

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 695/TT/2020

Coram:

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

Date of Order: 03.01.2022

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 for the 2019-24 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 of Salal-II Transmission System associated with Northern Region.

And in the matter of:

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

....Petitioner

Vs

1. Rajasthan Rajya Vidyut Prasaran Nigam Limited,
Vidyut Bhawan, Vidyut Marg,
Jaipur – 302 005.
2. Ajmer Vidyut Vitran Nigam Limited,
132 kV, GSS RVPNL Sub-Station Building,
Caligiri Road, Malviya Nagar,
Jaipur-302017.
3. Jaipur Vidyut Vitran Nigam Limited,
132 kV, GSS RVPNL Sub- Station Building,
Caligiri Road, Malviya Nagar,
Jaipur – 302017.
4. Jodhpur Vidyut Vitran Nigam Limited,
132 kV, GSS RVPBL Sub-Station Building,
Caligiri Road, Malviya Nagar,
Jaipur – 302017.



5. Himachal Pradesh State Electricity Board,
Vidyut Bhawan, Kumar House Complex Building II,
Shimla – 171 004.
6. Punjab State Electricity Board,
The Mall,
Patiala – 147 001.
7. Haryana Power Purchase Centre,
Shakti Bhawan, Sector-6,
Panchkula (Haryana) – 134 109.
8. Power Development Department,
Govt. Of Jammu & Kashmir,
Mini Secretariat,
Jammu.
9. Uttar Pradesh Power Corporation Limited,
Shakti Bhawan, 14, Ashok Marg,
Lucknow – 226 001.
10. Delhi Transco Limited,
Shakti Sadan, Kotla Road,
New Delhi – 110 002.
11. BSES Yamuna Power Limited,
BSES Bhawan, Nehru Place,
New Delhi.
12. BSES Rajdhani Power Limited,
BSES Bhawan, Nehru Place,
New Delhi.
13. Tata Power Delhi Distribution Limited,
33 kV Substation, Building,
Hudson Lane Kingsway Camp,
Delhi – 110 009.
14. Chandigarh Administration,
Sector -9,
Chandigarh.
15. Uttarakhand Power Corporation Limited,
Urja Bhawan, Kanwali Road,
Dehradun.



16. North Central Railway,
Allahabad.
17. New Delhi Municipal Council,
Palika Kendra, Sansad Marg,
New Delhi – 110 002.

...Respondents

For Petitioner : Shri S. S. Raju, PGCIL
Shri D.K. Biswal, PGCIL
Shri Ved Prakash Rastogi, PGCIL.
Shri A.K. Verma, PGCIL

For Respondents : None

ORDER

The instant petition has been filed by the Petitioner, Power Grid Corporation of India Limited, a deemed transmission licensee, for truing up of transmission tariff of the 2014-19 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) and for determination of tariff 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 Salal–II Transmission System (hereinafter referred to as “the transmission asset”) in the 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 7 and 8 above.

2) Allow fresh add- cap projected during 2019-24 and unrecovered depreciation as part of the Tariff of 2019-24.

3) Allow the petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended



from time to time) of the respective financial year directly without making any application before the Commission as provided in Tariff regulations 2014 and tariff regulation'19 as per para 7 & 8 above for respective block.

Further it is submitted that deferred tax liability before 01.04.2009 shall be recoverable from the beneficiaries or long-term customers / DIC as the case may be, as and when the same is 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 materialised 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 recover FERV on the foreign loans deployed as provided under clause 68 of the Tariff Regulations, 2019

8) 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 8.5 & 8.6 above.

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

10) Allow the Petitioner to bill and recover GST on Transmission Charges separately from the respondents, 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."

Background

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



a) Approval of the Central Government for setting up of Salal Hydro Electric Project Stage-II, including associated transmission system was accorded vide Ministry of Power letter dated 12.9.1989, for a total capital investment of ₹30378.00 lakh including an IDC of ₹2381.00 lakh. This included the capital investment of ₹9374.00 lakh (including ₹735.00 lakh on account of IDC on pro-rata basis) for the associated transmission system. Subsequently, Ministry of Power vide letter dated 10.1.2000 approved the revised cost estimate of Salal Stage-II Transmission System for capital investment of ₹10175.00 lakh, including an IDC of ₹930.00 lakh.

b) The approved scope of work covered under the transmission asset is as follows:

Name of Transmission Line	Date of commercial operation
220 kV D/C Salal-II -Kishenpur line	1.8.1996
220 kV D/C Kishenpur-Sarna line	1.1.1995
220 kV S/C Salal-II -Jammu line	1.1.1995
220 kV D/C Sarna-Dasua line	1.5.1994

c) The transmission asset was put under commercial operation from 1.5.1994 to 1.8.1996.

d) The transmission tariff for the 2009-14 tariff period was allowed *vide* order dated 4.11.2010 in Petition No.140/2010. The tariff for the 2009-14 period was trued-up and tariff for the period from 1.4.2014 to 31.3.2019 was allowed *vide* order dated 15.2.2016 in Petition No. 148/TT/2014.

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

5. The Petitioner has served the petition on the Respondents and notice regarding filing of this petition has also been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments/ objections have been received from the general public in response to the aforesaid notice published in the newspapers by the Petitioner. None of the Respondents have filed reply in the matter.



6. This order is issued considering the submissions made by the Petitioner in the petition, and affidavit dated 15.2.2021.

7. The hearing in this matter was held on 17.8.2021 through video conference and the order was reserved.

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

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

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

(₹ in lakh)					
Particular	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	201.91	201.91	201.90	201.91	201.90
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	995.75	1000.32	999.81	999.81	1002.50
Interest on Working Capital	52.86	53.80	54.66	55.55	56.55
O&M Expenses	457.77	472.96	488.81	504.83	521.79
Total	1708.29	1728.99	1745.18	1762.10	1782.74

10. The details of trued-up IWC claimed by the Petitioner in respect of the transmission asset are as follows:

(₹ in lakh)					
Particular	2014-15	2015-16	2016-17	2017-18	2018-19
O & M Expenses	38.15	39.41	40.73	42.07	43.48
Maintenance Spares	68.67	70.94	73.32	75.72	78.27
Receivables	284.72	288.17	290.87	293.68	297.12
Total	391.54	398.52	404.92	411.47	418.87
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	52.86	53.80	54.66	55.55	56.55

Capital Cost as on 1.4.2014

11. The capital cost of the transmission asset has been calculated in accordance with Regulations 9(3) and 9(6) of the 2014 Tariff Regulations.



12. The Commission vide order dated 15.2.2016 in Petition No. 148/TT/2014 had allowed the transmission tariff for the transmission asset for 2014-19 period based on admitted capital cost of ₹10147.77 lakh as on 1.4.2014. The Petitioner has not claimed any ACE during the 2014-19 tariff period. Accordingly, the capital cost of ₹10147.77 lakh for transmission asset has been considered for the purpose of truing up of the tariff for the 2014-19 tariff period.

Additional Capital Expenditure (ACE)

13. The Petitioner has not claimed any ACE during the 2014-19 tariff period.

Capital Cost considered for true up of tariff for the 2014-19 period

14. Accordingly, the capital cost considered for truing up of tariff of the 2014-19 tariff period is as follows:

(₹ in lakh)		
Capital Cost as on 1.4.2014	ACE during 2014-19	Capital Cost as on 31.3.2019
10147.77	0.00	10147.77

Debt-Equity Ratio

15. The debt-equity ratio has been allowed in accordance with Regulation 19(3) of the 2014 Tariff Regulations. As per Regulation 19(3) of the 2014 Tariff Regulations, the debt-equity ratio allowed by the Commission for determination of tariff for the period ending on 31.3.2014 shall be considered. Accordingly, the admitted debt-equity ratio of 50:50 for the period ending on 31.3.2014 has been considered for the purpose of truing up of tariff of 2014-19 period.

16. The details of the debt-equity ratio allowed as on 1.4.2014 and 31.3.2019 of the transmission asset is as follows:

Asset	As on 1.4.2014		As on 31.3.2019	
	Capital cost (₹ in lakh)	(%)	Capital cost (₹ in lakh)	(%)



Debt	5073.89	50.00	5073.89	50.00
Equity	5073.89	50.00	5073.89	50.00
Total	10147.77	100.00	10147.77	100.00

Depreciation

17. The depreciation has been allowed 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 the allowed ACE during the 2014-19 tariff period. The transmission asset having already completed 12 years of life as on 31.3.2009, the remaining depreciable value has been spread across the balance useful life of the transmission asset. Depreciation allowed during the 2014-19 period for the transmission asset as follows:

(₹ in lakh)					
Particular	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	10147.77	10147.77	10147.77	10147.77	10147.77
Addition during 2014-19 due to Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	10147.77	10147.77	10147.77	10147.77	10147.77
Average Gross Block	10147.77	10147.77	10147.77	10147.77	10147.77
Weighted Average Rate of Depreciation (%)	1.99	1.99	1.99	1.99	1.99
Balance useful life of the asset at the beginning of the year (Year)	15	14	13	12	11
Lapsed life at the beginning of the year (Year)	17	18	19	20	21
Aggregated Depreciable Value	9132.99	9132.99	9132.99	9132.99	9132.99
Depreciation during the year	201.91	201.91	201.91	201.91	201.91
Cumulative Depreciation at the end of the year	6306.29	6508.20	6710.10	6912.01	7113.92
Remaining Aggregate Depreciable Value at the end of the year	2826.71	2624.80	2422.89	2220.98	2019.08

18. The details of depreciation allowed *vide* order dated 15.2.2016 in Petition No. 148/TT/2014 for the transmission asset, depreciation claimed by Petitioner in the instant petition and trued-up depreciation allowed in the instant order are as follows:



(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed in order dated 15.2.2016 in Petition No. 148/TT/2014	201.91	201.91	201.91	201.91	201.91
Claimed by the Petitioner in the instant petition	201.91	201.91	201.90	201.91	201.90
Allowed after true-up in this order	201.91	201.91	201.91	201.91	201.91

Interest on Loan (“IoL”)

19. The Petitioner has not claimed IoL for the 2014-19 Tariff period as the entire loan has been repaid prior to 1.4.2014. Accordingly, IoL has not been allowed for the 2014-19 tariff period.

Return on Equity (“RoE”)

20. 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 the 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	19.624
2016-17	21.338	19.715
2017-18	21.337	19.704
2018-19	21.549	19.704

21. The Commission *vide* order dated 27.4.2020 in Petition No. 274/TT/2019 has arrived at the effective tax rate based on the notified MAT rates as follows:

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



Year	Notified MAT rates (in %) (inclusive of surcharge & cess)	Effective Tax (in %)
2017-18	21.342	21.342
2018-19	21.549	21.549

22. The MAT rates considered in Petition No. 274/TT/2019 are considered for the purpose of grossing up of rate of RoE for truing up of the tariff of the 2014-19 tariff period in terms of the provisions of the 2014 Tariff Regulations, which is as under:

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

23. Accordingly, RoE allowed for the transmission asset is as follows:

(₹ in lakh)					
Particular	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	5073.89	5073.89	5073.89	5073.89	5073.89
Addition due to Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Closing Equity	5073.89	5073.89	5073.89	5073.89	5073.89
Average Equity	5073.89	5073.89	5073.89	5073.89	5073.89
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
MAT rate for the respective Financial year (in %)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (Pre-tax) (in %)	19.610	19.705	19.705	19.705	19.758
Return on Equity (Pre-tax)	994.99	999.81	999.81	999.81	1002.50

24. The details of RoE allowed *vide* order dated 15.2.2016 in Petition No. 148/TT/2014 for the transmission asset, RoE claimed by Petitioner in the instant petition and trued-up RoE allowed in the instant order are as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed in order dated 15.2.2016 in Petition No. 148/TT/2014	994.99	994.99	994.99	994.99	994.99
Claimed by the Petitioner in the instant petition	995.75	1000.32	999.81	999.81	1002.50
Approved after true-up in this	994.99	999.81	999.81	999.81	1002.50



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
order					

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

25. The O&M Expenses claimed by the Petitioner are within the norms specified under the 2014 Tariff Regulations. The O&M Expenses allowed for the transmission asset for the 2014-19 tariff period are as follows:

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Sub-station Bays (Numbers)					
220 kV: Sarna (PSTCL): Bay of Dasuya CKT-II	1	1	1	1	1
220 kV: Dasuya ss (PSEB): Bay of Sarna	2	2	2	2	2
220 kV: Kishanpur: Bay of Salal-III & IV	2	2	2	2	2
220 kV: Kishanpur: Bay of Sarna-I	1	1	1	1	1
220 kV: Sarna (PSTCL): Kishenpur-I & II	2	2	2	2	2
220 kV: Jammu: Salal II Bay	1	1	1	1	1
Norm (₹ lakh/bay)					
220 kV Bay (AIS)	42.210	43.610	45.060	46.550	48.100
Total Sub-station O&M (A)	379.89	392.49	405.54	418.95	432.90
Transmission Lines (Kms)					
220 kV Single Circuit: Salal-Jammu-II	62.42	62.42	62.42	62.42	62.42
220 kV Double Circuit: Sarna-Dasuya- II (Extended under Stg-I)	53.07	53.07	53.07	53.07	53.07
220 kV Double Circuit: Salal-Kishenpur-III & IV	58.70	58.70	58.70	58.70	58.70
220 kV Double Circuit: Kishenpur-Sarna I & II	103.64	103.64	103.64	103.64	103.64
Norm (₹ lakh/km)					
Single Circuit – Single Conductor	0.202	0.209	0.216	0.223	0.230
Double Circuit – Single Conductor	0.303	0.313	0.324	0.334	0.346
Total Transmission Line O&M (B)	77.88	80.47	83.28	85.87	88.89
Total O&M Expenses (C=A+B)	457.77	472.96	488.82	504.82	521.79

26. The details of O&M Expenses allowed *vide* order dated 15.2.2016 in Petition No. 148/TT/2014 for the transmission asset, O&M Expenses claimed by Petitioner in



the instant petition and trued-up O&M Expenses approved in the instant order are as follows:

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed in order dated 15.2.2016 in Petition No. 148/TT/2014	457.77	472.96	488.82	504.82	521.79
Claimed by the Petitioner in the instant petition	457.77	472.96	488.81	504.83	521.79
Approved after true-up in this order	457.77	472.96	488.82	504.82	521.79

Interest on Working Capital ("IWC")

27. The Petitioner has claimed IWC as per Regulation 28(1)(c) of the 2014 Tariff Regulations. The components of the working capital and the Petitioner's entitlement to interest thereon are discussed as follows:

(i) **Maintenance spares:**

Regulation 28 of the 2014 Tariff Regulations provides for maintenance spares @15% per annum of the O&M Expenses. The value of maintenance spares has accordingly been worked out.

(ii) **O & M Expenses:**

Operation and maintenance expenses have been considered for one month as a component of working capital. The Petitioner has claimed O&M Expenses for 1 month of the respective year as claimed in the petition. This has been considered in the working capital

(iii) **Receivables:**

Receivables as a component of working capital will be equivalent to two months fixed cost. The Petitioner has claimed the receivables on the basis of 2 months annual transmission charges. In the tariff being allowed, receivables have been worked out on the basis of 2 months transmission charges

(iv) **Rate of interest on working capital:**



As per Proviso 3 of Regulation 28 of the 2014 Tariff Regulations, SBI Base rate 10.00% as on 1.4.2014 plus 350 Bps i.e. 13.50% has been considered for the asset, as the rate of interest on working capital.

28. The trued-up Interest on Working Capital allowed for the transmission asset for the 2014-19 tariff period is as follows:

	(₹ in lakh)				
Particular	2014-15	2015-16	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for 1 Month)	38.15	39.41	40.73	42.07	43.48
Working Capital for Maintenance Spares (15% of O&M)	68.67	70.94	73.32	75.72	78.27
Working Capital for Receivables (Equivalent to 2 months of annual transmission charges)	284.58	288.08	290.87	293.68	297.12
Total Working Capital	391.40	398.43	404.92	411.47	418.87
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50	13.50
Interest of working capital	52.84	53.79	54.66	55.55	56.55

29. The details of IWC allowed *vide* order dated 15.2.2016 in Petition No. 148/TT/2014 for the transmission asset, IWC claimed by Petitioner in the instant petition 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 in order dated 15.2.2016 in Petition No. 148/TT/2014	52.84	53.68	54.55	55.44	56.38
Claimed by the Petitioner in the instant petition	52.86	53.80	54.66	55.55	56.55
Approved after true-up in this order	52.84	53.79	54.66	55.55	56.55

Approved Annual Fixed Charges for the 2014-19 Tariff Period

30. Accordingly, the annual transmission charges approved after truing up for the 2014-19 tariff period in respect of the transmission asset are as follows:

	(₹ in lakh)				
Particular	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	201.91	201.91	201.91	201.91	201.91



Particular	2014-15	2015-16	2016-17	2017-18	2018-19
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	994.99	999.81	999.81	999.81	1002.50
O&M Expenses	457.77	472.96	488.82	504.82	521.79
Interest on Working Capital	52.84	53.79	54.66	55.55	56.55
Total	1707.50	1728.47	1745.20	1762.08	1782.74

31. The details of Annual Transmission Charges allowed *vide* order dated 15.2.2016 in Petition No. 148/TT/2014 for the transmission asset, claimed by Petitioner in the instant petition and approved after truing-up in the instant order are as follows:

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed in order dated 15.2.2016 in Petition No. 148/TT/2014	1707.51	1723.54	1740.27	1757.16	1775.06
Claimed by the Petitioner in the instant petition	1708.29	1728.99	1745.18	1762.10	1782.74
Approved after true-up in this order	1707.50	1728.47	1745.20	1762.08	1782.74

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

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

	(₹ in lakh)				
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	201.91	201.90	223.27	258.68	293.70
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	952.98	952.98	955.98	963.55	973.56
Interest on Working Capital	30.49	31.01	31.85	33.00	34.11
Operation and Maintenance	301.08	311.70	322.50	333.88	345.43
Total	1486.46	1497.59	1533.60	1589.11	1646.80

33. The details of IWC claimed by the Petitioner in respect of the transmission asset for the 2019-24 tariff period are as follows:

	(₹ in lakh)				
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M expenses	25.09	25.98	26.88	27.82	28.79
Maintenance Spares	45.16	46.76	48.38	50.08	51.81
Receivables	182.76	184.64	189.07	195.92	202.48
Total	253.01	257.38	264.33	273.82	283.08
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05



Interest on Working Capital	30.49	31.01	31.85	33.00	34.11
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Capital Cost

34. Regulations 19 of the 2019 Tariff Regulations provide as under: -

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

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

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

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



- (a) Capital cost admitted by the Commission prior to 1.4.2019 duly trued up by excluding liability, if any, as on 1.4.2019;
 - (b) Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;
 - (c) Capital expenditure on account of renovation and modernisation as admitted by this Commission in accordance with these regulations;
 - (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 upto 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 de-capitalised 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."*

35. The admitted capital cost of ₹10147.77 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)

36. Regulations 24 and 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;*
- (c) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 23 of these regulations;*
- (d) Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority or order or decree of any court of law;*
- (e) Change in law or compliance of any existing law; and*
- (f) Force Majeure events:*

Provided that in case of any replacement of the Asset, the additional capitalization shall be worked out after adjusting the gross fixed Asset and cumulative depreciation of the Asset 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 additional capital expenditure incurred or projected to be incurred in respect of an existing project or a new project on the following counts within the original scope of work and after the cut-off date may be admitted by the Commission, subject to prudence check:

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

(2) In case of replacement of Asset 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 Asset and the cumulative depreciation, subject to prudence check on the following grounds:

- (a) The useful life of the Asset is not commensurate with the useful life of the project and such Asset 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.*

37. The Petitioner vide affidavit dated 15.2.2021 has submitted the revised Auditor's Certificate and has projected ACE of ₹598.06 lakh for the transmission asset after adjusting for de-capitalisation during the 2019-24 tariff period.

38. The Petitioner has submitted that the projected ACE during 2019-24 is for replacement of some of the components/ equipment in the system which have deteriorated due to ageing and may affect the stability and reliability of the Grid in case of sudden failure and that the claim is covered under Regulation 25(2) of the 2019 Tariff regulations. The Petitioner has also proposed ACE and decapitalization in respect of building and civil works. The Petitioner vide Auditor Certificate dated 29.5.2020 has submitted the following details for ACE/ de-capitalization proposed during 2019-24:

	(₹ in lakh)		
	Building and Civil Works	Sub-station	Total
Proposed ACE in 2021-22	102.02	175.26	277.28
Proposed De-capitalisation in 2021-22	(11.26)	(91.17)	(102.43)
Proposed ACE in 2022-23	161.37	134.56	295.93
Proposed De-capitalisation in 2022-23	(7.01)	(73.17)	(80.18)
Proposed ACE in 2023-24	204.05	25.20	229.25
Proposed De-capitalisation in 2023-24	(14.01)	(7.78)	(21.79)
NET ACE	435.16	162.90	598.06

39. The Petitioner vide affidavit dated 15.2.2021, has submitted that problematic equipment like CB, CT, CVT, Isolators, C&R panel, Control and Power cable are proposed for replacement to ensure system reliability. The equipment is replaced



based on condition monitoring, but balance of the system remains under service, for which replacement may be required in near future. The Petitioner has further submitted that the gross block of old equipment, being proposed to be replaced in the instant petition is hardly 2.01% of the total gross block of the project. However, other equipment of the project remains the same as commissioned with original project. As some of the equipment are proposed to be replaced, it is difficult to determine the life extension of the entire project including the old equipment. The Petitioner has further submitted that the present project will be completing its life in 2028-2029 and no further life extension has been proposed.

40. The Petitioner has further submitted the equipment-wise justification for the proposed ACE vide affidavit dated 15.2.2021.

41. We have considered the submissions of the Petitioner. The Petitioner has not submitted the consent of beneficiaries/ Respondents nor placed any material on record to show that the proposed ACE has consent of beneficiaries/ Respondents. The “building and civil works” are non-critical works and, therefore, we are not inclined to allow ACE claimed by the Petitioner towards such works. However, the Petitioner may obtain approval of RPC and file a separate petition for ACE towards “building and civil works” for consideration by the Commission.

42. The remaining proposed ACE is towards replacement of isolators (10 sets of 220 kV at PSTCL Sarna S/S and 3 sets at PSTCL Dasuya S/S), CTs(3 numbers of 245 kV CTs at PSTCL Sarna S/S and 3 numbers of 245 kV CTs at PSTCL Dasuya S/S), Capacitive Voltage Transformers (3 numbers of 245 kV CTs at PSTCL Sarna S/S and 3 numbers of 245 kV CTs at PSTCL Dasuya S/S), control and relay panels (3 sets at PSTCI Sarna S/S, 1 set at PSTCL Dasuya S/S), and power and control



cables due to obsolescence of technology. These items are of critical nature and their failure may affect the stability and reliability of the grid. Hence, the replacement of these obsolete equipment and consequential ACE towards this is allowed, subject to true-up on actual basis. The Petitioner is also directed to submit the details of abstract cost estimate and details of the actual cost of the replaced equipment sub-station wise at the time of truing up.

43. ACE and de-capitalisation in respect of the transmission asset allowed for 2019-24 tariff period are as follows:

(₹ in lakh)				
Sr. No.	Particulars	2021-22	2022-23	2023-24
(1)	ACE	175.26	134.56	25.2
(2)	Decapitalization	91.17	73.17	7.78
(3)	Net ACE (1)-(2)	84.09	61.39	17.42

44. Accordingly, capital cost of the transmission asset as on 31.3.2024 is allowed as follows:

(₹ in lakh)				
Capital Cost allowed (as on 1.4.2019)	ACE			Capital Cost (as on 31.3.2024)
	2021-22	2022-23	2023-24	
10147.77	84.09	61.39	17.42	10310.67

Debt-Equity Ratio

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

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

Provided that:

- where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:*
- the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:*
- 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 project including communication, project 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 project including communication project 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 project including communication project declared under commercial operation prior to 1.4.2019, but where debt: equity ratio has not been determined by the Commission for determination of tariff for the period ending 31.3.2019, the Commission shall approve the debt: equity ratio in accordance with clause (1) of this Regulation.

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

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

46. The debt-equity ratio for the 2019-24 period is allowed as per Regulation 18(3) of the 2019 Tariff Regulations. The details of the debt-equity ratio considered for the purpose of tariff for 2019-24 tariff period are as follows:

Funding	Capital Cost (as on 1.4.2019) (₹ lakh)	(in %)	Total Capital Cost (as on 31.3.2024) (₹ lakh)	(in %)
Debt	5073.89	50.00	5222.34	50.65
Equity	5073.88	50.00	5088.33	49.35



Funding	Capital Cost (as on 1.4.2019) (₹ lakh)	(in %)	Total Capital Cost (as on 31.3.2024) (₹ lakh)	(in %)
Total	10147.77	100.00	10310.67	100.00

Depreciation

47. 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 project or element thereof including communication project. In case of the tariff of all the units of a generating station or all elements of a transmission project including communication project 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 project 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 project, 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 project, weighted average life for the generating station of the transmission project shall be applied. Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis.

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

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

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

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

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

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



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

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

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

(7) The generating company or the transmission licensee, as the case may be, shall submit the details of proposed capital expenditure five years before the completion of useful life of the project along with justification and proposed life extension. The Commission based on prudence check of such submissions shall approve the depreciation on capital expenditure.

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

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

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

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

48. We have considered the submissions of the Petitioner. The transmission asset was put under commercial operation on 1.8.1996, accordingly the asset has already completed 12 years of life on 31.3.2009. Consequently, depreciation has been calculated based on the remaining depreciable value (up to 90% of existing gross



block of assets) to be recovered over the balance useful life. As discussed above, the Petitioner has proposed ACE towards replacement of sub-station equipment, hence, depreciation corresponding to ACE (new additions) claimed for 2021-22 onwards is allowed at normative rate of depreciation as specified in the 2019 Tariff Regulations. The depreciation allowed in respect of the transmission asset for 2019-24 tariff period is as follows:

(₹ in lakh)					
Existing Assets	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Gross Block	10147.77	10147.77	10147.77	10056.60	9983.43
De-capitalisation	0.00	0.00	91.17	73.17	7.78
Closing Gross Block	10147.77	10147.77	10056.60	9983.43	9975.65
Average Gross Block	10147.77	10147.77	10102.19	10020.02	9979.54
Weighted average rate of Depreciation (WAROD) (in %)	1.99	1.99	1.95	1.98	2.03
Balance useful life at the beginning of the year (Year)	10.00	9.00	8.00	7.00	6.00
Lapsed life at the beginning of the year (Year)	22.00	23.00	24.00	25.00	26.00
Depreciable Value	9132.99	9132.99	9091.97	9018.01	8981.59
Cumulative Depreciation at the beginning of the year	7113.92	7315.83	7517.73	7632.46	7764.54
Remaining depreciable value at the beginning of the year	2019.08	1817.17	1574.23	1385.55	1217.04
Depreciation during the year	201.91	201.91	196.78	197.94	202.84
Depreciation adjustment on account of de-capitalisation	0.00	0.00	82.05	65.85	7.00
Cumulative depreciation at the end of the year	7315.83	7517.73	7,632.46	7,764.54	7,960.38
Remaining depreciable value at the end of the year	1817.17	1615.26	1,459.51	1,253.47	1,021.21

(₹ in lakh)					
New Additions	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Gross Block	--	--	0.00	175.26	309.82
Addition during the year	--	--	175.26	134.56	25.20
Closing Gross Block	--	--	175.26	309.82	335.02
Average Gross Block	--	--	87.63	242.54	322.42
WAROD	--	--	5.28	5.28	5.28
Depreciable Value	--	--	78.87	218.29	290.18
Cumulative Depreciation at the beginning of the year	--	--	0.00	4.63	17.43
Depreciation	--	--	4.63	12.81	17.02



Cumulative Depreciation at the end of the year	--	--	4.63	17.43	34.46
Remaining Depreciation at the end of the year	--	--	74.24	200.85	255.72

Interest on Loan (IoL)

49. 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 Asset, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered 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 project, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.

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

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

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



50. The Petitioner has not claimed IoL during the 2019-24 tariff period. The entire loan has been paid prior to 1.4.2014. Accordingly, no IoL has been allowed for the 2019-24 tariff period.

Return on Equity (RoE)

51. 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 project including communication project and run-of-river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run-of-river generating station with pondage:

Provided that return on equity in respect of additional capitalization after cutoff date beyond the original scope, excluding additional capitalization on 7 account of emission control system, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system or in the absence of actual loan portfolio of the generating station or the transmission system, the weighted average rate of interest of the generating company or the transmission licensee, as the case may be, as a whole shall be considered, subject to ceiling of 14%.

Provided further that:

i. In case of a new project, the rate of return on equity shall be reduced by 1.00% for such period as may be decided by the Commission, if the generating station or transmission project 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 project up to load dispatch centre or protection project based on the report submitted by the respective RLDC;

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

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

- a) rate of return on equity shall be reduced by 0.25% in case of failure to achieve the ramp rate of 1% per minute;*
- b) an additional rate of return on equity of 0.25% shall be allowed for every incremental ramp rate of 1% per minute achieved over and above the ramp rate of 1% per minute, subject to ceiling of additional rate of return on equity of 1.00%:*

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



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

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

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

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

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.”

52. Accordingly, the MAT rate applicable during 2019-20 has been considered for the purpose of RoE which will be trued-up with actual tax rate in accordance Clause (3) of Regulation 31 of the 2019 Tariff Regulations. RoE allowed for the transmission asset under Regulation 30 of the 2019 Tariff Regulations is as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity	5073.88	5073.88	5073.88	5080.87	5084.66
Net Addition due to Additional Capitalization/Decapitalization	0.00	0.00	6.99	3.78	3.67
Closing Equity	5073.88	5073.88	5080.87	5084.66	5088.33
Average Equity	5073.88	5073.88	5077.38	5082.76	5086.49
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
Tax Rate applicable (in %)	17.472	17.472	17.472	17.472	17.472
Rate of Return on Equity (Pre-tax) (in %)	18.782	18.782	18.782	18.782	18.782
Return on Equity (Pre-tax)	952.98	952.98	953.63	954.64	955.34

Operation & Maintenance Expenses (O&M Expenses)

53. Regulation 35(3) of the 2019 Tariff Regulations specifies the norms for O&M Expenses for the transmission project as:

“(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 (Rs 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 (Rs 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



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
132 kV and below	0.245	0.254	0.263	0.272	0.282
Norms for AC and HVDC lines (Rs 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 (Rs. 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;

(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.”

54. The O&M Expenses claimed by the Petitioner for the transmission asset are as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Sub-station Bays (Numbers)					
220 kV: Sarna (PSTCL): Bay of Dasuya CKT-II	1	1	1	1	1
220 kV: Dasuya ss (PSEB): Bay of Sarna	2	2	2	2	2
220 kV: Kishanpur: Bay of Salal-III & IV	2	2	2	2	2
220 kV: Kishanpur: Bay of Sarna-I	1	1	1	1	1
220 kV: Sarna (PSTCL): Kishenpur-I & II	2	2	2	2	2
220 kV: Jammu:Salal II Bay	1	1	1	1	1
Norm (₹ lakh/bay)					
220 kV Bay (AIS)	22.510	23.300	24.120	24.960	25.840
Total Sub-station O&M (A)	202.59	209.70	217.08	224.64	232.56
Transmission Lines (Kms)					
220 kV Single Circuit: Salal-Jammu-II	62.42	62.42	62.42	62.42	62.42
220 kV Double Circuit: Sarna-Dasuya- II (Extended under Stg-I)	53.07	53.07	53.07	53.07	53.07
220 kV Double Circuit: Salal-Kishenpur-III & IV	58.70	58.70	58.70	58.70	58.70
220 kV Double Circuit: Kishenpur-Sarna I & II	103.64	103.64	103.64	103.64	103.64
Norm (₹ lakh/km)					
Single Circuit – Single Conductor	0.252	0.260	0.270	0.279	0.289
Double Circuit – Single Conductor	0.377	0.391	0.404	0.419	0.433
Total Transmission Line O&M (B)	96.94	100.45	103.88	107.67	111.31
Communication System					
PLCC (₹ in lakh)	77.37	77.37	77.37	77.37	77.37
Norm (in %)	2.00	2.00	2.00	2.00	2.00
Total Communication System (C)	1.55	1.55	1.55	1.55	1.55
Total O&M Expenses	301.08	311.70	322.51	333.86	345.42



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
(D)= (A)+(B)+(C)					

55. 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 and 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.

56. The O&M Expenses allowed for the transmission asset for the 2019-24 tariff period are as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Sub-station Bays (Numbers)					
220 kV: Sarna (PSTCL): Bay of Dasuya CKT-II	1	1	1	1	1
220 kV: Dasuya ss (PSEB): Bay of Sarna	2	2	2	2	2
220 kV: Kishanpur: Bay of Salal-III & IV	2	2	2	2	2
220 kV: Kishanpur: Bay of Sarna-I	1	1	1	1	1
220 kV: Sarna (PSTCL): Kishanpur-I & II	2	2	2	2	2
220 kV: Jammu:Salal II Bay	1	1	1	1	1
Norm (₹ lakh/bay)					
220 kV Bay (AIS)	22.510	23.300	24.120	24.960	25.840
Total Sub-station O&M (A)	202.59	209.70	217.08	224.64	232.56
Transmission Lines (Kms)					
220 kV Single Circuit: Salal-Jammu-II	62.42	62.42	62.42	62.42	62.42
220 kV Double Circuit: Sarna-Dasuya- II (Extended under Stg-I)	53.07	53.07	53.07	53.07	53.07
220 kV Double Circuit: Salal-	58.70	58.70	58.70	58.70	58.70



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Kishenpur-III & IV					
220 kV Double Circuit: Kishenpur-Sarna I & II	103.64	103.64	103.64	103.64	103.64
Norm (₹ lakh/km)					
Single Circuit – Single Conductor	0.252	0.260	0.270	0.279	0.289
Double Circuit – Single Conductor	0.377	0.391	0.404	0.419	0.433
Total Transmission Line O&M (B)	96.94	100.45	103.88	107.67	111.31
Total O&M Expenses (C)= (A)+(B)	299.53	310.15	320.96	332.31	343.87

Interest on Working Capital (IWC)

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

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

(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 project including communication project 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. **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;”*

58. The Petitioner has submitted that it has computed IWC for the 2019-24 period considering the SBI Base Rate plus 350 basis points as on 1.4.2019. The Petitioner has considered the rate of IWC as 12.05%. IWC is worked out in accordance with



Regulation 34 of the 2019 Tariff Regulations. The rate of IWC considered is 12.05% (SBI 1year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20, 11.25% (SBI 1-year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) for 2020-21 and 10.50% (SBI 1-year MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points) for 2021-24. The components of the working capital and interest allowed thereon for the transmission asset are as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Working Capital for O&M Expenses (O&M Expenses for 1 Month)	24.96	25.85	26.75	27.69	28.66
Working Capital for Maintenance Spares (15% of O&M)	44.93	46.52	48.14	49.85	51.58
Working Capital for Receivables (Equivalent to 45 days of annual transmission charges)	182.56	184.18	185.34	188.09	190.26
Total Working Capital	252.45	256.55	260.23	265.63	270.50
Rate of Interest of working capital (in %)	12.05	11.25	10.50	10.50	10.50
Interest of working capital	30.42	28.86	27.32	27.89	28.40

Annual Fixed Charges for the 2019-24 Tariff Period

59. The detailed computation of the various components of the annual fixed charges for the transmission asset for the 2019-24 tariff period is summarized as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	201.91	201.91	201.41	210.74	219.86
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	952.98	952.98	953.63	954.64	955.34
O&M Expenses	299.53	310.15	320.96	332.31	343.87
Interest on Working Capital	30.42	28.86	27.32	27.89	28.40
Total	1484.83	1493.90	1503.32	1525.59	1547.48



Filing Fee and Publication Expenses

60. 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

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

Goods and Services Tax

62. The Petitioner has sought to recover GST on transmission charges separately from the Respondents, if at any time GST on transmission is withdrawn from negative list in future. We have considered the submission of the Petitioner and are of the opinion that GST is not levied on transmission service at present. Therefore, we are of the view that Petitioner's prayer is premature.

Security Expenses

63. 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 the audited accounts may be allowed to be recovered from the beneficiaries on a yearly basis.

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

Capital Spares

65. 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

66. 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 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.

67. To summarise:

- a. The trued-up Annual Fixed Charges approved for the transmission asset for the 2014-19 tariff period are as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
AFC	1707.50	1728.47	1745.20	1762.08	1782.74

- b. The Annual Fixed Charges allowed for the transmission asset for the 2019-24 tariff period are as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
AFC	1484.83	1493.90	1503.32	1525.59	1547.48

68. This order disposes of Petition No. 695/TT/2020 in terms of the above discussions and findings.

sd/-
(P. K. Singh)
Member

sd/-
(Arun Goyal)
Member

sd/-
(I. S. Jha)
Member

sd/-
(P. K. Pujari)
Chairperson

