

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 706/TT/2020

Coram:

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

Date of Order: 12.09.2021

In the matter of:

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and truing up of transmission tariff of the 2014-19 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of the 2019-24 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for the Transmission System associated with Auraiya Gas Power Project in Northern Region.

And in the matter of:

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

.....Petitioner

Versus

1. Rajasthan Rajya Vidyut Prasaran Nigam Limited,
Vidyut Bhawan, Vidyut Marg, Jaipur-302005.
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,
Govt. 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, a deemed transmission licensee, has filed the instant petition for trueing up of the capital expenditure 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 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”) of the Transmission System associated with Auraiya Gas Power Project (hereinafter referred to as “the transmission system”) in Northern Region.

2. The Petitioner has made the following prayers in the 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 add-cap claimed during 2014-19 & 2019-24 already approved vide order dated 11.12.2015 and also fresh add- cap projected during 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 and 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 allow 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 and 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”

3. **Backdrop of the case**

- a) The Investment Approval (I.A.) for setting up transmission system associated with Gas Turbine Projects at Kawas, Auraiya and Anta was accorded by Ministry of Power (MoP) vide letter dated 21.10.1986 at an estimated cost of ₹18918.00 lakh, including an IDC of ₹810.00 lakh. The apportioned cost in respect of the transmission system included in the approval was ₹10061.00 lakh, including an IDC of ₹450.00 lakh.
- b) Subsequently, I.A. for setting up the transmission system was accorded by MoP vide letter dated 5.3.1993 at an estimated cost of ₹10543.00 lakh, including an IDC of ₹650.00 lakh. Approval for revised I.A. was accorded by MoP vide letter dated 16.3.1995 at cost of ₹12013.00 lakh, including O&M Expenses of ₹943.00 lakh and exchange rate variation (non-plan) of ₹1193.00 lakh. The total cost of the transmission system was, thus, ₹10820.00 lakh, excluding exchange rate variation of ₹1193.00 lakh, but including an IDC of ₹1301.00 lakh.



c) The tariff in respect of the transmission system was notified by MoP vide notification dated 16.11.1998 on basis of total cost of ₹9863.00 lakh which was further revised to ₹10162.00 lakh by MoP vide notification dated 14.5.1999 after considering the Additional Capital Expenditure (ACE) of ₹299.00 lakh. The tariff notified by MoP was valid up to 31.3.2002. However, as the terms and conditions for tariff determination notified by the Commission came into effect on 1.4.2001, the transmission charges approved by MoP were rendered valid up to 31.3.2001.

d) The Petitioner has built the transmission system with dates of commercial operation (COD) of individual elements as follows:

| Particulars | COD | Actual Line length in kms |
|--|------------------------|---------------------------|
| Transmission Line | | |
| 220 kV Auraiya-Sikandara D/C Transmission line Ckt.-I and Ckt.-II | 1.4.1989 1.7.1989 | 182.176 |
| 220 kV Auraiya-Agra D/C Transmission line Ckt.-I and Ckt.-II | 7.3.1990 19.12.1990 | 165.835 |
| 400 kV Agra-Ballabgarh S/C Transmission line | 1.12.1991 | 181.137 |
| Sub-station | | Number of bays |
| Agra Sub-station | | |
| 400 kV Auraiya-I Bay | 7.3.1990 | 1 |
| 400 kV Auraiya-II Bay | 19.12.1990 | 1 |
| 400 kV BLB | 16.12.1991 | 1 |
| Sikandra Sub-station | | |
| 220 kV Auraiya-I Bay | 27.3.1989 | 1 |
| 220 kV Auraiya-II Bay | 9.6.1989 | 1 |
| Ballabgarh Sub-station | | |
| 400 kV Agra Bay | 26.12.1991 | 1 |

e) The transmission tariff of the 2001-04 tariff period with respect to the transmission system was allowed vide order dated 31.7.2003 in Petition No. 8/2002 by considering the gross block of ₹11454.80 lakh, including FERV of ₹1291.94 lakh up to 31.3.2001.

f) The transmission tariff for the 2004-09 tariff period was initially allowed vide order dated 12.12.2005 in Petition No. 105/2004 by considering the gross block of ₹11733.84 lakh and the same was subsequently revised vide order



dated 29.2.2008 by way of implementation of the judgment of Appellate Tribunal for Electricity dated 4.10.2006 in Appeal No. 135/2005.

g) The transmission tariff for the 2009-14 tariff period was allowed vide order dated 15.9.2011 in Petition No. 108/2009 which was subsequently trued-up and tariff for the 2014-19 tariff period allowed vide order dated 11.12.2015 in Petition No. 537/TT/2014.

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

5. The Petitioner has served the petition on the Respondents and notice 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 their reply in the matter.

6. The hearing in this matter was held on 9.7.2021 through video conference and the order was reserved.

7. This order is issued considering the submissions made by the Petitioner in the petition vide affidavit dated 6.1.2020 and Petitioner's affidavit dated 12.2.2021 filed in compliance of Technical Validation letter.

8. Having heard the representatives of the Petitioner and after perusal of the materials on record, we proceed to dispose of the petition.



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

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

| Particulars | (₹ in lakh) | | | | |
|-----------------------------|----------------|----------------|----------------|----------------|----------------|
| | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Depreciation | 248.00 | 247.99 | 253.73 | 270.26 | 290.66 |
| Interest on Loan | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Return on Equity | 1043.47 | 1048.26 | 1051.27 | 1059.93 | 1073.33 |
| Interest on Working Capital | 61.28 | 62.45 | 63.74 | 65.43 | 67.37 |
| O&M Expenses | 571.25 | 590.39 | 610.09 | 630.13 | 651.23 |
| Total | 1924.00 | 1949.09 | 1978.83 | 2025.75 | 2082.59 |

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

| Particulars | (₹ in lakh) | | | | |
|------------------------------------|---------------|---------------|---------------|---------------|---------------|
| | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| O&M Expenses | 47.60 | 49.20 | 50.84 | 52.51 | 54.27 |
| Maintenance Spares | 85.69 | 88.56 | 91.51 | 94.52 | 97.68 |
| Receivables | 320.67 | 324.85 | 329.81 | 337.63 | 347.10 |
| Total Working Capital | 453.96 | 462.61 | 472.16 | 484.66 | 499.05 |
| Rate of Interest (in %) | 13.50 | 13.50 | 13.50 | 13.50 | 13.50 |
| Interest on Working Capital | 61.28 | 62.45 | 63.74 | 65.43 | 67.37 |

Capital Cost

11. The capital cost of the transmission system has been calculated in accordance with Regulation 9(3) and Regulation 9(6) of the 2014 Tariff Regulation. The Commission vide order dated 11.12.2015 in Petition No. 537/TT/2014 admitted the capital cost as on 1.4.2014 of ₹12519.30 lakh.

12. The Petitioner had projected ACE of ₹449.62 lakh and projected de-capitalisation of ₹17.91 lakh at the time of determination of tariff for the 2014-19 tariff period and the same was allowed. Accordingly, the capital cost considered vide order dated 11.12.2015 in Petition No. 537/TT/2014 for tariff computation is as follows:



(₹ in lakh)

| Admitted Capital Cost (as on 1.4.2014) | ACE | | | | De-capitalisation | | | | Admitted Capital Cost (as on 31.3.2019) |
|--|---------|---------|---------|---------|-------------------|---------|---------|---------|---|
| | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2014-15 | 2015-16 | 2016-17 | 2017-18 | |
| 12519.30 | 66.62 | 0.00 | 171.00 | 212.00 | 3.18 | 0.00 | 0.00 | 14.73 | 12951.01 |

13. The capital cost allowed by the Commission as on 1.4.2014 vide order dated 11.12.2015 in Petition No. 537/TT/2014 for the transmission system has been considered as opening capital cost as on 1.4.2014 for determination of tariff, in accordance with the 2014 Tariff Regulations.

Additional Capital Expenditure

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

(₹ in lakh)

| Capital Cost (as on 1.4.2014) | ACE | | | De-capitalisation | | | Capital Cost (as on 31.3.2019) |
|-------------------------------|---------|---------|---------|-------------------|---------|---------|--------------------------------|
| | 2016-17 | 2017-18 | 2018-19 | 2016-17 | 2017-18 | 2018-19 | |
| 12519.30 | 124.26 | 194.84 | 182.38 | 3.18 | 14.73 | 0.00 | 13002.87 |

15. The Petitioner has submitted that ACE and de-capitalisation claimed are on account of replacement of old equipment due to obsolesce of technology and the same were admitted by the Commission vide order dated 11.12.2015 in Petition No. 537/TT/2014 under Regulations 14(3)(vii) and 14 (3)(ix) of the 2014 Tariff Regulations. The Petitioner has further submitted that ACE allowed during the 2014-19 tariff period has been spilled over in the 2019-24 tariff period and remaining ACE has been claimed during the 2019-24 period.

16. We have considered the submissions made by the Petitioner. ACE claimed is towards replacement of old equipment of sub-station due to obsolesce of technology



and the same is allowed under Regulation 14(3)(vii) and 14(3)(ix) of the 2014 Tariff Regulations. The total capital cost allowed as on 31.3.2019 is as follows:

| Capital Cost (as on 1.4.2014) | ACE | | | De-capitalisation | | | (₹ in lakh) |
|-------------------------------------|---------|---------|---------|-------------------|---------|---------|---|
| | 2016-17 | 2017-18 | 2018-19 | 2016-17 | 2017-18 | 2018-19 | Capital Cost (as on 31.3.2019) |
| 12519.30 | 124.26 | 194.84 | 182.38 | 3.18 | 14.73 | 0.00 | 13002.87 |

Debt-Equity Ratio

17. 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 transmission tariff for the period ending on 31.3.2014 shall be considered. The debt-equity ratio of 70:30 has been considered for ACE allowed during the 2014-19 tariff period in accordance with Regulation 19(5) of the 2014 Tariff Regulations. The de-capitalisation in the instant case is carried out in the debt-equity ratio as claimed by the Petitioner in Form-10B.

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

Debt-Equity for Capital Cost as on 1.4.2014

| Funding | Capital Cost (as on 1.4.2014) (₹ in lakh) (A) | (in %) |
|--------------|--|---------------|
| Debt | 7202.23 | 57.53 |
| Equity | 5317.07 | 42.47 |
| Total | 12519.30 | 100.00 |



Debt-Equity for ACE and De-capitalisation during the 2014-19 period

(₹ in lakh)

| Funding | ACE (B) | | De-capitalisation (C) | | ACE (D) | | De-capitalisation (E) | | ACE (F) | |
|--------------|---------------|---------------|-----------------------|---------------|---------------|---------------|-----------------------|---------------|---------------|---------------|
| | 2016-17 | (in %) | 2016-17 | (in %) | 2017-18 | (in %) | 2017-18 | (in %) | 2018-19 | (in %) |
| Debt | 86.98 | 70.00 | 1.80 | 56.69 | 136.39 | 70.00 | 8.35 | 56.69 | 127.67 | 70.00 |
| Equity | 37.28 | 30.00 | 1.38 | 43.31 | 58.45 | 30.00 | 6.38 | 43.31 | 54.71 | 30.00 |
| Total | 124.26 | 100.00 | 3.18 | 100.00 | 194.84 | 100.00 | 14.73 | 100.00 | 182.38 | 100.00 |

Debt-Equity for Capital Cost as on 31.3.2019

| Funding | Capital Cost [as on 31.3.2019 (₹ in lakh)] (G)=(A)+(B)-(C)+(D)-(E)+(F) | (in %) |
|--------------|--|---------------|
| Debt | 7543.11 | 58.01 |
| Equity | 5459.76 | 41.99 |
| Total | 13002.87 | 100.00 |

Depreciation

19. The depreciation has been allowed considering the admitted capital expenditure as on 31.3.2014 and accumulated depreciation up to 31.3.2014. The transmission system has already completed more than 12 years before 1.4.2014. Therefore, the remaining depreciable value as on 31.3.2014 has been spread across the balance useful life in accordance with Regulation 27(5) of the 2014 Tariff Regulations and trued-up depreciation allowed is as follows:

(₹ in lakh)

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--|----------|----------|----------|----------|----------|
| Opening Gross Block | 12519.30 | 12519.30 | 12519.30 | 12640.38 | 12820.49 |
| ACE | 0.00 | 0.00 | 124.26 | 194.84 | 182.38 |
| De-capitalisation | 0.00 | 0.00 | 3.18 | 14.73 | 0.00 |
| Closing Gross Block | 12519.30 | 12519.30 | 12640.38 | 12820.49 | 13002.87 |
| Average Gross Block | 12519.30 | 12519.30 | 12579.84 | 12730.44 | 12911.68 |
| Weighted Average Rate of Depreciation (WAROD) (in %) | 2.16 | 2.16 | 2.20 | 2.31 | 2.47 |
| Balance useful life of the asset (Year) | 11 | 10 | 9 | 8 | 7 |
| Lapsed Life of the asset (Year) | 23 | 24 | 25 | 26 | 27 |
| Depreciable Value | 11267.37 | 11267.37 | 11321.86 | 11457.39 | 11620.51 |



| | | | | | |
|--|---------------|---------------|---------------|---------------|---------------|
| Remaining Depreciable Value at the beginning of the year | 2975.93 | 2705.39 | 2489.34 | 2351.14 | 2233.63 |
| Combined Depreciation during the year | 270.54 | 270.54 | 276.59 | 293.89 | 319.09 |
| Cumulative Depreciation at the end of the year | 8561.98 | 8832.52 | 9106.25 | 9386.88 | 9705.97 |
| Remaining Depreciable Value at the end of the year | 2705.39 | 2434.85 | 2215.60 | 2070.51 | 1914.54 |

20. The details of depreciation allowed vide order dated 11.12.2015 in Petition No. 537/TT/2014, claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

| Particulars | (₹ in lakh) | | | | |
|---|-------------|---------|---------|---------|---------|
| | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Allowed vide order dated 11.12.2015 in Petition No. 537/TT/2014 | 273.13 | 275.99 | 284.54 | 305.25 | 317.94 |
| Claimed by Petitioner in the instant petition | 248.00 | 247.99 | 253.73 | 270.26 | 290.66 |
| Approved after true-up in this order | 270.54 | 270.54 | 276.59 | 293.89 | 319.09 |

Interest on Loan (IoL)

21. The Petitioner has not claimed any IoL for the 2014-19 tariff period and hence not considered for the purpose of truing up of tariff.

Return on Equity (RoE)

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

| Year | Claimed effective tax rate (in %) | Grossed-up RoE (in %) [(Base Rate/(1-t))] |
|---------|-----------------------------------|---|
| 2014-15 | 21.018 | 19.624 |
| 2015-16 | 21.382 | 19.715 |
| 2016-17 | 21.338 | 19.704 |
| 2017-18 | 21.337 | 19.704 |
| 2018-19 | 21.549 | 19.757 |



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

24. The MAT rates considered in order dated 27.4.2020 for the purpose of grossing up of rate of RoE for truing up of the tariff of the 2014-19 tariff period in terms of the provisions of the 2014 Tariff Regulations is considered in the instant case which is as follows:

| Year | Notified MAT rates (inclusive of surcharge & cess) (in %) | Base rate of RoE (in %) | Grossed-up RoE (Base Rate/1-t) (in %) |
|---------|---|-------------------------|---------------------------------------|
| 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 |

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

| Particulars | (₹ in lakh) | | | | |
|-------------------|-------------|---------|---------|---------|---------|
| | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Opening Equity | 5317.07 | 5317.07 | 5317.07 | 5352.97 | 5405.04 |
| Additions | 0.00 | 0.00 | 37.28 | 58.45 | 54.71 |
| De-capitalisation | 0.00 | 0.00 | 1.38 | 6.38 | 0.00 |



| | | | | | |
|-------------------------------------|----------------|----------------|----------------|----------------|----------------|
| Closing Equity | 5317.07 | 5317.07 | 5352.97 | 5405.04 | 5459.76 |
| Average Equity | 5317.07 | 5317.07 | 5335.02 | 5379.01 | 5432.40 |
| 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 | 1042.68 | 1047.73 | 1051.27 | 1059.93 | 1073.33 |

26. The details of RoE allowed vide order dated 11.12.2015 in Petition No. 537/TT/2014, 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 11.12.2015 in Petition No. 537/TT/2014 | 1044.54 | 1046.41 | 1051.44 | 1062.27 | 1068.07 |
| Claimed by Petitioner in the instant petition | 1043.47 | 1048.26 | 1051.27 | 1059.93 | 1073.33 |
| Approved after true-up in this order | 1042.68 | 1047.73 | 1051.27 | 1059.93 | 1073.33 |

Operation & Maintenance Expenses (O&M Expenses)

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

| (₹ in lakh) | | | | | |
|--|---------|---------|---------|---------|---------|
| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| 165.835 kms D/C Auraiya-Agra Ckt-I&II Transmission Line (Twin Conductor) | | | | | |
| 182.176 kms D/C Auraiya-Sikandra Ckt-I&II Transmission Line (Single Conductor) | | | | | |
| 181.137 kms S/C Agra Ballabgarh Transmission Line (Twin Conductor) | | | | | |
| 4 Numbers 400 kV Bays (Agra-Auraiya-I&II, Agra-Ballabgarh, Ballabgarh-Agra) | | | | | |
| 2 Numbers 220 kV Bays (UPPCL, Sikandra-Auraiya I & II) | | | | | |
| Total O&M Expenses Claimed | 571.25 | 590.39 | 610.09 | 630.13 | 651.23 |

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

| Element | Norms for 2014-15 | Norms for 2015-16 | Norms for 2016-17 | Norms for 2017-18 | Norms for 2018-19 |
|--------------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Single Circuit Twin/Triple Conductor | ₹0.404 lakh/ km | ₹0.418 lakh/ km | ₹0.432 lakh/ km | ₹0.446 lakh/ km | ₹0.461 lakh/ km |



| | | | | | |
|--------------------------------------|-----------------|-----------------|------------------|------------------|------------------|
| Double Circuit Twin/Triple Conductor | ₹0.707 lakh/ km | ₹0.731 lakh/ km | ₹0.755 lakh/ km | ₹0.780 lakh/ km | ₹0.806 lakh/ km |
| Double Circuit Single Conductor | ₹0.303 lakh/ km | ₹0.313 lakh/ km | ₹0.324 lakh/ km | ₹0.334 lakh/ km | ₹0.346 lakh/ km |
| 220 kV sub-station | ₹42.21 lakh/bay | ₹43.61 lakh/bay | ₹45.06 lakh/ bay | ₹46.55 lakh/ bay | ₹48.10 lakh/ bay |
| 400 kV sub-station | ₹60.30 lakh/bay | ₹62.30 lakh/bay | ₹64.37 lakh/ bay | ₹66.51 lakh/ bay | ₹68.71 lakh/ bay |

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

| (₹ in lakh) | | | | |
|-------------|---------|---------|---------|---------|
| 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| 571.24 | 590.38 | 610.08 | 630.13 | 651.24 |

30. The details of O&M Expenses allowed vide order dated 11.12.2015 in Petition No. 537/TT/2014, 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 11.12.2015 in Petition No. 537/TT/2014 | 571.24 | 590.38 | 610.08 | 630.13 | 651.24 |
| Claimed by Petitioner in the instant petition | 571.25 | 590.39 | 610.09 | 630.13 | 651.23 |
| Approved after true-up in this order | 571.24 | 590.38 | 610.08 | 630.13 | 651.24 |

Interest on Working Capital

31. IWC has been worked out as per the methodology provided in Regulation 28 of the 2014 Tariff Regulations and the trued-up IWC allowed for the transmission system for the 2014-19 tariff period are as follows:

| (₹ in lakh) | | | | | |
|---|---------|---------|---------|---------|---------|
| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Working Capital for O&M Expenses (O&M Expenses for 1 month) | 47.60 | 49.20 | 50.84 | 52.51 | 54.27 |
| Working Capital for Maintenance Spares (15% of O&M Expenses) | 85.69 | 88.56 | 91.51 | 94.52 | 97.69 |
| Working Capital for Receivables (Equivalent to 2 months of annual | 324.37 | 328.60 | 333.70 | 341.65 | 351.95 |



| | | | | | |
|------------------------------------|---------------|---------------|---------------|---------------|---------------|
| fixed cost) | | | | | |
| Total Working Capital | 457.66 | 466.36 | 476.05 | 488.68 | 503.90 |
| Rate of Interest (in %) | 13.50 | 13.50 | 13.50 | 13.50 | 13.50 |
| Interest on Working Capital | 61.78 | 62.96 | 64.27 | 65.97 | 68.03 |

32. The details of IWC allowed vide order dated 11.12.2015 in Petition No. 537/TT/2014, claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

| Particulars | (₹ in lakh) | | | | |
|---|-------------|---------|---------|---------|---------|
| | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Allowed vide order dated 11.12.2015 in Petition No. 537/TT/2014 | 61.89 | 63.05 | 64.45 | 66.29 | 67.88 |
| Claimed by Petitioner in the instant petition | 61.28 | 62.45 | 63.74 | 65.43 | 67.37 |
| Approved after true-up in this order | 61.78 | 62.96 | 64.27 | 65.97 | 68.03 |

Approved Annual Fixed Charges for the 2014-19 Tariff Period

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

| Particulars | (₹ in lakh) | | | | |
|-----------------------------|----------------|----------------|----------------|----------------|----------------|
| | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Depreciation | 270.54 | 270.54 | 276.59 | 293.89 | 319.09 |
| Interest on Loan | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Return on Equity | 1042.68 | 1047.73 | 1051.27 | 1059.93 | 1073.33 |
| O&M Expenses | 571.24 | 590.38 | 610.08 | 630.13 | 651.24 |
| Interest on Working Capital | 61.78 | 62.96 | 64.27 | 65.97 | 68.03 |
| Total | 1946.25 | 1971.61 | 2002.21 | 2049.92 | 2111.69 |

34. Accordingly, the Annual Transmission Charges allowed vide order dated 11.12.2015 in Petition No. 537/TT/2014, claimed by the Petitioner in the instant petition and approved after truing up in the instant order are as follows:

| Particulars | (₹ in lakh) | | | | |
|---|-------------|---------|---------|---------|---------|
| | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Allowed vide order dated 11.12.2015 in Petition No. 537/TT/2014 | 1950.81 | 1975.83 | 2010.51 | 2063.94 | 2105.13 |



| | | | | | |
|---|---------|---------|---------|---------|---------|
| Claimed by Petitioner in the instant petition | 1924.00 | 1949.09 | 1978.83 | 2025.75 | 2082.59 |
| Approved after true-up in this order | 1946.25 | 1971.61 | 2002.21 | 2049.92 | 2111.69 |

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

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

| (₹ in lakh) | | | | | |
|-----------------------------|----------------|----------------|----------------|----------------|----------------|
| Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| Depreciation | 303.94 | 310.19 | 315.14 | 315.16 | 315.13 |
| Interest on Loan | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Return on Equity | 1026.14 | 1028.36 | 1029.89 | 1029.89 | 1029.89 |
| Interest on Working Capital | 40.94 | 41.89 | 42.74 | 43.53 | 44.26 |
| O&M Expenses | 480.48 | 497.53 | 514.79 | 532.95 | 551.53 |
| Total | 1851.50 | 1877.97 | 1902.56 | 1921.53 | 1940.81 |

36. The details of IWC claimed by the Petitioner 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 | 40.04 | 41.46 | 42.90 | 44.41 | 45.96 |
| Maintenance Spares | 72.07 | 74.63 | 77.22 | 79.94 | 82.73 |
| Receivables | 227.64 | 231.53 | 234.56 | 236.90 | 238.62 |
| Total Working Capital | 339.75 | 347.62 | 354.68 | 361.25 | 367.31 |
| Rate of Interest (in %) | 12.05 | 12.05 | 12.05 | 12.05 | 12.05 |
| Interest on Working Capital | 40.94 | 41.89 | 42.74 | 43.53 | 44.26 |

Capital Cost

37. 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 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.”*

38. The Petitioner has claimed capital cost of ₹13002.87 lakh as on 31.3.2019 for the transmission system. The same has been worked out by the Commission as on 31.3.2019 and considered as the opening capital cost as on 1.4.2019 for determination of tariff in accordance with Regulation 19 of the 2019 Tariff Regulations.

Additional Capital Expenditure

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

“24. Additional Capitalisation within the original scope and upto 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 assets, the additional capitalization shall be worked out after adjusting the gross fixed assets and cumulative depreciation of the assets replaced on account of de-capitalization.

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

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

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

- (g) 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;
- (h) Change in law or compliance of any existing law;
- (i) Deferred works relating to ash pond or ash handling system in the original scope of work;
- (j) Liability for works executed prior to the cut-off date;
- (k) Force Majeure events;
- (l) Liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments; and
- (m) Raising of ash dyke as a part of ash disposal system.

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

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

40. The Petitioner has claimed ACE of ₹79.55 lakh during the 2019-24 tariff period and of this amount, ₹24.38 lakh is spill over from the 2014-19 tariff period and is towards replacement of old sub-station equipment due to obsolesce of technology already admitted by the Commission vide order dated 11.12.2015 in Petition No.



537/TT/2014. The Petitioner has further submitted that ACE of ₹57.00 lakh during 2020-21 is proposed for some of the equipment/ component in the system which has deteriorated due to ageing and may affect the stability and reliability of the Grid in case of sudden failure and is claimed under Regulation 25(2) of the 2019 Tariff Regulations. The Petitioner has claimed capital cost as on 31.3.2024 as follows:

| Expenditure (as on 31.3.2019) | Projected ACE | | Projected De-capitalisation | Capital Cost (as on 31.3.2024) |
|----------------------------------|---------------|---------|-----------------------------|-----------------------------------|
| | 2019-20 | 2020-21 | 2020-21 | |
| 13002.87 | 24.38 | 57.00 | 1.83 | 13082.42 |

41. The Petitioner was directed to furnish package-wise and vendor-wise details for ACE claimed in the 2019-24 period. In response, the Petitioner has submitted that the award of fresh ACE claimed during 2020-21 is yet to be placed and details of vendor will be submitted at the time of truing-up of the 2019-24 period. Further, ACE claimed during 2019-20 is on account of retention payments of M/s Siemens and Switchgears & Structural (India) and is spill-over from 2014-19 period already admitted by the Commission vide order dated 11.12.2015 in Petition No. 537/TT/2014 and is claimed under Regulation 25(2) of the 2019 Tariff Regulations.

42. The Petitioner has submitted the following justification of equipment proposed to be replaced in 2020-21:

a) **Current Transformer (CT) (9 numbers):**

i. CTs are of RK/HBB/CG make and have completed more than 30 years of service life. Leakage from multiple points and oil seepage from bottom of tank have been observed. Leakage in the long run may lead to moisture ingress and subsequent failures. CT are hermetically sealed equipment and repair at site is not feasible. Due to ingress of moisture, complete replacement of winding is required at manufacturer works, which will not be techno-economically viable.



ii.OEM support for RK & HBB make CTs are not available as on date. CG Power (formerly CGL) quoted refurbishment charges for 420 kV CT as Unit Ex-Works Price ₹5,75,000/- against price of ₹4,65,000/- for New CT.

iii.Replacement works should be taken up in place of refurbishment due to their techno-commercial feasibility.

b) **Surge arresters (15 numbers):**

i.All surge arresters have completed 25 years of useful life and increasing Third Harmonic Resistive Current Measurements and deteriorating Insulation resistance trends suggesting deterioration in equipment which is dangerous to keep these LAs in further service since their damage while in service may cause consequential damages to other equipment in vicinity and long forced outages of system.

ii.OEM recommendations (CGL make LA) has been submitted, wherein it has been recommended to replace such old LAs since specification of 400 kV class surge arrester has been changed to 336 kV from the earlier rating of 390 kV along with change in energy class.

43. We have considered the submissions made by the Petitioner. ACE claimed is towards replacement of CTs and surge arresters due to obsolescence of technology. In our view, these items are of critical nature and their failure may affect the stability and reliability of the Grid. The transmission system has not completed its useful life. As such, ACE claimed by the Petitioner is towards the replacement of old equipment due to obsolesce of technology and is allowed under Regulation 25(2) of the 2019 Tariff Regulations subject to true-up on actual basis. Accordingly, the capital cost allowed for the 2019-24 tariff period are as follows:

(₹ in lakh)

| Capital Cost (as on 31.3.2019) | ACE | | De-Capitalisation | Capital Cost (as on 31.3.2024) |
|-----------------------------------|---------|---------|-------------------|-----------------------------------|
| | 2019-20 | 2020-21 | 2020-21 | |
| 13002.87 | 24.38 | 57.00 | 1.83 | 13082.42 |



Debt-Equity Ratio

44. 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.”

45. The debt-equity ratio is allowed as per Regulation 18(3) of the 2019 Tariff Regulations. The de-capitalisation of the transmission system is carried out in the debt-equity ratio as per the details submitted by the Petitioner vide Form-10B. The details of debt-equity considered for the purpose of computation of tariff for the 2019-24 tariff period are as follows:

Debt-Equity for Gross Capital Cost as on 1.4.2019

| Funding | Capital Cost [as on 1.4.2019 (₹ in lakh)] (A) | (in %) |
|--------------|---|---------------|
| Debt | 7543.11 | 58.01 |
| Equity | 5459.76 | 41.99 |
| Total | 13002.87 | 100.00 |

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

| Funding | ACE during 2019-20 (₹ in lakh) (B) | (in %) | ACE during 2020-21 (₹ in lakh) (C) | (in %) | De-capitalisation during 2020-21 (₹ in lakh) (D) | (in %) |
|--------------|---|---------------|---|---------------|---|---------------|
| Debt | 17.07 | 70.00 | 39.90 | 70.00 | 1.04 | 56.69 |
| Equity | 7.31 | 30.00 | 17.10 | 30.00 | 0.79 | 43.41 |
| Total | 24.38 | 100.00 | 57.00 | 100.00 | 1.83 | 100.00 |

Debt-Equity for Gross Capital Cost as on 31.3.2024

| Funding | Capital Cost (as on 31.3.2024) (₹ in lakh) (E)=(A)+(B)+(C)-(D) | (in %) |
|--------------|---|---------------|
| Debt | 7599.04 | 58.09 |
| Equity | 5483.38 | 41.91 |
| Total | 13082.42 | 100.00 |

Depreciation

46. Regulation 33 of the 2019 Tariff Regulations provides 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 thereof including communication system. In case of the tariff of all the units of a generating station or all elements of a transmission system including communication



system for which a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission system taking into consideration the depreciation of individual units:

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

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

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

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

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

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

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

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

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

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

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

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



depreciation on capital expenditure.

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

47. 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 transmission system has already completed more than 12 years before 1.4.2019. Accordingly, 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. However, depreciation for ACE (new additions) claimed is allowed at normative rate of depreciation as specified in the 2019 Tariff Regulations:

Existing assets in the transmission system

(₹ in lakh)

| Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|--|---------------|---------------|---------------|---------------|---------------|
| Opening Gross Block | 13002.87 | 13002.87 | 13001.04 | 13001.04 | 13001.04 |
| ACE | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| De-capitalisation | 0.00 | 1.83 | 0.00 | 0.00 | 0.00 |
| Closing Gross Block | 13002.87 | 13001.04 | 13001.04 | 13001.04 | 13001.04 |
| Average Gross Block | 13002.87 | 13001.96 | 13001.04 | 13001.04 | 13001.04 |
| Weighted average rate of Depreciation (WAROD) (in %) | 2.56 | 2.56 | 2.56 | 2.56 | 2.56 |
| Depreciable Value | 11702.58 | 11701.76 | 11700.94 | 11700.94 | 11700.94 |
| Cumulative Depreciation at the beginning of the year | 9705.97 | 10038.74 | 10370.03 | 10702.75 | 11035.48 |
| Depreciation adjustment on account of de-capitalisation | 0 | 1.65 | 0 | 0 | 0 |
| Net Cumulative Depreciation after adjustment for de-capitalisation | 9705.97 | 10037.09 | 10370.03 | 10702.75 | 11035.48 |
| Remaining Depreciation Value at the beginning of the year (Year) | 1996.61 | 1664.67 | 1330.91 | 998.18 | 665.46 |
| Balance useful life of the asset (Year) | 6 | 5 | 4 | 3 | 2 |
| Lapsed life (Year) | 28 | 29 | 30 | 31 | 32 |
| Depreciation | 332.77 | 332.93 | 332.73 | 332.73 | 332.73 |



New Additions in the transmission system

(₹ in lakh)

| Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|-------------|-------------|-------------|-------------|-------------|
| Opening Gross Block | 0.00 | 24.38 | 81.38 | 81.38 | 81.38 |
| Additional Capitalisation | 24.38 | 57.00 | 0.00 | 0.00 | 0.00 |
| Closing Gross Block | 24.38 | 81.38 | 81.38 | 81.38 | 81.38 |
| Average Gross Block | 12.19 | 52.88 | 81.38 | 81.38 | 81.38 |
| Freehold Land | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Weighted average rate of Depreciation (WAROD) (in %) | 5.28 | 5.28 | 5.28 | 5.28 | 5.28 |
| Depreciable Value | 10.97 | 47.59 | 73.24 | 73.24 | 73.24 |
| Cumulative Depreciation at the beginning of the year | 0.00 | 0.64 | 3.44 | 7.73 | 12.03 |
| Depreciation | 0.64 | 2.79 | 4.30 | 4.30 | 4.30 |
| Cumulative Depreciation at the end of the year | 0.64 | 3.44 | 7.73 | 12.03 | 16.33 |
| Remaining Depreciation recoverable at the end of the year | 10.33 | 44.16 | 65.51 | 61.21 | 56.92 |

Interest on Loan

48. 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.”

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

| Particulars | (₹ in lakh) | | | | |
|--|--------------|--------------|--------------|--------------|--------------|
| | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| Gross Normative Loan | 7543.11 | 7560.18 | 7599.04 | 7599.04 | 7599.04 |
| Cumulative Repayments up to Previous Year | 7543.11 | 7543.76 | 7545.51 | 7549.81 | 7554.10 |
| Net Loan-Opening | 0.00 | 16.42 | 53.53 | 49.23 | 44.94 |
| Additions | 17.07 | 39.90 | 0.00 | 0.00 | 0.00 |
| De-capitalisation | 0.00 | 1.04 | 0.00 | 0.00 | 0.00 |
| Repayment during the year | 0.64 | 2.79 | 4.30 | 4.30 | 4.30 |
| Adjustment of cumulative repayment pertaining to the decapitalised asset | 0.00 | 1.04 | 0.00 | 0.00 | 0.00 |
| Net Loan-Closing | 16.42 | 53.53 | 49.23 | 44.94 | 40.64 |
| Average Loan | 8.21 | 34.98 | 51.38 | 47.09 | 42.79 |
| Weighted Average Rate of Interest on Loan (in %) | 8.1535 | 8.1058 | 8.0474 | 7.9739 | 7.8790 |
| Interest on Loan | 0.67* | 2.84* | 4.13* | 3.75* | 3.37* |

*Computed by multiplying WAROI into Average Loan raised for additions

Return on Equity

50. 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 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:

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

(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."

51. The Petitioner has submitted that MAT rate is applicable to the Petitioner's company. 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 the transmission system for the 2019-24 tariff period is as follows:

| Particulars | (₹ in lakh) | | | | |
|-------------------|-------------|---------|---------|---------|---------|
| | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| Opening Equity | 5459.76 | 5467.07 | 5483.38 | 5483.38 | 5483.38 |
| Additions | 7.31 | 17.10 | 0.00 | 0.00 | 0.00 |
| De-capitalisation | 0.00 | 0.79 | 0.00 | 0.00 | 0.00 |
| Closing Equity | 5467.07 | 5483.38 | 5483.38 | 5483.38 | 5483.38 |



| | | | | | |
|-------------------------------------|----------------|----------------|----------------|----------------|----------------|
| Average Equity | 5463.41 | 5475.22 | 5483.38 | 5483.38 | 5483.38 |
| Return on Equity (Base Rate) (in %) | 15.500 | 15.500 | 15.500 | 15.500 | 15.500 |
| MAT Rate for respective year (in %) | 17.472 | 17.472 | 17.472 | 17.472 | 17.472 |
| Rate of Return on Equity (in %) | 18.782 | 18.782 | 18.782 | 18.782 | 18.782 |
| Return on Equity | 1026.14 | 1028.36 | 1029.89 | 1029.89 | 1029.89 |

Operation & Maintenance Expenses

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

| Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---------------|---------------|---------------|---------------|---------------|
| O&M Expenses | | | | | |
| 2 Numbers of 220 kV bays | 45.02 | 46.60 | 48.24 | 49.92 | 51.68 |
| 4 Numbers of 400 kV bays | 128.60 | 133.12 | 137.80 | 142.64 | 147.64 |
| 181.37 kms Single Circuit Twin Conductor | 91.11 | 94.37 | 97.63 | 101.07 | 104.70 |
| 165.835 kms Double Circuit (Twin Conductor) | 146.10 | 151.24 | 156.55 | 162.02 | 167.66 |
| 182.176 kms Double Circuit Single Conductor | 68.68 | 71.23 | 73.60 | 76.33 | 78.88 |
| PLCC (2% of ₹48.49 lakh) | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Total O&M Expenses (₹ in lakh) | 480.48 | 497.53 | 514.79 | 532.95 | 551.53 |

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

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

| Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|--|---------|---------|---------|---------|---------|
| Norms for sub-station Bays (₹ Lakh per bay) | | | | | |
| 765 kV | 45.01 | 46.60 | 48.23 | 49.93 | 51.68 |
| 400 kV | 32.15 | 33.28 | 34.45 | 35.66 | 36.91 |
| 220 kV | 22.51 | 23.30 | 24.12 | 24.96 | 25.84 |
| 132 kV and below | 16.08 | 16.64 | 17.23 | 17.83 | 18.46 |
| Norms for Transformers (₹ Lakh per MVA) | | | | | |
| 765 kV | 0.491 | 0.508 | 0.526 | 0.545 | 0.564 |
| 400 kV | 0.358 | 0.371 | 0.384 | 0.398 | 0.411 |
| 220 kV | 0.245 | 0.254 | 0.263 | 0.272 | 0.282 |
| 132 kV and below | 0.245 | 0.254 | 0.263 | 0.272 | 0.282 |
| Norms for AC and HVDC lines (₹ Lakh per km) | | | | | |



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

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

Provided further that:

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



pole scheme (2000 MW);

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

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

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

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

"(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. We have considered the submissions of the Petitioner. The Petitioner has claimed O&M Expenses separately for PLCC under Regulation 35(4) of the 2019 Tariff Regulations @2% of its original project cost in the instant petition. The Petitioner has made similar claim in other petitions as well. Though PLCC is a communication system, it has been considered as part of the sub-station in the 2014 Tariff Regulations and the 2019 Tariff Regulations and the norms for sub-station have been specified accordingly. Accordingly, the Commission vide order dated 24.1.2021 in Petition No. 126/TT/2020 has already concluded that no separate O&M Expenses can be allowed for PLCC under Regulation 35(4) of the 2019 Tariff Regulations even



though PLCC is a communication system. Therefore, the Petitioner's claim for separate O&M Expenses for PLCC @2% is not allowed.

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

| | (₹ in lakh) | | | | |
|---|---------------|---------------|---------------|---------------|---------------|
| | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| O&M Expenses | | | | | |
| 2 Numbers of 220 kV bays | | | | | |
| Norms (₹ lakh/Bay) | 22.51 | 23.3 | 24.12 | 24.96 | 25.84 |
| Total | 45.02 | 46.60 | 48.24 | 49.92 | 51.68 |
| 4 Numbers of 400 kV bays | | | | | |
| Norms (₹ lakh/Bay) | 32.15 | 33.28 | 34.45 | 35.66 | 36.91 |
| Total | 128.60 | 133.12 | 137.80 | 142.64 | 147.64 |
| 181.37 kms Single Circuit Twin Conductor | | | | | |
| Norms (₹ lakh/km) | 0.503 | 0.521 | 0.539 | 0.558 | 0.578 |
| Total | 91.11 | 94.37 | 97.63 | 101.07 | 104.70 |
| 165.835 kms Double Circuit Twin Conductor | | | | | |
| Norms (₹ lakh/km) | 0.881 | 0.912 | 0.944 | 0.977 | 1.011 |
| Total | 146.10 | 151.24 | 156.55 | 162.02 | 167.66 |
| 182.176 kms Double Circuit Single Conductor | | | | | |
| Norms (₹ lakh/km) | 0.377 | 0.391 | 0.404 | 0.419 | 0.433 |
| Total | 68.68 | 71.23 | 73.60 | 76.33 | 78.88 |
| Total O&M Expenses allowed (₹ in lakh) | 479.51 | 496.56 | 513.82 | 531.99 | 550.56 |

Interest on Working Capital

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

“34. Interest on Working Capital:

(1) ...

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

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

“(3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2019 or as on 1st April of the year during the tariff



period 2019-24 in which the generating station or a unit thereof or the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later:

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;”

57. 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 Interest (RoI) considered is 12.05% (SBI 1year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20, RoI for 2020-21 has been considered as 11.25% (SBI 1 year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) and ROI for 2021-22 onwards has been considered as 10.50% (SBI 1 year MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points). The components of the working capital and interest allowed thereon is as follows:

| Particulars | (₹ in lakh) | | | | |
|--|---------------|---------------|---------------|---------------|---------------|
| | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| Working Capital for O&M Expenses (O&M Expenses for 1 month) | 39.96 | 41.38 | 42.82 | 44.33 | 45.88 |
| Working Capital for Maintenance Spares (15% of O&M Expenses) | 71.93 | 74.48 | 77.07 | 79.80 | 82.58 |
| Working Capital for Receivables (Equivalent to 45 days of annual transmission charges) | 231.28 | 234.61 | 237.00 | 239.28 | 240.94 |
| Total Working Capital | 343.17 | 350.47 | 356.89 | 363.41 | 369.40 |
| Rate of Interest (in %) | 12.05 | 11.25 | 10.50 | 10.50 | 10.50 |
| Interest on Working Capital | 41.35 | 39.43 | 37.47 | 38.16 | 38.79 |



Annual Fixed Charges for the 2019-24 Tariff Period

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

| Particulars | (₹ in lakh) | | | | |
|-----------------------------|----------------|----------------|----------------|----------------|----------------|
| | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| Depreciation | 333.41 | 335.73 | 337.02 | 337.02 | 337.02 |
| Interest on Loan | 0.67 | 2.84 | 4.13 | 3.75 | 3.37 |
| Return on Equity | 1026.14 | 1028.36 | 1029.89 | 1029.89 | 1029.89 |
| Interest on Working Capital | 41.35 | 39.43 | 37.47 | 38.16 | 38.79 |
| O&M Expenses | 479.51 | 496.56 | 513.82 | 531.99 | 550.56 |
| Total | 1881.08 | 1902.91 | 1922.34 | 1940.81 | 1959.63 |

Filing Fee and the Publication Expenses

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

Licence Fee & RLDC Fees and Charges

60. 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 Regulation 70 (3) of the 2019 Tariff Regulations for the 2019-24 tariff period.

Goods and Services Tax

61. 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.

62. 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

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

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

Capital Spares

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 system was governed by the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2010. With effect from 1.11.2020, sharing of transmission charges is governed by the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2020 (in short, “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 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.

67. To summarise:

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

| (₹ in lakh) | | | | |
|-------------|---------|---------|---------|---------|
| 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| 1946.25 | 1971.61 | 2002.21 | 2049.92 | 2111.69 |

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

| (₹ in lakh) | | | | |
|-------------|---------|---------|---------|---------|
| 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| 1881.08 | 1902.91 | 1922.34 | 1940.81 | 1959.63 |



68. This order disposes of Petition No. 706/TT/2020 in terms of the above discussion and findings.

sd/-
(Pravas Kumar Singh)
Member

sd/-
(Arun Goyal)
Member

sd/-
(I. S. Jha)
Member

