cost as approved on the date of commercial operation vide order dated 28.12.2011 in Petition No. 347/2010 and order dated 9.7.2012 in Petition No.



31/TT/2011. The WAL has been determined based on the admitted capital cost of individual elements as on the date of commercial operation, after adjusting the Capital Cost of IT equipment from sub-station, and their respective useful life as stipulated in the 2009 Tariff Regulations. Accordingly, the WAL of all the assets has been worked out as 26 years as shown below:-

Particulars	Combined Asset admitted capital cost (₹ in lakh)	Useful Life (in years)	Combined capital cost as admitted on COD (₹ in lakh)	Weighted cost (₹ in lakh)
Building Civil Works & Colony	0.00	25	0.00	0.00
Transmission Line	1391.45	35	1391.45	48700.75
Sub Station	4931.38	25	4931.38	123284.50
PLCC	78.96	15	78.96	1184.40
IT Equipment (Incl. Software)	380.72	6	380.72	2284.32
Total	6782.51		6782.51	175453.97
	Weighted Avg. Life of Asset			26

Capital Cost as on 1.4.2014

14. The Commission vide order dated 15.2.2016 in Petition No. 529/TT/2014 had approved capital cost of ₹7313.26 lakh as opening capital cost as on 1.4.2014 for determination of tariff for the 2014-19 period.

15. The Petitioner vide Auditor Certificate dated 31.7.2019 has claimed capital cost of ₹7313.26 lakh as on 31.3.2014. Therefore, the same has been allowed and considered as opening admitted capital cost as on 1.4.2014 in accordance with Regulation 9(3) of the 2014 Tariff Regulations.



Additional Capital Expenditure

16. The Commission had allowed additional capital expenditure of ₹63.96 lakh for Combined Asset B in 2014-15 towards balance and retention payments as under vide order dated 15.2.2016:

(₹ in lakh)

Assets	Apportioned Approved Capital Cost	Admitted Capital Cost as on 1.4.2014	Additional Capitalisation	Total Capital Cost as on 31.3.2019
			2014-19*	
Combined Asset-B	7313.26	7313.26	63.96	7377.22

(*Approved by the Commission vide order dated 15.2.2016 in Petition No. 529/TT/2014)

17. The Petitioner has claimed the following additional capital expenditure based on actual expenditure vide Auditor Certificate dated 31.7.2019 for Combined Asset-B:-

(₹ in lakh)

Asset	Apportioned Approved Capital Cost as per RCE	Capital Cost as on 31.3.2014	Actual Additional Capital Expenditure					Total Capital Cost
			2014-15	2015-16	2016-17	2017-18	2018-19	
Combined Asset-B	8171.00	7313.26	22.82	0.00	0.00	0.00	14.78	7350.86

18. The Petitioner has claimed the additional capital expenditure towards undischarged liabilities for works executed within the cut-off date for Combined Asset-B under Regulation 14(3)(v) of the 2014 Tariff Regulations. Therefore, the additional capital expenditure claimed by the Petitioner has been allowed.

19. The additional capital expenditure during 2014-19 and capital cost as on 31.3.2019 as approved by the Commission is as follows:



(₹ in lakh)

Asset	Apportioned Approved Capital Cost as per RCE	Capital Cost as on 31.3.2014	Actual Additional Capital Cost Expenditure during					Total Capital Cost as on 31.3.2019
			2014-15	2015-16	2016-17	2017-18	2018-19	
Combined Asset-B	8171.00	7313.26	22.82	0.00	0.00	0.00	14.78	7350.86

Debt-Equity ratio

20. 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 combined and considered for deciding opening debt and equity of the project as on 1.4.2014. The debt-equity ratio of 70:30 has been considered for the additional capital expenditure allowed during 2014-19 in accordance with Regulation 19(3) of the 2014 Tariff Regulations. The details of the debt and equity as on 1.4.2014 and 31.3.2019 for Combined Asset-B considered for the purpose of tariff for the 2014-19 tariff period as follows:

Funding	Capital Cost as on 1.4.2014 (₹ in lakh)	(%)	Additional Capital Expenditure during 2014-19 (₹ in lakh)	(%)	Total Capital Cost as on 31.3.2019 (₹ in lakh)	(%)
Debt	5119.28	70.00	26.32	70.00	5145.60	70.00
Equity	2193.98	30.00	11.28	30.00	2205.26	30.00
Total	7313.26	100.00	37.60	100.00	7350.86	100.00



Interest on Loan (IoL)

21. The Petitioner has claimed the weighted average rate of IoL based on its actual loan portfolio and rate of interest. Accordingly, IoL has been calculated based on actual interest rate submitted by the Petitioner, in accordance with Regulation 26 of the 2014 Tariff Regulations. The details of weighted average rate of interest are placed in Annexure-1. The IoL worked out is as follows:-

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	5119.28	5135.26	5135.26	5135.26	5135.26
Cumulative Repayments upto Previous Year	1329.25	1716.87	2105.09	2493.30	2881.52
Net Loan-Opening	3790.03	3418.39	3030.17	2641.95	2253.73
Additions	15.97	0.00	0.00	0.00	10.35
Repayment during the year	387.62	388.22	388.22	388.22	388.61
Net Loan-Closing	3418.39	3030.17	2641.95	2253.73	1875.47
Average Loan	3604.21	3224.28	2836.06	2447.84	2064.60
Weighted Average Rate of Interest on Loan (%)	9.0719	9.0743	9.0737	9.0721	9.0679
Interest on Loan	326.97	292.58	257.33	222.07	187.21

Particular	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 15.2.2016 in Petition No. 529/TT/2014	327.84	294.62	259.22	223.83	188.43
Claimed by the Petitioner	325.19	287.44	248.84	210.22	172.01
Allowed after true-up in this order	326.97	292.58	257.33	222.07	187.21

The difference in the IoL approved vide order dated 15.2.2016 in Petition No. 529/TT/2014 and that allowed after truing up in this Petition is on account of lower additional capital expenditure, depreciation/ repayment of loan, and change in the weighted average rate of interest which is computed based on actual loan portfolio and rate of interest.



Return on Equity (RoE)

22. The Petitioner is entitled to RoE for the instant assets in terms of Regulation 24 and 25 of the 2014 Tariff Regulations. The Petitioner has submitted that they are liable to pay income tax at MAT rates and has claimed the 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	19.624
2015-16	21.382	19.715
2016-17	21.338	19.704
2017-18	21.337	19.704
2018-19	21.549	19.757

23. We have considered the submissions of the Petitioner. The Commission in order dated 27.4.2020 in Petition No. 274/TT/2019 has arrived at the effective tax rate based on the notified MAT rates for the Petitioner and the same is given in the table below. The same MAT rates 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.

Year	Notified MAT rates (inclusive of surcharge & cess) (in %)	Base rate of RoE (in %)	Grossed up RoE (Base Rate/1-t) (in %)
2014-15	20.9605	15.50	19.611
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

24. The Petitioner has claimed RoE for the 2014-19 period after grossing up the RoE of 15.50% with Effective Tax rates (based on MAT rates) each year as per the



above said Regulation. The RoE is tried up basis the MAT rate applicable in the respective years and is allowed as follows:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Return on Equity					
Opening Equity	2193.98	2200.82	2200.82	2200.82	2200.82
Additions	6.85	0.00	0.00	0.00	4.43
Closing Equity	2200.82	2200.82	2200.82	2200.82	2205.26
Average Equity	2197.40	2200.82	2200.82	2200.82	2203.04
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (%)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (%)	19.610	19.705	19.705	19.705	19.758
Return on Equity	430.92	433.68	433.68	433.68	435.27

(₹ in lakh)					
Particular	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 15.2.2016 in Petition No. 529/TT/2014	432.13	434.01	434.01	434.01	434.01
Claimed by Petitioner	431.24	433.89	433.67	433.67	435.28
Allowed after true-up in this order	430.92	433.68	433.68	433.68	435.27

The difference in the RoE approved vide order dated 15.2.2016 in Petition No. 529/TT/2014 and that allowed after truing up in this Petition is on account of lower additional capitalisation expenditure and consideration of applicable MAT rate for computation of RoE.

Depreciation

25. The Petitioner's claim towards depreciation in this petition was found to be higher than the depreciation allowed for the instant assets in order dated 15.2.2016 in Petition No. 529/TT/2014. The Petitioner has neither given any justification for claiming higher depreciation than that allowed earlier in order dated 15.2.2016 nor



made any specific prayer for allowing higher depreciation in this petition. Therefore, the Petitioner was directed as follows:-

“Submit the working of depreciation considered for IT Equipment & Software. Also clarify the useful life considered by the Petitioner for the same”.

26. In response, the Petitioner vide affidavit dated 25.2.2020 submitted as follows:-

“....., it is submitted that the depreciation @ 15% on account of IT equipment has been provided under Appendix-II of the Tariff Regulations, 2014. Further, clause 3 of the Regulation 27 of Tariff Regulations 2014 provides NIL salvage value for IT equipment. Similar provisions have been provided in Tariff Regulations, 2019.

It is submitted that during the truing up for 2009-14 block in petition 529/TT/2014, capital cost of IT equipment was included in the substation cost inadvertently and therefore depreciation for IT equipment was allowed based on substation cost inadvertently and therefore depreciation for IT equipment upto 31.3.2014 has been considered @ 5.28% of corresponding capital cost in line with earlier approved order. Thus, calculation of depreciation of IT equipment upto 31.3.2014 is as given below;

Asset	COD	IT equipment cost (₹ in lakh) (2014-15)	Depreciation upto 31.3.2014 @5.28% (₹ in lakh)
Asset-I	1.4.2011	380.72	69.26

The Petitioner has submitted that during the truing up of the tariff of the 2009-14 period, the capital cost of the IT equipment was considered as part of the sub-station cost inadvertently and to avoid revision of tariff of the 2009-14 block, requested to consider depreciation of IT Equipment upto 31.3.2014 as 5.28%. The Petitioner has further submitted that the depreciation rate for IT Equipment in the 2014 Tariff Regulations and the 2019 Tariff Regulations is 15% and the salvage value for IT Equipment is NIL.

27. 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 dates of commercial operation to 31.3.2014 was allowed vide order dated



28.12.2011 in Petition No. 347/2010 and order dated 9.7.2012 in Petition No. 31/TT/2011. Further, the tariff of the 2009-14 period was trued up and tariff for the 2014-19 period was allowed vide order dated 15.2.2016 in Petition No.529/TT/2014. 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 the 2014-19 period was allowed even though there was a clear provision in the 2009 Tariff Regulations and the 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 the assets was achieved), the Petitioner has now, at the time of truing up of the tariff for the 2014-19 period, apportioned a part of the capital expenditure to "IT Equipment". The Petitioner has adopted similar methodology not only in the instant petition 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" @ of 15% at the time of truing up of the tariff of the 2014-19 period. Regulation 8(1) of the 2014 Tariff Regulations provides for truing up of the capital expenditure including the additional capital expenditure, incurred upto 31.3.2019, admitted by the Commission after prudence check. We are of the view that scope of truing up exercise is restricted to truing up of the capital expenditure already admitted and apportionment or reapportionment of the capital expenditure cannot be allowed at the time of truing up. Therefore, we are not inclined to consider the Petitioner's prayer for apportionment of capital expenditure towards IT Equipment and



allowing depreciation @ 15% from 1.4.2014 onwards. Accordingly, the depreciation @ 5.28% has been considered for IT Equipment as part of the sub-station upto 31.3.2019 while truing up the capital expenditure for the 2014-19 period. During the 2019-24 tariff period, the IT Equipment has been considered separately and depreciation has been allowed @ 15% for the balance depreciable value of IT Equipment in accordance with Regulation 33 read with Sr. No. (p) of the Appendix-I (Depreciation Schedule) of the 2019 Tariff Regulations.

28. The depreciation for the 2014-19 period is trued up for the instant assets as per the methodology provided in Regulation 27 of the 2014 Tariff Regulations, as follows:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation					
Opening Gross Block	7313.26	7336.08	7336.08	7336.08	7336.08
Additional Capitalisation	22.82	0.00	0.00	0.00	14.78
Closing Gross Block	7336.08	7336.08	7336.08	7336.08	7350.86
Average Gross Block	7324.67	7336.08	7336.08	7336.08	7343.47
Average Gross Block (90% depreciable assets)	6943.95	6955.36	6955.36	6955.36	6962.75
Average Gross Block (100% depreciable assets)	380.72	380.72	380.72	380.72	380.72
Freehold Land	0.00	0.00	0.00	0.00	0.00
Rate of Depreciation	5.29%	5.29%	5.29%	5.29%	5.29%
Balance useful life of the asset	23	22	21	20	19
Elapsed life	3	4	5	6	7
Depreciable Value (excluding IT equipment and software) - 90%	6249.56	6259.82	6259.82	6259.82	6266.48
Depreciable value of IT equipment and software - 100%	380.72	380.72	380.72	380.72	380.72
Depreciation during the year	387.62	388.22	388.22	388.22	388.61
Cumulative Depreciation upto PY	1329.25	1716.87	2105.09	2493.30	2881.52
Total Cumulative Depreciation	1716.87	2105.09	2493.30	2881.52	3270.13
Remaining Depreciable Value Total	4913.41	4535.46	4147.24	3759.02	3377.06



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 15.2.2016 in Petition No. 529/TT/2014	388.70	390.39	390.39	390.39	390.39
Claimed by Petitioner	424.62	425.22	425.22	425.22	425.62
Allowed after true-up in this order	387.62	388.22	388.22	388.22	388.61

The variation in depreciation approved vide order dated 15.2.2016 in Petition No. 529/TT/2014 and now trued up for the 2014-19 period is due to lower additional capital expenditure.

Operation & Maintenance Expenses (O&M Expenses)

29. Regulation 29(3) of the 2014 Tariff Regulations specifies the norms for O&M Expenses for the transmission system. The total O&M Expenses for the instant assets claimed by the Petitioner are as follows:-

(₹ in lakh)

O&M Expenses					
Sub-station Bays					
132 kV and below					
No. of bays	7	7	7	7	7
Norms (₹ lakh/Bay)	30.15	31.15	32.18	33.25	34.36
220 kV					
No. of bays	2	2	2	2	2
Norms (₹ lakh/Bay)	42.21	43.61	45.06	46.55	48.10
Transmission line					
S/C (Single Conductor) (kms)	11.56	11.56	11.56	11.56	11.56
Norms (₹ lakh/km)	0.202	0.209	0.216	0.223	0.23
D/C Single Conductor (kms)	0.347	0.347	0.347	0.347	0.347
Norms (₹ lakh/km)	0.303	0.313	0.324	0.334	0.346
Total O&M Expense (₹ in lakh)	297.91	307.79	317.99	328.54	339.50

The O&M Expenses claimed by the Petitioner are as per the norms specified in the 2014 Tariff Regulations and hence, they are allowed as claimed.



(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 15.2.2016 in Petition No. 529/TT/2014	297.91	307.79	317.99	328.54	339.50
Claimed by Petitioner	297.92	307.80	317.99	328.55	339.50
Allowed after true-up in this order	297.91	307.79	317.99	328.54	339.50

The O&M Expenses trued-up for the 2014-19 period are the same as approved vide order dated 15.2.2016 in Petition No. 529/TT/2014.

Interest on Working Capital (IWC)

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

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O & M Expenses	24.83	25.65	26.50	27.38	28.29
Maintenance Spares	44.69	46.17	47.70	49.28	50.92
Receivables	247.71	244.16	239.94	235.78	232.10
Total Working Capital	317.22	315.97	314.14	312.44	311.32
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on working capital	42.82	42.66	42.41	42.18	42.03

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 15.2.2016 in Petition No. 529/TT/2014	42.90	42.76	42.51	42.28	42.07
Claimed by the Petitioner	43.64	43.40	43.07	42.76	42.53
Allowed after true-up in this order	42.82	42.66	42.41	42.18	42.03

The difference in the IWC approved vide order dated 15.2.2016 and that allowed after truing up is on account of change in the receivables pursuant to variation in depreciation.



APPROVED ANNUAL FIXED CHARGES FOR 2014-19 TARIFF PERIOD

31. The detailed computation of the various components of the trued up annual fixed charges for the instant transmission assets for the tariff period 2014-19 is summarised below:-

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Annual Transmission Charges					
Depreciation	387.62	388.22	388.22	388.22	388.61
Interest on Loan	326.97	292.58	257.33	222.07	187.21
Return on Equity	430.92	433.68	433.68	433.68	435.27
Interest on Working Capital	42.82	42.66	42.41	42.18	42.03
O&M Expenses	297.91	307.79	317.99	328.54	339.50
Total	1486.24	1464.93	1439.63	1414.70	1392.62

DETERMINATION OF ANNUAL FIXED CHARGES FOR THE 2019-24 TARIFF

PERIOD

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

	(₹ in lakh)				
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	394.96	369.20	369.20	369.20	121.45
Interest on Loan	135.39	100.91	67.43	33.97	11.75
Return on Equity	414.36	414.52	414.52	414.52	414.52
Interest on Working Capital	24.05	23.54	23.40	23.26	19.54
O&M Expenses	225.98	233.93	242.15	250.49	259.37
Total	1194.74	1142.10	1116.70	1091.44	826.63

33. The Petitioner has claimed the following Interest on Working Capital for the 2019-24 period: -

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	18.83	19.49	20.18	20.87	21.61
Maintenance Spares	33.90	35.09	36.32	37.57	38.91
Receivables	146.89	140.81	137.68	134.56	101.63
Total Working Capital	199.62	195.39	194.18	193.00	162.15
Rate of Interest (%)	12.05	12.05	12.05	12.05	12.05
Interest on working capital	24.05	23.54	23.40	23.26	19.54



34. The tariff for the 2019-24 period is allowed as discussed in the subsequent paragraphs.

Capital Cost

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

“19. (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.”

36. The Petitioner vide Auditor Certificate dated 31.7.2019 has claimed capital cost of ₹7350.86 lakh as on 31.3.2019 for Combined Asset-B. The capital cost of ₹7350.86 lakh as on 31.3.2019 for Combined Asset-B has already been approved by the Commission and the same has been considered as 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

37. Regulation 25(1) of the 2019 Tariff Regulations provides as under:-

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

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

The Petitioner vide affidavit dated 31.7.2019 has claimed additional capital expenditure of ₹5.85 lakh for 2019-20 for Combined Asset-B under Regulation 25(1)(d) of the 2019 Tariff Regulations. The Petitioner has claimed additional capital expenditure on account of undischarged liability towards final payment for works executed within cut-off date as follows:



(₹ in lakh)

Asset	Capital cost as on 1.4.2019	Actual Additional Capitalisation for					Capital cost as on 31.4.2024
		2019-20	2020-21	2021-22	2022-23	2023-24	
Combined Asset-B	7350.86	5.85	0.00	0.00	0.00	0.00	7356.71

38. The Petitioner has claimed the additional capital expenditure as undischarged liabilities for works executed within the cut-off date for Combined Asset-B under Regulation (25)(1)(d) of the 2019 Tariff Regulations. The total capital expenditure as on 31.3.2024 is within the apportioned approved capital cost of ₹8171.00 lakh. Therefore, additional capital expenditure claimed by the Petitioner has been allowed for the purpose of determination of transmission tariff for the 2019-24 period.

39. The details of the approved additional capital expenditure and the capital cost as on 31.3.2024 is as follows:

(₹ in lakh)

Asset	Capital cost as on 1.4.2019	Actual Additional Capitalisation during					Capital cost as on 31.3.2024
		2019-20	2020-21	2021-22	2022-23	2023-24	
Combined Asset-B	7350.86	5.85	0.00	0.00	0.00	0.00	7356.71

Debt-Equity ratio

40. 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.

(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.”

41. The details of the debt and equity considered for the purpose of tariff for the 2019-24 period are as follows:-

Particulars	Capital cost as on 1.4.2019 (₹ in lakh)	%	Additional Capitalisation during 2019-24 (₹ in lakh)	%	Capital cost as on 31.3.2024 (₹ in lakh)	%
Debt	5145.60	70.00	4.10	70.00	5149.70	70.00
Equity	2205.26	30.00	1.76	30.00	2207.01	30.00
Total	7350.86	100.00	5.85	100.00	7356.71	100.00



Return on Equity (RoE)

42. Regulations 30 and 31 of the 2019 Tariff Regulations specify 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.

(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.”

43. 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. The RoE has been worked out and allowed as follows:-

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity	2205.26	2207.01	2207.01	2207.01	2207.01
Additions	1.76	0.00	0.00	0.00	0.00
Closing Equity	2207.01	2207.01	2207.01	2207.01	2207.01
Average Equity	2206.14	2207.01	2207.01	2207.01	2207.01
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (%)	17.472	17.472	17.472	17.472	17.472
Rate of Return on Equity (%)	18.782	18.782	18.782	18.782	18.782
Return on Equity	414.35	414.51	414.51	414.51	414.51



Interest on Loan (IoL)

44. 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.”

45. 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, the IoL has been worked out in accordance with Regulation 32 of the 2019 Tariff Regulations. The details of weighted average rate of interest for the 2019-24 tariff period are placed in Annexure-2 and the IoL has been worked out and allowed as follows:-

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	5145.60	5149.70	5149.70	5149.70	5149.70
Cumulative Repayments upto Previous Year	3270.13	3696.29	4122.61	4548.92	4975.24
Net Loan-Opening	1875.47	1453.40	1027.09	600.78	174.46
Additions	4.10	0.00	0.00	0.00	0.00
Repayment during the year	426.16	426.31	426.31	426.31	120.28
Net Loan-Closing	1453.40	1027.09	600.78	174.46	54.18
Average Loan	1664.44	1240.25	813.93	387.62	114.32
Weighted Average Rate of Interest on Loan (%)	9.0627	9.0597	9.0554	9.0474	9.0281
Interest on Loan	150.84	112.36	73.70	35.07	10.32

Depreciation

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

"33. Depreciation: (1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system or element 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.

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

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

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

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

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

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

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

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

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

(7) The generating company or the transmission licensee, as the case may be, shall submit the details of proposed capital expenditure five years before the completion of useful life of the project along with justification and proposed life



extension. The Commission based on prudence check of such submissions shall approve the depreciation on capital expenditure.

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

47. IT equipment has been taken as a part of the Gross Block and depreciated using weighted average rate of depreciation (WAROD). The salvage value of IT equipment has been considered nil, i.e. IT asset has been considered as 100% depreciable. The depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and accumulated depreciation up to 31.3.2019. The detailed calculation for depreciation for the transmission asset is worked out and allowed as follows:-

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation					
Opening Gross Block	7350.86	7356.71	7356.71	7356.71	7356.71
Additional Capitalisation	5.85	0.00	0.00	0.00	0.00
Closing Gross Block	7356.71	7356.71	7356.71	7356.71	7356.71
Average Gross Block	7353.79	7356.71	7356.71	7356.71	7356.71
Average Gross Block (90% depreciable assets)	6973.07	6975.99	6975.99	6975.99	6975.99
Average Gross Block (100% depreciable assets)	380.72	380.72	380.72	380.72	380.72
Freehold Land	0.00	0.00	0.00	0.00	0.00
Rate of Depreciation	5.80%	5.79%	5.79%	5.79%	Spreading
Balance useful life of the asset	18	17	16	15	14
Elapsed life	8	9	10	11	12
Depreciable Value (excluding IT equipment and software) - 90%	6275.76	6278.39	6278.39	6278.39	6278.39
Depreciable value of IT equipment and software - 100%	380.72	380.72	380.72	380.72	380.72
Depreciation during the year	426.16	426.31	426.31	426.31	120.28
Cumulative Depreciation upto PY	3270.13	3696.29	4122.61	4548.92	4975.24



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation					
Total Cumulative Depreciation	3696.29	4122.61	4548.92	4975.24	5095.51
Remaining Depreciable Value Total	2960.19	2536.50	2110.19	1683.88	1563.60

Operation & Maintenance Expenses (O&M Expenses)

48. Regulation 35(3)(a) of the 2019 Tariff Regulations provides as under:

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

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



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
500 kV Rihand-Dadri HVDC bipole scheme (₹ lakh) (1500 MW)	2,252	2,331	2,413	2,498	2,586
±500 kV Talcher- Kolar HVDC bipole scheme (₹ lakh) (2000 MW)	2,468	2,555	2,645	2,738	2,834
±500 kV Bhiwadi-Balia HVDC bipole scheme (₹ lakh) (2500 MW)	1,696	1,756	1,817	1,881	1,947
±800 kV, Bishwanath-Agra HVDC bipole scheme (₹ lakh) (3000 MW)	2,563	2,653	2,746	2,842	2,942

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

Provided further that:

- i. the operation and maintenance expenses for new HVDC bi-pole schemes commissioned after 1.4.2019 for a particular year shall be allowed pro-rata on the basis of normative rate of operation and maintenance expenses of similar HVDC bi-pole scheme for the corresponding year of the tariff period;*
 - ii. the O&M expenses norms for HVDC bi-pole line shall be considered as Double Circuit quad AC line;*
 - iii. the O&M expenses of ±500 kV Mundra-Mohindergarh HVDC bipole scheme (2000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ±500 kV Talchar-Kolar HVDC bi-pole scheme (2000 MW);*
 - iv. the O&M expenses of ±800 kV Champa-Kurukshetra HVDC bi-pole scheme (3000 MW) shall be on the basis of the normative O&M expenses for ±800 kV, Bishwanath-Agra HVDC bi-pole scheme;*
 - v. the O&M expenses of ±800 kV, Alipurduar-Agra HVDC bi-pole scheme (3000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ±800 kV, Bishwanath-Agra HVDC bi-pole scheme; and*
 - vi. the O&M expenses of Static Synchronous Compensator and Static Var Compensator shall be worked at 1.5% of original project cost as on commercial operation which shall be escalated at the rate of 3.51% to work out the O&M expenses during the tariff period. The O&M expenses of Static Synchronous Compensator and Static Var Compensator, if required, may be reviewed after three years.*
- (b) The total allowable operation and maintenance expenses for the transmission system shall be calculated by multiplying the number of sub-station bays, transformer capacity of the transformer (in MVA) and km of line length with the applicable norms for the operation and maintenance expenses per bay, per MVA and per km respectively.*
- (c) The Security Expenses and Capital Spares for transmission system shall be*



allowed separately after prudence check:

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

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

49. The total O&M Expenses claimed by the Petitioner for the instant assets are as follows:-

(₹ in lakh)

O&M Expenses					
Sub-station Bays					
132 kV and below					
No. of bays	7	7	7	7	7
Norms (₹ lakh/Bay)	30.15	31.15	32.18	33.25	34.36
220 kV					
No. of bays	2	2	2	2	2
Norms (₹ lakh/Bay)	42.21	43.61	45.06	46.55	48.10
Transmission line					
S/C (Single Conductor) (kms)	11.56	11.56	11.56	11.56	11.56
Norms (₹ lakh/km)	0.202	0.209	0.216	0.223	0.23
D/C Single Conductor (kms)	0.347	0.347	0.347	0.347	0.347
Norms (₹ lakh/km)	0.303	0.313	0.324	0.334	0.346
Transformers					
220 kV					
MVA	260	260	260	260	260
Norms (₹ lakh per MVA)	0.245	0.254	0.263	0.272	0.282
Total O&M Expense (₹ in lakh)	225.99	233.93	242.16	250.49	259.38

50. The total O&M Expenses for the instant assets allowed are as follows:-

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Combined Asset B	225.99	233.93	242.16	250.49	259.38



Interest on Working Capital (IWC)

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

“34. Interest on Working Capital

(1) ...

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

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

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

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

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

“3.Definitions ...

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

52. The Petitioner has submitted that it has computed interest on working capital for the 2019-24 period considering the SBI Base Rate plus 350 basis points as on 1.4.2019. The rate of IWC considered is 12.05%.

53. The IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The rate of IWC considered is 12.05% (SBI Base Rate of 8.55% plus 350



basis points). The components of the working capital and interest thereon have been worked as follows:-

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	18.83	19.49	20.18	20.87	21.61
Maintenance Spares	33.90	35.09	36.32	37.57	38.91
Receivables	152.72	149.39	145.61	141.84	101.31
Total Working Capital	205.45	203.97	202.11	200.29	161.83
Rate of Interest (%)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	24.76	24.58	24.35	24.14	19.50

ANNUAL FIXED CHARGES FOR THE 2019-24 TARIFF PERIOD

54. The transmission charges allowed for the instant transmission assets for the 2019-24 tariff period are summarised below:-

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Annual Transmission Charges					
Depreciation	426.16	426.31	426.31	426.31	120.28
Interest on Loan	150.84	112.36	73.70	35.07	10.32
Return on Equity	414.35	414.51	414.51	414.51	414.51
Interest on Working Capital	24.76	24.58	24.35	24.14	19.50
O & M Expenses	225.99	233.93	242.16	250.49	259.38
Total	1242.09	1211.69	1181.04	1150.51	823.98

Filing Fee and the Publication Expenses

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



Licence Fee and RLDC Fees and Charges

56. 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 & charges in accordance with Regulations 70(3) of the 2019 Tariff Regulations for the 2019-24 period.

Security Expenses

57. 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 Interest on Working Capital. 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.

58. We have considered the submissions of the Petitioner. Any application filed by the Petitioner in this regard shall be dealt with in accordance with the appropriate provisions of the 2019 Tariff Regulations.



Goods and Services Tax

59. The Petitioner has prayed for reimbursement of tax, if any, on account of implementation of GST. GST is not levied on transmission service at present and we are of the view that the Petitioner's prayer is premature.

Capital Spares

60. 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

61. 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 57 of the 2019 Tariff Regulations.

62. This order disposes of Petition No. 483/TT/2019.

sd/-
(I. S. Jha)
Member

sd/-
(P. K. Pujari)
Chairperson



ANNEXURE-1**DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO FOR 2014-19****(₹ in lakh)**

SL No	Particulars	Interest Rate (%)	Loan deployed as on 1.4.2014	Additions during the tariff period	Repayment	Total
1	BOND XXVIII -DOCO DRAWL ON 01-APR	9.33	400.00	0.00	166.65	400.00
2	BOND XXIX -DOCO DRAWL ON 01-APR	9.20	2040.00	0.00	850.00	2040.00
3	BOND XXX -DOCO DRAWL ON 01-APR	8.80	1195.00	0.00	497.90	1195.00
4	BOND XXXI -DOCO DRAWL ON 01-APR	8.90	194.00	0.00	80.85	194.00
5	BOND XXXIII -DOCO DRAWL ON 01-APR	8.64	175.00	0.00	72.90	175.00
6	BOND-XXXIV -DOCO DRAWL ON 01-APR	8.84	593.00	0.00	247.10	593.00
7	BOND-XXXV -ADDCAP FOR ADDCAP F	9.64	184.94	0.00	61.64	184.94
8	BOND-XXXV -DOCO FUNDING	9.64	154.50	0.00	51.52	154.50
9	BOND XXXVII -ADDCAP FOR ADDCAP F	9.25	182.84	0.00	60.96	182.84
10	SBI (2014-15) -ADD CAP 14-15	10.25	0.00	4.08	0.00	4.08
11	BOND XLVI -ADD CAP 14-15	9.30	0.00	11.89	0.00	11.89
12	BOND 59 -ADD CAP 2018-19	7.30	0.00	10.35	0.00	10.35
	Total		5119.28	26.32	2089.52	5145.60

WEIGHTED AVERAGE RATE OF INTEREST ON LOAN DURING 2014-19 TARIFF PERIOD**(₹ in lakh)**

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross opening loan	5119.28	5135.25	5135.25	5135.25	5135.25
Cumulative repayments of loans up to previous year	522.42	905.50	1332.11	1758.72	2185.33
Net loans opening	4596.86	4229.75	3803.14	3376.53	2949.92
Add: drawl(s) during the year	15.97	0.00	0.00	0.00	10.35
Less: repayment(s) of loan during the year	383.08	426.61	426.61	426.61	426.61



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Net closing loan	4229.75	3803.14	3376.53	2949.92	2533.66
Average net loan	4413.31	4016.45	3589.84	3163.23	2741.79
Rate of interest on loan	9.0719%	9.0743%	9.0737%	9.0721%	9.0679%
Interest on loan	400.37	364.47	325.73	286.97	248.62



ANNEXURE-2**DETAILS OF LOAN PORTFOLIO FOR 2019-24****(₹ in lakh)**

SL No	Particulars	Interest Rate (%)	Loan deployed as on 1.4.2019	Additions during the tariff period	Repayment	Total
1	BOND XXVIII -DOCO DRAWL ON 01-APR	9.33	400.00	0.00	166.65	400.00
2	BOND XXIX -DOCO DRAWL ON 01-APR	9.20	2040.00	0.00	850.00	2040.00
3	BOND XXX -DOCO DRAWL ON 01-APR	8.80	1195.00	0.00	497.90	1195.00
4	BOND XXXI -DOCO DRAWL ON 01-APR	8.90	194.00	0.00	80.85	194.00
5	BOND XXXIII -DOCO DRAWL ON 01-APR	8.64	175.00	0.00	72.90	175.00
6	BOND-XXXIV -DOCO DRAWL ON 01-APR	8.84	593.00	0.00	247.10	593.00
7	BOND-XXXV -ADDCAP FOR ADDCAP F	9.64	184.94	0.00	77.05	184.94
8	BOND-XXXV -DOCO FUNDING	9.64	154.50	0.00	64.40	154.50
9	BOND XXXVII -ADDCAP FOR ADDCAP F	9.25	182.84	0.00	76.20	182.84
10	SBI (2014-15) -ADD CAP 14-15	8.25	4.08	0.00	2.05	4.08
11	BOND XLVI -ADD CAP 14-15	9.30	11.89	0.00	3.96	11.89
12	BOND 59 -ADD CAP 2018-19	7.30	10.35	0.00	0.00	10.35
	Total		5145.60	0.00	2139.06	5145.60



WEIGHTED AVERAGE RATE OF INTEREST ON LOAN DURING 2019-24 TARIFF PERIOD**(₹ in lakh)**

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Gross opening loan	5145.60	5145.60	5145.60	5145.60	5145.60
Cumulative repayments of loans up to previous year	2611.93	3,042.91	3469.93	3896.95	4323.97
Net loans opening	2533.67	2102.69	1675.67	1248.65	821.63
Add: drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: repayment(s) of loan during the year	430.98	427.02	427.02	427.02	427.02
Net closing loan	2102.69	1675.67	1248.65	821.63	394.61
Average net loan	2318.18	1889.18	1462.16	1035.14	608.12
Rate of interest on loan	9.0627%	9.0597%	9.0554%	9.0474%	9.0281%
Interest on loan	210.09	171.15	132.40	93.65	54.90

