

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 380/TT/2020

Coram:

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

Date of Order : 27.10.2021

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 2009-14 and 2014-19 tariff periods under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 and the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 respectively and determination of transmission tariff of the 2019-24 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 of **Combined Asset** comprising of **Asset-I:** 765 kV S/C Agra-Gwalior Transmission Line Circuit-II along with 400 kV bays at Agra and Gwalior Sub-stations and **Asset-II:** 400 kV D/C Zerda-Kankroli Line along with associated bays under Transmission System Associated with North-West Transmission Corridor Strengthening Scheme in both Western and Northern Regions.

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.
2. Ajmer Vidyut Vitran Nigam Limited,
132 kV, GSS RVPNL Sub-station Building,
Caligiri Road, Malviya Nagar, Jaipur-302017 (Rajasthan).
3. Jaipur Vidyut Vitran Nigam Limited,
132 kV, GSS RVPNL Sub-station Building,
Caligiri Road, Malviya Nagar, Jaipur-302017 (Rajasthan).
4. Jodhpur Vidyut Vitran Nigam Limited,
132 kV, GSS RVPNL Sub-station Building,
Caligiri Road, Malviya Nagar, Jaipur-302017 (Rajasthan).



5. Himachal Pradesh State Electricity Board,
Vidyut Bhawan, Kumar House Complex Building II,
Shimla-171004.
6. Punjab State Electricity Board,
The Mall, Patiala-147001.
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.
10. Delhi Transco Limited,
Shakti Sadan, Kotla Road,
New Delhi-110002.
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 Sub-station Building, Hudson Lane,
Kingsway Camp, North Delhi-110009.
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-110002.

.....Respondent(s)



For Petitioner : Shri S. S. Raju, PGCIL
Shri D. K. Biswal, PGCIL
Shri Ved Prakash Rastogi, PGCIL
Shri Amit Yadav, PGCIL

For Respondents : None

ORDER

The Petitioner, Power Grid Corporation of India Limited, has filed the instant petition for truing up of transmission tariff of the 2009-14 and 2014-19 tariff periods under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as “the 2009 Tariff Regulations”) and the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) respectively and for determination of transmission tariff for the period from 1.4.2019 to 31.3.2024 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) in respect of the following transmission assets forming part of **Combined Asset** under Transmission System Associated with North-West Transmission Corridor Strengthening Scheme in both Western and Northern Regions (hereinafter referred to as “the transmission system”):

Asset-I: 765 kV S/C Agra-Gwalior Transmission Line Circuit-II along with 400 kV bays at Agra and Gwalior Sub-stations; and

Asset-II: 400 kV D/C Zerda-Kankroli Line along with associated bays.

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

“1) Approve the trued up Transmission Tariff for 2009-14, 2014-19 block and transmission tariff for 2019-24 block for the assets covered under this petition, as per para 12,14 and 14 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 12,13 and 14 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 14.7 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 Investment Approval (I.A.) for the transmission system was accorded by the Board of Directors (BOD) of the Petitioner's company (in 175th meeting held on 20.12.2005) vide Memorandum Ref. No. C/CP/N-W Corridor dated 23.1.2006 at an estimated cost ₹48310.00 lakh, including IDC of ₹1340.00 lakh (based on 2nd Quarter, 2005 price level) with the scope as follows:

Transmission Line:

- i. Agra-Gwalior 765 kV 2nd S/C (initially to be operated at 400 kV): 130 kms; and
- ii. Zerda-Kankroli 400 kV D/C: 270 kms

Sub-station:

- i. 400/220 kV Agra (POWERGRID) Sub-station Extension;
- ii. 400/220 kV Gwalior (POWERGRID) Sub-station Extension;



- iii. 400/220 kV Kankroli (POWERGRID) Sub-station Extension; and
- iv. 400/220 kV Zerda (GEB) Sub-station Extension.

b) As per I.A., the scheduled date of commercial operation of the transmission system was 1.2.2009. The Commission vide order dated 20.1.2011 in Petition No. 174/2010 allowed COD for Asset-I as 1.4.2009 and COD for the combined asset (comprising Asset-I and Asset-II) as 1.5.2009. Accordingly, the Commission allowed transmission tariff of Asset-I for the period from 1.4.2009 to 30.4.2009 and for the combined asset for the period from 1.5.2009 to 31.3.2014 based on the 2009 Tariff Regulations.

c) The time over-run of 2 months and 3 months in the respective commissioning of Asset-I and combined asset was condoned by the Commission vide order dated 20.1.2011. The cost over-run on account of Foreign Exchange Rate Variation (FERV) loss to the tune of ₹1908.51 lakh in respect of Asset-I and ₹2400.73 lakh in respect of combined asset was also allowed vide the same order.

d) The transmission tariff of Asset-I and combined asset for the 2009-14 tariff period was trued-up and transmission tariff of the combined asset for the 2014-19 tariff period was allowed by the Commission vide order dated 24.2.2016 in Petition No. 100/TT/2015.

e) Due to non-submission of RCE (Revised Cost Estimate) by the Petitioner, the Commission vide order dated 24.2.2016 had restricted the capital cost of Asset-I to the approved apportioned cost and extent of FERV variation. Therefore, the total capital cost in respect of Asset-I was restricted to ₹19430.42 lakh (₹17521.91 lakh + FERV loss of ₹1908.51 lakh).

f) In this petition, the Petitioner has submitted RCE of the transmission system approved by BOD of the Petitioner's Company (in 326th meeting held on 9.3.2016) vide Memorandum Ref. No. C/CP/North-West dated 11.3.2016 at an estimated cost ₹45502.00 lakh, including IDC of ₹3162.00 lakh (based on October 2015 price level).



g) The entire scope of work covered under the transmission system is complete and is covered in the instant petition.

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 and Western Regions.

5. The Petitioner has served the petition on the Respondents and notice regarding filing 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 received from the general public in response to the aforesaid notices published in the newspapers. 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 vide affidavit dated 28.1.2020, the Petitioner's affidavits dated 30.3.2021 and 28.7.2021 filed in response to technical validation letter dated 9.3.2021 and Record of Proceedings dated 9.7.2021 respectively.

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 2009-14 TARIFF PERIOD

8. The Annual Fixed Charges (AFC) of Asset-I and combined asset (comprising of Asset-I and Asset-II) for the 2009-14 tariff period were allowed vide order dated 24.2.2016 in Petition No. 100/TT/2015 and the same were also trued-up. In the



instant petition, transmission charges have been claimed by the Petitioner (after taking into account the revised cost estimates) for the said period as follows:

(₹ in lakh)

Particulars	Asset-I	combined assets comprising of Asset-I and Asset-II				
	2009-10 (Pro-rata 30 days)	2009-10 (Pro-rata 335 days)	2010-11	2011-12	2012-13	2013-14
Allowed vide order dated 24.2.2016 in Petition No. 100/TT/2015	216.36	6074.12	6613.24	6639.57	6670.65	6619.45
Claimed by the Petitioner based on truing up in this petition (after considering RCE)	223.69	6317.62	7054.28	7050.98	7026.07	6662.26

9. The Petitioner has submitted that in view of RCE being under approval and owing to its non-submission, the Commission vide order dated 24.2.2016 in Petition No. 100/TT/2015 had restricted the capital cost in case of Asset-I to the FR apportioned approved cost and extent of FERV variation i.e. the total capital cost in respect of Asset-I was restricted to ₹19430.42 lakh (₹17521.91 lakh + FERV loss of ₹1908.51 lakh).

10. The Petitioner has now submitted RCE as per which the revised apportioned approved cost along with completion cost with respect to the transmission assets are as follows:

(₹ in lakh)

Asset	Completion Cost as per Auditor Certificate	FERV Loss	Completion Cost (Excluding FERV)	Revised apportioned approved cost as per RCE
Asset-I	20126.42	1908.51	18217.91	18311.09
Asset-II	29247.85	2400.73	26847.12	27191.06
Total	49485.91	4309.24	45176.67	45502.15

11. Subsequent to submission of RCE in this petition, the Petitioner has submitted that the completion cost for Asset-I is within the apportioned approved cost and has



prayed to allow the trued-up transmission charges of Asset-I and combined asset for the 2009-14 tariff period as claimed in this petition.

12. We have considered the submissions of the Petitioner. The Commission, while truing-up the tariff for 2009-14 period in respect of the transmission assets, vide order dated 24.2.2016 in Petition No. 100/TT/2015 had restricted the capital cost of Asset-I to the FR apportioned approved cost and extent of FERV variation (as the completion cost exceeded the FR apportioned approved cost) and had disallowed Additional Capital Expenditure (ACE) of ₹599.84 lakh. We note that no liberty was granted by the Commission to produce RCE in the aforesaid order so as to reconsider the trued-up tariff for 2009-14 period. There being no provision of revising tariff once the same has been trued up in terms of the 2009 Tariff Regulations, we are not inclined to re-open the tariff of 2009-14 period based upon the revised cost estimates submitted after the truing-up exercise.

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

13. The details of the trued-up transmission charges as claimed by the Petitioner in respect of Combined Asset for the 2014-19 tariff period are as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	2596.82	2596.91	2598.17	2599.43	2599.43
Interest on Loan	372.00	363.96	453.23	435.94	457.38
Return on Equity	2822.08	2835.13	2835.10	2836.51	2844.14
O&M Expenses	604.60	624.89	645.48	666.98	689.07
Interest on Working Capital	166.69	167.93	171.15	172.00	173.89
Total	6562.19	6588.82	6703.13	6710.86	6763.91

14. The details of the trued-up Interest on Working Capital (IWC) as claimed by the Petitioner in respect of Combined Asset is as follows:



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
WC for O&M Expenses	50.38	52.07	53.79	55.58	57.42
WC for Maintenance Spares	90.69	93.73	96.82	100.05	103.36
WC for Receivables	1093.70	1098.14	1117.19	1118.48	1127.32
Total Working Capital	1234.77	1243.94	1267.80	1274.11	1288.10
Rate of Interest on Working Capital (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	166.69	167.93	171.15	172.00	173.89

Capital Cost

15. The capital cost of the transmission assets has been calculated in accordance with Regulation 9(3) of the 2014 Tariff Regulations.

16. The Commission vide order dated 24.2.2016 in Petition No. 100/TT/2015 had allowed capital cost for Asset -1 as on 31.3.2019 of ₹48548.02 lakh.

17. The details of capital cost as claimed by the Petitioner in the instant petition are as follows:

(₹ in lakh)

FR Approved Cost including FERV Cost	Capital Cost (as on 1.4.2014 including FERV Cost)	ACE			Capital Cost (as on 31.3.2019 including FERV Cost)
		2014-15	2015-16	2016-17	
52619.24	49147.86	3.44	0.00	47.69	49198.99

18. The Petitioner has claimed capital cost of ₹49147.86 lakh as on 1.4.2014 in the instant petition as against the capital cost of ₹48548.02 lakh as allowed by the Commission vide order dated 24.2.2016. The difference in the capital cost claimed is on account of adding back of ACE deducted by the Commission due to cost over-run vide order dated 24.2.2016. The Petitioner has added back ACE that was deducted vide order dated 24.2.2016 as it has submitted RCE in this petition.

19. We have considered the submissions of the Petitioner. The Commission vide order dated 20.1.2011 allowed the overall estimated completion cost [excluding FERV



loss (₹4309.24 lakh)] of ₹44891.27 lakh (49200.51-2400.73), which is within the approved cost of ₹48309.81 lakh. The Commission vide order dated 24.2.2016 in Petition No. 100/TT/2015 *inter-alia* held as follows:

“13. There is cost over-run in respect of Asset-I. In order dated 20.1.2011 in Petition No. 174/2010, the cost over-run in respect of Asset-I was allowed as it is on account of FERV loss. Further, the petitioner during the hearing on 20.1.2016 submitted that the Revised Cost Estimate (RCE) is under approval and it will be submitted shortly. However, the petitioner has not submitted RCE. As such, the capital cost is restricted to the approved apportioned cost and extent of FERV variation. Thus, the total capital cost in respect of Asset-I is restricted to ₹19430.42 lakh (₹17521.91 lakh + FERV loss of ₹1908.51 lakh).

20. We have observed that the Commission vide order dated 24.2.2016 had not granted any liberty to the Petitioner to file RCE at the time of filing of true up petition for the 2014-19 period and also due to non-submission of RCE by the Petitioner, vide the said order, transmission tariff of Asset-I and combined asset (comprising of Asset-I and Asset-II) was trued-up for the 2009-14 period. Therefore, we are of the view that the capital cost of Asset-I as on 31.3.2014 of ₹48548.02 lakh as approved by the Commission vide order dated 24.2.2016 is to be considered as capital cost on 1.4.2014 for truing-up of transmission tariff for the 2014-19 tariff period.

Additional Capital Expenditure

21. The Commission vide order dated 24.2.2016 had allowed ACE of ₹111.64 lakh during 2014-15 period for Combined Asset under Regulation 14(3)(v) of the 2014 Tariff Regulations on account of balance and retention payments which was subject to true-up of tariff for the 2014-19 tariff period.

22. With respect to Asset-II, the Petitioner vide affidavit dated 30.3.2021 has submitted the package-wise and vendor-wise details of ACE claimed (beyond cut-off date) during the 2014-19 tariff period as follows:



Year	ACE (₹ in lakh)	Party Name	Package
2014-15	3.44	M/s. KEC International Limited	Transmission Line
2016-17	47.69	M/s. Deepak Cables (India) Limited	Transmission Line

23. The Petitioner, in this petition has submitted that COD of Asset-I and Asset-II was 1.4.2009 and 1.5.2009 respectively and the cut-off date was 31.3.2012. ACE claimed in respect of Asset-II during the 2014-19 period is on account of balance and retention payment for the works executed prior to the cut-off date. The Petitioner has further requested to permit the said claimed ACE in accordance with Regulation 14(3)(v) of the 2014 Tariff Regulations.

24. We have considered the submissions of the Petitioner. ACE claimed for Asset-II during 2014-15 and 2016-17 is beyond the 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 details of the approved capital cost is as follows:

FR Approved Cost including FERV Cost	Capital Cost (as on 1.4.2014 including FERV Cost)	ACE			Capital Cost (as on 31.3.2019 including FERV Cost)
		2014-15	2015-16	2016-17	
52619.24	48548.02	3.44	0.00	47.69	48599.15

Debt-Equity Ratio

25. 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 details of the debt-equity ratio as on 1.4.2014 and 31.3.2019 for Combined Asset is as follows:



Funding	Capital Cost (as on 1.4.2014) (₹ in lakh)	(in %)	ACE 2014-19	(in %)	Capital Cost (as on 31.3.2019) (₹ in lakh)	(in %)
Debt	34166.36	70.38	35.79	70.00	34202.15	70.38
Equity	14381.66	29.62	15.34	30.00	14397.00	29.62
Total	48548.02	100.00	51.13	100.00	48599.15	100.00

Depreciation

26. 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 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). WAROD at Annexure-I has been worked out considering the depreciation rates of assets as specified in the 2014 Tariff Regulations and the trued-up depreciation allowed is as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	48548.02	48551.46	48551.46	48599.15	48599.15
ACE	3.44	0.00	47.69	0.00	0.00
Closing Gross Block	48551.46	48551.46	48599.15	48599.15	48599.15
Average Gross Block	48549.74	48551.46	48575.31	48599.15	48599.15
Weighted Average Rate of Depreciation (in %)	5.28	5.28	5.28	5.28	5.28
Balance useful life of the asset at the beginning of the year (Year)	30	29	28	27	26
Lapsed life at the beginning of the year (Year)	4	5	6	7	8
Depreciable Value at the beginning of the year	43694.77	43696.31	43717.77	43739.24	43739.24
Depreciation during the year	2565.13	2565.22	2566.48	2567.74	2567.74
Cumulative depreciation at the end of the year	15179.17	17744.40	20310.88	22878.62	25446.36
Remaining Depreciable Value at the end of the year	28515.59	25951.92	23406.90	20860.61	18292.87



27. Depreciation in respect of Combined Asset as allowed vide order dated 24.2.2016 in Petition No. 100/TT/2015, 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 24.2.2016 in Petition No. 100/TT/2015	2567.97	2570.92	2570.92	2570.92	2570.92
Claimed by the Petitioner in the instant petition	2596.82	2596.91	2598.17	2599.43	2599.43
Approved after true-up in this order	2565.13	2565.22	2566.48	2567.74	2567.74

Interest on Loan (IoL)

28. The Petitioner has claimed Weighted Average Rate of Interest (WAROI) on loan, based on its actual loan portfolio and rate of interest.

29. Accordingly, IoL has been calculated based on actual interest rate as submitted by the Petitioner in accordance with Regulation 26 of the 2014 Tariff Regulations. The trued-up IoL in respect of Combined Asset for the 2014-19 tariff period is as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	34166.36	34168.77	34168.77	34202.15	34202.15
Cumulative Repayments up to Previous Year	12614.04	15179.17	17744.40	20310.88	22878.62
Net Loan-Opening	21552.32	18989.60	16424.37	13891.27	11323.53
Additions	2.41	0.00	33.38	0.00	0.00
Repayment during the year	2565.13	2565.22	2566.48	2567.74	2567.74
Net Loan-Closing	18989.60	16424.37	13891.27	11323.53	8755.79
Average Loan	20270.96	17706.98	15157.82	12607.40	10039.66
Weighted Average Rate of Interest on Loan (in %)	1.7831	1.9925	2.8894	3.3268	4.3542
Interest on Loan	361.45	352.82	437.97	419.42	437.15



30. IoL in respect of Combined Asset as allowed vide order dated 24.2.2016 in Petition No. 100/TT/2015, 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 24.2.2016 in Petition No. 100/TT/2015	359.03	314.22	268.71	223.21	177.72
Claimed by the Petitioner in the instant petition	372.00	363.96	453.23	435.94	457.38
Approved after true-up in this order	361.45	352.82	437.97	419.42	437.15

Return on Equity (RoE)

31. The Petitioner has claimed RoE for Combined 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 Minimum Alternate Tax (MAT) rates and has claimed the effective tax rates for the 2014-19 tariff period as follows:

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

32. The Commission in order dated 27.4.2020 in Petition No. 274/TT/2019 had arrived at the effective tax rate for the Petitioner based on the notified MAT rates and the same are 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
2017-18	21.342	21.342
2018-19	21.549	21.549



33. 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 (%)	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

34. The Petitioner has claimed RoE for the 2014-19 period after grossing up RoE of 15.50% with Effective Tax rates (based on MAT rates) of each year as per Regulation 25(3) of the 2014 Tariff Regulations. RoE is trued-up on the basis of MAT rates applicable in the respective years and is allowed for Combined Asset as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	14381.66	14382.69	14382.69	14397.00	14397.00
Additions	1.03	0.00	14.31	0.00	0.00
Closing Equity	14382.69	14382.69	14397.00	14397.00	14397.00
Average Equity	14382.18	14382.69	14389.85	14397.00	14397.00
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	2820.34	2834.11	2835.52	2836.93	2844.56

35. RoE in respect of Combined Asset as allowed vide order dated 24.2.2016 in Petition No. 100/TT/2015, 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	2823.59	2826.88	2826.88	2826.88	2826.88



24.2.2016 in Petition No. 100/TT/2015					
Claimed by the Petitioner in the instant petition	2822.08	2835.13	2835.10	2836.51	2844.14
Approved after true-up in this order	2820.34	2834.11	2835.52	2836.93	2844.56

Operation & Maintenance Expenses (O&M Expenses)

36. The total O&M Expenses as claimed by the Petitioner in respect of various elements forming part of Combined Asset are as follows:

O&M Expenses					
	2014-15	2015-16	2016-17	2017-18	2018-19
Sub-station					
400 kV bays at: Zerda: 400 kV D/C Zerda Kankroli Line Kankroli: 400 kV D/C Zerda Kankroli Line Gwalior: 765 kV S/C Gwalior Agra Transmission Line Ckt-II/Bays Agra: 765 kV S/C Gwalior Agra Transmission Line Ckt-II/Bays					
Number of bays	6	6	6	6	6
Transmission lines					
400 kV D/C Zerda Kankroli Line					
D/C Twin/Triple Conductor (km)	233.756	233.756	233.756	233.756	233.756
765 kV S/C Gwalior Agra Transmission Line Ckt-II					
S/C (Bundle Conductor- 4 sub-c) (km)	127.934	127.934	127.934	127.934	127.934
Total O&M Expenses (₹ in lakh)	604.60	624.89	645.48	666.98	689.07

37. 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 Combined Asset are as follows:

Element	Norms for 2014-15	Norms for 2015-16	Norms for 2016-17	Norms for 2017-18	Norms for 2018-19
D/C (Twin/Triple Conductor) (₹ lakh/km)	0.707	0.731	0.755	0.78	0.806
S/C (Bundle Conductor- 4 sub-c) (₹ lakh/km)	0.606	0.627	0.647	0.669	0.691
400 kV Sub-station (₹ lakh/ bay)	60.30	62.30	64.37	66.51	68.71

38. The O&M Expenses are allowed in respect of Combined Asset 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
06 Numbers of 400 kV Sub-station bays	361.80	373.80	386.22	399.06	412.26
233.756 kms D/C (Twin/Triple Conductor) transmission line	165.27	170.88	176.49	182.33	188.41
127.934 km S/C (Bundle Conductor- 4 sub-c) transmission line	77.53	80.21	82.77	85.59	88.40
Total	604.59	624.89	645.48	666.98	689.07

39. O&M Expenses in respect of Combined Asset as allowed vide order dated 24.2.2016 in Petition No. 100/TT/2015, claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 24.2.2016 in Petition No. 100/TT/2015	604.59	624.89	645.48	666.98	689.07
Claimed by the Petitioner in the instant petition	604.60	624.89	645.48	666.98	689.07
Approved after true-up in this order	604.59	624.89	645.48	666.98	689.07

Interest on Working Capital

40. 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 Combined Asset for the 2014-19 tariff period are as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
WC for O&M Expenses (O&M Expenses for one month)	50.38	52.07	53.79	55.58	57.42
WC for Maintenance Spares (15% of O&M Expenses)	90.69	93.73	96.82	100.05	103.36
WC for Receivables (Equivalent to two months of annual transmission charges)	1086.20	1090.66	1109.26	1110.33	1118.54
Total Working Capital	1227.27	1236.47	1259.87	1265.96	1279.32
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	165.68	166.92	170.08	170.90	172.71



41. IWC in respect of Combined Asset as allowed vide order dated 24.2.2016 in Petition No. 100/TT/2015, 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 24.2.2016 in Petition No. 100/TT/2015	165.77	166.00	166.09	166.23	166.40
Claimed by the Petitioner in the instant petition	166.69	167.93	171.15	172.00	173.89
Approved after true-up in this order	165.68	166.92	170.08	170.90	172.71

Approved Annual Fixed Charges for the 2014-19 Tariff Period

42. The trued-up AFC approved for Combined Asset for the 2014-19 tariff period are as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	2565.13	2565.22	2566.48	2567.74	2567.74
Interest on Loan	361.45	352.82	437.97	419.42	437.15
Return on Equity	2820.34	2834.11	2835.52	2836.93	2844.56
O&M Expenses	604.59	624.89	645.48	666.98	689.07
Interest on Working Capital	165.68	166.92	170.08	170.90	172.71
Total	6517.20	6543.97	6655.54	6661.97	6711.23

43. Accordingly, the Annual Transmission Charges as approved vide order dated 24.2.2016 in Petition No. 100/TT/2015, claimed by the 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 vide order dated 24.2.2016 in Petition No. 100/TT/2015	6520.95	6502.90	6478.07	6454.21	6430.99
Claimed by the Petitioner in the instant petition	6562.19	6588.82	6703.13	6710.86	6763.91
Approved after true-up in this order	6517.20	6543.97	6655.54	6661.97	6711.23



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

44. The Petitioner has claimed the transmission charges in respect of Combined Asset for the 2019-24 tariff period as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	2601.01	2602.60	2602.60	492.98	492.97
Interest on Loan	346.65	233.79	119.95	52.24	30.68
Return on Equity	2705.33	2707.02	2707.02	2707.02	2707.02
O&M Expenses	495.43	512.79	530.87	549.42	568.71
Interest on Working Capital	106.60	105.96	105.04	73.01	73.37
Total	6255.02	6162.16	6065.48	3874.67	3872.75

45. The Petitioner has claimed IWC in respect of Combined Asset for the 2019-24 period as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
WC for O&M Expenses	41.29	42.73	44.24	45.79	47.39
WC for Maintenance Spares	74.31	76.92	79.63	82.41	85.31
WC for Receivables	769.06	759.72	747.80	477.70	476.16
Total Working Capital	884.66	879.37	871.67	605.90	608.86
Rate of Interest on working capital (in %)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	106.60	105.96	105.04	73.01	73.37

Capital Cost

46. 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.”

47. The Petitioner has claimed capital cost of ₹49198.99 lakh as on 31.3.2019 for Combined Asset. The capital cost as on 31.3.2019 of ₹48599.15 lakh has been worked out by the Commission 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

48. Regulation 25 of the 2019 Tariff Regulations provides as follows:

“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.

49. With respect to Asset-II, the Petitioner has projected ACE of ₹60.00 lakh during the 2019-24 period balance and retention payments due to un-discharged liability for works executed before cut-off date/ work deferred for execution in accordance with Regulation 25(1)(d) of the 2019 Tariff Regulations.

50. The Petitioner vide affidavit dated 30.3.2021 has submitted projected ACE claim details as follows:

Year	ACE (₹ in lakh)	Party Name	Package
2019-20	60	M/s. Deepak Cables (India) Limited	Transmission Line

51. We have considered the submissions of the Petitioner. ACE projected by the Petitioner for Asset-II during the 2019-24 tariff period has been allowed under Regulation 25(1)(d) of the 2019 Tariff Regulations, as it is towards liabilities for works executed prior to the cut-off date. Accordingly, the capital cost considered for the 2019-24 tariff period is as follows:

Capital Cost (as on 1.4.2019 including FERV Cost)	ACE (2019-20)	Capital Cost (as on 31.3.2024 including FERV Cost)
48599.15	60.00	48659.15

Debt-Equity Ratio

52. 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.”



53. The debt-equity ratio 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 %)	ACE (2019-24) (₹ in lakh)	(in %)	Capital Cost (as on 31.3.2024) (₹ in lakh)	(in %)
Debt	34202.15	70.38	42.00	70.00	34244.15	70.38
Equity	14397.00	29.62	18.00	30.00	14415.00	29.62
Total	48599.15	100.00	60.00	100.00	48659.15	100.00

Depreciation

54. 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."

55. WAROD at Annexure-II has been worked out as per the rates of depreciation specified in the 2019 Tariff Regulations. The depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and accumulated



depreciation up to 31.3.2019. The Combined Asset has completed 12 years of life as on 31.3.2022, the remaining depreciable value as on 31.3.2022 has been spread across the balance useful life of 22 years in accordance with Regulation 33(5) of the 2019 Tariff Regulations. The annual depreciation from the year 2022-23 and onwards is ₹496.46 lakh. The depreciation allowed in respect of Combined Asset for the 2019-24 tariff period is as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Gross Block	48599.15	48659.15	48659.15	48659.15	48659.15
Addition during the year 2019-24 due to projected ACE	60.00	0.00	0.00	0.00	0.00
Closing Gross Block	48659.15	48659.15	48659.15	48659.15	48659.15
Average Gross Block	48629.15	48659.15	48659.15	48659.15	48659.15
Weighted average rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28	1.10	1.10
Balance useful life at the beginning of the year (Year)	25	24	23	22	21
Lapsed life of the asset (Year)	9	10	11	12	13
Depreciable Value at the beginning of the year	43766.24	43793.24	43793.24	43793.24	43793.24
Depreciation during the year	2569.33	2570.91	2570.91	483.44	483.44
Cumulative Depreciation at the end of the year	28015.69	30586.60	33157.51	33640.95	34124.39
Remaining Depreciable Value at the end of the year	15750.55	13206.64	10635.73	10152.29	9668.84

Interest on Loan

56. 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.”

57. WAROI on loan has been considered on the basis of rates prevailing as on 1.4.2019. The Petitioner has prayed that the change in interest rate due to floating rate of interest applicable, if any, during the 2019-24 tariff period will be adjusted. Accordingly, the floating rate of interest, if any, shall be considered at the time of true up. Therefore, IoL has been allowed in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL allowed for Combined Asset for the 2019-24 tariff period is as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	34202.15	34244.15	34244.15	34244.15	34244.15
Cumulative Repayments up to Previous Year	25446.36	28015.69	30586.60	33157.51	33640.95
Net Loan-Opening	8755.79	6228.46	3657.55	1086.64	603.20
Additions	42.00	0.00	0.00	0.00	0.00
Repayment during the year	2569.33	2570.91	2570.91	483.44	483.44
Net Loan-Closing	6228.46	3657.55	1086.64	603.20	119.76
Average Loan	7492.13	4943.01	2372.10	844.92	361.48
Weighted Average Rate of Interest on Loan (in %)	4.3740	4.3745	4.3749	4.3755	4.3767
Interest on Loan	327.70	216.23	103.78	36.97	15.82



Return on Equity

58. Regulations 30 and 31 of the 2019 Tariff Regulations provide 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:

Rate of pre-tax return on equity = 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:

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.”

59. The Petitioner has submitted that MAT rate is applicable it. Accordingly, 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 Combined 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	14397.00	14415.00	14415.00	14415.00	14415.00
Additions	18.00	0.00	0.00	0.00	0.00
Closing Equity	14415.00	14415.00	14415.00	14415.00	14415.00
Average Equity	14406.00	14415.00	14415.00	14415.00	14415.00
Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50	15.50
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	2705.73	2707.43	2707.43	2707.43	2707.43

Operation & Maintenance Expenses

60. The O&M Expenses as claimed by the Petitioner for the various elements included in Combined Asset 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: Zerda: 400 kV D/C Zerda Kankroli Line Kankroli: 400 kV D/C Zerda Kankroli Line Gwalior: 765 kV S/C Gwalior Agra transmission Line Ckt-II/Bays Agra: 765 kV S/C Gwalior Agra Transmission Line Ckt-II/Bays					
Number of bays	6	6	6	6	6
Transmission lines					
400 kV D/C Zerda-Kankroli Line					
D/C Twin/Triple Conductor (km)	233.756	233.756	233.756	233.756	233.756
765 kV S/C Gwalior Agra Transmission Line Ckt-II					
S/C (Bundle Conductor- 4 sub-c) (km)	127.934	127.934	127.934	127.934	127.934
Total O&M Expenses (₹ in lakh)	495.43	512.79	530.87	549.42	568.71

61. Regulation 35(3)(a) of the 2019 Tariff Regulations provides 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
Double Circuit (Bundled conductor with four or more sub-conductors)	1.322	1.368	1.416	1.466	1.517
Double Circuit (Twin & Triple Conductor)	0.881	0.912	0.944	0.977	1.011
Double Circuit (Single Conductor)	0.377	0.391	0.404	0.419	0.433
Multi Circuit (Bundled Conductor with four or more sub-conductor)	2.319	2.401	2.485	2.572	2.662
Multi Circuit (Twin & Triple Conductor)	1.544	1.598	1.654	1.713	1.773
Norms for HVDC stations					
HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB)	834	864	894	925	958
Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW)	1,666	1,725	1,785	1,848	1,913
500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)	2,252	2,331	2,413	2,498	2,586



<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.”

62. We have considered the submissions of the Petitioner. The O&M Expenses allowed for the various elements included in Combined Asset during the 2019-24 tariff period are as follows:

	(₹ in lakh)				
Details	2019-20	2020-21	2021-22	2022-23	2023-24
06 Numbers of 400 kV Sub-station bays					
Norm (₹ lakh per bay)	32.15	33.28	34.45	35.66	36.91
O&M Expenses	192.90	199.68	206.70	213.96	221.46
233.756 kms D/C (Twin/Triple Conductor) transmission line					
Norm (₹ lakh per bay)	0.881	0.912	0.944	0.977	1.011
O&M Expenses	205.94	213.19	220.67	228.38	236.33
127.934 kms S/C (Bundle Conductor- 4 sub-c) transmission line					
Norm (₹ lakh per bay)	0.755	0.781	0.809	0.837	0.867
O&M Expenses	96.59	99.92	103.50	107.08	110.92
Total O&M Expenses	495.43	512.78	530.86	549.42	568.71

Interest on Working Capital

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

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

(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;”

64. 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.

65. We have considered the submissions of the Petitioner regarding IWC and the same is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations.

The components of the working capital and interest allowed thereon are as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
WC for O&M Expenses (O&M Expenses for one month)	41.29	42.73	44.24	45.79	47.39
WC for Maintenance Spares (15% of O&M Expenses)	74.31	76.92	79.63	82.41	85.31
WC for Receivables (Equivalent to 45 days of annual transmission cost)	762.79	752.73	740.18	473.48	471.99
Total Working Capital	878.39	872.38	864.05	601.68	604.69
Rate of Interest on working capital (in %)	12.05	11.25	10.50	10.50	10.50
Interest on Working Capital	105.85	98.14	90.73	63.18	63.49

Annual Fixed Charges of the 2019-24 Tariff Period

66. The transmission charges allowed for Combined Asset for the 2019-24 tariff period are as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	2569.33	2570.91	2570.91	483.44	483.44
Interest on Loan	327.70	216.23	103.78	36.97	15.82
Return on Equity	2705.73	2707.43	2707.43	2707.43	2707.43
O&M Expenses	495.43	512.78	530.86	549.42	568.71
Interest on Working Capital	105.85	98.14	90.73	63.18	63.49
Total	6204.04	6105.49	6003.70	3840.43	3838.89



Filing Fee and the Publication Expenses

67. Regulation 70(1) of the 2019 Tariff Regulations provides for reimbursement of filing fees and publication paid by the Petitioner. Accordingly, the Petitioner is 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

68. 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 2019-24 tariff period.

Goods and Services Tax

69. 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

70. 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

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



72. We have considered the submissions and prayer of the Petitioner regarding security expenses and observe that 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. accordingly, 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

73. 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

74. With effect from 1.7.2011, sharing of transmission charges for inter-State transmission systems is governed by the 2010 Sharing Regulations and with effect from 1.11.2020, sharing of transmission charges is governed by the 2020 Sharing Regulations. Accordingly, the liabilities of the 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. For subsequent period, the billing, collection and disbursement of the transmission charges approved in this order shall be governed by



the provisions of the 2020 Sharing Regulations as provided in Regulation 57 of the 2019 Tariff Regulations.

75. To summarise:

a) The trued-up AFC approved for Combined Asset for the 2014-19 tariff period are as follows:

(₹ in lakh)				
2014-15	2015-16	2016-17	2017-18	2018-19
6517.20	6543.97	6655.54	6661.97	6711.23

b) AFC allowed for Combined Asset for the 2019-24 tariff period in this order are as follows:

(₹ in lakh)				
2019-20	2020-21	2021-22	2022-23	2023-24
6204.04	6105.49	6003.70	3840.43	3838.89

76. Annexure-I and Annexure-II given hereinafter shall form part of this order.

77. This order disposes of Petition No. 380/TT/2020 in terms of the above discussions and findings.

sd/-
(P. K. Singh)
Member

sd/-
(Arun Goyal)
Member

sd/-
(I. S. Jha)
Member



Annexure-I

2014-19	Combined Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	ACE (₹ in lakh)			Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)				
Capital Expenditure		2014-15	2015-16	2016-17			2014-15	2015-16	2016-17	2017-18	2018-19
Transmission Line	42830.81	3.44	0.00	47.69	42881.94	5.28%	2261.56	2261.65	2262.91	2264.17	2264.17
Sub Station	5554.69	0.00	0.00	0.00	5554.69	5.28%	293.29	293.29	293.29	293.29	293.29
PLCC	162.52	0.00	0.00	0.00	162.52	6.33%	10.29	10.29	10.29	10.29	10.29
Total	48548.02	3.44	0.00	47.69	48599.15	Total	2565.13	2565.22	2566.48	2567.74	2567.74
Average Gross Block (₹ in lakh)							48549.74	48551.46	48575.31	48599.15	48599.15
Weighted Average Rate of Depreciation							5.28%	5.28%	5.28%	5.28%	5.28%



Annexure-II

2019-24	Admitted Capital Cost as on 1.4.2019	Projected ACE	Admitted Capital Cost as on 31.3.2024	Rate of Depreciation as per Regulations	Annual Depreciations as per Regulations		
Particulars		2019-20			2019-20	2020-21	2021-22
Transmission Line	42881.94	60.00	42941.94	5.28%	2265.75	2267.33	2267.33
Sub Station	5554.69	0.00	5554.69	5.28%	293.29	293.29	293.29
PLCC	162.52	0.00	162.52	6.33%	10.29	10.29	10.29
Total	48599.15	60.00	48659.15		2569.33	2570.91	2570.91
Average Gross Block					48629.15	48659.15	48659.15
Weighted Average Rate of Depreciation					5.28%	5.28%	5.28%

The Combined Asset has completed 12 years of life as on 31.3.2022, the remaining depreciable value as on 31.3.2022 has been spread across the balance useful life of 22 years in accordance with Regulation 33(5) of the 2019 Tariff Regulations. The annual depreciation from the year 2022-23 and onwards is ₹496.46 lakh.

