

CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No. 219/TT/2020

Coram:

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

Date of order: 29.03.2022

In the matter of:

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and truing-up of transmission tariff of 2014-19 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of 2019-24 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 in respect of the transmission assets covered under "Transmission System associated with Krishnapatnam UMPP-PART B covered in (a) order dated 31.5.2016 in Petition No. 418/TT/2014 and (b) order dated 10.12.2018 in Petition No. 101/TT/2018.

And in the matter of:

Power Grid Corporation of India Limited,
SAUDAMINI, Plot No-2,
Sector-29,
Gurgaon-122 001 (Haryana).

.....Petitioner

Vs.

1. Madhya Pradesh Power Management Company Limited,
Shakti Bhawan, Rampur,
Jabalpur-482008.
2. Madhya Pradesh Power Transmission Company Limited,
Shakti Bhawan, Rampur,
Jabalpur-482008.



3. Madhya Pradesh Audyogik Kendra,
Vikas Nigam (Indore) Limited,
3/54, Press Complex, Agra-Bombay Road,
Indore-452008.
4. Maharashtra State Electricity Distribution Company Limited,
Hongkong Bank Building, 3rd Floor,
M.G. Road, Fort,
Mumbai-400001.
5. Maharashtra State Electricity Transmission Company Limited,
Prakashganga, 6th Floor, Plot No. C-19, E-Block,
Bandra Kurla Complex, Bandra (East),
Mumbai-400051.
6. Gujarat Urja Vikas Nigam Limited,
Sardar Patel Vidyut Bhawan,
Race Course Road,
Vadodara-390007.
7. Electricity Department,
Government of Goa,
Vidyut Bhawan, Near Mandvi Hotel,
Panaji, Goa-403001.
8. Electricity Department,
Administration of Daman & Diu,
Daman-396210.
9. DNH Power Distribution Corporation Limited,
Vidyut Bhawan, 66 kV Road, Near Secretariat Amli,
Silvassa-396230.
10. Chhattisgarh State Power Transmission Company Limited,
Office of The Executive Director (C&P),
State Load Despatch Building, Dangania,
Raipur-492013.
11. Chhattisgarh State Power Distribution Company Limited,
P.O. Sunder Nagar, Dangania,
Raipur, Chhattisgarh-492013.
12. Karnataka Power Transmission Corporation Limited,
Kaveri Bhavan,
Bangalore-560009.



13. Transmission Corporation of Andhra Pradesh Limited,
Vidyut Soudha, Gunadala, Eluru Road,
Vijayawada- 520004.
14. Kerala State Electricity Board,
Vaidyuthi Bhavanam,
Pattom, Thiruvananthapuram-695004.
15. Tamil Nadu Generation and Distribution Corporation Limited,
(Formerly Tamil Nadu Electricity Board -TNEB),
NPKRR Maaligai, 800, Anna Salai,
Chennai-600002.
16. Electricity Department,
Government of Pondicherry,
Pondicherry-605001.
17. Eastern Power Distribution Company of Andhra Pradesh Limited,
P&T Colony, Seethmmadhara,
Vishakhapatnam, Andhra Pradesh.
18. Southern Power Distribution Company of Andhra Pradesh Limited,
Srinivasasa Kalyana Mandapam Backside,
Tiruchanoor Road, Kesavayana Gunta,
Tirupati-517501, Chittoor District, Andhra Pradesh.
19. Southern Power Distribution Company of Telangana Limited,
6-1-50, Corporate Office, Mint Compound,
Hyderabad – 500063, Telangana.
20. Northern Power Distribution Company of Telangana Limited,
H. No 2-5-3 1/2, Vidyut Bhawan, Corporate Office, Nakkal Gutta,
Hanamkonda,
Warangal – 506001, Telangana.
21. Bangalore Electricity Supply Company Limited,
Corporate Office, K.R.Circle,
Bangalore-560001, Karanataka.
22. Gulbarga Electricity Supply Company Limited,
Station Main Road,
Gulbarga, Karnataka.
23. Hubli Electricity Supply Company Limited,
Navanagar, PB Road,
Hubli, Karnataka.



24. Mescom Corporate Office,
Paradigm Plaza, AB Shetty Circle,
Mangalore-575001, Karnataka.
25. Chamundeswari Electricity Supply Corporation Limited,
927, L J Avenue, Ground Floor,
New Kantharaj Urs Road, Saraswatipuram,
Mysore-570009, Karnataka.
26. Transmission Corporation of Telangana Limited,
Vidhyut Sudha, Khairatabad,
Hyderabad-500082.
27. Tamil Nadu Transmission Corporation,
NPKRR Maaligai, 800, Anna Salai,
Chennai-600002.

...Respondent(s)

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

For Respondents: Shri S. Vallinyagam, Advocate, TANGEDCO
Dr. R. Kathiravan, TANGEDCO
Shri R. Ramalakshmi, TANGEDCO
Shri R. Srinivasan, TANGEDCO
Shri Anindya Khare, MPPMCL

ORDER

The instant petition has been filed by Power Grid Corporation of India Limited, a deemed transmission licensee, for truing up of transmission tariff 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 determination of tariff under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) of 2019-24 tariff period in respect of the following assets (hereinafter referred to as “the transmission assets/ Combined Asset”) under “Transmission



System associated with Krishnapatnam UMPP - PART B” (hereinafter referred to as “the transmission system”):

Combined Asset-A: Combined Assets of (Asset-A) 765 kV S/C Raichur-Sholapur line along with bay extensions at Raichur Sub-station with ICT 1 and Switchable Line Reactor at Raichur and Bays for Raichur Sholapur 765 kV S/C Transmission Line at 765/400 kV Sholapur Sub-station along with 240 MVAR switchable Line Reactor; (Asset-B) 765/400 kV, 1500 MVA ICT-2 and 765kV,4*80 MVAR Bus Reactors at 765/400 kV Raichur Sub-station; (Asset-C) LILO of 400 kV Quad Raichur-Gooty Transmission Line along with the associated bay equipment’s at 765/400 kV Raichur Sub-station; (Asset-D) 765/400 kV Sholapur Sub-station along with 240 MVAR Bus Reactor and associated bays; (Asset-E) 765/400 kV Sholapur Sub-station along with 1x1500 MVA ICT-1 and its associated bays; (Asset-F) 765/400 kV Sholapur Sub-station along with 1x1500 MVA ICT-2 and its associated bays; (Asset-G) 240 MVAR, 765 kV Line reactor for 765 kV S/C Sholapur- Pune Transmission Line charged as Bus reactor at Solapur Sub-station;

Asset-B: 765 kV S/C Sholapur-Pune Transmission Line and LILO of 400 kV D/C Pune-Parli at Pune GIS Sub-station with associated bays and equipment’s, 2x1500 MVA, 765/400 kV ICT 1&2 at Pune (GIS) and 240 MVAR, 765 kV bus reactor and 765 kV, 240 MVAR switchable line reactor at Pune (GIS) Sub-station with associated bays; and

Asset-C: LILO of 400 kV D/C Aurangabad-Pune Transmission Line at Pune GIS Sub-station with associated bays and 400 kV, 50 MVAR line Reactor.

(Combined Asset-A, Asset-B and Asset-C have been collectively referred to as “transmission assets” in 2014-19 tariff period. Combined Asset-A, Asset-B and Asset-C have been combined as on 1.4.2019 and have been collectively referred to as “Combined Asset” in 2019-24 tariff period.)

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

“1) Allow the addcap for 2014-19 and 2019-24 tariff block as claimed as per Para 4



and 5 above.

- 2) *Allow the initial spares for sub-station considering Project as a whole under Regulation: 8 of the 2009 CERC Regulation and Regulation- 13, Chapter- 4, of the CERC Regulations, 2014 claimed as per Para 4.10 above.*
- 3) *Approve the trued-up Transmission Tariff for 2014-19 block and transmission tariff for 2019-24 block for the assets covered under this petition, as per para 5 and 6 above.*
- 4) *Allow the Petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before Hon'ble Commission as provided in Tariff Regulation 2014 and Tariff regulations 2019 as per para 5 and 6 above for respective block.*
- 5) *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.*
- 6) *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.*
- 7) *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.*
- 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 6.6 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 beneficiaries, if GST on transmission is levied at any time in future. Further, any taxes including GST and duties including cess etc. imposed by any statutory/Govt./municipal authorities shall be allowed to be recovered from the beneficiaries.*

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

Background

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



- a) The Investment Approval (IA) for implementation of the transmission system was accorded by the Board of Directors of the Petitioner's Company *vide* Memorandum Ref. No. C/CP/KUMPP-B dated 9.2.2012 at an estimated cost of ₹192716.00 lakh including IDC of ₹8813.00 lakh (based on 4th Quarter 2011 price level). The Revised Cost Estimate (RCE) of the transmission system was accorded by the Board of Directors of the Petitioner's Company *vide* Memorandum No. C/CP/RCE-KUMPP-B dated 11.3.2016 at an estimated cost of ₹194058.00 lakh including IDC of ₹4701.00 lakh (based on August, 2015 price level).
- b) The broad scope of work covered under the transmission system is as follows:

A. Transmission Line:

- i. Raichur-Sholapur 765 kV S/C line
- ii. Sholapur-Pune 765 kV S/C line
- iii. LILO of Parli-Pune 400 kV D/C and Pune-Aurangabad 400 kV D/C line at Pune (GIS) Sub-station (including Multi Circuit)
- iv. LILO of existing Raichur-Gooty 400 kV Quad D/C line at Raichur (New) Sub-station.

B. Sub-stations:

- i. Establishment of new 765/400 kV Sub-station at Raichur with 2x1500 MVA ICTs.
- ii. Establishment of new 765/400 kV Sub-station at Sholapur with 2x1500 MVA ICTs
- iii. Establishment of new 765/400 kV Sub-station at Pune (GIS) with 2x1500 MVA ICTs.

C. Reactive Compensation

I. Line Reactors

- i. 1x240 MVAR switchable line reactors at each end of Raichur-Sholapur 765 kV S/C and Sholapur-Pune 765 kV S/C lines.
- ii. 4x50 MVAR 400 kV line reactors at Pune (GIS) Sub-station for LILO of Parli-Pune and Pune-Aurangabad 400 kV D/C line at Pune (GIS) Sub-station.

II. Bus Reactor



1x240 MVAR bus reactors each at Raichur-Sholapur and Pune
Sub-stations

c) Details of the assets covered in the instant petition are as follows:

| Assets | Description | Asset name in instant Order | Actual COD | Delay |
|----------------|--|-----------------------------|------------|-----------------------|
| Asset-A | 765 kV S/C Raichur-Sholapur line along with bay extensions at Raichur Sub-station with ICT 1 and Switchable Line Reactor at Raichur and Bays for Raichur-Sholapur 765 kV S/C Transmission line at 765/400 kV Sholapur Sub-station along with 240 MVAR switchable Line Reactor | Combined Asset-A | 1.1.2014 | Nil |
| Asset-B | 765/400 kV, 1500 MVA ICT-2 and 765 kV, 4*80 MVAR bus Reactors at 765/400 kV Raichur Sub-station | | 1.2.2014 | Nil |
| Asset-C | LILO of 400 kV Quad Raichur-Gooty Transmission line along with the associated bay equipment's at 765/400 kV Raichur Sub-station | | 1.1.2014 | Nil |
| Asset-D | 765/400 kV Sholapur Sub-station along with 240 MVAR Bus Reactor and associated bays | | 1.1.2014 | Nil |
| Asset-E | 765/400 kV Sholapur Sub-station along with 1x1500 MVA ICT-1 and its associated bays | | 1.1.2014 | Nil |
| Asset-F | 765/400 kV Sholapur Sub-station along with 1x1500 MVA ICT-2 and its associated bays | | 1.1.2014 | Nil |
| Asset-G | 240 MVAR, 765 kV line reactor for 765 kV S/C Sholapur-Pune Transmission line charged as Bus reactor at Sholapur Sub-station. | | 1.3.2014 | Nil |
| Asset-B | 765 kV S/C Sholapur-Pune Transmission line and LILO of 400 kV D/C Pune-Parli at Pune GIS Sub-station with associated bays and equipment's, 2x1500 MVA, 765/400 kV ICT 1&2 at Pune (GIS) and 240 MVAR, 765 kV bus reactor and 765 kV, 240 MVAR switchable line reactor at Pune (GIS) Sub-station with associated bays | Asset-B | 6.3.2015 | 4 months and 24 days |
| Asset-C | LILO of 400 kV D/C Aurangabad-Pune Transmission line at Pune GIS Sub-station with associated bays and 400 kV, 50 MVAR line reactor | Asset-C | 5.4.2016 | 17 months and 27 days |



d) The transmission assets were scheduled to be put into commercial operation within 32 months from the date of IA which was 9.2.2012. Therefore, the scheduled date of commercial operation (SCOD) of the transmission system was 9.10.2014 and Combined Asset-A was put into commercial operation within SCOD. However, Asset-B and Asset-C were put into commercial operation on 6.3.2015 and 5.4.2016, respectively. Hence, there is time over-run of 4 months and 24 days in case of Asset-A and 17 months and 27 days in case of Asset-B and the same was condoned vide order dated 31.5.2016 in Petition No. 418/TT/2014

e) The transmission tariff from COD to 31.2.3.2019 in respect of the Combined Asset-A was determined vide order dated 10.12.2018 in Petition No. 101/TT/2018 and in respect of Asset-B and Asset-C was determined vide order dated 31.5.2016 in Petition No. 418/TT/2014.

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

5. The Petitioner has served the petition on the Respondents and notice regarding filing of this petition has been published in the newspaper 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 notice published in the newspaper by the Petitioner. Madhya Pradesh Power Management Company Limited (MPPMCL) Respondent No. 1, has filed its reply vide affidavit dated 29.2.2020 and has raised the issues of grossing-up of RoE for 2014-19 period, calculation of Initial Spares, ACE claimed by the Petitioner during 2019-24 tariff period and the effect of CGST. Tamil Nadu Generation and Distribution Corporation Ltd. (TANGEDCO) Respondent No. 15, vide affidavit dated 27.8.2021 has filed its reply and raised the issue regarding



consideration of project as a whole for calculation of initial spares and sharing of transmission charges. The Petitioner *vide* affidavit dated 16.8.2021 has filed rejoinder to the reply of MPPMCL. However, the Petitioner has not filed any rejoinder to the reply of TANGEDCO.

6. It has been placed before us that MPPMCL has repeatedly been raising the issue of grossing up of RoE in almost all the petitions despite clear findings of the Commission. The contentions of MPPMCL with reference to RoE have been rejected by the Commission in other petitions including in order dated 25.4.2021 in Petition No. 348/TT/2019. Since MPPMCL did not challenge the findings of the Commission the same have attained finality. In view of this, the pleas raised by MPPMCL with reference to grossing up of RoE are rejected. The submissions of MPPMCL on RoE, Petitioner's response thereto and Commission's finding thereon have not been reproduced here again to avoid repetition. Other issues of MPPMCL which are specific to the present petition and the issues raised by TANGEDCO and the clarifications given by the Petitioner have been addressed in the relevant portion of this order.

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

8. This order is issued considering the submissions made by the Petitioner in the petition *vide* affidavit dated 13.12.2019, and *vide* affidavits dated 14.7.2021 and 13.8.2021, MPPMCL reply *vide* affidavit dated 29.2.2020, TANGEDCO's reply *vide* affidavit dated 27.8.2021 and Petitioner's rejoinder to the reply of MPPMCL *vide* affidavit dated 16.8.2021.



9. Having heard the representatives of the Petitioner and MPPMCL and learned counsel of TANGEDCO and having perused the material on record, we proceed to dispose of the petition.

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

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

Combined Asset-A

(₹ in lakh)

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|-----------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Depreciation | 3472.49 | 3788.76 | 3912.60 | 3966.07 | 3973.29 |
| Interest on Loan | 1377.62 | 1756.59 | 2014.86 | 2023.32 | 2065.42 |
| Return on Equity | 4040.39 | 4451.59 | 4610.14 | 4673.22 | 4693.89 |
| O&M Expenses | 1458.02 | 1506.57 | 1556.47 | 1608.26 | 1661.53 |
| Interest on Working Capital | 285.19 | 313.24 | 328.54 | 334.28 | 338.83 |
| Total | 10633.71 | 11816.85 | 12422.61 | 12605.15 | 12732.96 |

Asset-B

(₹ in lakh)

| Particulars | 2014-15 (Pro-rata 26 days) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|-----------------------------|----------------------------------|-----------------|-----------------|-----------------|-----------------|
| Depreciation | 290.84 | 4254.73 | 4521.48 | 4787.67 | 4933.43 |
| Interest on Loan | 100.33 | 1655.22 | 2122.28 | 2366.27 | 2649.95 |
| Return on Equity | 331.78 | 4889.57 | 5220.13 | 5541.41 | 5726.15 |
| O&M Expenses | 64.63 | 938.09 | 969.03 | 1001.31 | 1034.50 |
| Interest on Working Capital | 20.21 | 300.40 | 326.61 | 347.54 | 363.51 |
| Total | 807.79 | 12038.01 | 13159.53 | 14044.20 | 14707.54 |

Asset-C

(₹ in lakh)

| Particulars | 2016-17 (Pro-rata 361 days) | 2017-18 | 2018-19 |
|-----------------------------|-----------------------------------|----------------|----------------|
| Depreciation | 579.79 | 623.33 | 638.28 |
| Interest on Loan | 378.93 | 416.06 | 436.59 |
| Return on Equity | 658.51 | 707.84 | 726.51 |
| O&M Expenses | 237.68 | 248.25 | 256.50 |
| Interest on Working Capital | 47.69 | 51.07 | 52.69 |
| Total | 1902.60 | 2046.55 | 2110.57 |



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

Combined Asset-A

(₹ in lakh)

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|------------------------------------|----------------|----------------|----------------|----------------|----------------|
| O&M Expenses | 121.50 | 125.55 | 129.71 | 134.02 | 138.46 |
| Maintenance Spares | 218.70 | 225.99 | 233.47 | 241.24 | 249.23 |
| Receivables | 1772.29 | 1969.48 | 2070.44 | 2100.86 | 2122.16 |
| Total Working Capital | 2112.49 | 2321.02 | 2433.62 | 2476.12 | 2509.85 |
| Rate of Interest (in %) | 13.50 | 13.50 | 13.50 | 13.50 | 13.50 |
| Interest on Working Capital | 285.19 | 313.34 | 328.54 | 334.28 | 338.83 |

Asset-B

(₹ in lakh)

| Particulars | 2014-15 (Pro-rata 26 days) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|------------------------------------|----------------------------------|----------------|----------------|----------------|----------------|
| O&M Expenses | 75.64 | 78.17 | 80.75 | 83.44 | 86.21 |
| Maintenance Spares | 136.16 | 140.71 | 145.35 | 150.20 | 155.18 |
| Receivables | 1890.10 | 2006.34 | 2193.26 | 2340.70 | 2451.26 |
| Total Working Capital | 2101.90 | 2225.22 | 2419.36 | 2574.34 | 2692.65 |
| Rate of Interest (in %) | 13.50 | 13.50 | 13.50 | 13.50 | 13.50 |
| Interest on Working Capital | 20.21 | 300.40 | 326.61 | 347.54 | 363.51 |

Asset-C

(₹ in lakh)

| Particulars | 2016-17 (Pro-rata 361 days) | 2017-18 | 2018-19 |
|------------------------------------|-----------------------------------|---------------|---------------|
| O&M Expenses | 20.03 | 20.69 | 21.38 |
| Maintenance Spares | 36.05 | 37.24 | 38.48 |
| Receivables | 320.61 | 341.09 | 351.76 |
| Total Working Capital | 376.69 | 399.02 | 411.62 |
| Rate of Interest (in %) | 12.80 | 12.80 | 12.80 |
| Interest on Working Capital | 47.69 | 51.07 | 52.69 |

Capital Cost

12. The Commission vide order dated 10.12.2018 in Petition No. 101/TT/2018 and vide order dated 31.5.2016 in Petition No. 418/TT/2014 allowed the capital cost as on COD in respect of the Combined Asset-A, Asset-B and Asset-C and projected ACE for



2014-19 tariff period. The details of capital cost as allowed by the Commission in the said order after adjusting IDC and IEDC are as follows:

(₹ in lakh)

| Assets | Approved Apportioned Capital Cost (as per RCE) | Capital Cost allowed as on COD | ACE | | | | | Capital Cost allowed as on 31.3.2019 |
|------------------|--|--------------------------------|---------|---------|---------|---------|---------|--------------------------------------|
| | | | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | |
| Combined Asset-A | 81906.89 | 63777.61 | 9679.89 | 3550.20 | 1860.60 | 367.39 | 0.00 | 79235.69 |
| Asset-B | 98467.68 | 78149.41 | 1142.10 | 5978.88 | 9334.90 | 2313.47 | 0.00 | 96918.76 |
| Asset-C | 13683.17 | 10720.72 | 0.00 | 0.00 | 1411.03 | 425.05 | 0.00 | 12556.80 |

13. The Petitioner in the instant true-up petition has submitted the details of the apportioned approved cost as per RCE, capital cost as on COD and as on 31.3.2019 (including actual ACE during 2014-19 period) and the same is as follows:

(₹ in lakh)

| Assets | Approved Cost | Cost as on COD/ 31.3.2014 | ACE | | | | | Total cost as on 31.3.2019 |
|------------------|---------------|---------------------------|---------|---------|---------|---------|---------|----------------------------|
| | | | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | |
| Combined Asset A | 81906.89 | 63777.62 | 9698.28 | 3580.07 | 1860.61 | 273.36 | 0.00 | 79189.94 |
| Asset B | 98467.68 | 78539.33 | 1142.09 | 5979.88 | 5288.70 | 5581.01 | 149.58 | 96679.59 |
| Asset C | 13683.17 | 10720.72 | 0.00 | 0.00 | 1084.47 | 337.45 | 228.53 | 12371.17 |

*The Petitioner has submitted the value as ₹79193.89 lakh.

Time Over-run

14. There was no time over-run in respect of the Combined Asset-A. The time over-run of 4 months and 24 days in case of Asset-B and 17 months and 27 days in case of Asset-C was condoned by the Commission in order dated 31.5.2016 in Petition No. 418/TT/2014.



15. The details of apportioned approved capital cost, actual expenditure up to COD/ 31.3.2014 and Additional Capital Expenditure (ACE) incurred during 2014-19 tariff period as claimed by the Petitioner are as follows:

(₹ in lakh)

| Assets | Approved Cost | Cost as on COD/ 31.3.2014 | ACE incurred during | | | | | Total cost as on 31.03.2019 |
|------------------|---------------|---------------------------|---------------------|---------|---------|---------|---------|-----------------------------|
| | | | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | |
| Combined Asset A | 81906.89 | 63777.62 | 9698.28 | 3580.07 | 1860.61 | 273.36 | 0.00 | 79193.89 |
| Asset B | 98467.68 | 78539.33 | 1142.09 | 5979.88 | 5288.70 | 5581.01 | 149.58 | 96679.59 |
| Asset C | 13683.17 | 10720.72 | 0.00 | 0.00 | 1084.47 | 337.45 | 228.53 | 12371.17 |

16. We have considered the submission of the Petitioner. The completion cost of the transmission assets as on 31.3.2019 including ACE is within the apportioned approved cost as per RCE approved by the Board of Directors of the Petitioner's company.

Interest During Construction ("IDC") and Incidental Expenditure During Construction ("IEDC")

17. The Petitioner has claimed IDC in respect of the transmission assets covered in the instant petition and has submitted the Auditor's Certificate in support of the same. The Petitioner has submitted the computation of IDC along with year-wise details of IDC discharged which is as follows:

(₹ in lakh)

| Assets | IDC (as per Auditor's Certificate) | IDC Discharged up to COD/31.3.2014 | IDC discharged during the year | | |
|------------------|------------------------------------|------------------------------------|--------------------------------|---------|---------|
| | | | 2014-15 | 2015-16 | 2016-17 |
| Combined Asset-A | 1233.42 | 1158.08 | 75.34 | 0.00 | 0.00 |
| Asset-B | 1653.70 | 1142.20 | 168.36 | 343.13 | 0.00 |
| Asset-C | 340.54 | 177.52 | 0.00 | 0.00 | 163.02 |



18. The Petitioner *vide* affidavit dated 14.7.2021 has submitted additional information regarding Foreign IDC computation as follows:

- a) The Petitioner avails loans periodically after pooling the fund requirement of all the transmission projects which are under different stages of construction. Fund requirement for all the on-going transmission projects is anticipated for next two to three months and accordingly funds are raised through Domestic Borrowings (Bonds/CP/Bank Loans) or Borrowing in Foreign Currency-ECB (Through World Bank, Asian Development Bank, KFW etc).
- b) As per policy of the Petitioner's company, out of total loans taken for the pooled requirement of all transmission projects, loans are earmarked, to a particular project/ element based on actual fund outflow for that project/ element. IDC paid on such loan (taken for pooled requirement of transmission projects under construction) is allocated to a particular project/ element in proportion to the loan so earmarked to that project. In addition to IDC, other expenses covered under borrowing cost (i.e., guarantee fee, commitment charges, front end fee etc. in respect of foreign currency loan) are also allocated to individual project/ element in proportion to the loan amount earmarked to a particular project/ element.
- c) Foreign currency loans are also contracted for a basket of projects. Loan (Foreign Currency) Agreement speaks for overall limit of the loan amount, name of foreign currency and projects for which lender (WB, ADB etc.) has agreed to fund. These loans are also availed (drawn) by the Petitioner based on actual outflow of funds during a certain period for all the transmission projects under construction covered in loan agreement. Loans get accumulated with every drawl up to the sanction limit. Such loans as well as debt service (repayment of loan and interest payment thereon) is also done in foreign currency. Repayment of loan and payment of interest must be released to the lender as per schedule of repayment agreed for the loan as a whole consisting of the entire basket of projects.



- d) The total foreign currency loan drawn in first stage is allocated to different projects based on actual utilisation of loan for respective projects. Accordingly, interest and other financial charges against a particular loan is allocated to different projects in proportion to loan utilised by respective projects periodically. These interest and financial charges so allocated get accumulated till COD of the project/ element (part of the project). In case of COD of element (part of the project), foreign currency loan drawn for a specific project is apportioned to the individual elements of that project in proportion to the expenses related to that element as compared to total expenses of the project (related to foreign currency loan part).
- e) Foreign currency loans are considered, in tariff forms, equivalent to INR value taking exchange rate as on COD. IDC statement shows INR value of interest paid (In foreign currency) taking amount of actual foreign currency paid multiplied by exchange rate prevailing on the day on payment of interest. INR value of un-discharged interest (to be paid subsequently after COD) is shown as actual liability in foreign currency multiplied by exchange rate as on COD.
- f) The necessity of availing the loan for pooled-fund requirement of all the on-going project, then earmarking the drawn loan amount to a particular project/ element based on the actual cash outflow for that project/ element, enforces to allocate IDC of the entire loan to those projects/ elements to which loan amount is earmarked. IDC thus allocated to a particular project/ element is shown in the cost certificate.
- g) Therefore, providing details showing actual calculation of IDC for a particular project/ element is not practical. However, the Petitioner has submitted the details of periodical foreign IDC (interest + other financial charges) for foreign loans allocated to Asset-B and Asset-C covered under the instant petition.
- h) The Petitioner has further submitted that foreign exchange exposure has not been hedged by the Petitioner's Company.



19. The Petitioner *vide* affidavit dated 14.7.2021 has further submitted that all the borrowed funds are allocated to specific projects as a whole, and not for each element, over the entire construction period. In the intervening period, if any asset is put into commercial operation, debt funds and IDC are apportioned to the asset for the period (claimable) from the date of infusion of debt, after taking into account the prudent phasing of funds up to COD, for the purpose of filing tariff petition. IDC booked to the project are not proportionate during the period of construction and the same is calculated based on the actual deployment of funds in the project at the time of COD. Therefore, providing details showing actual calculation of IDC for a particular project/ element having particular package wise, sub work wise loan allocation and apportionment is not practically possible. The Petitioner has requested the Commission to kindly allow IDC as claimed for all the assets.

20. We have considered the submissions of the Petitioner. The Petitioner has submitted IDC computation statement for domestic as well as foreign currency loans which contains the name of loan, drawl date, loan amount, interest rate, exchange rate and interest claimed. IDC is worked out based on the details given in the IDC statement. Further, the loan amount as on COD has been mentioned in Forms-6 and Form-9C. On scrutiny of these documents, certain discrepancies have been noted such as mismatch in loan amount between IDC statement and Forms 6 and Form-9C. The allowable IDC has been worked out based on the information available on record and relying on loan amount as per Form 9C. IDC claimed and considered as on COD and summary of discharge of IDC liability up to COD and thereafter for the purpose of tariff determination is as follows:



(₹ in lakh)

| Assets | IDC as per Auditor's Certificate | IDC disallowed due to time over-run not condoned | IDC disallowed due to computational error | IDC allowed | IDC discharged up to COD/ 31.3.2014 | IDC discharged during the year | | |
|------------------|----------------------------------|--|---|-------------|-------------------------------------|--------------------------------|---------|---------|
| | | | | | | 2014-15 | 2015-16 | 2016-17 |
| 1 | 2 | 3 | 4 | 5=(2-3-4) | 6 | 7 | 8 | 9 |
| Combined Asset-A | 1233.42 | 0.00 | 3.95 | 1229.47 | 1154.13 | 75.34 | 0.00 | 0.00 |
| Asset-B | 1653.70 | 0.00 | 13.49 | 1640.21 | 1142.20 | 168.36 | 329.65 | 0.00 |
| Asset-C | 340.54 | 0.00 | 0.00 | 340.54 | 177.52 | 0.00 | 0.00 | 163.02 |

21. The Petitioner has also claimed IEDC in respect of the transmission asset as per the table given below. The Commission *vide* order dated 10.12.2018 in Petition No. 101/TT/2018 has allowed IEDC of ₹2765.02 lakh in respect of the Combined Asset-A. The IEDC claimed by the Petitioner in respect of Asset-B and Asset-C is in order. Accordingly, IEDC considered for the purpose of tariff calculation are as follows:

(₹ in lakh)

| Assets | IEDC claimed as per Auditor certificate | IEDC disallowed due to time over-run/excess claim | IEDC allowed as on COD |
|------------------|---|---|------------------------|
| Combined Asset-A | 2765.02 | 0.00 | 2765.02 |
| Asset-B | 2203.31 | 0.00 | 2203.31 |
| Asset-C | 989.28 | 0.00 | 989.28 |

Initial Spares

22. The Petitioner has submitted that Initial Spares for sub-station and transmission lines are within the norms considering project as a whole under Regulation 8 of the 2009 Tariff Regulations and Regulation 13 of the 2014 Tariff Regulations. The details submitted by the Petitioner are as follows:



(₹ in lakh)

| Assets | Particulars | Estimated Completion Cost (A) | Initial Spares Claimed (B) | Ceiling Limit (C) | Initial Spares Worked out $D = [(A-B)*C/(100-C)]$ | Excess [B-D] If B>D | Balance Available within criteria [D-B] If D>B |
|---|-------------|-------------------------------|----------------------------|-------------------|--|------------------------|---|
| Combined Asset-A :2009-14 Assets | | | | | | | |
| Asset-A | SS | 22042.15 | 0 | 2.5 | 565.18 | 0.00 | 565.18 |
| Asset-B | SS | 8380.35 | 0 | 2.5 | 214.88 | 0.00 | 214.88 |
| Asset-C | SS | 1748.99 | 0 | 2.5 | 44.85 | 0.00 | 44.85 |
| Asset-D | SS | 4897.71 | 0 | 2.5 | 125.58 | 0.00 | 125.58 |
| Asset-E | SS | 6276.85 | 200.15 | 2.5 | 155.81 | 44.34 | 0.00 |
| Asset-F | SS | 6510.86 | 0 | 2.5 | 166.95 | 0.00 | 166.95 |
| Asset-G | SS | 2432.70 | 0 | 2.5 | 62.38 | 0.00 | 62.38 |
| Asset-A | TL | 25674.89 | 0 | 0.75 | 194.02 | 0.00 | 194.02 |
| Asset-B | TL | 0.00 | 0 | 0.75 | 0.00 | 0.00 | 0.00 |
| Asset-C | TL | 1225.45 | 0 | 0.75 | 9.26 | 0.00 | 9.26 |
| Asset-D | TL | 0 | 0 | 0.75 | 0.00 | 0.00 | 0.00 |
| Asset-E | TL | 0.00 | 0 | 0.75 | 0.00 | 0.00 | 0.00 |
| Asset-F | TL | 0.00 | 0 | 0.75 | 0.00 | 0.00 | 0.00 |
| Asset-G | TL | 0.00 | 0 | 0.75 | 0.00 | 0.00 | 0.00 |
| Asset-B&C:2014-19 Assets | | | | | | | |
| Asset-B | SS | 39954.59 | 1992.01 | 4 | 1581.77 | 410.24 | 0.00 |
| Asset-C | SS | 4365.51 | 0 | 4 | 181.90 | 0.00 | 181.90 |
| Asset-B | TL | 46630.23 | 427.98 | 1 | 466.69 | 0.00 | 38.71 |
| Asset-C | TL | 5944.16 | 45.51 | 1 | 59.58 | 0.00 | 14.07 |

23. The Petitioner has submitted that total Initial Spares claimed for Sub-station and transmission line is ₹2192.16 lakh and ₹473.49 lakh against allowable limit of ₹3099.30 lakh and ₹729.55 lakh respectively. The Petitioner has requested to allow the total Initial Spares as claimed.

24. MPPMCL has raised its concern over the applicability of APTEL's judgment in Appeal No. 74/2017 in the instant petition as the transmission line, sub-station and reactor are separate assets with different COD and cannot be clubbed for calculating the cost of Initial Spares.



25. In response, the Petitioner *vide* affidavit dated 16.8.2021 has re-submitted the components. The Petitioner has further submitted that the Commission *vide* order dated 10.12.2018 in the Petition No. 101/TT/2018 disallowed ₹44.34 lakh on account of excess Initial Spares in case of Combined Asset-A and *vide* order dated 31.5.2016 in the Petition No. 418/TT/2014 disallowed ₹389.91 lakh on account of excess Initial Spares in case of Asset-B, however, as per APTEL's judgment in Appeal No. 74 of 2017, Initial Spares have been calculated on project level. Therefore, disallowed Initial Spares of ₹44.34 lakh and ₹389.91 lakh has been added in the admitted capital cost of the Combined Asset-A and Asset-B.

26. TANGEDCO during the hearing dated 17.8.2021 submitted that the APTEL's judgment dated 14.9.2019 in the Appeal No. 74 of 2017 is contradictory to the APTEL's earlier judgment dated 28.11.2013 in the Appeal No. 165 of 2012, which is required to be clarified by a larger bench of APTEL and in the meanwhile Initial Spares may be allowed as per the APTEL's judgment in the Appeal No. 165 of 2012. In response, the Petitioner during the hearing has submitted that the APTEL in the judgment dated 14.9.2019 in Appeal No. 74 of 2017 has discussed about its judgment dated 28.11.2013 in the Appeal No. 165 of 2012 and clarified that Initial Spares are to be allowed as per the norms on the overall project cost basis at the time of true-up.

27. TANGEDCO *vide* affidavit dated 27.8.2021 filed its reply and reiterated the same submissions as it made during the course of hearing dated 17.8.2021 and requested that Initial Spares may be restricted based on the capital cost of the individual asset.



28. We have considered the submissions of the Petitioner, MPPMCL and TANGEDCO. Initial Spares are considered as per Regulation 8 of the 2009 Tariff Regulations and Regulation 13(d) of the 2014 Tariff Regulations.

29. The transmission assets of the Combined Asset-A in the transmission system with effective from COD of 5.1.2014 are combined during 2014-19 tariff period. As per the APTEL's judgment dated 14.9.2019 in Appeal No. 74 of 2017, Initial Spares are to be calculated on project level. However, transmission assets of the transmission system in the instant petition are combined at project level in 2019-24 period and accordingly allowed on the project as a whole in 2019-24 tariff period. Therefore, Initial Spares are allowed as a percentage of the project cost and plant & machinery cost of the transmission assets specified in the 2009 Tariff Regulations and the 2014 Tariff Regulations respectively as follows:

(₹ in lakh)

| Assets | Particulars | Plant and Machinery cost (excluding IDC and IEDC, land cost & cost of civil works) up to cut-off date (A) | Initial Spares Claimed (B) | Norms as per applicable Tariff Regulations (%) (C) | Initial Spares Allowable $D = [(A-B)*C / (100-C)]$ | Excess Initial Spares disallowed $E=(B-D)$ if $B>D$ | Initial Spares allowed $F=(B-E)$ |
|--|-------------------|---|----------------------------|--|--|---|----------------------------------|
| Combined Asset-A:2009-14 Assets | | | | | | | |
| Asset-A | Sub-station | 22042.15 | 0.00 | 2.50 | 565.18 | 0.00 | 0.00 |
| | Transmission Line | 25674.89 | 0.00 | 0.75 | 194.02 | 0.00 | 0.00 |
| Asset-B | Sub-station | 8380.35 | 0.00 | 2.50 | 214.88 | 0.00 | 0.00 |
| | Transmission Line | 0.00 | 0.00 | 0.75 | 0.00 | 0.00 | 0.00 |
| Asset-C | Sub-station | 1748.99 | 0.00 | 2.50 | 44.85 | 0.00 | 0.00 |



| Assets | Particulars | Plant and Machinery cost (excluding IDC and IEDC, land cost & cost of civil works) up to cut-off date (A) | Initial Spares Claimed (B) | Norms as per applicable Tariff Regulations (%) (C) | Initial Spares Allowable $D = [(A-B)*C / (100-C)]$ | Excess Initial Spares disallowed $E=(B-D)$ if $B>D$ | Initial Spares allowed $F=(B-E)$ |
|-------------------------------------|-------------------|---|----------------------------|--|--|---|----------------------------------|
| | Transmission Line | 1225.45 | 0.00 | 0.75 | 9.26 | 0.00 | 0.00 |
| Asset-D | Sub-station | 4897.71 | 0.00 | 2.50 | 125.58 | 0.00 | 0.00 |
| | Transmission Line | 0 | 0.00 | 0.75 | 0.00 | 0.00 | 0.00 |
| Asset-E | Sub-station | 6276.85 | 200.15 | 2.50 | 155.81 | 44.34 | 155.81 |
| | Transmission Line | 0.00 | 0.00 | 0.75 | 0.00 | 0.00 | 0.00 |
| Asset-F | Sub-station | 6510.86 | 0.00 | 2.50 | 166.95 | 0.00 | 0.00 |
| | Transmission Line | 0.00 | 0.00 | 0.75 | 0.00 | 0.00 | 0.00 |
| Asset-G | Sub-station | 2432.70 | 0.00 | 2.50 | 62.38 | 0.00 | 0.00 |
| | Transmission Line | 0.00 | 0.00 | 0.75 | 0.00 | 0.00 | 0.00 |
| Asset-B&C:2014-19 Assets | | | | | | | |
| Asset-B | Sub-station | 39954.59 | 1992.01 | 4.00 | 1581.77 | 410.24 | 1581.77 |
| | Transmission Line | 46630.23 | 427.98 | 1.00 | 466.69 | 0.00 | 427.98 |
| Asset-C | Sub-station | 4365.51 | 0.00 | 4.00 | 181.90 | 0.00 | 0.00 |
| | Transmission Line | 5944.16 | 45.51 | 1.00 | 59.58 | 0.00 | 45.51 |

30. The Commission *vide* order dated 10.12.2018 in the Petition No. 101/TT/2018 has determined that the excess capitalized Initial Spares of ₹44.34 lakh at asset level pertaining to Asset-E of the Combined Asset-A (considered in the instant order) based on the initially submitted Auditor's Certificate dated 7.11.2017 of Asset-E and Asset-F and accordingly reduced the same from the claimed ACE of 2014-15 (₹14.47 lakh) and 2015-16 (₹29.87 lakh) as per the discharge statement of Initial Spares. Further, the excess Initial Spares in respect of Asset-B has been deducted from the capital cost as on COD in line with the treatment done in order dated 31.5.2016 in Petition No. 418/TT/2014.



Capital Cost as on COD

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

32. We have considered the submissions of the Petitioner. The details of capital cost approved as on COD after adjustment of IDC, IEDC and Initial Spares are as follows:

(₹ in lakh)

| Assets | Capital Cost claimed as on COD/ 31.3.2014 (A) | Un-discharged IDC (B) | IDC Disallowed due to computational error (C) | IEDC Disallowed due to time over-run (D) | Excess Initial Spares disallowed (E) | Capital Cost allowed as on 1.4.2014/ COD (F) = (A-B-C-D-E) |
|------------------|---|-----------------------|---|--|--------------------------------------|--|
| Combined Asset-A | 63856.90 | 75.34 | 3.95 | 0.00 | 0.00 | 63777.61 |
| Asset-B | 79050.82 | 498.01 | 13.49 | 0.00 | 410.24 | 78129.08 |
| Asset-C | 10883.74 | 163.02 | 0.00 | 0.00 | 0.00 | 10720.72 |

Additional Capital Expenditure ("ACE")

33. The Commission had disallowed ACE of ₹465.30 lakh for 2017-18 in respect of Asset-A of the Combined Asset-A (considered in the instant order) for the period from COD to 31.3.2017 *vide* order dated 10.12.2018 in Petition No. 101/TT/2018 as the Petitioner has not specified the reason for fresh ACE after the cut-off date. Further, the Commission had allowed ACE in respect of Asset-B and Asset-C for the period from COD to 31.3.2019 *vide* order dated 31.5.2016 in Petition No. 418/TT/2014 under Regulation 14(1) of the 2014 Tariff Regulations. The entitled un-discharged IDC and Initial Spares liability as on COD was allowed as ACE during the year of its discharge.



34. The details of ACE allowed by the Commission *vide* order dated 10.12.2018 in Petition No. 101/TT/2018 in respect of the Combined Asset-A and order dated 31.5.2016 in Petition No. 418/TT/2014 in respect of Asset-B and Asset-C are as follows:

| Assets | ACE | | | | |
|------------------|---------|---------|---------|---------|---------|
| | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Combined Asset-A | 9679.88 | 3550.20 | 1860.60 | 367.39 | 0.00 |
| Asset-B | 1142.10 | 5978.88 | 9334.90 | 2313.47 | 0.00 |
| Asset-C | 0.00 | 0.00 | 1411.03 | 425.05 | 0.00 |

35. The Petitioner in the instant petition has claimed ACE in respect of the Combined Asset-A, Asset-B and Asset-C up to the cut-off date in accordance with Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations and for ACE incurred after cut-off date in accordance with Regulation 14(2)(iv) and Regulation 14(3)(v) of the 2014 Tariff Regulations. The details of ACE claimed by the Petitioner in respect of the Combined Asset-A, Asset-B and Asset-C are as follows:

| Assets | Approved Cost | Cost as on COD/ 31.3.2014 | ACE | | | | | Total Cost as on 31.03.2019 |
|------------------|---------------|---------------------------|---------|---------|---------|---------|---------|-----------------------------|
| | | | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | |
| Combined Asset A | 81906.89 | 63777.62 | 9698.28 | 3580.07 | 1860.61 | 273.36 | 0.00 | 79193.89* |
| Asset B | 98467.68 | 78539.33 | 1142.10 | 5978.88 | 5288.70 | 5581.01 | 149.58 | 96679.59 |
| Asset C | 13683.17 | 10720.72 | 0.00 | 0.00 | 1084.47 | 337.45 | 228.53 | 12371.17 |

(*sic ₹ 79189.94 – Totalling error by Petitioner)

36. The Petitioner *vide* affidavit dated 14.7.2021 has submitted that ACE claimed under instant petition is lower than the ACE approved *vide* order dated 31.5.2016 in Petition No. 418/TT/2014 for Asset-B and Asset-C. The Petitioner has further



submitted that ACE as claimed in the instant Petition is on the basis of actual payments made to the contractor after receipt of final invoices from the contractor and incorporating the amendments. It is further submitted that the payments were made after submission of invoice and after reconciliation in accordance with contractual clause as per provision of contract and has requested to allow the same as claimed.

37. We have considered the submissions of the Petitioner. ACE claimed by the Petitioner is lower than the ACE approved vide order dated 10.12.2018 in Petition No. 101/TT/2018 in respect of the Combined Asset-A and order dated 31.5.2016 in Petition No. 418/TT/2014 in respect of Asset-B and Asset-C. ACE claimed by the Petitioner is allowed under Regulation 14(1)(i), Regulation 14(1)(ii), Regulation 14(2)(iv) and Regulation 14(3)(v) of the 2014 Tariff Regulations. The un-discharged IDC liability as on COD has been allowed as ACE during the year of its discharge. The allowed ACE is as follows:

(₹ in lakh)

| Assets | Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|------------------|------------------------------------|----------------|----------------|----------------|----------------|---------------|
| Combined Asset-A | ACE as per Auditor's Certificate | 9619.01 | 3580.06 | 1860.61 | 273.36 | 0.00 |
| | IDC discharged during the year | 75.34 | 0.00 | 0.00 | 0.00 | 0.00 |
| | Excess Initial Spares Disallowed | 14.47 | 29.87 | 0.00 | 0.00 | 0.00 |
| | ACE allowed during the year | 9679.88 | 3550.19 | 1860.61 | 273.36 | 0.00 |
| Asset-B | ACE as per Auditor's Certificate | 973.74 | 5635.75 | 5288.70 | 5581.01 | 149.58 |
| | IDC discharged during the year | 168.36 | 329.65 | 0.00 | 0.00 | 0.00 |
| | Excess Initial Spares | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | ACE allowed during the year | 1142.10 | 5965.40 | 5288.70 | 5581.01 | 149.58 |
| Asset-C | ACE as per Auditor's Certificate | 0.00 | 0.00 | 921.45 | 337.45 | 228.53 |



| Assets | Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--------|------------------------------------|-------------|-------------|----------------|---------------|---------------|
| | IDC discharged during the year | 0.00 | 0.00 | 163.02 | 0.00 | 0.00 |
| | Excess Initial Spares | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | ACE allowed during the year | 0.00 | 0.00 | 1084.47 | 337.45 | 228.53 |

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

(₹ in lakh)

| Assets | Approved Apportioned Capital Cost (as per RCE) | Capital cost as on 1.4.2014/ COD | ACE allowed | | | | | Capital Cost as on 31.3.2019 |
|------------------|--|----------------------------------|-------------|---------|---------|---------|---------|------------------------------|
| | | | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | |
| Combined Asset-A | 81906.89 | 63777.61 | 9679.88 | 3550.19 | 1860.61 | 273.36 | 0.00 | 79141.65 |
| Asset-B | 98467.68 | 78129.08 | 1142.10 | 5965.40 | 5288.70 | 5581.01 | 149.58 | 96255.88 |
| Asset-C | 13683.17 | 10720.72 | 0.00 | 0.00 | 1084.47 | 337.45 | 228.53 | 12371.17 |

Debt-Equity ratio

39. The Petitioner has claimed debt-equity ratio of 70:30 as on COD and as on 31.3.2019 in respect of the transmission assets in the instant petition. The Petitioner vide affidavit dated 14.7.2021 has submitted that due to an inadvertent error, for ACE during 2015-16, the amount of Bond LI for Asset-A of the Combined Asset-A was mentioned as ₹1428.70 lakh instead of ₹1326.89 lakh in Petition No. 101/TT/2018 hence, debt-equity ratio in respect of the Combined Asset-A was determined as 72.81:27.19 which has been corrected in the instant petition and has requested to consider the same.

40. We have considered the submissions of the Petitioner and debt-equity ratio of 70:30 is considered as provided under Regulation 19 of the 2014 Tariff Regulations. The details of debt-equity as on COD/1.4.2014 and as on 31.3.2019 for Combined



Asset-A, Asset-B and Asset-C considered for the purpose of tariff of 2014-19 period are as follows:

Combined Asset-A

(₹ in lakh)

| Funding | Capital Cost (as on 1.4.2014) (₹ in lakh) | (in %) | ACE During 2014-19 (₹ in lakh) | (in %) | Total Capital Cost (as on 31.3.2019) (₹ in lakh) | (in %) |
|--------------|---|---------------|--------------------------------------|---------------|--|---------------|
| Debt | 44644.33 | 70.00 | 10754.83 | 70.00 | 55399.16 | 70.00 |
| Equity | 19133.28 | 30.00 | 4609.21 | 30.00 | 23742.50 | 30.00 |
| Total | 63777.61 | 100.00 | 15364.04 | 100.00 | 79141.65 | 100.00 |

Asset-B

(₹ in lakh)

| Funding | Capital Cost as on COD (₹ in lakh) | (in %) | ACE in 2014-19 (₹ in lakh) | (in %) | Total Capital Cost as on 31.3.2019 (₹ in lakh) | (in %) |
|--------------|--|---------------|----------------------------------|---------------|--|---------------|
| Debt | 54690.36 | 70.00 | 12688.76 | 70.00 | 67379.11 | 70.00 |
| Equity | 23438.73 | 30.00 | 5438.04 | 30.00 | 28876.76 | 30.00 |
| Total | 78129.08 | 100.00 | 18126.79 | 100.00 | 96255.88 | 100.00 |

Asset-C

(₹ in lakh)

| Funding | Capital Cost as on COD (₹ in lakh) | (in %) | ACE in 2014-19 (₹ in lakh) | (in %) | Total Capital Cost as on 31.3.2019 (₹ in lakh) | (in %) |
|--------------|--|---------------|-------------------------------|---------------|--|---------------|
| Debt | 7504.50 | 70.00 | 1155.32 | 70.00 | 8659.82 | 70.00 |
| Equity | 3216.22 | 30.00 | 495.14 | 30.00 | 3711.35 | 30.00 |
| Total | 10720.72 | 100.00 | 1650.45 | 100.00 | 12371.17 | 100.00 |

Depreciation

41. The Petitioner’s claim towards depreciation in respect of the Combined Asset-A and Asset-B has been found to be higher than the depreciation allowed for the transmission assets vide order dated 10.12.2018 in Petition No. 101/TT/2018 and order dated 31.5.2016 in Petition No. 418/TT/2014. The Petitioner has neither given any justification for claiming higher depreciation than that allowed earlier vide order dated 10.12.2018 in Petition No. 101/TT/2018 and order dated 31.5.2016 in Petition



No. 418/TT/2014 nor made any specific prayer for allowing higher depreciation in the instant petition. Similar issue had come up in Petition No. 19/TT/2020, wherein, depreciation has been considered @ 5.28% for IT Equipment as part of the sub-station up to 31.3.2019 while truing up the capital expenditure for 2014-19 period in respect of the transmission assets. The Gross Block during 2014-19 tariff period has been depreciated at Weighted Average Rate of Depreciation (WAROD). WAROD at Annexure-I has been worked out after taking into account the depreciation rates of asset as prescribed in the 2014 Tariff Regulations and trued-up depreciation allowed during 2014-19 tariff period is as follows:

Combined Asset-A

(₹ in lakh)

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--|----------------|----------------|----------------|----------------|----------------|
| Opening Gross Block | 63777.61 | 73457.49 | 77007.68 | 78868.29 | 79141.65 |
| ACE | 9679.88 | 3550.19 | 1860.61 | 273.36 | 0.00 |
| Closing Gross Block | 73457.49 | 77007.68 | 78868.29 | 79141.65 | 79141.65 |
| Average Gross Block | 68617.55 | 75232.59 | 77937.99 | 79004.97 | 79141.65 |
| Freehold land | 1476.04 | 1709.30 | 1787.65 | 1825.15 | 1825.15 |
| Weighted average rate of Depreciation (WAROD) (in %) | 5.03 | 5.01 | 4.99 | 4.99 | 4.99 |
| Balance useful life of the asset (Year) | 29 | 28 | 27 | 26 | 25 |
| Lapsed life (Year) | 0 | 1 | 2 | 3 | 4 |
| Aggregate Depreciable Value | 60427.36 | 66170.95 | 68535.2982 | 69461.83 | 69584.85 |
| Combined Depreciation during the year | 3451.07 | 3766.05 | 3889.11 | 3942.59 | 3949.80 |
| Aggregate Cumulative depreciation at the end of the year | 4185.25 | 7951.31 | 11840.41 | 15783.00 | 19732.80 |
| Remaining Aggregate Depreciable Value at the end of the year | 56242.11 | 58219.65 | 56694.89 | 53678.84 | 49852.05 |



Asset-B

(₹ in lakh)

| Particulars | 2014-15 (Pro-rata 26 days) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--|----------------------------------|----------------|----------------|----------------|----------------|
| Opening Gross Block | 78129.08 | 79271.18 | 85236.59 | 90525.29 | 96106.30 |
| ACE | 1142.10 | 5965.40 | 5288.70 | 5581.01 | 149.58 |
| Closing Gross Block | 79271.18 | 85236.59 | 90525.29 | 96106.30 | 96255.88 |
| Average Gross Block | 78700.13 | 82253.89 | 87880.94 | 93315.79 | 96181.09 |
| Freehold land | 1411.89 | 1411.89 | 1619.33 | 1905.99 | 1985.20 |
| Weighted average rate of Depreciation (WAROD) (in %) | 5.13 | 5.12 | 5.09 | 5.08 | 5.08 |
| Balance useful life of the asset (Year) | 30 | 30 | 29 | 28 | 27 |
| Lapsed life (Year) | 0 | 0 | 1 | 2 | 3 |
| Aggregate Depreciable Value | 69559.42 | 72757.80 | 77635.45 | 82268.83 | 84776.30 |
| Combined Depreciation during the year | 287.58 | 4208.47 | 4474.82 | 4741.02 | 4886.78 |
| Aggregate Cumulative depreciation at the end of the year | 287.58 | 4496.05 | 8970.87 | 13711.89 | 18598.67 |
| Remaining Aggregate Depreciable Value at the end of the year | 69271.84 | 68261.75 | 68664.58 | 68556.94 | 66177.63 |

Asset-C

(₹ in lakh)

| Particulars | 2016-17 (Pro-rata 361 days) | 2017-18 | 2018-19 |
|---------------------|-----------------------------------|----------|----------|
| Opening Gross Block | 10720.72 | 11805.19 | 12142.64 |
| ACE | 1084.47 | 337.45 | 228.53 |
| Closing Gross Block | 11805.19 | 12142.64 | 12371.17 |
| Average Gross Block | 11262.96 | 11973.92 | 12256.91 |



| Particulars | 2016-17 (Pro-rata 361 days) | 2017-18 | 2018-19 |
|--|-----------------------------------|---------------|---------------|
| Freehold land | 0.00 | 0.00 | 0.00 |
| Weighted average rate of Depreciation (WAROD) (in %) | 5.19 | 5.19 | 5.20 |
| Balance useful life of the asset (Year) | 30 | 30 | 29 |
| Lapsed life (Year) | 0 | 0 | 1 |
| Aggregate Depreciable Value | 10136.66 | 10776.52 | 11031.21 |
| Combined Depreciation during the year | 578.41 | 621.94 | 636.88 |
| Aggregate Cumulative depreciation at the end of the year | 578.41 | 1200.35 | 1837.23 |
| Remaining Aggregate Depreciable Value at the end of the year | 9558.25 | 9576.18 | 9193.99 |

42. The details of depreciation allowed *vide* order dated 10.12.2018 in Petition No. 101/TT/2018 in respect of the Combined Asset-A and order dated 31.5.2016 in Petition No. 418/TT/2014 in respect of Asset-B and Asset-C, claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

Combined Asset-A

(₹ in lakh)

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--|---------|---------|---------|---------|---------|
| Allowed <i>vide</i> order dated 10.12.2018 in Petition No. 101/TT/2018 | 3451.07 | 3766.06 | 3889.11 | 3945.08 | 3954.77 |
| Claimed by the Petitioner in the instant petition | 3472.49 | 3788.76 | 3912.60 | 3966.07 | 3973.29 |
| Approved after true-up in this order | 3451.07 | 3766.05 | 3889.11 | 3942.59 | 3949.80 |

Asset-B

(₹ in lakh)

| Particulars | 2014-15 (Pro-rata 26 days) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---|----------------------------------|---------|---------|---------|---------|
| Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 418/TT/2014 | 287.68 | 4210.05 | 4558.17 | 4819.39 | 4874.66 |



| Particulars | 2014-15 (Pro-rata 26 days) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---|----------------------------------|----------------|----------------|----------------|----------------|
| Claimed by the Petitioner in the instant petition | 290.84 | 4254.73 | 4521.48 | 4787.67 | 4933.43 |
| Approved after true-up in this order | 287.58 | 4208.47 | 4474.82 | 4741.02 | 4886.78 |

Asset-C

(₹ in lakh)

| Particulars | 2016-17 (Pro-rata 361 days) | 2017-18 | 2018-19 |
|--|-----------------------------------|---------|---------|
| Allowed vide order dated 31.5.2016 in Petition No. 418/TT/2014 | 586.34 | 639.82 | 650.60 |
| Claimed by the Petitioner in the instant petition | 579.79 | 623.33 | 638.28 |
| Approved after true-up in this order | 578.41 | 621.94 | 636.88 |

Interest on Loan ("IoL")

43. The Petitioner has claimed the weighted average rate of IoL based on its actual loan portfolio and rate of interest. We have considered the submissions of the Petitioner. IoL has been calculated based on actual interest rate submitted by the Petitioner in accordance with Regulation 26 of the 2014 Tariff Regulations. The trued-up IoL allowed in respect of the transmission assets are as follows:

Combined Asset-A

(₹ in lakh)

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---|----------|----------|----------|----------|----------|
| Gross Normative Loan | 44644.33 | 51420.24 | 53905.38 | 55207.80 | 55399.16 |
| Cumulative Repayments up to Previous Year | 734.18 | 4185.25 | 7951.31 | 11840.41 | 15783.00 |
| Net Loan-Opening | 43910.15 | 47234.99 | 45954.07 | 43367.39 | 39616.16 |
| Additions due to ACE | 6775.92 | 2485.13 | 1302.43 | 191.35 | 0.00 |
| Repayment during the year | 3451.07 | 3766.05 | 3889.11 | 3942.59 | 3949.80 |
| Net Loan-Closing | 47234.99 | 45954.07 | 43367.39 | 39616.16 | 35666.36 |
| Average Loan | 45572.57 | 46594.53 | 44660.73 | 41491.78 | 37641.26 |



| | | | | | |
|--|----------------|----------------|----------------|----------------|----------------|
| Weighted Average Rate of Interest on Loan (in %) | 3.0232 | 3.7707 | 4.5137 | 4.8818 | 5.4972 |
| Interest on Loan | 1377.76 | 1756.92 | 2015.86 | 2025.56 | 2069.23 |

Asset-B

(₹ in lakh)

| Particulars | 2014-15 (Pro-rata 26 days) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--|----------------------------------|----------------|----------------|----------------|----------------|
| Gross Normative Loan | 54690.36 | 55489.83 | 59665.61 | 63367.70 | 67274.41 |
| Cumulative Repayments up to Previous Year | 0.00 | 287.58 | 4496.05 | 8970.87 | 13711.89 |
| Net Loan-Opening | 54690.36 | 55202.25 | 55169.56 | 54396.84 | 53562.52 |
| Additions due to ACE | 799.47 | 4175.78 | 3702.09 | 3906.71 | 104.71 |
| Repayment during the year | 287.58 | 4208.47 | 4474.82 | 4741.02 | 4886.78 |
| Net Loan-Closing | 55202.25 | 55169.56 | 54396.84 | 53562.52 | 48780.45 |
| Average Loan | 54946.30 | 55185.91 | 54783.20 | 53979.68 | 51171.48 |
| Weighted Average Rate of Interest on Loan (in %) | 2.5502 | 2.9850 | 3.8578 | 4.3693 | 5.1654 |
| Interest on Loan | 99.81 | 1647.28 | 2113.40 | 2358.51 | 2643.23 |

Asset-C

(₹ in lakh)

| Particulars | 2016-17 (Pro-rata 361 days) | 2017-18 | 2018-19 |
|--|-----------------------------------|---------------|---------------|
| Gross Normative Loan | 7504.50 | 8263.63 | 8499.85 |
| Cumulative Repayments up to Previous Year | 0.00 | 578.41 | 1200.35 |
| Net Loan-Opening | 7504.50 | 7685.22 | 7299.50 |
| Additions due to ACE | 759.13 | 236.22 | 159.97 |
| Repayment during the year | 578.41 | 621.94 | 636.88 |
| Net Loan-Closing | 7685.22 | 7299.50 | 6822.59 |
| Average Loan | 7594.86 | 7492.36 | 7061.05 |
| Weighted Average Rate of Interest on Loan (in %) | 5.0450 | 5.5549 | 6.1861 |
| Interest on Loan | 378.96 | 416.19 | 436.80 |

44. The details of IoL allowed *vide* order dated 10.12.2018 in Petition No. 101/TT/2018 in respect of the Combined Asset-A and order dated 31.5.2016 in Petition No. 418/TT/2014 in respect of Asset-B and Asset-C, claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:



Combined Asset-A

(₹ in lakh)

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--|---------|---------|---------|---------|---------|
| Allowed <i>vide</i> order dated 10.12.2018 in Petition No. 101/TT/2018 | 1367.18 | 1688.53 | 1714.33 | 1627.47 | 1470.50 |
| Claimed by the Petitioner in the instant petition | 1377.62 | 1756.59 | 2014.86 | 2023.32 | 2065.42 |
| Approved after true-up in this order | 1377.76 | 1756.92 | 2015.86 | 2025.56 | 2069.23 |

Asset-B

(₹ in lakh)

| Particulars | 2014-15 (Pro-rata 26 days) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---|----------------------------------|---------|---------|---------|---------|
| Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 418/TT/2014 | 99.63 | 1564.97 | 1738.45 | 1742.33 | 1619.55 |
| Claimed by the Petitioner in the instant petition | 100.33 | 1655.22 | 2122.28 | 2366.27 | 2649.95 |
| Approved after true-up in this order | 99.81 | 1647.28 | 2113.40 | 2358.51 | 2643.23 |

Asset-C

(₹ in lakh)

| Particulars | 2016-17 (Pro-rata 361 days) | 2017-18 | 2018-19 |
|---|-----------------------------------|---------|---------|
| Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 418/TT/2014 | 352.27 | 362.57 | 344.31 |
| Claimed by the Petitioner in the instant petition | 378.93 | 416.06 | 436.59 |
| Approved after true-up in this order | 378.96 | 416.19 | 436.80 |

Return on Equity ("RoE")

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



| Year | Claimed effective tax rate (in %) | Grossed-up RoE (in %) [(Base Rate)/(1-t)] |
|---------|-----------------------------------|---|
| 2014-15 | 21.0177% | 19.625 |
| 2015-16 | 21.3819% | 19.716 |
| 2016-17 | 21.3384% | 19.705 |
| 2017-18 | 21.3371% | 19.704 |
| 2018-19 | 21.5488% | 19.758 |

46. The Commission *vide* order dated 27.4.2020 in Petition No. 274/TT/2019, has arrived at the effective tax rate for the Petitioner based on the notified MAT rates and the same is 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 |

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

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

48. The Petitioner has claimed RoE for 2014-19 tariff period after grossing up the RoE @15.50% with effective tax rates (based on MAT rates) each year as per the above said Regulation. RoE is trued-up on the basis of MAT rates applicable in the respective years and is allowed in respect of the transmission assets as follows:



Combined Asset-A

(₹ in lakh)

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|-------------------------------------|----------------|----------------|----------------|----------------|----------------|
| Opening Equity | 19133.28 | 22037.25 | 23102.30 | 23660.49 | 23742.50 |
| Additions due to ACE | 2903.96 | 1065.06 | 558.18 | 82.01 | 0.00 |
| Closing Equity | 22037.25 | 23102.30 | 23660.49 | 23742.50 | 23742.50 |
| Average Equity | 20585.27 | 22569.78 | 23381.40 | 23701.49 | 23742.50 |
| 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 | 4036.77 | 4447.37 | 4607.30 | 4670.38 | 4691.04 |

Asset-B

(₹ in lakh)

| Particulars | 2014-15 (Pro-rata 26 days) | 2015-16 | 2016- 17 | 2017-18 | 2018-19 |
|-------------------------------------|----------------------------------|----------------|----------------|----------------|----------------|
| Opening Equity | 23438.73 | 23781.36 | 25570.9 8 | 27157.59 | 28831.89 |
| Additions due to ACE | 342.63 | 1789.62 | 1586.61 | 1674.30 | 44.87 |
| Closing Equity | 23781.36 | 25570.98 | 27157.5 9 | 28831.89 | 28876.76 |
| Average Equity | 23610.04 | 24676.17 | 26364.2 8 | 27994.74 | 28854.33 |
| 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 | 329.80 | 4862.44 | 5195.08 | 5516.36 | 5701.04 |

Asset-C

(₹ in lakh)

| Particulars | 2016-17 (Pro-rata 361 days) | 2017-18 | 2018-19 |
|-------------------------------------|-----------------------------------|---------------|---------------|
| Opening Equity | 3216.22 | 3541.56 | 3642.79 |
| Additions due to ACE | 325.34 | 101.24 | 68.56 |
| Closing Equity | 3541.56 | 3642.79 | 3711.35 |
| Average Equity | 3378.89 | 3592.17 | 3677.07 |
| Return on Equity(Base Rate) (in %) | 15.500 | 15.500 | 15.500 |
| MAT Rate for respective year (in %) | 21.342 | 21.342 | 21.549 |
| Rate of Return on Equity (in %) | 19.705 | 19.705 | 19.758 |
| Return on Equity | 658.51 | 707.84 | 726.52 |

49. The details of RoE allowed *vide* order dated 10.12.2018 in Petition No. 101/TT/2018 in respect of the Combined Asset-A and order dated 31.5.2016 in



Petition No. 418/TT/2014 in respect of Asset-B and Asset-C, claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

Combined Asset-A

(₹ in lakh)

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--|---------|---------|---------|---------|---------|
| Allowed <i>vide</i> order dated 10.12.2018 in Petition No. 101/TT/2018 | 4036.96 | 4416.36 | 4565.74 | 4631.28 | 4642.08 |
| Claimed by the Petitioner in the instant petition | 4040.39 | 4451.59 | 4610.14 | 4673.22 | 4693.89 |
| Approved after true-up in this order | 4036.77 | 4447.37 | 4607.30 | 4670.38 | 4691.04 |

Asset-B

(₹ in lakh)

| Particulars | 2014-15 (Pro-rata 26 days) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---|----------------------------------|---------|---------|---------|---------|
| Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 418/TT/2014 | 329.89 | 4840.59 | 5291.04 | 5633.68 | 5701.73 |
| Claimed by the Petitioner in the instant petition | 331.78 | 4889.57 | 5220.13 | 5541.41 | 5726.15 |
| Approved after true-up in this order | 329.80 | 4862.44 | 5195.08 | 5516.36 | 5701.04 |

Asset-C

(₹ in lakh)

| Particulars | 2016-17 (Pro-rata 361 days) | 2017-18 | 2018-19 |
|---|-----------------------------------|---------|---------|
| Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 418/TT/2014 | 664.84 | 726.21 | 738.72 |
| Claimed by the Petitioner in the instant petition | 658.51 | 707.84 | 726.51 |
| Approved after true-up in this order | 658.51 | 707.84 | 726.52 |

Operation & Maintenance Expenses ("O&M Expenses")

50. O&M Expenses claimed by the Petitioner in respect of the transmission assets are as follows:



Combined Asset-A

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|
| Transmission Line S/C (Bundled – 4 or more sub conductor) | | | | | |
| 765 kV S/C Raichur-Sholapur Transmission Line (km) | 207.754 | 207.754 | 207.754 | 207.754 | 207.754 |
| Norms (₹ lakh/km) | 0.606 | 0.627 | 0.647 | 0.669 | 0.691 |
| O&M Expenses (₹ in lakh) | 125.90 | 130.26 | 134.42 | 138.99 | 143.56 |
| Transmission Line D/C (Bundled – 4 or more sub conductor) | | | | | |
| 400 kV LILO Raichur-Gooty Transmission Line at Raichur (km) | 5.202 | 5.202 | 5.202 | 5.202 | 5.202 |
| Norms (₹ lakh/km) | 1.062 | 1.097 | 1.133 | 1.171 | 1.210 |
| O&M Expenses (₹ in lakh) | 5.52 | 5.71 | 5.89 | 6.09 | 6.29 |
| Sub-station Bays 765 kV (Conventional) | | | | | |
| Raichur 765 kV Bays | 4 | 4 | 4 | 4 | 4 |
| Sholapur 765 kV Bays | 6 | 6 | 6 | 6 | 6 |
| Norms (₹ lakh/bay) | 84.42 | 87.22 | 90.12 | 93.11 | 96.2 |
| O&M Expenses (₹ in lakh) | 844.20 | 872.20 | 901.20 | 931.10 | 962.00 |
| Sub-station Bays 400 kV (Conventional) | | | | | |
| Sholapur: 400 kV Bays | 2 | 2 | 2 | 2 | 2 |
| Raichur: 400 kV Bays | 6 | 6 | 6 | 6 | 6 |
| Norms (₹ lakh/bay) | 60.3 | 62.3 | 64.37 | 66.51 | 68.71 |
| O&M Expenses (₹ in lakh) | 482.40 | 498.40 | 514.96 | 532.08 | 549.68 |
| Total O&M Expenses (₹ in lakh) | 1,458.02 | 1,506.57 | 1,556.47 | 1,608.26 | 1,661.53 |

Asset-B

| Particulars | 2014-15 (Pro-rata 26 days) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--|----------------------------------|---------------|---------------|---------------|---------------|
| Transmission Line S/C (Bundled – 4 or more sub conductor) | | | | | |
| 765 kV SC Sholapur-Pune Transmission Line (km) | 268.051 | 268.051 | 268.051 | 268.051 | 268.051 |
| Norms (₹ lakh/km) | 0.606 | 0.627 | 0.647 | 0.669 | 0.691 |
| O&M Expenses (₹ in lakh) | 162.44 | 168.07 | 173.43 | 179.33 | 185.22 |
| Transmission Line D/C (Bundled – 4 or more sub conductor) | | | | | |
| 765 kV Sholapur-Pune Transmission Line (km) | 1.476 | 1.476 | 1.476 | 1.476 | 1.476 |
| Norms (₹ lakh/km) | 1.062 | 1.097 | 1.133 | 1.171 | 1.21 |



| Particulars | 2014-15 (Pro-rata 26 days) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--|----------------------------------|---------------|---------------|----------------|----------------|
| O&M Expenses (₹ in lakh) | 1.57 | 1.62 | 1.67 | 1.73 | 1.79 |
| Transmission Line D/C (Twin/Triple Conductor) | | | | | |
| LILO of 400 kV D/C Parli-Pune | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 |
| Norms (₹ lakh/km) | 0.707 | 0.731 | 0.755 | 0.78 | 0.806 |
| O&M Expenses (₹ in lakh) | 1.84 | 1.90 | 1.96 | 2.03 | 2.10 |
| Transmission Line M/C (Twin/Triple Conductor) | | | | | |
| LILO of 400 kV D/C Parli-Pune | 8.50 | 8.50 | 8.50 | 8.50 | 8.50 |
| Norms (₹ lakh/km) | 1.24 | 1.282 | 1.324 | 1.368 | 1.413 |
| O&M Expenses (₹ in lakh) | 10.54 | 10.90 | 11.25 | 11.63 | 12.01 |
| Sub-station Bays 765 kV (Conventional) | | | | | |
| Raichur 765 kV Bays | 5 | 5 | 5 | 5 | 5 |
| Norms (₹ lakh/bay) | 84.42 | 87.22 | 90.12 | 93.11 | 96.20 |
| O&M Expenses (₹ in lakh) | 422.10 | 436.10 | 450.60 | 465.55 | 481.00 |
| Sub-station Bays 400 kV (GIS) | | | | | |
| Solapur: 400 kV Bays | 6 | 6 | 6 | 6 | 6 |
| Norms (₹ lakh/bay) | 51.54 | 53.25 | 55.02 | 56.84 | 58.73 |
| O&M Expenses (₹ in lakh) | 309.24 | 319.50 | 330.12 | 341.04 | 352.38 |
| Total O&M Expenses (₹ in lakh) | 64.63 | 938.09 | 969.03 | 1001.31 | 1034.50 |

Asset-C

| Particulars | 2016-17 (Pro-rata 361 days) | 2017-18 | 2018-19 |
|--|-----------------------------------|--------------|--------------|
| Transmission Line D/C (Twin/Triple conductor) | | | |
| LILO of 400 kV DC Aurangabad-Pune at Pune GIS (km) | 13.083 | 13.083 | 13.083 |
| Norms (₹ lakh/km) | 0.755 | 0.78 | 0.806 |
| O&M Expenses (₹ in lakh) | 9.88 | 10.20 | 10.54 |
| Transmission Line M/C (Twin/Triple conductor) | | | |
| LILO OF 400 kV MC Aurangabad-Pune at Pune GIS (km) | 7.811 | 7.811 | 7.811 |
| Norms (₹ lakh/km) | 1.989 | 2.055 | 2.123 |
| O&M Expenses (₹ in lakh) | 10.34 | 10.69 | 11.04 |
| Sub-station Bays 400 kV (Conventional) | | | |
| Pune- Aurangabad (1)- Bay | 1 | 1 | 1 |
| Pune- Aurangabad (2)- Bay | 1 | 1 | 1 |
| Pune- Pune (3)- Bay | 1 | 1 | 1 |
| Pune- Pune (3)- Bay | 1 | 1 | 1 |
| Norms (₹ lakh/bay) | 55.02 | 56.84 | 58.73 |



| Particulars | 2016-17 (Pro-rata 361 days) | 2017-18 | 2018-19 |
|---|-----------------------------------|---------------|---------------|
| O&M Expenses (₹ in lakh) | 220.08 | 227.36 | 234.92 |
| Total O&M Expenses (₹ in lakh) | 237.68 | 248.25 | 256.50 |

51. O&M Expenses are determined as per the norms under Regulation 29(3) of the 2014 Tariff Regulations and are as follows:

Combined Asset-A

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|
| Transmission Line S/C (Bundled – 4 or more sub conductor) | | | | | |
| 765 kV S/C Raichur-Sholapur Transmission Line (km) | 207.754 | 207.754 | 207.754 | 207.754 | 207.754 |
| Norms (₹ lakh/km) | 0.606 | 0.627 | 0.647 | 0.669 | 0.691 |
| O&M Expenses (₹ in lakh) | 125.90 | 130.26 | 134.42 | 138.99 | 143.56 |
| Transmission Line D/C (Bundled – 4 or more sub conductor) | | | | | |
| 400 kV LILO Raichur-Gooty Transmission Line at Raichur (km) | 5.202 | 5.202 | 5.202 | 5.202 | 5.202 |
| Norms (₹ lakh/km) | 1.062 | 1.097 | 1.133 | 1.171 | 1.210 |
| O&M Expenses (₹ in lakh) | 5.52 | 5.71 | 5.89 | 6.09 | 6.29 |
| Sub-station Bays 765 kV (Conventional) | | | | | |
| Raichur 765 kV Bays | 4 | 4 | 4 | 4 | 4 |
| Sholapur 765 kV Bays | 6 | 6 | 6 | 6 | 6 |
| Norms (₹ lakh/bay) | 84.42 | 87.22 | 90.12 | 93.11 | 96.2 |
| O&M Expenses (₹ in lakh) | 844.20 | 872.20 | 901.20 | 931.10 | 962.00 |
| Sub-station Bays 400 kV (Conventional) | | | | | |
| Sholapur: 400 kV Bays | 2 | 2 | 2 | 2 | 2 |
| Raichur: 400 kV Bays | 6 | 6 | 6 | 6 | 6 |
| Norms (₹ lakh/bay) | 60.3 | 62.3 | 64.37 | 66.51 | 68.71 |
| O&M Expenses (₹ in lakh) | 482.40 | 498.40 | 514.96 | 532.08 | 549.68 |
| Total O&M Expenses (₹ in lakh) | 1,458.02 | 1,506.57 | 1,556.47 | 1,608.26 | 1,661.53 |



Asset-B

| Particulars | 2014-15 (Pro-rata 26 days) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--|----------------------------------|---------------|---------------|----------------|----------------|
| Transmission Line S/C (Bundled – 4 or more sub conductor) | | | | | |
| 765 kV SC Sholapur-Pune Transmission Line (km) | 268.051 | 268.051 | 268.051 | 268.051 | 268.051 |
| Norms (₹ lakh/km) | 0.606 | 0.627 | 0.647 | 0.669 | 0.691 |
| O&M Expenses(₹ in lakh) | 162.44 | 168.07 | 173.43 | 179.33 | 185.22 |
| Transmission Line D/C (Bundled – 4 or more sub conductor) | | | | | |
| 765 kV Sholapur-Pune Transmission Line (km) | 1.476 | 1.476 | 1.476 | 1.476 | 1.476 |
| Norms (₹ lakh/km) | 1.062 | 1.097 | 1.133 | 1.171 | 1.21 |
| O&M Expenses (₹ in lakh) | 1.57 | 1.62 | 1.67 | 1.73 | 1.79 |
| Transmission Line D/C (Twin/Triple Conductor) | | | | | |
| LILO of 400 kV D/C Parli-Pune | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 |
| Norms (₹ lakh/km) | 0.707 | 0.731 | 0.755 | 0.78 | 0.806 |
| O&M Expenses (₹ in lakh) | 1.84 | 1.90 | 1.96 | 2.03 | 2.10 |
| Transmission Line M/C (Twin/Triple Conductor) | | | | | |
| LILO of 400 kV D/C Parli-Pune | 8.50 | 8.50 | 8.50 | 8.50 | 8.50 |
| Norms (₹ lakh/km) | 1.24 | 1.282 | 1.324 | 1.368 | 1.413 |
| O&M Expenses (₹ in lakh) | 10.54 | 10.90 | 11.25 | 11.63 | 12.01 |
| Sub-station Bays 765 kV (Conventional) | | | | | |
| Raichur 765 kV Bays | 5 | 5 | 5 | 5 | 5 |
| Norms (₹ lakh/bay) | 84.42 | 87.22 | 90.12 | 93.11 | 96.20 |
| O&M Expenses(₹ in lakh) | 422.10 | 436.10 | 450.60 | 465.55 | 481.00 |
| Sub-station Bays 400 kV (GIS) | | | | | |
| Sholapur: 400 kV Bays | 6 | 6 | 6 | 6 | 6 |
| Norms (₹ lakh/bay) | 51.54 | 53.25 | 55.02 | 56.84 | 58.73 |
| O&M Expenses (₹ in lakh) | 309.24 | 319.50 | 330.12 | 341.04 | 352.38 |
| Total O&M Expenses (₹ in lakh) | 64.66 | 938.08 | 969.04 | 1001.30 | 1034.50 |

Asset-C

| Particulars | 2016-17 (Pro-rata 361 days) | 2017-18 | 2018-19 |
|--|-----------------------------------|---------|---------|
| Transmission Line D/C (Twin/Triple conductor) | | | |
| LILO of 400 kV DC Aurangabad-Pune at Pune GIS (km) | 13.083 | 13.083 | 13.083 |



| Particulars | 2016-17 (Pro-rata 361 days) | 2017-18 | 2018-19 |
|--|-----------------------------------|---------------|---------------|
| Norms (₹ lakh/km) | 0.755 | 0.78 | 0.806 |
| O&M Expenses (₹ in lakh) | 9.88 | 10.20 | 10.54 |
| Transmission Line M/C (Twin/Triple conductor) | | | |
| LILO of 400 kV MC Aurangabad-Pune at Pune GIS (km) | 7.811 | 7.811 | 7.811 |
| Norms (₹ lakh/km) | 1.989 | 2.055 | 2.123 |
| O&M Expenses (₹ in lakh) | 10.34 | 10.69 | 11.04 |
| Sub-station Bays 400 kV (Conventional) | | | |
| Pune- Aurangabad (1)- Bay | 1 | 1 | 1 |
| Pune- Aurangabad (2)- Bay | 1 | 1 | 1 |
| Pune-Pune (3)- Bay | 1 | 1 | 1 |
| Pune-Pune (3)- Bay | 1 | 1 | 1 |
| Norms (₹ lakh/bay) | 55.02 | 56.84 | 58.73 |
| O&M Expenses (₹ in lakh) | 220.08 | 227.36 | 234.92 |
| Total O&M Expenses (₹ in lakh) | 237.67 | 248.25 | 256.50 |

52. The details of O&M Expenses allowed *vide* order dated 10.12.2018 in Petition No. 101/TT/2018 in respect of the Combined Asset-A and order dated 31.5.2016 in Petition No. 418/TT/2014 in respect of Asset-B and Asset-C, claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

Combined Asset-A

| Particulars | (₹ in lakh) | | | | |
|--|-------------|---------|---------|---------|---------|
| | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Allowed <i>vide</i> order dated 10.12.2018 in Petition No. 101/TT/2018 | 1542.44 | 1596.79 | 1646.59 | 1701.37 | 1757.73 |
| Claimed by the Petitioner in the instant petition | 1458.02 | 1506.57 | 1556.47 | 1608.26 | 1661.53 |
| Approved after true-up in this order | 1458.02 | 1506.57 | 1556.47 | 1608.26 | 1661.53 |



Asset-B

(₹ in lakh)

| Particulars | 2014-15 (Pro-rata 26 days) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---|----------------------------------|---------|---------|---------|---------|
| Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 418/TT/2014 | 64.66 | 938.08 | 969.04 | 1001.30 | 1034.50 |
| Claimed by the Petitioner in the instant petition | 64.63 | 938.09 | 969.03 | 1001.31 | 1034.50 |
| Approved after true-up in this order | 64.66 | 938.08 | 969.04 | 1001.30 | 1034.50 |

Asset-C

(₹ in lakh)

| Particulars | 2016-17 (Pro-rata 361 days) | 2017-18 | 2018-19 |
|---|-----------------------------------|---------|---------|
| Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 418/TT/2014 | 237.67 | 248.25 | 256.50 |
| Claimed by the Petitioner in the instant petition | 237.68 | 248.25 | 256.50 |
| Approved after true-up in this order | 237.67 | 248.25 | 256.50 |

Interest on Working Capital ("IWC")

53. IWC has been worked out as per the methodology provided in Regulation 28 of the 2014 Tariff Regulations and allowed in respect of the transmission assets is as follows:

Combined Asset-A

(₹ in lakh)

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---|----------------|----------------|----------------|----------------|----------------|
| WC for O&M Expenses (O&M Expenses for one month) | 121.50 | 125.55 | 129.71 | 134.02 | 138.46 |
| WC for Maintenance Spares (15% of O&M Expenses) | 218.70 | 225.99 | 233.47 | 241.24 | 249.23 |
| WC for Receivables (Equivalent to two months of annual fixed cost) | 1768.04 | 1964.94 | 2066.12 | 2096.75 | 2118.32 |
| Total Working Capital | 2108.25 | 2316.47 | 2429.29 | 2472.01 | 2506.01 |
| Rate of Interest (in %) | 13.50 | 13.50 | 13.50 | 13.50 | 13.50 |
| Interest on Working Capital | 284.61 | 312.72 | 327.95 | 333.72 | 338.31 |



Asset-B

(₹ in lakh)

| Particulars | 2014-15 (Pro-rata 26 days) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--|----------------------------------|----------------|----------------|----------------|----------------|
| WC for O&M Expenses (O&M Expenses for one month) | 75.64 | 78.17 | 80.75 | 83.44 | 86.21 |
| WC for Maintenance Spares (15% of O&M Expenses) | 136.16 | 140.71 | 145.36 | 150.20 | 155.17 |
| WC for Receivables (Equivalent to two months of annual fixed cost) | 1876.33 | 1992.47 | 2179.52 | 2327.15 | 2437.87 |
| Total Working Capital | 2088.13 | 2211.35 | 2405.63 | 2560.79 | 2679.26 |
| Rate of Interest (in %) | 13.50 | 13.50 | 13.50 | 13.50 | 13.50 |
| Interest on Working Capital | 20.08 | 298.53 | 324.76 | 345.71 | 361.70 |

Asset-C

(₹ in lakh)

| Particulars | 2016-17 (Pro-rata 361 days) | 2017-18 | 2018-19 |
|---|-----------------------------------|---------------|---------------|
| WC for O&M Expenses (O&M Expenses for one month) | 20.02 | 20.69 | 21.38 |
| WC for Maintenance Spares (15% of O&M Expenses) | 36.04 | 37.24 | 38.48 |
| WC for Receivables (Equivalent to two months of annual fixed cost) | 320.38 | 340.88 | 351.56 |
| Total Working Capital | 376.45 | 398.80 | 411.41 |
| Rate of Interest (in %) | 12.80 | 12.80 | 12.80 |
| Interest on Working Capital | 47.66 | 51.05 | 52.66 |

54. The details of IWC allowed *vide* order dated 10.12.2018 in Petition No. 101/TT/2018 in respect of the Combined Asset-A and order dated 31.5.2016 in Petition No. 418/TT/2014 in respect of Asset-B and Asset-C, claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:



Combined Asset-A

(₹ in lakh)

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--|---------|---------|---------|---------|---------|
| Allowed <i>vide</i> order dated 10.12.2018 in Petition No. 101/TT/2018 | 284.37 | 310.44 | 320.06 | 323.72 | 323.52 |
| Claimed by the Petitioner in the instant petition | 285.19 | 313.34 | 328.54 | 334.28 | 338.83 |
| Approved after true-up in this order | 284.61 | 312.72 | 327.95 | 333.72 | 338.31 |

Asset-B

(₹ in lakh)

| Particulars | 2014-15 (Pro-rata 26 days) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---|----------------------------------|---------|---------|---------|---------|
| Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 418/TT/2014 | 20.08 | 20.08 | 20.08 | 20.08 | 20.08 |
| Claimed by the Petitioner in the instant petition | 20.21 | 300.40 | 326.61 | 347.51 | 363.51 |
| Approved after true-up in this order | 20.08 | 298.53 | 324.76 | 345.71 | 361.70 |

Asset-C

(₹ in lakh)

| Particulars | 2016-17 (Pro-rata 361 days) | 2017-18 | 2018-19 |
|---|-----------------------------------|---------|---------|
| Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 418/TT/2014 | 47.39 | 50.67 | 51.21 |
| Claimed by the Petitioner in the instant petition | 47.69 | 51.07 | 52.69 |
| Approved after true-up in this order | 47.66 | 51.05 | 52.66 |

Approved Annual Fixed Charges for 2014-19 Tariff Period

55. The trued-up Annual Fixed Charges (AFC) approved in respect of the transmission assets for 2014-19 tariff period are as follows:

Combined Asset-A

(₹ in lakh)

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|------------------|---------|---------|---------|---------|---------|
| Depreciation | 3451.07 | 3766.05 | 3889.11 | 3942.59 | 3949.80 |
| Interest on Loan | 1377.76 | 1756.92 | 2015.86 | 2025.56 | 2069.23 |
| Return on Equity | 4036.77 | 4447.37 | 4607.30 | 4670.38 | 4691.04 |
| O&M Expenses | 1458.02 | 1506.57 | 1556.47 | 1608.26 | 1661.53 |



| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|-----------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Interest on Working Capital | 284.61 | 312.72 | 327.95 | 333.72 | 338.31 |
| Total | 10608.24 | 11789.64 | 12396.70 | 12580.51 | 12709.92 |

Asset-B

(₹ in lakh)

| Particulars | 2014-15 (Pro-rata 26 days) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|-----------------------------|----------------------------------|-----------------|-----------------|-----------------|-----------------|
| Depreciation | 287.58 | 4208.47 | 4474.82 | 4741.02 | 4886.78 |
| Interest on Loan | 99.81 | 1647.28 | 2113.40 | 2358.51 | 2643.23 |
| Return on Equity | 329.80 | 4862.44 | 5195.08 | 5516.36 | 5701.04 |
| O&M Expenses | 20.08 | 298.53 | 324.76 | 345.71 | 361.70 |
| Interest on Working Capital | 64.66 | 938.08 | 969.04 | 1001.30 | 1034.50 |
| Total | 801.94 | 11954.81 | 13077.10 | 13962.91 | 14627.25 |

Asset-C

(₹ in lakh)

| Particulars | 2016-17 (Pro-rata 361 days) | 2017-18 | 2018-19 |
|-----------------------------|-----------------------------------|----------------|----------------|
| Depreciation | 578.41 | 621.94 | 636.88 |
| Interest on Loan | 378.96 | 416.19 | 436.80 |
| Return on Equity | 658.51 | 707.84 | 726.52 |
| O&M Expenses | 237.67 | 248.25 | 256.50 |
| Interest on Working Capital | 47.66 | 51.05 | 52.66 |
| Total | 1901.21 | 2045.26 | 2109.36 |

56. The details of AFC allowed *vide* order dated 10.12.2018 in Petition No. 101/TT/2018 in respect of the Combined Asset-A and order dated 31.5.2016 in Petition No. 418/TT/2014 in respect of Asset-B and Asset-C, AFC claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

Combined Asset-A

(₹ in lakh)

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--|----------|----------|----------|----------|----------|
| Allowed <i>vide</i> order dated 10.12.2018 in Petition No. 101/TT/2018 | 10597.59 | 11687.94 | 12045.70 | 12135.79 | 12052.39 |
| Claimed by the Petitioner in the instant petition | 10633.71 | 11816.85 | 12422.61 | 12605.15 | 12732.96 |
| Approved after true-up in this order | 10608.24 | 11789.64 | 12396.70 | 12580.51 | 12709.92 |



Asset-B

(₹ in lakh)

| Particulars | 2014-15 (Pro-rata 26 days) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---|----------------------------------|----------|----------|----------|----------|
| Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 418/TT/2014 | 801.95 | 11849.86 | 12876.96 | 13532.72 | 13568.31 |
| Claimed by the Petitioner in the instant petition | 807.79 | 12038.01 | 13159.53 | 14044.17 | 14707.54 |
| Approved after true-up in this order | 801.94 | 11954.81 | 13077.10 | 13962.91 | 14627.25 |

Asset-C

(₹ in lakh)

| Particulars | 2016-17 (Pro-rata 361 days) | 2017-18 | 2018-19 |
|---|-----------------------------------|---------|---------|
| Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 418/TT/2014 | 1888.50 | 2027.52 | 2041.34 |
| Claimed by the Petitioner in the instant petition | 1902.60 | 2046.55 | 2110.57 |
| Approved after true-up in this order | 1901.21 | 2045.26 | 2109.36 |

DETERMINATION OF ANNUAL FIXED CHARGES FOR 2019-24 TARIFF PERIOD

57. The Petitioner has combined transmission assets and claimed the following transmission charges for 2019-24 tariff period in respect of the Combined Asset as follows:

(₹ in lakh)

| Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|-----------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Depreciation | 9577.70 | 9600.44 | 9541.04 | 9528.47 | 9528.47 |
| Interest on Loan | 4910.78 | 4359.36 | 3816.70 | 3255.83 | 2685.78 |
| Return on Equity | 10631.23 | 10655.87 | 10655.87 | 10655.87 | 10655.87 |
| O&M Expenses | 5932.37 | 6137.81 | 6354.42 | 6581.59 | 6811.17 |
| Interest on Working Capital | 636.28 | 638.95 | 639.32 | 640.58 | 640.75 |
| Total | 31688.36 | 31392.43 | 31007.35 | 30662.34 | 30322.04 |

58. The details of IWC claimed by the Petitioner in respect of the Combined Asset for 2019-24 tariff period are as follows:



(₹ in lakh)

| Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|------------------------------------|----------------|----------------|----------------|----------------|----------------|
| O&M Expenses | 494.36 | 511.48 | 529.54 | 548.47 | 567.60 |
| Maintenance Spares | 889.86 | 920.67 | 953.16 | 987.24 | 1021.68 |
| Receivables | 3896.11 | 3870.30 | 3822.82 | 3780.29 | 3728.12 |
| Total Working Capital | 5280.33 | 5302.45 | 5305.52 | 5316.00 | 5317.40 |
| Rate of Interest (in %) | 12.05 | 12.05 | 12.05 | 12.05 | 12.05 |
| Interest on Working Capital | 636.28 | 638.95 | 639.32 | 640.58 | 640.75 |

Effective Date of Commercial Operation ("E-COD")

59. The Petitioner has claimed that E-COD of the Combined Asset works out to be 3.10.2014. Based on the trued-up admitted capital cost as on 31.3.2019 and actual COD of all the transmission assets, E-COD of the Combined Asset has been worked out as follows:

| Assets | Capital Cost (as on 31.3.2019) (₹ in lakh) | COD | Number of days from last COD | Weightage of Cost (in %) | Weighted days | Effective COD (latest COD – weighted days) |
|------------------|--|----------|------------------------------|--------------------------|---------------|--|
| Combined Asset-A | 79141.65 | 5.1.2014 | 821 | 42.15% | 346.04 | 3.10.2014 |
| Asset-B | 96255.88 | 6.3.2015 | 396 | 51.26% | 203.00 | |
| Asset-C | 12371.17 | 5.4.2016 | 0 | 6.59% | 0.00 | |
| Total | 187768.70 | | | 100.00% | 549.04 | |

60. E-COD is used to determine the lapsed life of the project as a whole which works out as 4 (four) year as on 1.4.2019 (i.e., the number of completed years as on 1.4.2019 from E-COD).

Weighted Average Life ("WAL")

61. Life as defined in Regulation 33 of the 2019 Tariff Regulations has been considered for determination of WAL. Combined Asset may have multiple elements such as land, building, transmission line, sub-station and PLCC and each element



may have different span of life. Therefore, the concept of WAL has been used as the useful life of the project as a whole.

62. WAL has been determined based on the admitted capital cost of individual elements as on 31.3.2019 and their respective life as specified in the 2019 Tariff Regulations. Accordingly, WAL of the Combined Asset has been worked out as 29 years as follows:

| Particulars | Capital Cost (as on 31.3.2019) (₹ in lakh) (1) | Life (in years) (2) | Weighted Cost (₹ in lakh) (3)= [(1)x(2)] | Weighted Average Life of Asset (in years) (4) = [(3)/(1) |
|--------------------------------------|---|---------------------------|--|---|
| Building & Civil Works | 12275.99 | 25 | 306899.86 | 29.3671 (rounded off to 29 years) |
| Transmission Line | 81737.36 | 35 | 2860807.49 | |
| Sub Station | 88809.25 | 25 | 2220231.14 | |
| PLCC | 817.89 | 15 | 12268.35 | |
| IT Equipment (Including Software) | 317.88 | 6.67 | 2120.15 | |
| Total | 183958.35 | | 5402326.99 | |

63. WAL as on 1.4.2019 as determined above is applicable prospectively (i.e. for 2019-24 tariff period onwards) and no retrospective adjustment of depreciation in previous tariff period is required to be done. As discussed above, E-COD of the Combined Asset is 3.10.2014 and the lapsed life of the project as a whole works out as 4 years as on 1.4.2019 (i.e. the number of completed years as on 1.4.2019 from Effective COD). Accordingly, WAL has been used to determine the remaining useful life as on 31.3.2019 to be 29 years.

Initial Spares

64. As stated earlier in this order, Initial Spares were allowed for 2014-19 tariff period are on the basis of the cost of the individual assets. The assets covered in the transmission system are combined and the overall project cost is arrived at in 2019-24



tariff period and therefore Initial Spares allowed during 2019-24 tariff period is on the basis of the overall project cost as per the APTEL's judgement dated 14.9.2019 in Appeal No. 74 of 2017.

(₹ in lakh)

| Assets | Particulars | Plant and Machinery cost (excluding IDC and IEDC, land cost & cost of civil works) up to cut-off date (A) | Initial Spares Claimed (B) | Norms as per applicable Tariff Regulations (%) (C) | Initial Spares Allowable $D = \frac{(A-B) \times C}{100-C}$ | Excess Initial Spares disallowed $E = (B-D)$ if $B > D$ | Additional Initial Spares allowed on project cost basis |
|-----------------------|--------------------|---|----------------------------|--|---|---|---|
| Combined Asset | | | | | | | |
| Asset-A | Sub-station | 22042.15 | 0.00 | 2.50 | 565.18 | 0.00 | 0.00 |
| | Transmission Line | 25674.89 | 0.00 | 0.75 | 194.02 | 0.00 | 0.00 |
| Asset-B | Sub-station | 8380.35 | 0.00 | 2.50 | 214.88 | 0.00 | 0.00 |
| | Transmission Line | 0.00 | 0.00 | 0.75 | 0.00 | 0.00 | 0.00 |
| Asset-C | Sub-station | 1748.99 | 0.00 | 2.50 | 44.85 | 0.00 | 0.00 |
| | Transmission Line | 1225.45 | 0.00 | 0.75 | 9.26 | 0.00 | 0.00 |
| Asset-D | Sub-station | 4897.71 | 0.00 | 2.50 | 125.58 | 0.00 | 0.00 |
| | Transmission Line | 0 | 0.00 | 0.75 | 0.00 | 0.00 | 0.00 |
| Asset-E | Sub-station | 6276.85 | 200.15 | 2.50 | 155.81 | 44.34 | 44.34 |
| | Transmission Line | 0.00 | 0.00 | 0.75 | 0.00 | 0.00 | 0.00 |
| Asset-F | Sub-station | 6510.86 | 0.00 | 2.50 | 166.95 | 0.00 | 0.00 |
| | Transmission Line | 0.00 | 0.00 | 0.75 | 0.00 | 0.00 | 0.00 |
| Asset-G | Sub-station | 2432.70 | 0.00 | 2.50 | 62.38 | 0.00 | 0.00 |
| | Transmission Line | 0.00 | 0.00 | 0.75 | 0.00 | 0.00 | 0.00 |
| Assets | | | | | | | |
| Asset-B | Sub-station | 39954.59 | 1992.01 | 4.00 | 1581.77 | 410.24 | 410.24 |
| | Transmission Line | 46630.23 | 427.98 | 1.00 | 466.69 | 0.00 | 0.00 |
| Asset-C | Sub-station | 4365.51 | 0.00 | 4.00 | 181.90 | 0.00 | 0.00 |
| | Transmission Line | 5944.16 | 45.51 | 1.00 | 59.58 | 0.00 | 0.00 |
| Total | Sub-station | 96609.71 | 2192.16 | | 3099.30 | 454.57 | 454.57 |



| | | | | | | | |
|--|--------------------------|-----------------|---------------|--|---------------|-------------|-------------|
| | Transmission Line | 79474.73 | 473.49 | | 729.55 | 0.00 | 0.00 |
|--|--------------------------|-----------------|---------------|--|---------------|-------------|-------------|

65. Thus, in terms of the APTEL's judgement dated 14.9.2019 in Appeal No. 74 of 2017, additional Initial Spares of ₹454.57 lakh for sub-station element of Combined Asset are being allowed as part of the combined capital cost as on 1.4.2019.

Capital Cost

66. 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 tried up by excluding liability, if any, as on 1.4.2019;*
- (b) Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;*
- (c) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*
- (d) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*
- (e) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal up to the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and*
- (f) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.”*

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

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

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

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

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

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



(c) In case of hydro generating stations, any expenditure incurred or committed to be incurred by a project developer for getting the project site allotted by the State Government by following a transparent process;

(d) Proportionate cost of land of the existing project which is being used for generating power from generating station based on renewable energy; and

(e) Any grant received from the Central or State Government or any statutory body or authority for the execution of the project which does not carry any liability of repayment.”

67. The Petitioner has claimed the capital cost of ₹188240.72 lakh as on 31.3.2019 in respect of the Combined Asset.

68. The capital cost of ₹187768.70 lakh was admitted in respect of the transmission assets as on 31.3.2019. Accordingly, the opening capital cost of ₹187768.70 lakh as on 1.4.2019 of the Combined Asset has been considered for the determination of tariff in accordance with Regulation 19 of the 2019 Tariff Regulations. Further, as discussed in the preceding paragraphs, the incremental Initial Spares of ₹454.57 lakh are added back to the capital cost of the Combined Asset as on 31.3.2019.

69. Capital cost of the Combined Asset as on 1.4.2019 allowed after adding Initial Spares is as follows:

| (₹ in lakh) | | | |
|----------------|--|---|---|
| Asset | Combined Capital Cost (as on 31.3.2019) | Additional Initial Spares allowed as per APTEL judgement dated 14.9.2019 | Combined Capital Cost (as on 1.4.2019) |
| Combined Asset | 187768.70 | 454.57 | 188223.27 |

70. The trued-up capital cost of ₹188223.27 lakh in respect of the Combined Asset is considered as admitted capital cost as on 1.4.2019 for working out tariff for 2019-24 tariff period in accordance with Regulation 19 of the 2019 Tariff Regulations.

71. Against the overall apportioned approved capital cost (as per RCE) of ₹194057.70 lakh, the estimated completion cost is ₹188223.27 lakh. The individual



capital cost of each transmission asset is also within the respective RCE apportioned capital cost.

Additional Capital Expenditure ("ACE")

72. Regulation 24 and Regulation 25 of the 2019 Tariff Regulations provides as follows:

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

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

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

Provided that in case of any replacement of the 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 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;*
- (g) *Raising of ash dyke as a part of ash disposal system.*

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

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

73. The Petitioner has claimed ACE of ₹874.55 lakh in respect of the Combined Asset (Asset-B ₹634.51 lakh and Asset-C ₹240.04 lakh) in 2019-24 period under Regulations 25(1)(d) of the 2019 Tariff Regulations on account of undischarged liability towards final payment for works executed prior to the cut-off date/ works deferred for execution.

74. MPPMCL has raised its concern over the documents submitted by the Petitioner in support of estimated ACE of ₹236.60 lakh towards land compensation for Asset-C. In response, the Petitioner has submitted that the Ministry of Power issued revised guidelines for payment of compensation towards damages in regard to Right of Way for transmission lines *vide* letter dated 15.10.2015 wherein additional compensation towards damages with regard to Right of Way has been provisioned due to which farmers started raising higher land/tree compensation. The Petitioner has further submitted that the supporting documents regarding the details of actual ACE will be submitted at the time of true-up of 2019-24 tariff period and requested to allow cost and tariff as claimed in the petition.



75. We have considered the submissions of the Petitioner and MPPMCL. ACE claimed by the Petitioner for Asset-B and Asset-C has been allowed under Regulation 25(1)(d) of the 2019 Tariff Regulations, as it is towards undischarged liabilities for works executed prior to the cut-off date. However, the Petitioner is directed to submit the supporting documents for ACE at the time of true-up for 2019-24 period. Accordingly, ACE for 2019-24 tariff period and the capital cost as on 31.3.2024 considered in respect of the Combined Asset is as follows:

(₹ in lakh)

| Asset | Capital Cost admitted (as on 1.4.2019) (A) | ACE allowed for 2019-20 (B) | Capital Cost allowed (as on 31.3.2024) (C)=[(A)+(B)] |
|----------------|--|-----------------------------------|--|
| Combined Asset | 188223.27 | 874.55 | 189097.82 |

Debt-Equity ratio

76. 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.

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

77. The details of debt-equity ratio considered for the purpose of computation of tariff of 2019-24 tariff period in respect of the Combined Asset is as follows:

| Funding | Capital Cost (as on 1.4.2019) (₹ in lakh) | (in %) | ACE in 2019-24 (₹ in lakh) | (in %) | Capital Cost (as on 31.3.2024) (₹ in lakh) | (in %) |
|--------------|--|---------------|----------------------------------|---------------|---|---------------|
| Debt | 131756.29 | 70.00 | 612.19 | 70.00 | 132368.48 | 70.00 |
| Equity | 56466.98 | 30.00 | 262.37 | 30.00 | 56729.35 | 30.00 |
| Total | 188223.27 | 100.00 | 874.55 | 100.00 | 189097.82 | 100.00 |



Depreciation

78. 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 up to 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.

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

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

a) twenty five years, in case the generating station or unit thereof is in operation for fifteen years or less as on the date of operation of the emission control system; or

b) balance useful life of the generating station or unit thereof plus fifteen years, in case the generating station or unit thereof is in operation for more than fifteen years as on the date of operation of the emission control system; or

c) ten years or a period mutually agreed by the generating company and the beneficiaries, whichever is higher, in case the generating station or unit thereof has completed its useful life.”

79. IT equipment has been considered as a part of the Gross Block and depreciated using WAROD. WAROD at Annexure-II has been worked out after taking into account the depreciation rates of IT and non-IT assets as prescribed in the 2019



Tariff Regulations. The salvage value of IT equipment has been considered nil, i.e. IT assets has been considered as 100 per cent depreciable. Depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and accumulated depreciation up to 31.3.2019. Depreciation allowed in respect of the Combined Asset is as follows:

| (₹ in lakh) | | | | | |
|--|----------------|----------------|----------------|----------------|----------------|
| Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| Opening Gross Block | 188223.27 | 189097.82 | 189097.82 | 189097.82 | 189097.82 |
| ACE | 874.55 | 0.00 | 0.00 | 0.00 | 0.00 |
| Closing Gross Block | 189097.82 | 189097.82 | 189097.82 | 189097.82 | 189097.82 |
| Average Gross Block | 188660.55 | 189097.82 | 189097.82 | 189097.82 | 189097.82 |
| Freehold Land | 3810.35 | 3810.35 | 3810.35 | 3810.35 | 3810.35 |
| Weighted average rate of Depreciation (WAROD) (in %) | 5.07 | 5.07 | 5.07 | 5.07 | 5.07 |
| Balance useful life of the asset (Year) | 25 | 24 | 23 | 22 | 21 |
| Lapsed life at the beginning of the year (year) | 4 | 5 | 6 | 7 | 8 |
| Aggregate Depreciable Value | 166396.96 | 166790.51 | 166790.51 | 166790.51 | 166790.51 |
| Depreciation during the year | 9561.07 | 9583.81 | 9583.81 | 9583.81 | 9583.81 |
| Cumulative depreciation | 49729.76 | 59313.57 | 68897.38 | 78481.18 | 88064.99 |
| Remaining Depreciable Value | 116667.20 | 107476.94 | 97893.14 | 88309.33 | 78725.53 |

Interest on Loan ("IoL")

80. 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.

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

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

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

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



(₹ in lakh)

| Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|--|----------------|----------------|----------------|----------------|----------------|
| Gross Normative Loan | 131756.29 | 132368.48 | 132368.48 | 132368.48 | 132368.48 |
| Cumulative Repayments up to Previous Year | 40168.69 | 49729.76 | 59313.57 | 68897.38 | 78481.18 |
| Net Loan-Opening | 91587.60 | 82638.71 | 73054.91 | 63471.10 | 53887.30 |
| Additions due to ACE | 612.19 | 0.00 | 0.00 | 0.00 | 0.00 |
| Repayment during the year | 9561.07 | 9583.81 | 9583.81 | 9583.81 | 9583.81 |
| Net Loan-Closing | 82638.71 | 73054.91 | 63471.10 | 53887.30 | 44303.49 |
| Average Loan | 87113.15 | 77846.81 | 68263.00 | 58679.20 | 49095.39 |
| Weighted Average Rate of Interest on Loan (in %) | 5.6570 | 5.6231 | 5.6189 | 5.5730 | 5.4929 |
| Interest on Loan | 4927.98 | 4377.38 | 3835.61 | 3270.17 | 2696.75 |

Return on Equity ("RoE")

82. Regulation 30 and Regulation 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 on account of emission control system shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system or in the absence of actual loan portfolio of the generating station or the transmission system, the weighted average rate of interest of the generating company or the transmission licensee, as the case may be, as a whole shall be considered, subject to ceiling of 14%;

Provided further that:

i. In case of a new project, the rate of return on equity shall be reduced by 1.00% for such period as may be decided by the Commission, if the generating station or transmission 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."

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

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

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

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

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

Illustration-

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



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

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

(a) Estimated Gross Income from generation or transmission business for FY 2019-20 is Rs 1,000 crore;

(b) Estimated Advance Tax for the year on above is Rs 240 crore;

(c) Effective Tax Rate for the year 2019-20 = Rs 240 Crore / Rs 1000 Crore = 24%;

(d) Rate of return on equity = $15.50 / (1 - 0.24) = 20.395\%$.

(3) The generating company or the transmission licensee, as the case may be, shall true up the grossed up rate of return on equity at the end of every financial year based on actual tax paid together with any additional tax demand including interest thereon, duly adjusted for any refund of tax including interest received from the income tax authorities pertaining to the tariff period 2019-24 on actual gross income of any financial year. However, penalty, if any, arising on account of delay in deposit or short deposit of tax amount shall not be claimed by the generating company or the transmission licensee, as the case may be. Any under-recovery or over-recovery of grossed up rate on return on equity after truing up, shall be recovered or refunded to beneficiaries or the long term customers, as the case may be, on year to year basis.”

83. The Petitioner has submitted that MAT rate is applicable to it. Accordingly, MAT rate applicable for 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 in respect of the Combined Asset is as follows:

| (₹ in lakh) | | | | | |
|-------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| Opening Equity | 56466.98 | 56729.35 | 56729.35 | 56729.35 | 56729.35 |
| Additions due to ACE | 262.37 | 0.00 | 0.00 | 0.00 | 0.00 |
| Closing Equity | 56729.35 | 56729.35 | 56729.35 | 56729.35 | 56729.35 |
| Average Equity | 56598.16 | 56729.35 | 56729.35 | 56729.35 | 56729.35 |
| 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 | 10630.27 | 10654.91 | 10654.91 | 10654.91 | 10654.91 |



Operation & Maintenance Expenses ("O&M Expenses")

84. O&M Expenses claimed by the Petitioner for various elements included in the Combined Asset for 2019-24 tariff period are as follows:

| Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|--|----------------|----------------|----------------|----------------|----------------|
| Total O&M Expenses for Combined Asset (₹ in lakh) | 5932.37 | 6137.81 | 6354.42 | 6581.59 | 6811.17 |

85. Regulation 35(3)(a) and Regulation 33(4) 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 |
| ±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 year

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

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

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

(4) Communication system: *The operation and maintenance expenses for the communication system shall be worked out at 2.0% of the original project cost related to such communication system. The transmission licensee shall submit the actual operation and maintenance expenses for truing up.”*

86. We have considered the submission 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.



87. O&M Expenses have been worked out in respect of the Combined Asset in accordance with Regulation 35(3)(a) of the 2019 Tariff Regulations and the same are as follows:

| Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|--|---------------|---------------|---------------|---------------|---------------|
| Transmission Line S/C (Bundled – 4 or more sub conductor) | | | | | |
| 765kV S/C Raichur-Sholapur Transmission Line (km) | 207.754 | 207.754 | 207.754 | 207.754 | 207.754 |
| 765 kV S/C Sholapur-Pune Transmission Line (km) | 268.051 | 268.051 | 268.051 | 268.051 | 268.051 |
| Norms (₹ lakh/km) | 0.755 | 0.781 | 0.809 | 0.837 | 0.867 |
| O&M Expenses (₹ in lakh) | 359.23 | 371.60 | 384.93 | 398.25 | 412.52 |
| Transmission Line D/C (Bundled – 4 or more sub conductor) | | | | | |
| 765 kV D/C Sholapur-Pune Transmission Line (km) | 1.476 | 1.476 | 1.476 | 1.476 | 1.476 |
| 400 kV D/C LILO Raichur-Gooty Transmission Line (km) | 5.202 | 5.202 | 5.202 | 5.202 | 5.202 |
| Norms (₹ lakh/km) | 1.322 | 1.368 | 1.416 | 1.466 | 1.517 |
| O&M Expenses (₹ in lakh) | 8.83 | 9.14 | 9.46 | 9.79 | 10.13 |
| Transmission Line D/C (Twin/Triple conductor) | | | | | |
| LILO of 400 kV D/C Parli-Pune | 2.600 | 2.600 | 2.600 | 2.600 | 2.600 |
| LILO of 400 kV D/C Aurangabad- Pune at Pune GIS (km) | 13.083 | 13.083 | 13.083 | 13.083 | 13.083 |
| Norms (₹ lakh/km) | 0.881 | 0.912 | 0.944 | 0.977 | 1.011 |
| O&M Expenses (₹ in lakh) | 13.82 | 14.30 | 14.80 | 15.32 | 15.86 |
| Transmission Line M/C (Twin/Triple conductor) | | | | | |
| LILO of 400 kV M/C Parli-Pune | 8.500 | 8.500 | 8.500 | 8.500 | 8.500 |
| LILO of 400 kV M/C Aurangabad- Pune at Pune GIS (km) | 7.811 | 7.811 | 7.811 | 7.811 | 7.811 |
| Norms (₹ lakh/km) | 1.544 | 1.598 | 1.654 | 1.713 | 1.773 |
| O&M Expenses (₹ in lakh) | 25.18 | 26.06 | 26.98 | 27.94 | 28.92 |
| Sub-station Bays 765 kV (Conventional) | | | | | |
| Raichur 765 kV Bays | 4 | 4 | 4 | 4 | 4 |
| Sholapur 765 kV Bays | 6 | 6 | 6 | 6 | 6 |
| Norms (₹ lakh/bay) | 45.01 | 46.60 | 48.23 | 49.93 | 51.68 |
| O&M Expenses (₹ in lakh) | 450.10 | 466.00 | 482.30 | 499.30 | 516.80 |
| Sub-station Bays 400 kV (Conventional) | | | | | |
| Raichur 765 kV Bays | 6 | 6 | 6 | 6 | 6 |



| Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|--|----------------|----------------|----------------|----------------|----------------|
| Sholapur 765 kV BAYS | 2 | 2 | 2 | 2 | 2 |
| Norms (₹ lakh/bay) | 32.15 | 33.28 | 34.45 | 35.66 | 36.91 |
| O&M Expenses (₹ in lakh) | 257.20 | 266.24 | 275.60 | 285.28 | 295.28 |
| Sub-station Bays 765 kV GIS | | | | | |
| Pune: 765/400 kV, 1500 MVA ICT-I | 1 | 1 | 1 | 1 | 1 |
| Pune: 765/400 kV, 1500 MVA ICT-II | 1 | 1 | 1 | 1 | 1 |
| Pune: 240 MVAR Bus Reactor | 1 | 1 | 1 | 1 | 1 |
| Pune: Sholapur – 1 Number BAY | 1 | 1 | 1 | 1 | 1 |
| Pune: 765 kV, 240 MVAR Switchable Line Reactor for Sholapur-Pune | 1 | 1 | 1 | 1 | 1 |
| Norms (₹ lakh/bay) | 31.507 | 32.62 | 33.761 | 34.951 | 36.176 |
| O&M Expenses (₹ in lakh) | 157.54 | 163.10 | 168.81 | 174.76 | 180.88 |
| Sub-station Bays 400 kV GIS | | | | | |
| Pune- Aurangabad (1)- Bay | 1 | 1 | 1 | 1 | 1 |
| Pune- Aurangabad (2)- Bay | 1 | 1 | 1 | 1 | 1 |
| Pune-Pune (3)- Bay | 1 | 1 | 1 | 1 | 1 |
| Pune-Pune (4)- Bay | 1 | 1 | 1 | 1 | 1 |
| Pune: 765/400 kV, 1500 MVA ICT-I | 1 | 1 | 1 | 1 | 1 |
| Pune: 765/400 kV, 1500 MVA ICT-II | 1 | 1 | 1 | 1 | 1 |
| Pune: Parli (1) 50 MVAR Line Reactor | 1 | 1 | 1 | 1 | 1 |
| Pune: Parli (2) 50 MVAR Line Reactor | 1 | 1 | 1 | 1 | 1 |
| Pune- Pune (1)- Bay | 1 | 1 | 1 | 1 | 1 |
| Pune- Pune (2)- Bay | 1 | 1 | 1 | 1 | 1 |
| Norms (₹ lakh/bay) | 22.505 | 23.296 | 24.115 | 24.962 | 25.837 |
| O&M Expenses (₹ in lakh) | 225.05 | 232.96 | 241.15 | 249.62 | 258.37 |
| Transformation Capacity – 765 kV | | | | | |
| Raichur 765 kV ICT (MVA) | 3000 | 3000 | 3000 | 3000 | 3000 |
| Sholapur 765 kV ICT (MVA) | 3000 | 3000 | 3000 | 3000 | 3000 |
| Pune 765 kV ICT (MVA) | 3000 | 3000 | 3000 | 3000 | 3000 |
| Norms (₹ lakh/MVA) | 0.491 | 0.508 | 0.526 | 0.545 | 0.564 |
| O&M Expenses (₹ in lakh) | 4419.00 | 4572.00 | 4734.00 | 4905.00 | 5076.00 |
| Total O&M Expenses (₹ in lakh) | 5915.95 | 6121.41 | 6338.02 | 6565.26 | 6794.76 |

Interest on Working Capital ("IWC")

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

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

(1)...



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

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

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

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

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

“3.Definitions ...

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

89. The Petitioner has submitted that it has computed IWC for 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%.

90. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. RoI considered is 12.05% (SBI 1-year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20, whereas RoI for 2020-21 onwards has been considered as 11.25% (SBI 1-year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) for 2020-21 and from 2021-22 onwards has been considered as 10.50% (SBI 1-year MCLR applicable as on 1.4.2020 of 7.00% plus 350 basis points). The components of the working capital and interest allowed thereon in respect of the Combined Asset are as follows:



(₹ in lakh)

| Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|--|----------------|----------------|----------------|----------------|----------------|
| Working Capital for O&M Expenses (O&M Expenses for one month) | 493.00 | 510.12 | 528.17 | 547.10 | 566.23 |
| Working Capital for Maintenance Spares (15% of O&M Expenses) | 887.39 | 918.21 | 950.70 | 984.79 | 1019.21 |
| Working Capital for Receivables (Equivalent to 45 days of annual transmission charges) | 3893.95 | 3862.94 | 3818.04 | 3776.49 | 3723.90 |
| Total Working Capital | 5274.34 | 5291.27 | 5296.91 | 5308.38 | 5309.34 |
| Rate of Interest (in %) | 12.05 | 11.25 | 10.50 | 10.50 | 10.50 |
| Interest on Working Capital | 635.56 | 595.27 | 556.18 | 557.38 | 557.48 |

Annual Fixed Charges of 2019-24 Tariff Period

91. The transmission charges allowed in respect of Combined Asset for 2019-24 tariff period are as follows:

(₹ in lakh)

| Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|-----------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Depreciation | 9561.07 | 9583.81 | 9583.81 | 9583.81 | 9583.81 |
| Interest on Loan | 4927.98 | 4377.38 | 3835.61 | 3270.17 | 2696.75 |
| Return on Equity | 10630.27 | 10654.91 | 10654.91 | 10654.91 | 10654.91 |
| O&M Expenses | 635.56 | 595.27 | 556.18 | 557.38 | 557.48 |
| Interest on Working Capital | 5915.95 | 6121.41 | 6338.02 | 6565.26 | 6794.76 |
| Total | 31670.82 | 31332.76 | 30968.52 | 30631.52 | 30287.70 |

Filing Fee and Publication Expenses

92. 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.



License Fee and RLDC Fees and Charges

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

Goods and Services Tax

94. 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.

95. MPPMCL has submitted that the claim of GST is premature and need not be considered at this juncture. In response, the Petitioner has reiterated its submissions.

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

Security Expenses

97. 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 consequential IWC.



98. We have considered the submissions of the Petitioner. The Petitioner has claimed consolidated security expenses on projected basis for 2019-24 tariff period on the basis of actual security expenses incurred in 2018-19 in Petition No. 260/MP/2020. The said petition has already been disposed of by the Commission *vide* order dated 3.8.2021 wherein the Commission has already approved security expenses from 1.4.2019 to 31.3.2024. Hence, 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

99. 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

100. TANGEDCO has submitted that the trued-up capital cost for 2014-2019 tariff period has to be shared among the beneficiaries as per the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010 (the 2010 Sharing Regulations). TANGEDCO has further submitted that Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020 (the 2020 Sharing Regulations) was notified on 4.5.2020 and came into effect on 1.11.2020, hence, it is essential to segregate the additional cost and tariff liability up to 31.10.2020 as per the 2010 Sharing Regulations and from 1.11.2020 as per the 2020 Sharing Regulations and requested to issue



suitable directions to allocate the trued-up YTC up to 31.10.2020 as per the 2010 Sharing Regulations from 1.11.2020 as per the 2020 Sharing Regulations.

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

102. To summarise:

a. The trued-up AFC approved for 2014-19 tariff period are as follows:

Combined Asset-A

(₹ in lakh)

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|-------------|----------|----------|----------|----------|----------|
| AFC | 10608.24 | 11789.64 | 12396.70 | 12580.51 | 12709.92 |

Asset-B

(₹ in lakh)

| Particulars | 2014-15 (Pro-rata 26 days) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|-------------|-------------------------------|----------|----------|----------|----------|
| AFC | 801.94 | 11954.81 | 13077.10 | 13962.91 | 14627.25 |



Asset-C**(₹ in lakh)**

| Particulars | 2016-17 (Pro-rata 361 days) | 2017-18 | 2018-19 |
|--------------------|--|----------------|----------------|
| AFC | 1901.21 | 2045.26 | 2109.36 |

b. AFC allowed in respect of the Combined Asset for 2019-24 tariff period in this order are:

(₹in lakh)

| Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|--------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| AFC | 31670.82 | 31332.76 | 30968.52 | 30631.52 | 30287.70 |

103. Annexure-I and Annexure-II given hereinafter form part of the instant order.

104. This order disposes of Petition No. 219/TT/2020 in terms of above discussions and findings.

sd/-
(P. K. Singh)
Member

sd/-
(Arun Goyal)
Member

sd/-
(I. S. Jha)
Member

sd/-
(P. K. Pujari)
Chairperson



Annexure-I

Combined Asset-A

| 2014-19 Capital Expenditure | Admitted Capital Cost as on 1.4.2014/ COD (₹ 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) | | | | |
|---|---|-----------------|----------------|----------------|---------------|-----------------|---|---|--|-----------------|-----------------|-----------------|-----------------|
| | | 2014-15 | 2015-16 | 2016-17 | 2017-18 | Total | | | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Land - Freehold | 1283.63 | 384.82 | 81.70 | 75.00 | - | 541.52 | 1825.15 | - | - | - | - | - | - |
| Building Civil Works & Colony | 4589.54 | 756.60 | 1523.43 | 90.46 | - | 2370.49 | 6960.03 | 3.34% | 165.93 | 204.00 | 230.95 | 232.46 | 232.46 |
| Transmission Line | 13873.39 | 859.91 | 412.10 | 912.19 | 273.36 | 2457.56 | 26912.73 | 5.28% | 755.22 | 788.80 | 823.76 | 855.06 | 862.27 |
| Sub Station | 43764.06 | 7652.39 | 1532.86 | 782.96 | - | 9968.21 | 43150.49 | 5.28% | 2512.77 | 2755.26 | 2816.39 | 2837.06 | 2837.06 |
| PLCC | 213.38 | 26.12 | 0.10 | - | - | 26.22 | 239.60 | 6.33% | 14.33 | 15.16 | 15.17 | 15.17 | 15.17 |
| IT Equipment (Including Software) | 53.61 | 0.03 | - | - | - | 0.03 | 53.65 | 5.28% | 2.83 | 2.83 | 2.83 | 2.83 | 2.83 |
| Total | 63777.61 | 9679.88 | 3550.19 | 1860.61 | 273.36 | 15364.04 | 79141.65 | | 3451.07 | 3766.05 | 3889.11 | 3942.59 | 3949.80 |
| Average Gross Block (₹ in lakh) | | | | | | | | | 68617.55 | 75232.59 | 77937.99 | 79004.97 | 79141.65 |
| Weighted Average Rate of Depreciation (in %) | | | | | | | | | 5.03% | 5.01% | 4.99% | 4.99% | 4.99% |



Asset-B

| 2014-19 Capital Expenditure | Admitted Capital Cost as on 1.4.2014/ COD (₹ 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) | | | | |
|-----------------------------------|---|-----------------|----------------|----------------|----------------|---------------|-----------------|---|---|---|-----------------|-----------------|-----------------|-----------------|
| | | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | Total | | | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Land - Freehold | 1411.89 | - | - | 414.88 | 158.43 | - | 573.31 | 1985.20 | - | - | - | - | - | - |
| Building Civil Works & Colony | 2368.83 | 96.51 | 1616.18 | 454.73 | 138.30 | 0.99 | 2306.72 | 4675.55 | 3.34% | 80.73 | 109.33 | 143.92 | 153.82 | 156.15 |
| Transmission Line | 41612.36 | 282.44 | 2341.99 | 1133.40 | 2734.90 | - | 6492.73 | 48105.09 | 5.28% | 2204.59 | 2273.87 | 2365.62 | 2467.75 | 2539.95 |
| Sub Station | 32188.58 | 742.28 | 1975.67 | 3262.08 | 2548.25 | 148.59 | 8676.87 | 40865.45 | 5.28% | 1719.15 | 1790.91 | 1929.18 | 2082.58 | 2153.77 |
| PLCC | 299.11 | 20.32 | 30.50 | 23.61 | 1.13 | - | 75.56 | 374.67 | 6.33% | 19.58 | 21.19 | 22.90 | 23.68 | 23.72 |
| IT Equipment (Including Software) | 248.31 | 0.54 | 1.06 | - | - | - | 1.60 | 249.92 | 5.28% | 13.13 | 13.17 | 13.20 | 13.20 | 13.20 |
| Total | 78129.08 | 1142.10 | 5965.40 | 5288.70 | 5581.01 | 149.58 | 18126.79 | 96255.88 | | 4037.18 | 4208.47 | 4474.82 | 4741.02 | 4886.78 |
| | | | | | | | | | | Average Gross Block (₹ in lakh) | | | | |
| | | | | | | | | | | 78700.13 | 82253.89 | 87880.94 | 93315.79 | 96181.09 |
| | | | | | | | | | | Weighted Average Rate of Depreciation (in %) | | | | |
| | | | | | | | | | | 5.13% | 5.12% | 5.09% | 5.08% | 5.08% |



Asset-C

| 2014-19 Capital Expenditure | Admitted Capital Cost as on 1.4.2014/ COD (₹ 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) | | |
|---|---|--------------------|---------------|---------------|----------------|---|--|---|-----------------|-----------------|
| | | 2016-17 | 2017-18 | 2018-19 | Total | | | 2016-17 | 2017-18 | 2018-19 |
| Building Civil Works & Colony | 586.92 | 52.58 | 0.92 | - | 53.50 | 640.42 | 3.34% | 20.48 | 21.37 | 21.39 |
| Transmission Line | 5790.88 | 617.29 | 82.83 | 228.53 | 928.65 | 6719.53 | 5.28% | 322.06 | 340.54 | 348.76 |
| Sub Station | 4143.00 | 398.58 | 251.72 | - | 650.30 | 4793.30 | 5.28% | 229.27 | 246.44 | 253.09 |
| PLCC | 185.83 | 15.81 | 1.98 | - | 17.79 | 203.62 | 6.33% | 12.26 | 12.83 | 12.89 |
| IT Equipment (Including Software) | 14.09 | 0.21 | - | - | 0.21 | 14.30 | 5.28% | 0.75 | 0.76 | 0.76 |
| Total | 10720.72 | 1084.47 | 337.45 | 228.53 | 1650.45 | 12371.17 | | 584.82 | 621.94 | 636.88 |
| Average Gross Block (₹ in lakh) | | | | | | | | 11262.96 | 11973.92 | 12256.91 |
| Weighted Average Rate of Depreciation (in %) | | | | | | | | 5.19% | 5.19% | 5.20% |



Combined Asset

| 2019-24 Capital Expenditure | Admitted Capital Cost as on 1.4.2019 (₹ in lakh) | Projected ACE (₹ in lakh) | | Admitted Capital Cost as on 31.3.2024 (₹ in lakh) | Rate of Depreciation as per Regulations | Annual Depreciation as per Regulations (₹ in lakh) | | | | |
|---|--|---------------------------|---------------|---|---|--|------------------|------------------|------------------|------------------|
| | | 2019-20 | Total | | | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| Land - Freehold | 3810.35 | - | - | 3810.35 | - | - | - | - | - | - |
| Building Civil Works & Colony | 12275.99 | 36.22 | 36.22 | 12312.21 | 3.34% | 410.62 | 411.23 | 411.23 | 411.23 | 411.23 |
| Transmission Line | 81737.36 | 798.25 | 798.25 | 82535.61 | 5.28% | 4336.81 | 4357.88 | 4357.88 | 4357.88 | 4357.88 |
| Sub Station | 89263.82 | 40.08 | 40.08 | 89303.90 | 5.28% | 4714.19 | 4715.25 | 4715.25 | 4715.25 | 4715.25 |
| PLCC | 817.89 | - | - | 817.89 | 6.33% | 51.77 | 51.77 | 51.77 | 51.77 | 51.77 |
| IT Equipment (Incl. Software) | 317.86 | - | - | 317.86 | 15.00% | 47.68 | 47.68 | 47.68 | 47.68 | 47.68 |
| Total | 188223.27 | 874.55 | 874.55 | 189097.82 | | 9561.07 | 9583.81 | 9583.81 | 9583.81 | 9583.81 |
| Average Gross Block (₹ in lakh) | | | | | | 188660.55 | 189097.82 | 189097.82 | 189097.82 | 189097.82 |
| Weighted Average Rate of Depreciation (in %) | | | | | | 5.07% | 5.07% | 5.07% | 5.07% | 5.07% |

