

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 715/TT/2020

Coram:

**Shri I. S. Jha, Member
Shri Arun Goyal, Member
Shri Pravas Kumar Singh, Member**

Date of order: 13.09.2021

In the matter of:

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and truing up of transmission tariff of the 2014-19 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of the 2019-24 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for 400 kV S/C Chamera II Pooling Station Transmission Line, 400/220 kV GIS Pooling Station at Rajera with 400/220 kV 315 MVA ICT-I and ICT-II under Chamera II System and 400 kV S/C Chamera II Pooling Station Transmission Line, 400/220 kV GIS Pooling Station at Rajera with 80 MVA Bus Reactor at Pooling Point under Chamera II System in Northern Region.

And in the matter of:

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

.....Petitioner

Versus

1. Rajasthan Rajya Vidyut Prasaran Nigam Limited,
Vidyut Bhawan, Vidyut Marg, Jaipur-302005 (Rajasthan).
2. Ajmer Vidyut Vitran Nigam Limited,
400 kV, GSS Building (Ground Floor),
Ajmer Road, Heerapura, Jaipur (Rajasthan).
3. Jaipur Vidyut Vitran Nigam Limited,
400 kV, GSS Building (Ground Floor),
Ajmer Road, Heerapura, Jaipur (Rajasthan).
4. Jodhpur Vidyut Vitran Nigam Limited,
400 kV, GSS Building (Ground Floor),
Ajmer Road, Heerapura, Jaipur (Rajasthan).



5. Himachal Pradesh State Electricity Board,
Vidyut Bhawan, Kumar House Complex Building II,
Shimla-171004 (Himachal Pradesh).
6. Punjab State Electricity Board,
Thermal Shed Tia, Near 22 Phatak,
Patiala-147001 (Punjab).
7. Haryana Power Purchase Centre,
Shakti Bhawan, Sector-6,
Panchkula-134109 (Haryana).
8. Power Development Department,
Government of Jammu & Kashmir,
Mini Secretariat, Jammu.
9. Uttar Pradesh Power Corporation Limited,
(Formerly Uttar Pradesh State Electricity Board),
Shakti Bhawan, 14, Ashok Marg,
Lucknow-226001 (Uttar Pradesh).
10. Delhi Transco Limited,
Shakti Sadan, Kotla Road,
New Delhi-110002.
11. BSES Yamuna Power Limited,
B-Block, Shakti Kiran Bldg. (Near Karkardooma Courts),\
Karkardooma 2nd Floor,
New Delhi.
12. BSES Rajdhani Power Limited,
BSES Bhawan, Nehru Place,
New Delhi-110019.
13. Tata Power Delhi Distribution Limited,
NDPL house, Hudson Lines Kingsway Camp,
Delhi-110009.
14. Chandigarh Administration,
Sector-9, Chandigarh.
15. Uttarakhand Power Corporation Limited,
Urja Bhawan, Kanwali Road,
Dehradun (Uttarakhand).
16. North Central Railway,
Allahabad (Uttar Pradesh).



17. New Delhi Municipal Council,
Palika Kendra, Sansad Marg,
New Delhi-110002.

.....Respondent(s)

For Petitioner : Shri S. S. Raju, PGCIL
Shri D. K. Biswal, PGCIL
Shri V. P. Rastogi, PGCIL
Shri Amit Yadav, PGCIL

For Respondents : None

ORDER

The present petition has been filed by Power Grid Corporation of India Ltd., a deemed transmission licensee, for truing up of transmission tariff for period 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 transmission tariff under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) appertaining to for 400 kV S/C Chamera II Pooling Station Transmission Line, 400/220 kV GIS Pooling Station at Rajera with 400/220 kV 315 MVA ICT-I and ICT-II under Chamera II System and 400 kV S/C Chamera II Pooling Station Transmission Line, 400/220 kV GIS Pooling Station at Rajera with 80 MVAr Bus Reactor at Pooling Point under Chamera II System (hereinafter referred to as “the transmission system”) in Northern Region.

2. The Petitioner has made the following prayers in this 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 5 and 6 above.
- 2) Allow the petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before Hon’ble Commission as provided in Tariff Regulation 2014 and Tariff regulations 2019 as per para 5 and 6 above for respective block.



- 3) *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.*
- 4) *Allow the petitioner to bill and recover Licensee fee and RLDC fees and charges, separately from the beneficiaries in terms of Regulation 70 (3) and (4) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019.*
- 5) *Allow the petitioner to bill and adjust impact on Interest on Loan due to change in Interest rate on account of floating rate of interest applicable during 2019-24 period, if any, from the beneficiaries.*
- 6) *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 6.6 above.*
- 7) *Allow the petitioner to claim the capital spares at the end of tariff block as per actual.*
- 8) *Allow the Petitioner to bill and recover GST on Transmission Charges separately from the beneficiaries, if GST on transmission is withdrawn from negative list at any time in future. Further, any taxes including GST and duties including cess etc. imposed by any statutory/Govt./municipal authorities shall be allowed to be recovered from the beneficiaries.*

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

3. **Backdrop of the case**

a) The administrative approval and expenditure sanction of the transmission system has been said to be accorded by the Board of Directors of the Petitioner's company vide Memorandum No. C/CP/GIS near Chamera-II dated 7.9.2007 at an estimated cost of ₹26210.00 lakh, including an IDC of ₹1656.00 lakh (based on 1st quarter, 2007 price level).

b) The details of scope of work is as follows:

i. **Budhil Time Frame (Part-I)**

Transmission Lines:

- Chamera Pooling station-Chamera-II HEP 400 kV S/C Line-1 kms



Sub Stations:

- New 400/220 kV GIS Pooling Station near Chamera-II HEP-2 X 315 MVA

- 2 numbers of 220 kV line bays for lines from Bhudil*;
- 2 numbers of 400/220 kV, 2X315 MVA transformer along with associated bays;
- 400 kV line bay for Chamera Pooling Station-Chamera II HEP line;
- 220 kV bus coupler/transfer bays.

* to be carried out on work depository basis on behalf of project Promoter (M/s Lanco) and cost has not been included in the Feasibility Report.

- Extension of 400 kV Chamera-II HEP Switchyard (NHPC)**

** Work associated with bay is to be executed by NHPC on work deposit basis. Cost estimates for the work is tentative and has been included in the estimated cost and actual cost incurred after the completion of job to be paid to NHPC.

ii. **Chamera-III Time Frame Part-II**

Sub-station:

- Extension of 400/220 kV GIS Pooling Station near Chamera-II HEP created under Budhil time frame (Part-I)

- 2 numbers of 400 kV line bays for Pooling Station-Jalandhar 400 kV D/C Line;
- 80 MVAR Bus Reactor;
- Bus Reactor bay;
- 2 numbers of 220 kV line bays for lines from Chamera-III HEP; and
- 4 numbers of 220 kV line bays for lines for HPSEB.

c) The entire scope of work is covered in the present petition. The transmission system was commissioned on 1.11.2011.

d) The tariff for the 2009-14 tariff period was determined vide order dated order dated 2.1.2013 in Petition No. 94/TT/2011. The respective time and cost over-run with respect to Part-I and II of the transmission system was also condoned vide order dated 2.1.2013.



e) The transmission tariff for the 2009-14 period was trued-up and tariff for 2014-19 period was determined vide order dated 17.2.2016 in Petition No. 528/TT/2014.

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

5. The Petitioner has served the petition on the Respondents and notice of this petition has been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments or suggestions have been said to be received from the general public in response to the aforesaid notices published in the newspapers. None of the Respondents have filed any reply.

6. This order is issued considering the submissions made by the Petitioner in the petition vide affidavit dated 20.1.2020, Petitioner's affidavit dated 9.2.2021 filed in compliance of the technical validation letter and Petitioner's affidavit dated 8.7.2021.

7. The hearing in this matter was held on 9.7.2021 through video conference and the order was reserved. Having heard the representatives of the Petitioner and after perusal of the materials on record, we proceed to dispose of the petition.

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

8. The details of the trued-up transmission charges claimed by the Petitioner in respect of the transmission system are as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	1089.24	1091.26	1092.20	1092.73	1092.73
Interest on Loan	1102.11	1007.66	911.11	813.59	715.42
Return on Equity	1276.21	1285.27	1286.29	1287.22	1290.69



Interest on Working Capital	112.47	111.63	110.58	109.52	108.54
O&M Expenses	591.09	610.70	630.99	651.94	673.54
Total	4171.12	4106.52	4031.17	3955.00	3880.92

9. The details of the trued-up Interest on Working Capital (IWC) claimed by the Petitioner in respect of the transmission system are as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses	49.26	50.89	52.58	54.33	56.13
Maintenance Spares	88.66	91.61	94.65	97.79	101.03
Receivables	695.19	684.42	671.86	659.17	646.82
Total Working Capital	833.11	826.92	819.09	811.29	803.98
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	112.47	111.63	110.58	109.52	108.54

Capital Cost

10. The capital cost of the transmission system has been calculated in accordance with Regulation 9(3) of the 2014 Tariff Regulations. The details of capital cost admitted vide order dated 17.2.2016 in Petition No. 528/TT/2014 are as follows:

(₹ in lakh)						
Capital cost as on 1.4.2014	ACE					Capital cost as on 31.3.2019
	2014-15	2015-16	2016-17	2017-18	2018-19	
21845.96	84.17	0.00	0.00	0.00	0.00	21930.13

11. The details of capital cost claimed by the Petitioner in the instant true up petition are summarized as follows:

(₹ in lakh)							
Apportioned approved cost	Capital cost as on 1.4.2014	ACE					Capital cost as on 31.3.2019
		2014-15	2015-16	2016-17	2017-18	2018-19	
24006.44	21845.96	83.55	25.02	31.51	0.00	0.20	21986.24

12. The Petitioner has claimed the same capital cost of ₹21845.96 lakh as on 1.4.2014 as admitted by the Commission vide order dated 17.2.2016 in Petition No. 528/TT/2014. Therefore, the capital cost of ₹21845.96 lakh has been considered as



opening capital cost as on 1.4.2014 for truing-up of transmission tariff for the 2014-19 tariff period.

Additional Capital Expenditure

13. The details of ACE claimed by the Petitioner in the instant petition are summarized as follows:

Year	ACE (₹ in lakh)	Party Name	Package
2014-15	20.79	NHPC	Sub-station
	62.76	M/s Vijay Dhall , M/S Ahuja Const. , M/s. Ajay Kumar, M/S Scope T & M Pvt. Ltd.	Civil and Building
2014-15 Total	83.55		
2015-16	25.02	M/S Ahuja Const.	Civil and Building
2016-17	31.44	M/S Ahuja Const.	Civil and Building
	0.07	NHPC	Sub-station
2016-17 Total	31.51		
2018-19	0.20	M/S Ahuja Const.	Sub-station

14. The Petitioner has submitted that COD of the transmission system was 1.11.2011 and the cut-off date comes out to 31.3.2014 and ACE claimed pertains to balance and retention payments for works executed prior to the cut-off date. ACE incurred during 2014-15, 2015-16, 2016-17 and 2018-19 has been claimed under Regulation 14(3)(v) of the 2014 Tariff Regulations.

15. We have considered the submissions of the Petitioner. ACE claimed for 2014-15, 2015-16, 2016-17 and 2018-19 is beyond cut-off date and pertains to the balance and retention payments for works executed within the cut-off date. Hence, it is allowed under Regulation 14(3)(v) of the 2014 Tariff Regulations. Accordingly, the capital cost considered for truing up of transmission tariff of the 2014-19 tariff period is as follows:

Capital cost as on 1.4.2014	(₹ in lakh)					Capital cost as on 31.3.2019
	2014-15	2015-16	2016-17	2017-18	2018-19	
21845.96	83.55	25.02	31.51	0.00	0.20	21986.24



Debt-Equity Ratio

16. The debt-equity ratio for the period ending on 31.3.2014 has been considered in terms of Regulation 19(3) of the 2014 Tariff Regulations. Accordingly, the details of the debt-equity ratio as on 1.4.2014 and 31.3.2019 for the transmission system are as follows:

Funding	Capital Cost as on 1.4.2014 (₹ in lakh)	(in %)	Capital Cost as on 31.3.2019 (₹ in lakh)	(in %)
Debt	15355.53	70.29	15453.72	70.29
Equity	6490.43	29.71	6532.52	29.71
Total	21845.96	100.00	21986.24	100.00

Depreciation

17. The depreciation has been worked out as per the methodology provided in Regulation 27 of the 2014 Tariff Regulations. Depreciation has been allowed considering capital expenditure as on 1.4.2014 and approved ACE during the 2014-19 tariff period. The Gross Block during the 2014-19 tariff period has been depreciated at Weighted Average Rate of Depreciation (WAROD) and working of WAROD is at Annexure-I. The trued-up depreciation for the 2014-19 tariff period for the transmission system is as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	21845.96	21929.51	21954.53	21986.04	21986.04
ACE	83.55	25.02	31.51	0.00	0.20
Closing Gross Block	21929.51	21954.53	21986.04	21986.04	21986.24
Average Gross Block	21887.74	21942.02	21970.29	21986.04	21986.14
Freehold land	447.42	447.42	447.42	447.42	447.42
Weighted Average Rate of Depreciation (in %)	4.98	4.97	4.97	4.97	4.97
Aggregate Depreciable Value	19296.01	19344.87	19370.31	19384.49	19384.58
Balance useful life of the asset (Year)	23.00	22.00	21.00	20.00	19.00
Lapsed life (Year)	2.00	3.00	4.00	5.00	6.00
Depreciation during	1089.24	1091.26	1092.20	1092.73	1092.73



the year					
Cumulative depreciation at the end of the year	3636.71	4727.97	5820.17	6912.90	8005.63
Remaining Depreciable Value at the end of the year	15659.30	14616.90	13550.14	12471.59	11378.94

18. The details of depreciation allowed vide order dated 17.2.2016 in Petition No. 528/TT/2014, depreciation 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 vide order dated 17.2.2016 in Petition No. 528/TT/2014	1088.61	1089.57	1089.57	1089.57	1089.57
Claimed by the Petitioner in the instant petition	1089.24	1091.26	1092.20	1092.73	1092.73
Approved after true-up in this order	1089.24	1091.26	1092.20	1092.73	1092.73

Interest on Loan (IoL)

19. 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 trued-up IoL allowed in respect of the transmission system is as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Interest on Loan					
Gross Normative Loan	15355.53	15414.01	15431.52	15453.58	15453.58
Cumulative Repayments up to Previous Year	2547.47	3636.71	4727.97	5820.17	6912.90
Net Loan-Opening	12808.06	11777.30	10703.55	9633.41	8540.68
Additions	58.49	17.51	22.06	0.00	0.14
Repayment during the year	1089.24	1091.26	1092.20	1092.73	1092.73
Net Loan-Closing	11777.30	10703.55	9633.41	8540.68	7448.09
Average Loan	12292.68	11240.43	10168.48	9087.05	7994.38
Weighted Average	8.9656	8.9646	8.9601	8.9533	8.9491



Rate of Interest on Loan (in %)					
Interest on Loan	1102.11	1007.66	911.10	813.59	715.42

20. The details of IoL allowed vide order dated 17.2.2016 in Petition No. 528/TT/2014, IoL claimed by the Petitioner in the instant petition and trued-up in the instant order is as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 17.2.2016 in Petition No. 528/TT/2014	1102.08	1006.95	909.01	811.09	713.26
Claimed by the Petitioner in the instant petition	1102.11	1007.66	911.11	813.59	715.42
Approved after true-up in this order	1102.11	1007.66	911.10	813.59	715.42

Return on Equity (RoE)

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

Year	Claimed effective tax rate (in %)	Grossed-up RoE (in %) [Base Rate/(1-t)]
2014-15	21.018	19.625
2015-16	21.382	19.715
2016-17	21.338	19.705
2017-18	21.337	19.705
2018-19	21.549	19.758

22. 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 and the same is given in the table below:

Year	Notified MAT rates (in %) (inclusive of surcharge & cess)	Effective tax (in %)
2014-15	20.961	20.961
2015-16	21.342	21.342
2016-17	21.342	21.342
2017-18	21.342	21.342



2018-19	21.549	21.549
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23. The MAT rates considered in order dated 27.4.2020 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, is considered in the instant case which is as follows:

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

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 Regulation 25(3) of the 2014 Tariff Regulations. RoE is trued-up on the basis of the MAT rate applicable in the respective years and is approved for the transmission system as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	6490.43	6515.50	6523.01	6532.46	6532.46
Additions	25.07	7.51	9.45	0.00	0.06
Closing Equity	6515.50	6523.01	6532.46	6532.46	6532.52
Average Equity	6502.97	6519.25	6527.73	6532.46	6532.49
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (in %)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (in %)	19.610	19.705	19.705	19.705	19.758
Return on Equity	1275.23	1284.62	1286.29	1287.22	1290.69



25. The details of RoE allowed vide order dated 17.2.2016 in Petition No. 528/TT/2014, RoE 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 vide order dated 17.2.2016 in Petition No. 528/TT/2014	1275.28	1277.75	1277.75	1277.75	1277.75
Claimed by the Petitioner in the instant petition	1276.21	1285.27	1286.29	1287.22	1290.69
Approved after true-up in this order	1275.23	1284.62	1286.29	1287.22	1290.69

Operation & Maintenance Expenses (O&M Expenses)

26. The total O&M Expenses claimed by the Petitioner for the transmission system are as follows:

O&M Expenses					
	2014-15	2015-16	2016-17	2017-18	2018-19
Sub-station					
400 kV bays at: Chamera:ICT-I Bay Chamera:ICT-II Bay Chamera:Bus Reactor Bay Chamera:Chamera III HEP Line II Bay Chamera:Jalhandhar I Bay Chamera:Jalandhar-II Bay Chamera:Chamera Pooling Station (Chamera) Bay Chamera:Chamera-II					
Number of bays	7	7	7	7	7
220 kV bays at: Chamera:ICT I Bay Chamera:ICT-II Bay Chamera:Chamera-III HEP					
Number of bays	4	4	4	4	4
Transmission lines					
Chamera Pooling Station-Chamera-II transmission line					
S/C Twin/Triple Conductor (km)	0.375	0.375	0.375	0.375	0.375
Total O&M Expenses (₹ in lakh)	591.09	610.70	630.99	651.94	673.54

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



Element	Norms for 2014-15	Norms for 2015-16	Norms for 2016-17	Norms for 2017-18	Norms for 2018-19
S/C (Twin/Triple Conductor) (₹ lakh/km)	0.202	0.209	0.216	0.223	0.230
220 kV Sub-station (₹ lakh/ bay)	42.21	43.61	45.06	46.55	48.10
400 kV Sub-station (₹ lakh/ bay)	60.30	62.30	64.37	66.51	68.71

28. The O&M Expenses are approved for the transmission system as per the norms specified in Regulation 29(3) of the 2014 Tariff Regulations and are as follows:

(₹ in lakh)					
Details	2014-15	2015-16	2016-17	2017-18	2018-19
4 Numbers of 220 kV Sub-station bays	168.84	174.44	180.24	186.20	192.40
7 Numbers of 400 kV Sub-station bays	422.10	436.10	450.59	465.57	480.97
0.375 km S/C (Twin/Triple Conductor) transmission line	0.15	0.16	0.16	0.17	0.17
Total	591.09	610.70	630.99	651.94	673.54

29. The details of O&M Expenses allowed vide order dated 17.2.2016 in Petition No. 528/TT/2014, O&M Expenses claimed by the Petitioner in the instant petition and trued-up in the instant order is as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 17.2.2016 in Petition No. 528/TT/2014	591.09	610.70	630.99	651.94	673.54
Claimed by the Petitioner in the instant petition	591.09	610.70	630.99	651.94	673.54
Approved after true-up in this order	591.09	610.70	630.99	651.94	673.54

Interest on Working Capital

30. IWC has been worked out as per the methodology provided in Regulation 28 of the 2014 Tariff Regulations and the trued-up IWC allowed for the transmission system as follows:



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	49.26	50.89	52.58	54.33	56.13
Working Capital for Maintenance Spares (15% of O&M Expenses)	88.66	91.60	94.65	97.79	101.03
Working Capital for Receivables (Equivalent to two months of annual transmission charges)	695.02	684.31	671.86	659.17	646.82
Total Working Capital	832.94	826.80	819.09	811.29	803.98
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	112.45	111.62	110.58	109.52	108.54

31. The details of IWC allowed vide order dated 17.2.2016 in Petition No. 528/TT/2014, IWC claimed by the Petitioner in the instant petition and true-up in the instant order is as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 17.2.2016 in Petition No. 528/TT/2014	112.43	111.40	110.27	109.17	108.11
Claimed by the Petitioner in the instant petition	112.47	111.63	110.58	109.52	108.54
Approved after true-up in this order	112.45	111.62	110.58	109.52	108.54

Approved Annual Fixed Charges for the 2014-19 Tariff Period

32. The true-up Annual Fixed Charges (AFC) approved for the transmission system for the 2014-19 tariff period are as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	1089.24	1091.26	1092.20	1092.73	1092.73
Interest on Loan	1102.11	1007.66	911.10	813.59	715.42
Return on Equity	1275.23	1284.62	1286.29	1287.22	1290.69
O&M Expenses	591.09	610.70	630.99	651.94	673.54
Interest on Working Capital	112.45	111.62	110.58	109.52	108.54
Total	4170.12	4105.85	4031.17	3955.00	3880.93



33. Accordingly, the Annual Transmission Charges allowed vide order dated 17.2.2016 in Petition No. 528/TT/2014, claimed by the Petitioner in the instant petition and approved after truing up in the instant order is as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 17.2.2016 in Petition No. 528/TT/2014	4169.49	4096.38	4017.60	3939.53	3862.25
Claimed by the Petitioner in the instant petition	4171.12	4106.52	4031.17	3955.00	3880.92
Approved after true-up in this order	4170.12	4105.85	4031.17	3955.00	3880.93

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

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

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	1092.74	1092.74	1092.74	1092.74	1092.74
Interest on Loan	617.36	519.25	421.12	322.94	224.57
Return on Equity	1226.94	1226.94	1226.94	1226.94	1226.94
Interest on Working Capital	68.04	67.55	66.93	66.35	65.62
O&M Expenses	547.80	567.07	586.73	607.39	627.86
Total	3552.88	3473.55	3394.46	3316.36	3237.73

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

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	45.65	47.26	48.89	50.62	52.32
Maintenance Spares	82.17	85.06	88.01	91.11	94.18
Receivables	436.83	428.24	418.50	408.87	398.08
Total Working Capital	564.65	560.56	555.40	550.60	544.58
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	68.04	67.55	66.93	66.35	65.62

Capital Cost

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



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

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

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

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

- (a) Capital cost admitted by the Commission prior to 1.4.2019 duly trued up by excluding liability, if any, as on 1.4.2019;*
- (b) Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;*
- (c) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*



- (d) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;
- (e) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal up to the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and
- (f) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.

(4) The capital cost in case of existing or new hydro generating station shall also include:

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

(5) The following shall be excluded from the capital cost of the existing and new projects:

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

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

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

- (c) In case of hydro generating stations, any expenditure incurred or committed to be incurred by a project developer for getting the project site allotted by the State Government by following a transparent process;
- (d) Proportionate cost of land of the existing project which is being used for generating power from generating station based on renewable energy; and
- (e) Any grant received from the Central or State Government or any statutory body or authority for the execution of the project which does not carry any liability of repayment."

37. The Petitioner has claimed capital cost of ₹21986.24 lakh as on 31.3.2019 for the transmission system. The same has been worked out by the Commission as on



31.3.2019 and considered as the opening capital cost as on 1.4.2019 for determination of tariff in accordance with Regulation 19 of the 2019 Tariff Regulations.

Additional Capital Expenditure

38. The Petitioner initially had not projected any ACE during 2019-24 tariff period for the transmission system. However, vide affidavit dated 8.7.2021, the Petitioner has prayed for 'in-principle' approval for booking of cost of acquisition of Private Land measuring 01 Bigha 03 Biswa under Khasra no. 461 at 400/200 kV GIS Chamera-II sub-station at the time filing of trueing up petition for the 2019-24 tariff period as per Regulation 14(3)(i) of 2014 Tariff Regulations. The Petitioner has submitted the following in respect of the same:

- a) 400/220 kV GIS Chamera-II sub-station at Rajera, Chamba was put to commercial operation in November 2011 and is catering to the evacuation of power generated by NHPC Chamera-I, II, III, M/s Lanco Budhil hydro power project and other mini/ micro hydro power projects in nearby areas. For the construction of this sub-station, 36 Bigha 16 Biswa land was acquired from NHPC Chamera-2 project while balance 9 Bigha 3 Biswa of private land was acquired through negotiation under erstwhile Land Acquisition Act (LA Act) at a base price rate of ₹1.50 lakh per Biswa in year 2008.
- b) Additional 1 Bigha 3 Biswa private land under Khasra no. 461 at village Rajera is under the possession of the Petitioner since 2008 whose acquisition was pending due to obstruction by landowner at site and through court cases.
- c) Due to abnormal delay in acquisition of land through LA Act and hindrance in work by local landowners by way of litigation in District Court Chamba, efforts are being made to acquire this piece of land through private negotiation mode.
- d) For the said land, sale consideration inclusive of both the base rate as well as interest portion @11% of total amount of ₹83.835 lakh (@ ₹3.645 lakh per Biswa) as agreed upon with the landowners for land measuring 1 Bigha 3



Biswa (23 Biswa). As per the settlement, a liability of approx. ₹83.83 lakh may be payable to the landowner. However, the same has not been considered while calculating the tariff of 2019-24 tariff period in the true up instant petition and the amount will be claimed in true-up of 2019-24 as per the final settlement.

e) The Petitioner has prayed for 'in-principle' approval as per Regulation 14(3)(i) of 2014 Tariff Regulations for booking of cost for above said land in GIS Chamera-II Sub-station at the time filing of trueing up petition for the 2019-24 tariff period.

39. We have considered the submissions of the Petitioner. The Petitioner has prayed for 'in-principle' approval for an amount of ₹83.83 lakh towards acquisition of private land stating that tariff for the same shall be claimed at the time of trueing up of tariff for 2019-24 tariff period. For the additional 1 Bigha 3 Biswa of private land under Khasra no. 461 at village Rajera, the Petitioner has submitted that the land is under the possession of the Petitioner since 2008 whose acquisition was pending due to obstruction by landowner at site and through court cases. It is not clear as to how this land is under possession of the Petitioner when it has neither been acquired under LA Act nor purchased from landowners. The Petitioner has also not clarified the use of this land as regards the transmission system. Moreover, the Petitioner has not claimed tariff for ACE for an amount of ₹83.83 lakh towards private land acquisition. Therefore, ACE on this count is not allowed in the instant petition. However, the Petitioner is at liberty to approach the Commission with actual amount paid towards private land acquisition at the time of true-up with proper justification and relevant regulations.

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



(₹ in lakh)	
Capital Cost (as on 1.4.2019)	Capital Cost (as on 31.3.2024)
21986.24	21986.24

Debt-Equity Ratio

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

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

Provided that:

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

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

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

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

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

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



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

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

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

Funding	Capital Cost as on 1.4.2019 (₹ in lakh)	(in %)	Capital Cost as on 31.3.2024 (₹ in lakh)	(in %)
Debt	15453.72	70.29	15453.72	70.29
Equity	6532.52	29.71	6532.52	29.71
Total	21986.24	100.00	21986.24	100.00

Depreciation

43. Regulations 33(1), 33(2) and 33(5) of the 2019 Tariff Regulations provide as follows:

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

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

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



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

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

44. The depreciation has been worked out considering the admitted capital expenditure as on 1.4.2019 and accumulated depreciation up to 31.3.2019. The depreciation has been calculated in accordance with Regulation 33(5) of the 2019 Tariff Regulations. The Gross Block during the 2019-24 tariff period has been depreciated at WAROD and working of WAROD is at Annexure-II. The depreciation allowed for the transmission system for the 2019-24 tariff period is as follows:

	(₹ in lakh)				
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation					
Opening Gross Block	21986.24	21986.24	21986.24	21986.24	21986.24
Addition during the year 2019-24 due to projected ACE	0	0	0	0	0
Closing Gross Block	21986.24	21986.24	21986.24	21986.24	21986.24
Average Gross Block	21986.24	21986.24	21986.24	21986.24	21986.24
Freehold Land	447.42	447.42	447.42	447.42	447.42
Weighted average rate of Depreciation (WAROD) (in %)	4.97	4.97	4.97	4.97	4.97
Balance useful life at the beginning of the year (Year)	18	17	16	15	14
Lapsed life of the asset (Year)	7	8	9	10	11
Depreciable Value	19384.67	19384.67	19384.67	19384.67	19384.67
Depreciation during the year	1092.74	1092.74	1092.74	1092.74	1092.74
Cumulative Depreciation	9098.37	10191.11	11283.85	12376.59	13469.33
Remaining Depreciable Value	10286.29	9193.55	8100.82	7008.08	5915.34

Interest on Loan

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

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



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

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

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

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

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

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

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

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

46. 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 2019-24 tariff period will be adjusted. Accordingly, the floating rate of interest, if any, shall be considered at the time of true up. Therefore, IoL has been allowed in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL allowed for the transmission system for the 2019-24 tariff period is as follows:



(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	15,453.72	15,453.72	15,453.72	15,453.72	15,453.72
Cumulative Repayments up to Previous Year	8,005.63	9,098.37	10,191.11	11,283.85	12,376.59
Net Loan-Opening	7,448.09	6,355.35	5,262.61	4,169.87	3,077.13
Additions	0.00	0.00	0.00	0.00	0.00
Repayment during the year	1,092.74	1,092.74	1,092.74	1,092.74	1,092.74
Net Loan-Closing	6,355.35	5,262.61	4,169.87	3,077.13	1,984.39
Average Loan	6,901.72	5,808.98	4,716.24	3,623.50	2,530.76
Weighted Average Rate of Interest on Loan (in %)	8.9450	8.9387	8.9292	8.9123	8.8735
Interest on Loan	617.36	519.25	421.12	322.94	224.57

Return on Equity

47. Regulations 30 and 31 of the 2019 Tariff Regulations provides as follows:

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

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

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

Provided further that:

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

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

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

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



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

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

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

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

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

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

Illustration-

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

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

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

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

(3) The generating company or the transmission licensee, as the case may be, shall true up the grossed up rate of return on equity at the end of every financial year based on actual tax paid together with any additional tax demand including interest thereon, duly adjusted for any refund of tax including interest received from the income tax authorities pertaining to the tariff period 2019-24 on actual gross



income of any financial year. However, penalty, if any, arising on account of delay in deposit or short deposit of tax amount shall not be claimed by the generating company or the transmission licensee, as the case may be. Any under-recovery or over-recovery of grossed up rate on return on equity after truing up, shall be recovered or refunded to beneficiaries or the long term customers, as the case may be, on year to year basis.”

48. The Petitioner has submitted that MAT rate is applicable to the Petitioner's company. We have considered the submissions of the Petitioner. 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 system for the 2019-24 tariff period is as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity	6532.52	6532.52	6532.52	6532.52	6532.52
Additions	-	-	-	-	-
Closing Equity	6532.52	6532.52	6532.52	6532.52	6532.52
Average Equity	6532.52	6532.52	6532.52	6532.52	6532.52
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472	17.472
Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782	18.782
Return on Equity	1226.94	1226.94	1226.94	1226.94	1226.94

Operation & Maintenance Expenses

49. The O&M Expenses claimed by the Petitioner for the various elements included in the transmission system for the 2019-24 tariff period are as follows:

O&M Expenses					
	2019-20	2020-21	2021-22	2022-23	2023-24
Sub-station					
400 kV bays at:					
Chamera:ICT-I Bay					
Chamera:ICT-II Bay					
Chamera:Bus Reactor Bay					
Chamera:Chamera III HEP Line II Bay					
Chamera:Jalhandhar I Bay					
Chamera:Jalandhar-II Bay					
Chamera:Chamera Pooling Station (Chamera) Bay					
Chamera:Chamera-II					



Number of bays	7	7	7	7	7
220 kV bays at: Chamera:ICT I Bay Chamera:ICT-II Bay Chamera:Chamera-III HEP					
Number of bays	4	4	4	4	4
Transmission lines					
Chamera Pooling Station-Chamera-II					
S/C Twin/Triple Conductor (km)	0.375	0.375	0.375	0.375	0.375
Transformer					
400 kV 2 numbers of 315 MVA ICT at Chamera Sub-station					
Number of transformers	2	2	2	2	2
O&M claimed for PLCC (2% of ₹348.78 lakh)	6.98	6.98	6.98	6.98	6.98
Total O&M Expenses (₹ in lakh)	547.80	567.07	586.73	607.39	627.86

50. Regulation 35(3)(a) and 33(4) of the 2019 Tariff Regulations provide as follows:

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

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Norms for sub-station Bays (₹ Lakh per bay)					
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



<i>Double Circuit (Bundled conductor with four or more sub-conductors)</i>	1.322	1.368	1.416	1.466	1.517
<i>Double Circuit (Twin & Triple Conductor)</i>	0.881	0.912	0.944	0.977	1.011
<i>Double Circuit (Single Conductor)</i>	0.377	0.391	0.404	0.419	0.433
<i>Multi Circuit (Bundled Conductor with four or more sub-conductor)</i>	2.319	2.401	2.485	2.572	2.662
<i>Multi Circuit (Twin & Triple Conductor)</i>	1.544	1.598	1.654	1.713	1.773
Norms for HVDC stations					
<i>HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB)</i>	834	864	894	925	958
<i>Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW)</i>	1,666	1,725	1,785	1,848	1,913
<i>500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)</i>	2,252	2,331	2,413	2,498	2,586
<i>±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)</i>	2,468	2,555	2,645	2,738	2,834
<i>±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500 MW)</i>	1,696	1,756	1,817	1,881	1,947
<i>±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)</i>	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 year

(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."*

51. We have considered the submissions of the Petitioner. The Petitioner has claimed O&M Expenses separately for 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.

52. The O&M Expenses allowed for the transmission system are as follows:

(₹ in lakh)					
Details	2019-20	2020-21	2021-22	2022-23	2023-24
4 Numbers of 220 kV Sub-station bays	90.04	93.20	96.48	99.84	103.36
7 Numbers of 400 kV Sub-station bays	225.05	232.96	241.15	249.62	258.37
0.375 km S/C (Twin/Triple Conductor) transmission line	0.19	0.20	0.20	0.21	0.22
2 Numbers of 400 kV 315 MVA ICTs at Chamera Sub-station	225.54	233.73	241.92	250.74	258.93
Total	540.82	560.09	579.75	600.41	620.88

Interest on Working Capital

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

“34. Interest on Working Capital

(1)...

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

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

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

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

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



“3.Definitions ...

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

54. The Petitioner has submitted that it has computed IWC for the 2019-24 period considering the SBI Base Rate plus 350 basis points as on 1.4.2019. The Petitioner has considered the rate of IWC as 12.05%. The Rate of Interest (RoI) considered is 12.05% (SBI 1 year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20, RoI for 2020-21 onwards has been considered as 11.25% (SBI 1 year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) for 2020-2021 and RoI for 2021-22 onwards has been considered as 10.50% (SBI 1 year MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points). The components of the working capital and interest allowed thereon is as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Working Capital for O&M Expenses (O&M Expenses for one month)	45.07	46.67	48.31	50.03	51.74
Working Capital for Maintenance Spares (15% of O&M Expenses)	81.12	84.01	86.96	90.06	93.13
Working Capital for Receivables (Equivalent to 45 days of annual transmission cost)	435.93	426.79	416.53	406.91	396.14
Total Working Capital	562.12	557.47	551.80	547.00	541.01
Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50
Interest on Working Capital	67.74	62.72	57.94	57.44	56.81

Annual Fixed Charges for the 2019-24 Tariff Period

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

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	1092.74	1092.74	1092.74	1092.74	1092.74
Interest on Loan	617.36	519.25	421.12	322.94	224.57
Return on Equity	1226.94	1226.94	1226.94	1226.94	1226.94



O&M Expenses	540.82	560.09	579.75	600.41	620.88
Interest on Working Capital	67.74	62.72	57.94	57.44	56.81
Total	3545.59	3461.72	3378.49	3300.46	3221.93

Filing Fee and the Publication Expenses

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

Licence Fee & RLDC Fees and Charges

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

Goods and Services Tax

58. The Petitioner has submitted that if GST is levied at any rate and at any point of time in future on charges of transmission of electricity, the same shall be borne and additionally paid by the Respondent(s) to the Petitioner and the same shall be charged and billed separately by the Petitioner. Further additional taxes, if any, are to be paid by the Petitioner on account of demand from Government/ Statutory Authorities, the same may be allowed to be recovered from the beneficiaries

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



Security Expenses

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

61. We have considered the submissions of the Petitioner. The Petitioner has claimed consolidated security expenses for all the transmission assets owned by it on projected basis for the 2019-24 tariff period on the basis of actual security expenses incurred in 2018-19 in Petition No. 260/MP/2020. The Commission vide order dated 3.8.2021 in Petition No. 260/MP/2020 approved security expenses from 1.4.2019 to 31.3.2024. Therefore, security expenses will be shared in terms of the order dated 3.8.2021 in Petition No. 260/MP/2020. Therefore, the Petitioner's prayer in the instant petition for allowing it to file a separate petition for claiming the overall security expenses and consequential IWC has become infructuous.

Capital Spares

62. 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

63. 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 Sharing Regulations and shall be recovered from the concerned DICs through Bills 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.

64. To summarise:

(a) The trued-up AFC approved for the transmission system for the 2014-19 tariff period are as follows:

(₹ in lakh)				
2014-15	2015-16	2016-17	2017-18	2018-19
4170.12	4105.85	4031.17	3955.00	3880.93

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

(₹ in lakh)				
2019-20	2020-21	2021-22	2022-23	2023-24
3545.59	3461.72	3378.49	3300.46	3221.93

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

66. This order disposes of Petition No. 715/TT/2020 in terms of the above discussions and findings.

sd/-
(Pravas Kumar Singh)
Member

sd/-
(Arun Goyal)
Member

sd/-
(I. S. Jha)
Member



Annexure-I

2014-19		ACE (₹ in lakh)						Depreciation as per Regulations					
Capital Cost	Capital Cost as on 1.4.2014 / COD (₹ in lakh)	2014-19	2015-16	2016-17	2017-18	2018-19	Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depn.	2014-15	2015-16	2016-17	2017-18	2018-19
Land - Freehold	447.42	0.00	0.00	0.00	0.00	0.00	447.42	0.00	0.00	0.00	0.00	0.00	0.00
Land - Leasehold	1453.70	0.00	0.00	0.00	0.00	0.00	1453.70	3.34%	48.55	48.55	48.55	48.55	48.55
Building Civil Works & Colony	909.38	62.76	25.02	31.44	0.00	0.00	1028.60	3.34%	31.42	32.89	33.83	34.36	34.36
Transmission Line	178.66	0.00	0.00	0.00	0.00	0.00	178.66	5.28%	9.43	9.43	9.43	9.43	9.43
Sub Station	18507.72	20.79	0.00	0.07	0.00	0.20	18528.78	5.28%	977.76	978.31	978.31	978.31	978.31
PLCC	348.78	0.00	0.00	0.00	0.00	0.00	348.78	6.33%	22.08	22.08	22.08	22.08	22.08
IT Equipment (Incl. Software)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.00%	0.00	0.00	0.00	0.00	0.00
Total	21845.66	83.55	25.02	31.51	0.00	0.20	21985.94	Total	1089.24	1091.26	1092.20	1092.73	1092.73
Average Gross Block (₹ in lakh)									21887.44	21941.72	21969.99	21985.74	21985.84
Weighted Average Rate of Depreciation									4.98%	4.97%	4.97%	4.97%	4.97%

Annexure-II

2019-24	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Projected ACE (₹ in lakh)	Admitted Capital Cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)					
Capital Expenditure		2019-24			2019-20	2020-21	2021-22	2022-23	2023-24	
Land - Freehold	447.42	0.00	447.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Land - Leasehold	1453.70	0.00	1453.70	3.34%	48.55	48.55	48.55	48.55	48.55	48.55
Building Civil Works & Colony	1028.60	0.00	1028.60	3.34%	34.36	34.36	34.36	34.36	34.36	34.36
Transmission Line	178.66	0.00	178.66	5.28%	9.43	9.43	9.43	9.43	9.43	9.43
Sub Station	18528.78	0.00	18528.78	5.28%	978.32	978.32	978.32	978.32	978.32	978.32
PLCC	348.78	0.00	348.78	6.33%	22.08	22.08	22.08	22.08	22.08	22.08
IT Equipment (Incl. Software)	0.00	0.00	0.00	15.00%	0.00	0.00	0.00	0.00	0.00	0.00
Total	21985.94	0.00	21985.94		1092.74	1092.74	1092.74	1092.74	1092.74	1092.74
Average Gross Block (₹ in lakh)					21985.94	21985.94	21985.94	21985.94	21985.94	21985.94
Weighted Average Rate of Depreciation					4.97%	4.97%	4.97%	4.97%	4.97%	4.97%

