

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 269/TT/2020

Coram:

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

Date of Order: 09.08.2021

In the matter of:

Approval under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 for 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 Chukka Transmission System in Eastern Region.

And in the matter of:

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

....Petitioner

Vs.

1. Bihar State Power (Holding) Company Ltd.,
(Formerly Bihar State Electricity Board - BSEB),
Vidyut Bhavan, Bailey Road, Patna – 800 001.
2. West Bengal State Electricity Distribution Company Ltd.,
Bidyut Bhawan, Bidhan Nagar,
Block DJ, Sector-II, Salt Lakecity,
Calcutta – 700 091.
3. Grid Corporation of Orissa Ltd.,
Shahid Nagar, Bhubaneswar – 751 007.
4. Jharkhand State Electricity Board,
In Front of Main Secretariat,
Doranda, Ranchi – 834 002.



5. Damodar Valley Corporation,
DVC Tower, Maniktala,
Civic Centre, VIP Road, Calcutta – 700 054.

6. Power Department,
Government of Sikkim,
Gangtok – 737 101.

...Respondent(s)

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

For Respondent : Shri Nishant Kumar, Advocate, BSPHCL

ORDER

The instant petition has been filed by Power Grid Corporation of India Ltd., a deemed transmission licensee, for truing up of transmission tariff from 1.4.2014 to 31.3.2019 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) and determination of tariff for the period from 1.4.2019 to 31.3.2024 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) in respect of the transmission asset, Chukka Transmission System in Eastern Region.

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 and 10 above.

2) Allow the capital cost including the additional capitalization/ DE-capitalization going to be incurred during 2019-24 period as claimed by petitioner

3(a) 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 and 10 above for respective block.



3(b) It is further submitted that deferred tax liability before 01.04.2009 shall be recoverable from the beneficiaries or long term transmission customers /DICs as the case may be, as and when materialized as per regulation 49 of 2014 and regulation 67 of 2019 tariff regulation. The petitioner may be allowed to recover the deferred tax liability materialized directly without making any application before the commission as provided in the regulation.

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 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 10.5 above.

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

9) Allow the Petitioner to bill and recover GST on Transmission Charges separately from the 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 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 transmission asset, Chukka Transmission System is associated with evacuation of power generated from Chukka Hydroelectric Power Project situated in Bhutan. The Chukka Transmission System was initially implemented by NHPC and was subsequently taken over by the Petitioner. The Central Government in Ministry of Power vide its letter dated 4.9.1998 accorded its approval to the revised cost estimates of ₹13909 lakh, including IDC of ₹824 lakh. The scope of the work covered in the transmission asset is as follows:



Transmission Lines

- (i) Malda-Farakka 400 kV D/C transmission line (Charged to 400 kV on 1.5.2002)
- (ii) Malda-Dalkhola 220 kV D/C transmission line
- (iii) Dalkhola-Purnea 220 kV D/C transmission line
- (iv) Dalkhola-Siliguri 220 kV D/C transmission line
- (v) Siliguri-Birpara 220 kV D/C transmission line
- (vi) Birpara –Salakati 220 kV D/C transmission line
- (vii) Birpara-Puntsholing 220 kV D/C transmission line
- (viii) Birpara-Puntsholing-III 220 kV S/C transmission line
- (ix) Salakati-BTPS 220 kV S/C transmission line

Sub-stations

I. 220 kV Birpara Sub-station

- (i) 3 Number of 220 kV bays at Birpara-Chukka-I, II &III bays
- (ii) 2 Number of 220 kV bays at Birpara-Siliguri-I&II
- (iii) 2 Number of 220 kV bays at Birpara -Salakati-I &II
- (iv) 2 Number of 220 kV ICT-I&II bays at Birpara
- (v) 1 Number of 132 kV ICT-II bay at Birpara

II. 220 kV Dalkhola Sub-station

- (i) 2 Number of 220 kV bays at Dalkhola-Siliguri-I&II
- (ii) 2 Number of 220 kV bays at Dalkhola-Purnea-I&II
- (iii) 2 Number of 220 kV bays at Dalkhola-Malda-I&II

III. 220 kV Siliguri Sub-station

- (i) 2 Number of 220 kV bays at Siliguri-Baraipada-I&II
- (ii) 2 Number of 220 kV bays at Siliguri-Dalkhola-I&II
- (iii) 1 Number of 220 kV ICT bay at Siliguri
- (iv) 1 Number of 132 kV ICT bay at Siliguri

IV. 400 kV Farakka Sub-station

- (i) 1 Number of 400 kV bay at Farakka(NTPC)-malda
- (ii) 1 Number of 220 kV ICT bay Farakka(NTPC)



V. 400 kV Malda Sub-station

- (i) 2 Number of 400 kV bays at Malda-Farakka-I&II
- (ii) 1 Number of 400 kV ICT-III bay at Malda
- (iii) 2 Number of 220 kV bays at Malda-Dalkhola-I&II
- (iv) 3 Number of 220 kV ICT-I,II and III bays at Malda

VI. 220 kV Purnea Sub-station

- (i) 2 Number of 220 kV ICT-I&II bays at Purnea
- (ii) 2 Number of 220 kV bays at Purnea-Dalkhola-I&II

VII. 220 kV Salakati Sub-station

- (i) 2 Number of 220 kV bays at Salakati-Birpara-I&II

(b) The notional COD of the transmission asset is considered as 1.4.1987.

(c) Initial tariff for the transmission asset was notified by the Ministry of Power vide its notification dated 14.5.1999 at an admitted capital cost of ₹13874.00 lakh. The tariff notified by Ministry of Power was valid up to 31.3.2002. However, as the terms and conditions for determination of tariff notified by the Commission came into effect on 1.4.2001, the transmission charges approved by Ministry of Power were rendered valid up to 31.3.2001.

(d) The transmission tariff for the period 2001-04 in respect of the transmission asset was allowed vide order dated 30.6.2003 in Petition No. 11/2002; the tariff for the 2004-09 tariff period was allowed vide order dated 21.12.2005 in Petition No. 124/2004; the tariff for the 2009-14 tariff period was determined vide order dated 6.8.2013 in Petition No. 331/2010; and tariff for 2009-14 tariff period was trued up and tariff for 2014-19 period was allowed vide order dated 8.1.2016 in Petition No. 60/TT/2015.

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



5. The Petitioner has served the petition on the Respondents and notice of this application has also been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments or suggestions have been received from the general public in response to the aforesaid notices published in the newspapers by the Petitioner. Bihar State Power (Holding) Company Ltd. (BSPHCL), i.e. Respondent No. 1, has filed its reply dated 28.9.2020 on e-filing portal of the Commission and has raised issues of grossing up of Return on Equity (RoE), Additional Capital Expenditure (ACE) and GST etc. The Petitioner vide affidavit dated 19.11.2020 has filed its rejoinder to the reply of BSPHCL. The issues raised by BSPHCL and the clarifications given by the Petitioner are dealt in the relevant portions of the instant order.

6. The hearing in this matter was held on 19.8.2020 through video conference and order was reserved. This order is being issued taking into consideration the submissions made by the Petitioner in the petition vide affidavit dated 16.1.2020, Petitioner's affidavits dated 7.8.2020, 10.10.2020 and 24.12.2020, reply of BSPHCL dated 28.9.2020 and Petitioner's rejoinder thereto.

7. 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

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

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	493.82	609.60	674.69	751.70	746.77
Interest on Loan	8.57	8.30	0.00	0.00	0.00



Return on Equity	1422.10	1463.70	1479.77	1477.41	1476.30
Interest on working capital	151.63	158.81	164.18	169.67	173.50
O & M Expenses	1942.89	2007.33	2074.36	2142.60	2214.41
Total	4019.01	4247.74	4393.00	4541.38	4610.98

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

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses	161.91	167.28	172.86	178.55	184.53
Maintenance Spares	291.43	301.10	311.15	321.39	332.16
Receivables	669.84	707.96	732.17	756.90	768.50
Total	1123.18	1176.34	1216.18	1256.84	1285.19
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	151.63	158.81	164.18	169.67	173.50

Capital Cost as on COD

10. The capital cost of the transmission asset has been calculated in accordance with Regulation 9(3) and Regulation 9(6) of the 2014 Tariff Regulations. The Commission vide order dated 8.1.2016 in Petition No. 60/TT/2015 admitted the capital cost of ₹14572.65 lakh as on 31.3.2014 for the transmission asset.

11. The Petitioner projected ACE of ₹683.26 lakh and ₹1380.31 lakh for 2014-15 and 2015-16 respectively and de-capitalisation of ₹216.72 lakh and ₹159.78 lakh for 2014-15 and 2015-16 respectively at the time of determination of tariff for 2014-19 period and the same was allowed. Accordingly, the capital cost considered vide order dated 8.1.2016 in Petition No. 60/TT/2015 for tariff computation is as follows:

(₹ in lakh)				
Capital cost admitted as on 31.3.2014	ACE during 2014-19			Total cost as on 31.3.2019
	ACE/De-capitalisation	2014-15	2015-16	
14572.65	ACE	683.26	1380.31	16259.72
	De-capitalisation	216.72	159.78	
	Net ACE	466.54	1220.53	

12. The Petitioner vide Auditor's Certificates dated 16.1.2020 and 6.8.2020 has submitted capital cost as on 31.3.2014 as well as ACE and de-capitalisation up to



31.3.2024 in respect of the transmission asset. The details of the capital cost as on 1.4.2014, ACE and de-capitalisation incurred up to 31.3.2019 as claimed by the Petitioner in respect of the transmission asset are as follows:

Capital Cost as on 1.4.2014	ACE and De-capitalisation (as per Auditor's Certificate)									Total Capital Cost as on 31.3.2019
	2014-15		2015-16		2016-17		2017-18		2018-19	
	ACE	De-capitalisation	ACE	De-capitalisation	ACE	De-capitalisation	ACE	De-capitalisation	ACE	
14572.65	979.47	100.27	390.43	17.03	196.20	8.71	105.73	158.18	92.60	16052.89

13. The capital cost allowed by the Commission as on 1.4.2014 vide order dated 8.1.2016 in Petition No. 60/TT/2015 for the transmission asset has been considered as opening capital cost as on 1.4.2014 for determination of tariff, in accordance with Regulation 9(3) of the 2014 Tariff Regulations.

Additional Capital Expenditure (ACE)

14. The details of ACE and de-capitalisation during 2014-19 tariff period as claimed by the Petitioner in respect of the transmission asset are as follows:

ACE and De-capitalisation (as per Auditor's Certificate)									(₹ in lakh)
2014-15		2015-16		2016-17		2017-18		2018-19	
ACE	De-capitalisation	ACE	De-capitalisation	ACE	De-capitalisation	ACE	De-capitalisation	ACE	
979.47	100.27	390.43	17.03	196.20	8.71	105.73	158.18	92.60	

15. The Commission vide order dated 17.8.2020 in Petition No. 37/TT/2020 held as under:

"27.----- Therefore, the Petitioner is directed to submit all the information required for decapitalisation of the 132 single main and transfer bus scheme at Baripara Sub-station on affidavit with a copy to all the Respondents within seven days from the date of issue of the instant order in Petition No.269/TT/2020. The staff is directed to decapitalise the 132 single main and transfer bus scheme at Baripara Sub-station which is part of the Chukha Transmission System in Petition No.269/TT/2019."

16. In response, the Petitioner vide affidavit dated 7.8.2020 has submitted that apart from earlier de-capitalisation as shown in the Auditor's certificate submitted with the petition, additional de-capitalisation details have been filed. This additional



decapitalisation pertains to Birpara Sub-station on account of modification of 132 kV bays from AIS to GIS and transfer bus scheme. The details submitted as per Form-10B are as follows:

(₹ in lakh)					
Year of decapitalisation	Work/Equipment proposed to be de-capitalised	Year of capitalisation of asset/ equipment being de-capitalised	Original book value of the asset being de-capitalised	Cumulative repayment of loan corresponding to decapitalisation	Net book value
2017-18	SS Item	1986	62.19	55.97	6.22

17. BSPHCL has submitted that the Commission has admitted capital cost of ₹16259.72 lakh as on 31.3.2019 and actual cost claimed by the Petitioner is ₹16052.89 lakh. BSPHCL has further submitted that the Petitioner has claimed ACE for the years 2016-17, 2017-18 and 2018-19 without prior approval of the Commission.

18. In response, the Petitioner has submitted that ACE claimed for 2016-17, 2017-18 and 2018-19 is spill-over of ACE already approved vide order dated 8.1.2016 in Petition No. 60/TT/2015.

19. We have considered the submissions of the Petitioner and BSPHCL. The ACE claimed is on account of balance payments towards tower foundation works of the transmission lines, replacement of sub-station equipment and the same is allowed under Regulation 14(3)(vii) and 14(3)(ix) of the 2014 Tariff Regulations. The total capital cost allowed as on 31.3.2019 is as follows:

Capital Cost as on 31.3.2014	ACE and Decapitalisation (as per Auditor's Certificate)									Total Capital Cost as on 31.3.2019
	2014-15		2015-16		2016-17		2017-18		2018-19	
	ACE	Decapitalisation	ACE	Decapitalisation	ACE	Decapitalisation	ACE	Decapitalisation	ACE	
14572.65	979.47	100.27	390.43	17.03	196.20	8.71	105.73	220.37	92.60	15990.70



Debt-Equity Ratio

20. The Petitioner has claimed debt-equity ratio as on 31.3.2014 approved by the Commission vide order dated 8.1.2016 in Petition No. 60/TT/2015 and the same has been considered as opening debt-equity ratio as on 1.4.2014 as provided under Regulation 19(3) of the 2014 Tariff Regulations. The details of the same are as follows:

Particulars	Amount (₹ in lakh)	(%)
Debt	7442.97	51.07
Equity	7129.68	48.93
Total	14572.65	100.00

21. The debt-equity ratio of 70:30 has been considered for ACE allowed during 2014-19 tariff period in accordance with Regulation 19(5) of the 2014 Tariff Regulations. The de-capitalisation of the asset in the instant case is carried out in the debt-equity ratio as claimed by the Petitioner in Form 10B.

22. The details of debt-equity ratio as on 1.4.2014 and 31.3.2019 in respect of the transmission asset considered for the purpose of tariff for 2014-19 tariff period is as follows:

Debt-Equity for Capital Cost as on 1.4.2014

Particulars	Amount (₹ in lakh)	(%)
Debt	7442.97	51.07
Equity	7129.68	48.93
Total	14572.65	100.00

Debt-Equity for ACE and Decapitalisation during 2014-19

(₹ in lakh)

Particulars	ACE		De-capitalisation		ACE		De-capitalisation	
	2014-15	(%)	2014-15	(%)*	2015-16	(%)	2015-16	(%)*
Debt	685.63	70.00	50.14	50.00	273.30	70.00	8.52	50.00
Equity	293.84	30.00	50.14	50.00	117.13	30.00	8.52	50.00
Total	979.47	100.00	100.27	100.00	390.43	100.00	17.03	100.00
Particulars	ACE		De-capitalisation		ACE		De-capitalisation	
	2016-17	(%)	2016-17	(%)*	2017-18	(%)	2017-18	(%)*
Debt	137.34	70.00	4.36	50.00	74.01	70.00	110.19	50.00
Equity	58.86	30.00	4.36	50.00	31.72	30.00	110.19	50.00
Total	196.20	100.00	8.71	100.00	105.73	100.00	220.37	100.00



Particulars	ACE	
	2018-19	(%)
Debt	64.82	70.00
Equity	27.78	30.00
Total	92.60	100.00

*as per the Form 10B submitted by the petitioner

Debt-Equity for Capital Cost as on 31.3.2019

Particulars	Amount (₹ in lakh)	(%)
Debt	8504.88*	53.19
Equity	7485.82**	46.81
Total	15990.70	100.00

*Debt as on 1.4.2014 plus debt considered for ACE minus adjustment made in debt on de-capitalisation.

** Equity as on 1.4.2014 plus equity considered for ACE minus adjustment made in equity on de-capitalisation

Depreciation

23. The transmission asset has already completed 12 years before 1.4.2014. Accordingly, depreciation has been calculated based on the remaining depreciable value to be recovered over the balance useful life and trued up depreciation allowed for 2014-19 tariff period is as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	14572.65	15451.85	15825.25	16012.74	15898.10
Additional Capitalisation	979.47	390.43	196.20	105.73	92.60
De-capitalisation	100.27	17.03	8.71	220.37	0.00
Closing Gross Block	15451.85	15825.25	16012.74	15898.10	15990.70
Average Gross Block	15012.25	15638.55	15919.00	15955.42	15944.40
Weighted average rate of Depreciation (WAROD) (%)	3.02	3.73	4.09	4.16	4.76
Balance useful life of the asset at the beginning of the year (Year)	6.00	5.00	4.00	3.00	2.00
Elapsed useful life of the asset at the beginning of the year (Year)	27.00	28.00	29.00	30.00	31.00
Depreciable Value	13106.03	13669.70	13922.10	13954.88	13944.96
Depreciation during the year	452.76	583.54	650.48	664.02	758.47
Cumulative depreciation at the end of the year	10751.98	11320.19	11962.83	12428.02	13186.49
Remaining aggregated depreciable value at the end of the year	2263.80	2334.17	1951.43	1328.03	758.47



24. The details of the depreciation allowed in respect of the transmission asset vide order dated 8.1.2016 in Petition No. 60/TT/2015, claimed by the Petitioner in the instant petition and trued up in the instant order are as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed in order dated 8.1.2016 in Petition No. 60/TT/2015	447.82	622.71	760.02	760.02	760.02
Claimed by the Petitioner in the instant petition	493.82	609.60	674.69	751.70	746.77
Allowed after true-up in this order	452.76	583.54	650.48	664.02	758.47

Interest on Loan (IoL)

25. The Petitioner has claimed IoL for 2014-15 and 2015-16 only. The Petitioner has claimed the weighted average rate of IoL based on its actual loan portfolio and rate of interest.

26. We have considered the submissions of the Petitioner. IoL is calculated based on the actual interest rate in accordance with Regulation 26 of the 2014 Tariff Regulations. The details of trued-up IoL allowed in respect of the transmission asset for 2014-19 tariff period are as follows:

Particulars	(₹ in lakh)	
	2014-15	2015-16
Gross Normative Loan	7442.97	8078.46
Cumulative Repayments up to Previous Year	7442.97	7845.59
Net Loan-Opening	0.00	232.87
Addition due to ACE	635.49	264.79
Adjustment of cumulative repayment pertaining to the de-capitalised asset	50.14	8.52
Repayment during the year	452.76	506.18
Net Loan-Closing	232.87	0.00
Average Loan	116.44	116.44
Weighted Average Rate of Interest on Loan (%)	8.938	8.649
Interest on Loan	10.41	10.07



27. Accordingly, IoL approved vide order dated 8.1.2016 in Petition No. 60/TT/2015, claimed by the Petitioner in the instant petition and trued up in the instant order are as follows:

Particulars	(₹ in lakh)	
	2014-15	2015-16
Allowed vide order dated 8.1.2016 in Petition No. 60/TT/2015	0.00	9.73
Claimed by the Petitioner in the instant petition	8.57	8.30
Allowed after true-up in this order	10.41	10.07

Return on Equity (RoE)

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

Year	Claimed effective tax (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

29. BSPHCL has submitted that the Petitioner is entitled to RoE for the transmission asset in accordance with Regulation 24 and Regulation 25 of the 2014 Tariff Regulations. BSPHCL further submitted that the Commission vide order dated 27.4.2020 in Petition No. 274/TT/2019 has arrived at the effective tax rate for the Petitioner based on the notified MAT rates. BSPHCL has also submitted that effective tax rates based on notified MAT rates may be considered for the purpose of grossing up of rate of return on equity.

30. In response, the Petitioner has submitted that the transmission tariff have already been trued-up for 2014-19 period by the Commission vide order dated 18.4.2020 in Petition No. 247/TT/2019, order dated 27.4.2020 in Petition No.



274/TT/2019, order dated 23.4.2020 in Petition No. 245/TT/2019 and order dated 16.4.2020 in Petition No. 307/TT/2019 for transmission assets under the respective petitions. The Petitioner has requested to allow the differential tariff on account of the trued-up ROE based on effective tax rate calculated on completion of Income Tax assessment/ re-assessment for the years 2014-15, 2015-16, 2016-17, 2017-18 and 2018-19 on receipt of the respective assessment orders, directly from the beneficiaries, on year to year basis as provided in the 2014 Tariff Regulations.

31. We have considered the submissions of the Petitioner and BSPHCL. The Commission vide order dated 27.4.2020 in Petition No. 274/TT/2019 has arrived at the effective tax rate for the Petitioner based on the notified MAT rates.

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

Year	MAT Rate (%)	Grossed up RoE [(Base Rate)/(1-t)] (%)
2014-15	20.961	19.610
2015-16	21.342	19.705
2016-17	21.342	19.705
2017-18	21.342	19.705
2018-19	21.549	19.758

33. Accordingly, the trued-up RoE allowed for the transmission asset for 2014-19 period is as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	7129.68	7373.39	7482.00	7536.51	7458.04
Addition due to ACE	293.84	117.13	58.86	31.72	27.78
De-Capitalisation	50.14	8.52	4.36	110.19	0.00
Closing Equity	7373.39	7482.00	7536.51	7458.04	7485.82
Average Equity	7251.53	7427.69	7509.25	7497.27	7471.93
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500



Tax Rate applicable (%)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (Pre-tax)	19.610	19.705	19.705	19.705	19.758
Return on Equity (Pre-tax)	1422.03	1463.63	1479.70	1477.34	1476.30

34. The details of RoE allowed vide order dated 8.1.2016 in Petition No. 60/TT/2015, claimed by the Petitioner in the instant petition and trued up in the instant order are as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 8.1.2016 in Petition No. 60/TT/2015	1411.89	1461.51	1497.41	1497.41	1497.41
Claimed by the Petitioner in the instant petition	1422.10	1463.70	1479.77	1477.41	1476.30
Allowed after true-up in this order	1422.03	1463.63	1479.70	1477.34	1476.30

Operation & Maintenance Expenses (O&M Expenses)

35. The details of the O&M Expenses claimed by the Petitioner in respect of the transmission asset and allowed under Regulation 29(4)(a) of the 2014 Tariff Regulations are as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Sub-station Bays (Number)					
400 kV bays	4	4	4	4	4
220 kV bays	34	34	34	34	34
132 kV and below	2	2	2	2	2
Norm (₹ lakh/bay)					
400 kV	60.30	62.30	64.37	66.51	68.71
220 kV	42.21	43.61	45.06	46.55	48.10
132 kV and Below	30.15	31.15	32.18	33.25	34.36
Total Sub-station O&M Expenses (₹ in lakh)	1736.64	1794.24	1853.88	1915.24	1978.96
AC transmission Lines (in KM)					
400 kV Double Circuit Twin Conductor Farakka-Malda CKT I & CKT II	40	40	40	40	40
220kV Double Circuit Single Conductor Birpara Siliguri CKT I & II	86	86	86	86	86
220 kV Double Circuit Single Conductor Chukha-Birpara-I & II	36	36	36	36	36



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
220 kV Double Circuit Single Conductor Siliguri-Dalkhola-I & II	119	119	119	119	119
220 kV Double Circuit Single Conductor Dalkhola-Malda-I & II	116	116	116	116	116
220kV Double Circuit Single Conductor Birpara-Salakati I & II	161	161	161	161	161
220 kV Double Circuit Single Conductor Dalkhola-Purnea-I & II	41	41	41	41	41
220 kV Double Circuit Single Conductor Salakati-BTPS-I & Salakati-BTPS-II	3	3	3	3	3
220kV Single Circuit Single Conductor	38	38	38	38	38
Norm (₹ lakh/KM)					
Double Circuit Twin/Triple Conductor	0.707	0.731	0.755	0.780	0.806
Double Circuit Single Conductor	0.303	0.313	0.324	0.334	0.346
Single Circuit Single Conductor	0.202	0.209	0.216	0.223	0.230
Total Transmission Line	206.24	213.09	220.50	227.38	235.43
Total O&M Expenses	1942.88	2007.33	2074.38	2142.62	2214.39

36. The details of the O&M Expenses approved vide order dated 8.1.2016 in Petition No. 60/TT/2015, O&M Expenses claimed by the Petitioner in the instant petition and true up O&M Expenses allowed in the instant order are as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 8.1.2016 in Petition No. 60/TT/2015	1942.88	2007.33	2074.38	2142.62	2214.39
Claimed by the Petitioner in the instant petition	1942.89	2007.33	2074.36	2142.60	2214.41
Allowed after true-up in this order	1942.88	2007.33	2074.38	2142.62	2214.39

Interest on Working Capital (IWC)

37. The Petitioner is entitled to claim IWC as per Regulation 28(1)© of the 2014 Tariff Regulations as follows:



i. Maintenance spares:

Maintenance spares have been worked out based on 15% of Operation and Maintenance Expenses.

ii. O & M Expenses:

O&M Expenses have been considered for one month of the allowed O&M Expenses.

iii. Receivables:

The receivables have been worked out on the basis of 2 months of annual transmission charges as worked out above.

iv. Rate of interest on working capital:

Rate of interest on working capital is considered on normative basis in accordance with Clause (3) of Regulation 28 of the 2014 Tariff Regulations.

38. Accordingly, the trued-up IWC allowed for the transmission asset is as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O & M Expenses (O&M expenses for 1 month)	161.91	167.28	172.86	178.55	184.53
Maintenance Spares (15% of O&M expenses)	291.43	301.10	311.16	321.39	332.16
Receivables (Equivalent to 2 months of annual fixed cost)	663.13	703.80	728.03	741.94	770.49
Total	1116.47	1172.18	1212.05	1241.88	1287.18
Rate of Interest on working capital (%)	13.50	13.50	13.50	13.50	13.50
Interest of working Capital	150.72	158.24	163.63	167.65	173.77

39. The details of the IWC approved vide order dated 8.1.2016 in Petition No. 60/TT/2015, trued up IWC claimed by the Petitioner and trued up IWC allowed in the instant order are as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 8.1.2016 in Petition No. 60/TT/2015	150.13	159.08	166.55	170.32	174.28
Claimed by the Petitioner in the instant petition	151.63	158.81	164.18	169.67	173.50
Allowed after true-up in this order	150.72	158.24	163.63	167.65	173.77



Approved Annual Fixed Charges For 2014-19 Tariff Period

40. The trued up annual fixed charges approved for the transmission asset for 2014-19 tariff period are as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	452.76	583.54	650.48	664.02	758.47
Interest on Loan	10.41	10.07	0.00	0.00	0.00
Return on Equity	1422.03	1463.63	1479.70	1477.34	1476.30
Interest on Working Capital	150.72	158.24	163.63	167.65	173.77
Operation & Maintenance Expenses	1942.88	2007.33	2074.38	2142.62	2214.39
Total	3978.80	4222.81	4368.18	4451.63	4622.94

41. Accordingly, the annual transmission charges approved in the order dated 8.1.2016 in Petition No. 60/TT/2015, trued up AFC claimed by the Petitioner in the instant petition and trued up AFC allowed in the instant order are as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 8.1.2016 in Petition No. 60/TT/2015	3952.72	4260.36	4498.36	4570.37	4646.10
Claimed by the Petitioner in the instant petition	4019.01	4247.74	4393.00	4541.38	4610.98
Allowed after true-up in this order	3978.80	4222.81	4368.18	4451.63	4622.94

Determination of Annual Fixed Charges for 2019-24 Tariff Period

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

(₹ in lakh)					
Particulars	2019-20	2020-21	201-22	2022-23	2023-24
Depreciation	788.49	119.34	683.01	1537.41	1818.92
Interest on Loan	0.00	28.22	144.42	211.58	119.92
Return on Equity	1405.99	1431.07	1565.29	1683.42	1706.62
Interest on Working Capital	95.48	88.57	103.10	121.14	126.55
Operation and Maintenance	1433.77	1484.74	1536.46	1590.52	1645.92
Total	3723.73	3151.94	4032.28	5144.07	5417.93

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



(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M expenses	119.48	123.73	128.04	132.54	137.16
Maintenance Spares	215.07	222.71	230.47	238.58	246.89
Receivables	457.84	388.60	497.13	634.20	666.14
Total	792.39	735.04	855.64	1005.32	1050.19
Rate of Interest (%)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	95.48	88.57	103.10	121.14	126.55

Capital Cost

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

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

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



and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.

- (3) The Capital cost of an existing project shall include the following:
- (a) Capital cost admitted by the Commission prior to 1.4.2019 duly tried 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.”

45. The admitted capital cost of ₹15990.70 lakh as on 31.3.2019 for the transmission asset 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 (ACE)

46. Regulation 24 and Regulation 25 of the 2019 Tariff Regulations provide as follows:

“24. Additional Capitalization within the original scope and up to the cut-off date

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

- (a) Undischarged liabilities recognized to be payable at a future date;*
- (b) Works deferred for execution;*
- © Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 23 of these regulations;*
- (d) Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority or order or decree of any court of law;*
- (e) Change in law or compliance of any existing law; and*
- (f) Force Majeure events:*

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

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

“25. Additional Capitalisation within the original scope and after the cut-off date:

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

- a) Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority, or order or decree of any court of law;*
- b) Change in law or compliance of any existing law;*



- c) *Deferred works relating to ash pond or ash handling system in the original scope of work;*
- d) *Liability for works executed prior to the cut-off date;*
- e) *Force Majeure events;*
- f) *Liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments; and*
- g) *Raising of ash dyke as a part of ash disposal system.”*

(2) *In case of replacement of assets deployed under the original scope of the existing project after cut-off date, the additional capitalization may be admitted by the Commission, after making necessary adjustments in the gross fixed assets and the cumulative depreciation, subject to prudence check on the following grounds:*

- a) *The useful life of the assets is not commensurate with the useful life of the project and such assets have been fully depreciated in accordance with the provisions of these regulations;*
- b) *The replacement of the asset or equipment is necessary on account of change in law or Force Majeure conditions;*
- c) *The replacement of such asset or equipment is necessary on account of obsolescence of technology; and*
- d) *The replacement of such asset or equipment has otherwise been allowed by the Commission.”*

47. The Petitioner vide Auditor’s Certificate has projected net ACE of ₹6113.06 lakh after adjustment of de-capitalisation during 2019-24 tariff period which is as follows:

(₹ in lakh)	
Particulars	Amount
ACE in 2019-20	0.18
ACE in 2020-21	1162.12
ACE in 2021-22	3960.28
ACE in 2022-23	1236.73
ACE in 2023-24	542.39
De-capitalisation in 2020-21	(163.65)
De-capitalisation in 2021-22	(51.61)
De-capitalisation in 2022-23	(550.69)
De-capitalisation in 2023-24	(22.69)

48. The Petitioner has submitted that the sub-station equipment proposed to be replaced for the transmission asset covered in the instant petition was put into commercial operation in 1992. The useful life of sub-station equipment was completed during 2014-19 period. During various routine tests, critical conditions are observed and it was noticed that equipment giving operational problems are threat to the reliability and security of the grid. The Petitioner has submitted that designs have undergone substantial changes over the period since COD and manufacturers have



discontinued the product models. The suppliers are unable to provide replenish parts required for quick restoration and repairs turned out unviable.

49. The Petitioner has further submitted that buildings and other civil structures like overhead tanks etc. which have been constructed in the sub-stations have completed the useful life of 30 years in accordance with Schedule-II, Companies Act, 2013 Part-C (1b). The Petitioner has submitted that these buildings and civil structures were constructed in 1987-88 and have been in service for more than 30 years and they do not comply with the earthquake resistant provisions of latest IS codes. The Petitioner has submitted that it is mandatory for all Government-owned buildings and structures to be seismic resistant (Clause 3.2.6.1 of National Disaster Management Authority). Some of these buildings and civil structures are in dilapidated and unsafe condition and need urgent re-construction to avoid any damage/ threat to human life or property. Accordingly, the Petitioner has proposed to demolish these dilapidated and unsafe buildings and structures and construct new buildings and structures during 2019-24 tariff period. Thus, ACE/ de-capitalization proposed under the head of building and civil structures correspond to demolition of such old buildings and construction of new buildings and civil structures. The Petitioner has submitted that the test reports in respect of healthiness of buildings and civil structures shall be submitted shortly. The Petitioner has also mentioned relevant provisions of authenticated documents which recommend for seismic retrofitting, demolishing and reconstruction.

50. The Petitioner has submitted that the projected ACE has become necessary for efficient and secure operation of the transmission system as envisaged under Regulation 25(2)(c) of the 2019 Tariff Regulations.



51. BSPHCL has submitted that the Petitioner has claimed capitalisation and de-capitalisation under Regulation 25(2)© of the 2019 Tariff Regulations. However, Regulation 25(2)(c) of the 2019 Tariff Regulations does not cover ACE under the heads of 'Civil Work' and 'Illumination System' and ACE claimed towards the same is liable to be rejected. BSPHCL has further submitted that Regulation 22 of the 2019 Tariff Regulations enlists the controllable and uncontrollable factors.

52. In response, the Petitioner has submitted that ACE under the heads of 'Civil Work' and 'Illumination System' were in fact claimed under Regulation 25(2)(a) of the 2019 Tariff Regulations. The Petitioner has inadvertently mentioned only Regulation 25(2)(c) of the 2019 Tariff Regulations in the petition. The Petitioner has further submitted that Regulation 25 relates to replacement of old equipment deployed in original project and Regulation 22 is not applicable.

53. On specific query of the Commission (during hearing of the Petition) with regard to expected life extension of proposed ACE and OEM's recommendation, the Petitioner vide affidavit dated 10.10.2020 has submitted that ACE during 2019-24 period is towards problematic equipment like CT, CVT, CB, isolators, etc. that are proposed to be replaced to ensure system reliability. In addition to equipment like CT, CVT, CB, isolators, transformers, reactors, C&R panels etc., there are many other equipment/ materials like earthing system, tower and gantry structures, cables, which play a very important role in operation of any sub-station. The Petitioner has submitted that it is very difficult to assess the life of the complete project. The equipment is replaced based on condition. The Petitioner has further submitted that balance equipment of the transmission system still remains under service for which replacement may be required in near future. The gross block of old equipment, being



proposed to be replaced in the instant petition is hardly 7% of the total gross block of the project. However, other equipment of the project remains the same as commissioned with original project. The new equipment can definitely run for more than five years but considering the combination of equipment where majority of items are old and may require replacement in future that cannot be assessed at this stage. The Petitioner has further proposed the life extension of five years for the transmission asset.

54. In response to another query of the Commission with regard to segregation of proposed ACE towards critical and non-critical works, the Petitioner vide affidavit dated 24.12.2020, has submitted the cost details for ACE/ decapitalisation proposed during 2019-24 under various heads and the same are as follows:

(₹ in lakh)				
Sl. No.	Particulars	Projected ACE	Projected De-capitalisation	Net projected ACE
1	Projected ACE towards critical equipment	5280.48	700.44	4580.04
2	Civil works relating to quarters	1621.22	88.20	1533.02
3	Total	6901.70	788.64	6113.06

55. We have considered the submissions of the Petitioner and BSPHCL. The Petitioner has proposed ACE at the fag end of the useful life of the transmission asset and has proposed five years extension of life for the transmission asset. The Petitioner did not submit the consent of beneficiaries/ Respondents nor placed any material on record to show that the proposed ACE towards “building and civil works” had the consent of beneficiaries/ Respondents. The “building and civil works” are non-critical works in nature. In view of this, we are not inclined to allow ACE claimed by the Petitioner towards “building and civil works” under Regulation 25(2)(a) of the 2019 Tariff Regulations. However, the Petitioner may obtain approval of RPC and file



a separate petition for the ACE towards “building and civil works” for consideration by the Commission.

56. It is also directed that in future, all the cases where substantial ACE is proposed at the fag end of useful life of any transmission asset, the Petitioner shall submit the consent of beneficiaries/ Respondents..

57. The remaining proposed ACE is towards replacement of isolators, CTs, Capacitive Voltage Transformers (CVTs), control and relay panels, CB and power and control cables due to obsolescence of technology. In our view, these items are of critical nature and their failure may affect the stability and reliability of the grid. As such, the replacement of these equipment and consequent ACE is approved, subject to true-up on actual basis with details sub-station wise. The sub-station associated with the transmission asset has already completed its useful life.

58. ACE and de-capitalisation allowed for 2019-24 tariff period are as follows:

(₹ in lakh)						
Sr. No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	ACE	0.18	1000.00	3154.53	830.43	295.34
2	De-capitalisation	0.00	134.36	30.21	535.87	0.00
3	Net ACE (3=1-2)	0.18	865.64	3124.32	294.56	295.34

59. Accordingly, capital cost of the transmission asset as on 31.3.2024 is approved as follows:

(₹ in lakh)						
Capital Cost as on 1.4.2019	Approved Net ACE					Capital Cost as on 31.3.2024
	2019-20	2020-21	2021-22	2022-23	2023-24	
15990.70	0.18	865.64	3124.32	294.56	295.34	20570.74

Adjustments to Equity

60. The notional COD of the transmission asset is 1.4.1987. The debt-equity ratio as on COD was 50:50. The Weighted Average Life for the transmission asset is



determined as 33 years vide order dated 8.1.2016 in Petition No.60/TT/2015. Thus, the transmission asset has completed its useful life on 31.3.2020. First proviso to Regulation 18(3) of the 2019 Tariff Regulations provides that in case of a transmission system including communication system which has completed its useful life on or after 1.4.2019, and if the actual equity actually deployed as on 1.4.2019 is more than 30% of the capital cost, then the equity shall be restricted to 30% of the total equity deployed. Regulation 18(3) of the 2019 Tariff Regulations provides as follows:

“18. Debt-Equity Ratio:

(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;.....”

61. The debt-equity ratio as on 31.3.2019 is 53.19:46.81 i.e. the equity deployed is more than 30%. Therefore, as per the first proviso to Regulation 18(3) of the 2019 Tariff Regulations, equity from 2020-21 onwards has been restricted to 30%. The loan has already been repaid prior to 1.4.2019. Accordingly, the capital cost for 2019-24 tariff period is allowed as follows:

Particulars	(₹ in lakh)
	Amount
Closing equity as on 31.3.2019*	7485.82
Closing equity as on 31.3.2020** (a)	7485.87
Equity in excess of 30% (b)	2688.61
Equity admissible as on 1.4.2020*** (a)-(b)	4797.26

*Represents 46.81% of Gross Block of ₹15990.70 lakh

** Represents 46.81% of Gross Block of ₹15990.88 lakh

***Represents 30% of Gross Block of ₹15990.88 lakh



Debt-Equity Ratio

62. Regulations 18(3), 18(4) and 18(5) of the 2019 Tariff Regulations provide as follows:

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

Provided that:

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

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

(4) 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.

(5) 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.”

63. The transmission asset has completed its useful life in 2019-20 (on 31.3.2020) and de-capitalisation of elements of transmission asset is proposed after the completion of useful life. In accordance with Regulation 18 of the 2019 Tariff Regulations, ACE for 2019-24 period is allowed in the ratio of 70:30. As decided above, the equity from 2020-21 onwards is restricted to 30%. The details of the debt-equity considered for the purpose of computation of tariff for 2019-24 tariff period is as follows:

Debt-Equity for Gross Capital Cost as on 1.4.2019

Particulars	Amount (₹ in lakh) (A)	(%)
Debt	8504.88	53.19
Equity	7485.82	46.81
Total	15990.70	100.00

Debt-Equity for ACE and De-capitalisation during 2019-24

(₹ in lakh)

Particulars	ACE (B)		ACE (C)		De- capitalisation (D)	
	2019-20	(%)	2020-21	(%)	2020-21	(%)
Debt	0.13	70.00	700.00	70.00	94.05	70.00
Equity	0.05	30.00	300.00	30.00	40.31	30.00
Total	0.18	100.00	1000.00	100.00	134.36	100.00

Particulars	ACE (E)		De- capitalisation (F)		ACE (G)		De- capitalisation (H)	
	2021-22	(%)	2021-22	(%)	2022-23	(%)	2022-23	(%)
Debt	2208.17	70.00	21.15	70.00	581.30	70.00	375.11	70.00
Equity	946.36	30.00	9.06	30.00	249.13	30.00	160.76	30.00
Total	3154.53	100.00	30.21	100.00	830.43	100.00	535.87	100.00

Particulars	ACE (I)	
	2023-24	(%)
Debt	206.74	70.00
Equity	88.60	30.00
Total	295.34	100.00



Debt-Equity for Gross Capital Cost as on 31.3.2024

Particulars	Amount (₹ in lakh)
	(J)=(A)+(B)+(C)-(D)+(E)-(F)+(G)-(H)+(G)+(I)
Debt	11710.91
Equity	8859.83****
Total	20570.74

****Equity to be serviced as on 31.3.2024 is ₹6171.22 lakh (₹8859.83 lakh - ₹2688.61 lakh i.e. Equity in excess of 30% reduced as discussed in Para. 59 above)

Depreciation

64. Regulations 33 of the 2019 Tariff Regulations provides as under:

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

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

(6) 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.

(7) 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.



(8) 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.

(9) 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.

(10) 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.

(11) 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.

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

65. The transmission asset has already completed more than 12 years (COD being 1.4.1987, it has completed 32 years as on 1.4.2019) before 1.4.2019. Accordingly, depreciation has been calculated based on the remaining depreciable value (up to 90% of existing gross block of transmission asset) to be recovered over the balance useful life up to 31.3.2020 (since the transmission asset completes useful life of 33 years from notional COD of 1.4.1987) and w.e.f. 1.4.2021, no depreciation is allowed on existing transmission asset. As discussed above, the Petitioner has proposed life extension for the transmission asset by five years, but there is no basis for the same. Hence, depreciation for ACE (new additions) claimed for 2020-21 onwards is allowed at normative rate of depreciation as specified in the 2019 Tariff Regulations. Depreciation allowed for the transmission asset for the 2019-24 period is as under:



(₹ in lakh)

Existing Assets	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Gross Block	15990.70	15990.70	15856.34	15826.13	15290.26
Addition during the year 2019-24 due to projected ACE	0.00	0.00	0.00	0.00	0.00
De-capitalisation	0.00	134.36	30.21	535.87	0.00
Closing Gross Block	15990.70	15856.34	15826.13	15290.26	15290.26
Average Gross Block	15990.70	15923.52	15841.24	15558.20	15290.26
Weighted average rate of Depreciation (WAROD) (%)	4.77				
Balance useful life at the beginning of the year (Year)	1				
Elapsed life at the beginning of the year (Year)	32				
Depreciable Value	13986.63	13865.71	13838.52	13356.23	13356.23
Cumulative depreciation at the beginning of the year	13186.49	13986.63	13865.71	13838.52	13356.23
Depreciation adjustment on account of de-capitalisation	0.00	120.92	27.19	482.28	0.00
Net cumulative depreciation after de-capitalisation	13186.49	13865.71	13838.52	13356.23	13356.23
Remaining depreciable value at the beginning of the year	800.14				
Depreciation during the year	800.14				

(₹ in lakh)

New Additions	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Gross Block	0.00	0.18	1000.18	4154.71	4985.14
Addition during the year 2019-24 due to projected ACE	0.18	1000.00	3154.53	830.43	295.34
Closing Gross Block	0.18	1000.18	4154.71	4985.14	5280.48
Average Gross Block	0.09	500.18	2577.45	4569.93	5132.81
Weighted Average rate of Depreciation (WAROD) (%)	5.28	5.28	5.28	5.28	5.28
Depreciable Value	0.08	450.16	2319.70	4112.93	4619.53
Cumulative Depreciation at the beginning of the year	0.00	0.00	26.41	162.50	403.79
Depreciation during the year	0.00	26.41	136.09	241.29	271.01
Cumulative Depreciation at the end of the year	0.00	26.41	162.50	403.79	674.80
Remaining Depreciation recoverable at the end of the year	0.08	423.75	2157.20	3709.14	3944.73

Interest on Loan (IoL)

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

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



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

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

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

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

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

Provided further that if the generating station or the transmission 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”.*

67. Gross normative loan has already been repaid prior to 1.4.2019 and therefore, IoL has been considered on ACE (new additions). 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 change in interest rate due to floating rate of interest applicable, if any, during 2019-24 tariff period may be adjusted. Accordingly, the floating rate of interest, if any, shall be considered at the time of truing up. Therefore, IoL has been allowed in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL allowed for the transmission asset is as follows:



(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	8504.88	8505.01	9110.96	11297.98	11504.17
Cumulative Repayments up to Previous Year	8504.88	8504.88	8437.23	8552.16	8418.34
Net Loan-Opening	0.00	0.13	673.73	2745.82	3085.84
Addition due to ACE	0.13	700.00	2208.17	581.30	206.74
Adjustment of gross loan pertaining to de-capitalised asset	0.00	94.05	21.15	375.11	0.00
Repayment during the year	0.00	26.40	136.08	241.28	271.00
Adjustment of cumulative repayment pertaining to de-capitalised asset	0.00	94.05	21.15	375.11	0.00
Net Loan-Closing	0.00	673.73	2745.82	3085.84	3021.57
Average Loan	0.00	336.93	1709.77	2915.83	3053.70
Weighted Average Rate of Interest (WAROI) on Loan (%)	8.17	8.13	8.31	8.64	8.61
Interest on Loan**	0.00	27.39	142.02	252.07	263.06

**Computed by multiplying WAROI into Average Loan raised for additions.

Return on Equity (RoE)

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

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

(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating station, transmission 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:
- rate of return on equity shall be reduced by 0.25% in case of failure to achieve the ramp rate of 1% per minute;
 - 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:

- Estimated Gross Income from generation or transmission business for FY 2019-20 is Rs 1,000 crore;
- Estimated Advance Tax for the year on above is Rs 240 crore;
- Effective Tax Rate for the year 2019-20 = Rs 240 Crore/Rs 1000 Crore = 24%;
- 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.”

69. The Petitioner has submitted that MAT rate is applicable to the Petitioner Company. As observed above, equity from 2021-22 onwards has been restricted to 30% as per first proviso to Regulation 18(3) of the 2019 Tariff Regulations. 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 transmission asset is as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity	7485.82	4797.26	5056.96	5994.25	6082.62
Addition due to ACE	0.05	300.00	946.36	249.13	88.60
Decrease due to de-capitalisation during the period	0.00	40.31	9.06	160.76	0.00
Closing Equity	7485.87	5056.96	5994.25	6082.62	6171.22
Average Equity	7485.85	4927.11	5525.60	6038.44	6126.92
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
Tax Rate applicable (%)	17.472	17.472	17.472	17.472	17.472
Rate of Return on Equity (Pre-tax)	18.782	18.782	18.782	18.782	18.782
Return on Equity (Pre-tax)	1405.99	925.41	1037.82	1134.14	1150.76

**Equity in excess of 30% removed

Operation & Maintenance Expenses (O&M Expenses)

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

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

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<i>Norms for sub-station Bays (₹ Lakh per bay)</i>					
765 Kv	45.01	46.60	48.23	49.93	51.68
400 kV	32.15	33.28	34.45	35.66	36.91
220 kV	22.51	23.30	24.12	24.96	25.84
132 kV and below	16.08	16.64	17.23	17.83	18.46



Norms for Transformers (₹ Lakh per MVA)					
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
Norms for AC and HVDC lines (₹ Lakh per km)					
Single Circuit (Bundled Conductor with six or more sub-conductors)	0.881	0.912	0.944	0.977	1.011
Single Circuit (Bundled conductor with four sub-conductors)	0.755	0.781	0.809	0.837	0.867
Single Circuit (Twin & Triple Conductor)	0.503	0.521	0.539	0.558	0.578
Single Circuit (Single Conductor)	0.252	0.260	0.270	0.279	0.289
Double Circuit (Bundled conductor with four or more sub-conductors)	1.322	1.368	1.416	1.466	1.517
Double Circuit (Twin & Triple Conductor)	0.881	0.912	0.944	0.977	1.011
Double Circuit (Single Conductor)	0.377	0.391	0.404	0.419	0.433
Multi Circuit (Bundled Conductor with four or more sub-conductor)	2.319	2.401	2.485	2.572	2.662
Multi Circuit (Twin & Triple Conductor)	1.544	1.598	1.654	1.713	1.773
Norms for HVDC stations					
HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB)	834	864	894	925	958
Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW)	1,666	1,725	1,785	1,848	1,913
500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)	2,252	2,331	2,413	2,498	2,586
±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)	2,468	2,555	2,645	2,738	2,834
±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500 MW)	1,696	1,756	1,817	1,881	1,947
±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)	2,563	2,653	2,746	2,842	2,942

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

Provided further that:

- i. the operation and maintenance expenses for new HVDC bi-pole schemes commissioned after 1.4.2019 for a particular year shall be allowed pro-rata on the basis of normative rate of operation and maintenance expenses of similar HVDC bi-pole scheme for the corresponding year of the tariff period;*
- ii. the O&M expenses norms for HVDC bi-pole line shall be considered as Double Circuit quad AC line;*
- iii. the O&M expenses of ±500 kV Mundra-Mohindergarh HVDC bipole scheme (2000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ±500 kV Talchar-Kolar HVDC bi-pole scheme (2000 MW);*



- iv. the O&M expenses of ± 800 kV Champa-Kurukshetra HVDC bi-pole scheme (3000 MW) shall be on the basis of the normative O&M expenses for ± 800 kV, Bishwanath-Agra HVDC bi-pole scheme;
- v. the O&M expenses of ± 800 kV, Alipurduar-Agra HVDC bi-pole scheme (3000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ± 800 kV, Bishwanath-Agra HVDC bi-pole scheme; and
- vi. the O&M expenses of Static Synchronous Compensator and Static Var Compensator shall be worked at 1.5% of original project cost as on commercial operation which shall be escalated at the rate of 3.51% to work out the O&M expenses during the tariff period. The O&M expenses of Static Synchronous Compensator and Static Var Compensator, if required, may be reviewed after three years.

(b) The total allowable operation and maintenance expenses for the transmission system shall be calculated by multiplying the number of sub-station bays, transformer capacity of the transformer (in MVA) and km of line length with the applicable norms for the operation and maintenance expenses per bay, per MVA and per km respectively.

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

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

(3) **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.”

71. The O&M Expenses claimed by the Petitioner in respect of the transmission asset are as follows:

	(₹ in lakh)				
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Sub-station Bays (Number)					
400 kV bays	4	4	4	4	4
220 kV bays	34	34	34	34	34
132 kV and below	2	2	2	2	2
Norm (₹ lakh/bay)					
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
Total Sub-station O&M Expenses (₹ in lakh)	926.10	958.60	992.34	1026.94	1063.12
Transformer (MVA)					
400 kV ICT at Malda	315	315	315	315	315
220 kV ICT at Malda and Birpara	150	150	150	150	150



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
220 kV ICTS at Birpara Siliguri & Purnea	400	400	400	400	400
Norms (₹ lakh/MVA)					
400 kV	0.358	0.371	0.384	0.398	0.411
220 kV	0.245	0.254	0.263	0.272	0.282
Total Transformer (₹ in lakh)	247.52	256.57	265.61	274.97	284.57
AC & HVDC Lines (in km)					
400 kV Double Circuit Twin Conductor Farakka-Malda CKT I & CKT II	40	40	40	40	40
220 kV Double Circuit Single Conductor Birpara Siliguri CKT I & II	86	86	86	86	86
220 kV Double Circuit Single Conductor Chukha-Birpara-I & II	36	36	36	36	36
220 kV Double Circuit Single Conductor Siliguri-Dalkhola-I & II	119	119	119	119	119
220 kV Double Circuit Single Conductor Dalkhola-Malda-I & II	116	116	116	116	116
220 kV Double Circuit Single Conductor Birpara-Salakati I & II	161	161	161	161	161
220 kV Double Circuit Single Conductor Dalkhola-Purnea-I & II	41	41	41	41	41
220 kV Double Circuit Single Conductor Salakati-BTPS-I & Salakati-BTPS-II	3	3	3	3	3
220 kV Single Circuit Single Conductor	38	38	38	38	38
Norm (₹ lakh/KM)					
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
Single Circuit Single Conductor	0.252	0.260	0.270	0.279	0.289
Total Transmission Line	256.69	266.10	275.07	285.16	294.77
Communication System					
PLCC (₹ in lakh)	173.19	173.19	173.19	173.19	173.19
Norms (%)	2	2	2	2	2
Total Communication System	3.46	3.46	3.46	3.46	3.46
Total O&M Expenses	1433.77	1484.73	1536.48	1590.53	1645.92

72. The Petitioner has claimed O&M Expenses separately for the PLCC under Regulation 35(4) of the 2019 Tariff Regulations @2% of its original project cost in the instant petition. The Petitioner has made similar claim in other petitions as well.



Though PLCC is a communication system, it has been considered as part of the sub-station in the 2014 Tariff Regulations and the 2019 Tariff Regulations and the norms for sub-station have been specified accordingly. Accordingly, the Commission vide order dated 24.1.2021 in Petition No.126/TT/2020 has already concluded that no separate O&M Expenses can be allowed for PLCC under Regulation 35(4) of the 2019 Tariff Regulations even though PLCC is a communication system. Therefore, the Petitioner's claim for separate O&M Expenses for PLCC @2% is not allowed.

73. The O&M Expenses allowed for the transmission asset are as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Sub-station Bays (Number)					
400 kV bays	4	4	4	4	4
220 kV bays	34	34	34	34	34
132 kV and below	2	2	2	2	2
Norm (₹ lakh/bay)					
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
Total Sub-station O&M Expenses (₹ in lakh)	926.10	958.60	992.34	1026.94	1063.12
Transformer (MVA)					
400 kV ICT at Malda	315	315	315	315	315
220 kV ICT at Malda and Birpara	150	150	150	150	150
220 kV ICTS at Birpara Siliguri & Purnea	400	400	400	400	400
Norms (₹ lakh/MVA)					
400 kV	0.358	0.371	0.384	0.398	0.411
220 kV	0.245	0.254	0.263	0.272	0.282
Total Transformer (₹ in lakh)	247.52	256.57	265.61	274.97	284.57
AC & HVDC Lines (in km)					
400 kV Double Circuit Twin Conductor Farakka-Malda CKT I & CKT II	40	40	40	40	40
220 kV Double Circuit Single Conductor Birpara Siliguri CKT I & II	86	86	86	86	86
220 kV Double Circuit Single Conductor Chukha-Birpara-I & II	36	36	36	36	36
220 kV Double Circuit Single Conductor Siliguri-Dalkhola-I & II	119	119	119	119	119



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
220 kV Double Circuit Single Conductor Dalkhola-Malda-I & II	116	116	116	116	116
220 kV Double Circuit Single Conductor Birpara-Salakati I & II	161	161	161	161	161
220 kV Double Circuit Single Conductor Dalkhola-Purnea-I & II	41	41	41	41	41
220 kV Double Circuit Single Conductor Salakati-BTPS-I & Salakati-BTPS-II	3	3	3	3	3
220 kV Single Circuit Single Conductor	38	38	38	38	38
Norm (₹ lakh/KM)					
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
Single Circuit Single Conductor	0.252	0.260	0.270	0.279	0.289
Total Transmission Line	256.69	266.10	275.07	285.16	294.77
Total O&M Expenses	1430.31	1481.27	1533.02	1587.07	1642.45

Interest on Working Capital (IWC)

74. Regulations 34(1), 34(3) and 34(4) and Regulation 3(7) of the 2019 Tariff Regulations provides as follows:

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

(75) *c) For Hydro Generating Station (including Pumped Storage Hydro Generating Station) and Transmission System: i) Receivables equivalent to 45 days of annual fixed cost; ii) Maintenance spares @ 15% of operation and maintenance expenses including security expenses; and iii) Operation and maintenance expenses, including security expenses for one month. 3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2019 or as on 1st April of the year during the tariff period 2019-24 in which the generating station or a unit thereof or the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later:*

(75) *Provided that in case of true-up, the rate of interest on working capital shall be considered at bank rate as on 1st April of each of the financial year during the tariff period 2019-24. 4) Interest on working capital shall be payable on normative basis notwithstanding that the generating company or the transmission licensee has not taken loan for working capital from any outside agency.”*

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



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

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

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O & M Expenses (O&M expenses for 1 month)	119.19	123.44	127.75	132.26	136.87
Maintenance Spares (15% of O&M expenses)	214.55	222.19	229.95	238.06	246.37
Receivables (Equivalent to 45 days of annual transmission charges)	458.86	312.47	361.21	407.10	420.20
Total	792.60	658.10	718.91	777.41	803.44
Rate of Interest (%)	12.05	11.25	11.25	11.25	11.25
Interest of working capital	95.51	74.04	80.88	87.46	90.39

Annual Fixed Charges for the 2019-24 Tariff Period

76. The transmission charges allowed in respect of the transmission asset for 2019-24 tariff period are as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	800.14	26.41	136.09	241.29	271.01
Interest on Loan	0.00	27.39	142.02	252.07	263.06
Return on Equity	1405.99	925.41	1037.82	1134.14	1150.76
Interest on Working Capital	95.51	74.04	80.88	87.46	90.39
Operation and Maintenance	1430.31	1481.27	1533.02	1587.07	1642.45
Total	3731.95	2534.52	2929.83	3302.03	3417.67



Filing Fee and Publication Expenses

77. The Petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses, in terms of Regulation 70(1) of the 2019 Tariff Regulations. 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

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

Goods and Services Tax

79. The Petitioner has sought to recover GST on transmission charges separately from the Respondents, if GST on transmission service is withdrawn from negative list in future.

80. BSPHCL has submitted that the demand of the Petitioner is premature.

81. In response, the Petitioner has submitted that if GST is levied in future on charges of transmission of electricity at any rate and any point of time, 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, the Petitioner has submitted that 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.

82. We have considered the submissions of the Petitioner and BSPHCL and are of the opinion that GST is not levied on transmission service at present and the Petitioner's prayer is premature.

Security Expenses

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

84. We have considered the submissions of the Petitioner. We are of the view that the Petitioner should claim security expenses for all the transmission assets in one petition. It is observed that the Petitioner has already filed Petition No. 260/MP/2020 claiming consolidated security expenses on projected basis for 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

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

Sharing of Transmission Charges

86. With effect from 1.7.2011, sharing of transmission charges for inter-State transmission systems was governed by the provisions of the 2010 Sharing Regulations. However, with effect from 1.11.2020, the 2010 Sharing Regulations has been repealed and sharing of transmission charges is governed by the provisions of the 2020 Sharing Regulations. Accordingly, the liabilities of DICs for arrears of transmission charges determined through this order shall be computed DIC-wise in accordance with the provisions of respective Tariff Regulations and shall be recovered from the concerned DICs through Bill 2 under Regulation 15(2)(b) of the 2020 Sharing Regulations. Billing, collection and disbursement of transmission charges for subsequent period shall be recovered in terms of provisions of the 2020 Sharing Regulations as provided in Regulation 57 of the 2019 Tariff Regulations.

87. To summarise:

(a) The trued-up Annual Fixed Charges approved for the transmission asset for 2014-19 tariff period are:

	(₹ in lakh)				
Asset	2014-15	2015-16	2016-17	2017-18	2018-19
AFC	3978.80	4222.81	4368.18	4451.63	4622.94

(b) The Annual Fixed Charges allowed in respect of the transmission asset for 2019-24 tariff period are:

	(₹ in lakh)				
Asset	2019-20	2020-21	2021-22	2022-23	2023-24
AFC	3731.95	2534.52	2929.83	3302.03	3417.67



88. This order disposes of Petition No. 269/TT/2020 in terms of the above discussions and findings.

sd/-
(Arun Goyal)
Member

sd/-
(I.S. Jha)
Member

sd/-
(P. K. Pujari)
Chairperson

