

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 117/TT/2020**

**Coram:**

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

**Date of Order: 02.02.2021**

**In the Matter of:**

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and truing up of transmission tariff of the 2014-19 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of the 2019-24 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 of **Asset-1:** 63 MVAR Line Reactors at Madurai and Trichy Sub-stations, **Asset-2:** 63 MVAR Bus Reactors at Hossur and Salem Sub-stations, **Asset-3:** 63 MVAR Bus Reactor at Sriperumbudur Sub-station, **Asset-4:** 63 MVAR Bus Reactor at Kolar, Hyderabad and Munirabad Sub-stations, **Asset-5:** 63 MVAR Bus Reactor at Hiriyur Sub-station, **Asset-6:** 63 MVAR Line Reactor at Udumalpet Sub-station and **Asset-7:** 63 MVAR Line Reactors at Trivandrum Sub-station along with associated bays under "System Strengthening-VIII in Southern Region".

**And in the Matter of:**

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

**.....Petitioner**

**Vs**

1. Karnataka Power Transmission Corporation Ltd.,  
Kaveri Bhavan,  
Bangalore – 560 009
2. Transmission Corporation of Andhra Pradesh Ltd.,  
Vidyut Soudha,  
Hyderabad– 500082
3. Kerala State Electricity Board,  
Vaidyuthi Bhavanam, Pattom,  
Thiruvananthapuram – 695 004



4. Tamil Nadu Generation and Distribution Corporation Ltd.,  
(Formerly Tamil Nadu Electricity Board -TNEB)  
NPKRR Maaligai, 800, Anna Salai,  
Chennai – 600 002
5. Electricity Department,  
Government of Pondicherry,  
Pondicherry - 605001
6. Eastern Power Distribution Company of Andhra Pradesh Ltd.,  
P&T Colony, Seethmmadhara,  
Vishakhapatnam, Andhra Pradesh.
7. Southern Power Distribution Company of Andhra Pradesh Ltd.,  
Srinivasasa Kalyana Mandapam Backside,  
Tiruchanoor Road, Kesavayana Gunta, Tirupati-517501  
Chittoor District, Andhra Pradesh
8. Central Power Distribution Company of Andhra Pradesh Ltd.,  
Corporate Office, Mint Compound,  
Hyderabad – 500063, Telangana
9. Northern Power Distribution Company of Andhra Pradesh Ltd.,  
Opp. NIT Petrol Pump, Chaitanyapuri, Kazipet,  
Warangal– 506 004, Telangana
10. Bangalore Electricity Supply Company Ltd.,  
Corporate Office, K.R. Circle  
Bangalore – 560 001, Karnataka
11. Gulbarga Electricity Supply Company Ltd.,  
Station Main Road, Gulbarga,  
Karnataka.
12. Hubli Electricity Supply Company Ltd.,  
Navanagar, PB Road, Hubli, Karnataka
13. Manglore Electricity Supply Company Ltd.,  
MESCOM Corporate Office,  
Paradigm Plaza, AB Shetty Circle,  
Mangalore – 575 001, Karnataka
14. Chamundeswari Electricity Supply Corporation Ltd.,  
927, L J Avenue, Ground Floor, New Kantharaj Urs Road,  
Saraswatipuram, Mysore – 570 009,  
Karnataka.



15. Electricity Department,  
Government of Goa,  
Vidyuti Bhawan, Panaji, Goa 403001
16. Transmission Corporation of Telangana Ltd.,  
Vidhyut Sudha, Khairatabad,  
Hyderabad, 500082
17. Tamil Nadu Transmission Corporation,  
NPKRR Maaligai, 800, Anna Salai  
Chennai – 600 002

... Respondents

**For Petitioner** : Shri S. S. Raju, PGCIL  
Shri B. Dash, PGCIL

**For Respondents** : Shri S. Vallinayagam, Advocate, TANGEDCO

### **ORDER**

The present petition has been filed by Power Grid Corporation of India Ltd., (hereinafter referred to as “the Petitioner”), a deemed transmission licensee, for truing up of the transmission tariff from 1.4.2014 to 31.3.2019 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) and for determination of the tariff from 1.4.2019 to 31.3.2024 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) in respect of the following assets (hereinafter collectively referred to as “the Combined Asset”) under “System Strengthening-VIII in Southern Region” (hereinafter referred to as “the Transmission Project”):

**Asset-1:** 63 MVAR Line Reactors at Madurai and Trichy Sub-stations along with associated bays;

**Asset-2:** 63 MVAR Bus Reactors at Hossur and Salem Sub-stations alongwith associated bays;



**Asset-3:** 63 MVAR Bus Reactor at Sriperumbudur Sub-station along with associated bays;

**Asset-4:** 63 MVAR Bus Reactor at Kolar, Hyderabad and Munirabad Sub-stations along with associated bays;

**Asset-5:** 63 MVAR Bus Reactor at Hiriyur Sub-station along with associated bays;

**Asset-6:** 63 MVAR Line Reactor at Udumalpet Sub-station along with associated bays; and

**Asset-7:** 63 MVAR Line Reactors at Trivandrum Sub-station along with associated bays.

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

*“1) Approve the trued up Transmission Tariff for 2014-19 block and transmission tariff for 2019-24 block for the assets covered under this petition, as per para 10.2 and 11.0 above.*

*2) Approve the Completion cost and additional capitalization incurred during 2014-19.*

*3) Allow the petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission as provided in Tariff Regulation 2014 and Tariff regulations 2019 as per para 10.2 and 11.0 above for respective block.*

*4) Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on publishing of notices in newspapers in terms of Regulation 70 (1) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019, and other expenditure ( if any) in relation to the filing of petition.*

*5) Allow the petitioner to bill and recover Licensee fee and RLDC fees and charges, separately from the respondents in terms of Regulation 70 (3) and (4) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019.*

*6) Allow the petitioner to bill and adjust impact on Interest on Loan due to change in Interest rate on account of floating rate of interest applicable during 2019-24 period, if any, from the respondents.*

*7) Allow the petitioner to 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 11.6 above.*

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



9) Allow the petitioner initial spares for the project as a whole.

10) Allow the Petitioner to bill and recover GST on Transmission Charges separately from the respondents, if GST on transmission is levied at any rate 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 under:

(a)The Investment Approval (IA) for the Transmission Project was accorded by the Board of Directors of the Petitioner's Company vide Memorandum Ref: C/CP/SR-VIII dated 26.2.2008 with an estimated cost of ₹10584.00 lakh including IDC of ₹784.00 lakh based on 3<sup>rd</sup> quarter, 2007 price level.

(b)The scope of work covered under the Transmission Project is as follows:

#### **A. Bus Reactors at the following Sub-stations of the Petitioner:**

- (i) 63 MVAR Bus Reactor at Hossur,
- (ii) 63 MVAR Bus Reactor at Salem,
- (iii) 63 MVAR Bus Reactor at Sriperumbudur,
- (iv) 63 MVAR Bus Reactor at Kolar,
- (v) 63 MVAR Bus Reactor at Hyderabad,
- (vi) 63 MVAR Bus Reactor at Munirabad,
- (vii) 63 MVAR Bus Reactor at Hiriyyur

#### **B. Line Reactors at the following Sub-stations of the Petitioner:**

- (i) 63 MVAR Line Reactor at Trichy,
- (ii) 63 MVAR Line Reactor at Madurai,
- (iii) 63 MVAR Line Reactor at Udumalpet,
- (iv) 63 MVAR Line Reactor at Trivandrum

(c)The entire scope of the work under the Transmission Project is covered in the instant petition.



(d)The tariff of the transmission assets from their respective COD to 31.3.2014 was determined in Petition No. 282 of 2010 vide order dated 28.7.2011 as per the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as “the 2009 Tariff Regulations”. The tariff allowed for the transmission assets for the 2009-14 tariff period was trued up and tariff for the 2014-19 tariff period was approved vide order dated 28.4.2016 in Petition No. 533/TT/2014 as per the 2014 Tariff Regulations.

(e)The details of the elements forming part of the Transmission Project and the manner of combining them for the purpose of determination of tariff are as under:

| <b>Sl. No</b> | <b>Name of the asset being combined for tariff calculation</b>   | <b>Name of Asset after clubbing</b> | <b>Actual COD</b> |
|---------------|--|-------------------------------------|-------------------|
| 1.            | Asset-1:, 63 MVAR Line Reactors at Trichy and Madurai Sub-stations   | Asset-1                             | 1.12.2009         |
| 2.            | Asset-1:, 63 MVAR Line Reactors at Trichy and Madurai Sub-stations<br>Asset-2:, 63 MVAR Bus Reactors at Hossur and Salem Sub-stations  | Asset-2<br>(Combined Assets-1 & 2)  | 1.3.2010          |
| 3.            | Asset-1:, 63 MVAR Line Reactors at Trichy and Madurai Sub-stations<br>Asset-2:, 63 MVAR Bus Reactors at Hossur and Salem Sub-stations,<br>Asset-3: 63 MVAR Bus Reactor at Sriperumbudur Sub-station  | Asset-2<br>(Combined Assets-1-3)    | 1.4.2010          |
| 4.            | Asset-1: 63 MVAR Line Reactors at Trichy and Madurai Sub-stations<br>Asset-2: 63 MVAR Bus Reactors at Hossur and Salem Sub-stations<br>Asset-3: 63 MVAR Bus Reactor at Sriperumbudur Sub-station<br>Asset-4: 63 MVAR Bus Reactor at Kolar, Hyderabad and Munirabad Sub-stations  | Asset-4<br>(Combined Assets-1-4)    | 1.5.2010          |
| 5.            | Asset-1: 63 MVAR Line Reactors at Trichy and Madurai Sub-stations<br>Asset-2:, 63 MVAR Bus Reactors at Hossur and Salem Sub-stations<br>Asset-3: 63 MVAR Bus Reactor at Sriperumbudur Sub-station<br>Asset-4: 63 MVAR Bus Reactor at Kolar, Hyderabad and Munirabad Sub-stations<br>Asset-5: 63 MVAR Bus Reactor at Hiriyyur | Asset-5<br>(Combined Assets-1-5)    | 1.6.2010          |
| 6.            | Asset-1: 63 MVAR Line Reactors at Trichy and Madurai Sub-stations<br>Asset-2: 63 MVAR Bus Reactors at Hossur and Salem Sub-stations<br>Asset-3: 63 MVAR Bus Reactor at   | Asset-6<br>(Combined Assets-1-6)    | 1.7.2010          |



|    |  |                                  |                              |
|----|--|----------------------------------|------------------------------|
|    | Sriperumbudur Sub-station<br>Asset-4: 63 MVAR Bus Reactor at Kolar, Hyderabad and Munirabad Sub-stations<br>Asset-5: 63 MVAR Bus Reactor at Hiriyyur,<br>Asset-6: 63 MVAR Line Reactor at Udumalpet Sub-station  |                                  |                              |
| 7. | Asset-1: 63 MVAR Line Reactors at Trichy and Madurai Sub-stations<br>Asset-2: 63 MVAR Bus Reactors at Hossur and Salem Sub-stations<br>Asset-3: 63 MVAR Bus Reactor at Sriperumbudur Sub-station<br>Asset-4: 63 MVAR Bus Reactor at Kolar, Hyderabad and Munirabad Sub-stations<br>Asset-5: 63 MVAR Bus Reactor at Hiriyyur,<br>Asset-6: 63 MVAR Line Reactor at Udumalpet Sub-station<br>Asset-7: 63 MVAR Line Reactors at Trivandrum Sub-station | Asset-7<br>(Combined Assets-1-7) | 1.10.2010<br>Notional<br>COD |

(f) The Transmission Project was scheduled to be put into commercial operation within 33 months from the date of IA i.e. by 25.11.2010, scheduled SCOD of 1.12.2010. The transmission assets have been put under commercial operation between 1.12.2009 to 1.10.2010. Therefore, there is no time over-run.

(g) The true up tariff claimed by the Petitioner in the instant petition along with details of the tariff approved in the previous order is as under:

|                |   | (₹ in lakh) |         |         |         |         |
|----------------|---|-------------|---------|---------|---------|---------|
| Particulars    | Particulars   | 2014-15     | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Combined Asset | Annual Fixed Charges approved vide order dated 28.4.2016 in Petition No. 533/TT/2014. | 1768.36     | 1753.00 | 1727.70 | 1702.89 | 1678.52 |
|                | Claimed by the Petitioner based on true-up in the instant petition.                   | 1762.67     | 1751.99 | 1741.50 | 1718.86 | 1695.48 |

4. The Respondents are the distribution licensees and transmission licensees which are procuring transmission services from the Petitioner and are mainly the beneficiaries of the Southern Region.

5. The Petitioner has served the petition on the Respondents and notice of this petition has also been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments or suggestions have been received from the



general public in response to the aforesaid notices published in the newspapers by the Petitioner. Notice dated 12.3.2020 was also published on Commission's website directing the beneficiaries/Respondents to file reply in the matter. Tamil Nadu Generation and Distribution Company Ltd. ("TANGEDCO"), Respondent No.4 has filed Written Submissions accompanied by affidavit dated 2.9.2020 and has raised issues of Additional Capital Expenditure (ACE) after the cut-off date and Initial Spares claimed by the Petitioner. The Petitioner *vide* affidavit dated 4.9.2020 has filed rejoinder to the Written Submissions of TANGEDCO.

6. This order is issued considering the submissions made by the Petitioner in the petition accompanied by affidavits dated 29.10.2019, 12.3.2020, 8.7.2020 and 4.9.2020. Besides this, we have also considered the issues raised by TANGEDCO in its Written Submissions dated 2.9.2020.

7. The hearing in this matter was held on 24.6.2020 and 10.8.2020 through video conference and the order was reserved.

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

**Truing up of Annual Fixed Charges for the 2014-19 Tariff Period**

9. The details of the trued up transmission charges claimed by the Petitioner in respect of the Combined Asset are as under:

| (₹ in lakh)      |         |         |         |         |         |
|------------------|---------|---------|---------|---------|---------|
| Particulars      | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Depreciation     | 442.97  | 446.71  | 451.24  | 452.01  | 452.01  |
| Interest on Loan | 350.70  | 315.62  | 281.09  | 241.86  | 201.76  |
| Return on equity | 493.94  | 500.40  | 505.20  | 506.08  | 507.44  |





|                             |                |                |                |                |                |
|-----------------------------|----------------|----------------|----------------|----------------|----------------|
| Interest on Working Capital | 52.96          | 53.16          | 53.38          | 53.34          | 53.30          |
| O & M Expenses              | 422.10         | 436.10         | 450.59         | 465.57         | 480.97         |
| <b>Total</b>                | <b>1762.67</b> | <b>1751.99</b> | <b>1741.50</b> | <b>1718.86</b> | <b>1695.48</b> |

10. The details of trued up Interest on Working Capital (IWC) claimed by the Petitioner are as under:

| (₹ in lakh)                        |                |                |                |                |                |
|------------------------------------|----------------|----------------|----------------|----------------|----------------|
| <b>Combined Asset</b>              |                |                |                |                |                |
| <b>Particulars</b>                 | <b>2014-15</b> | <b>2015-16</b> | <b>2016-17</b> | <b>2017-18</b> | <b>2018-19</b> |
| O & M expenses                     | 35.18          | 36.34          | 37.55          | 38.80          | 40.08          |
| Maintenance Spares                 | 63.32          | 65.42          | 67.59          | 69.84          | 72.15          |
| Receivables                        | 293.78         | 292.00         | 290.25         | 286.48         | 282.58         |
| <b>Total</b>                       | <b>392.28</b>  | <b>393.76</b>  | <b>395.39</b>  | <b>395.12</b>  | <b>394.81</b>  |
| Rate of Interest (%)               | 13.50          | 13.50          | 13.50          | 13.50          | 13.50          |
| <b>Interest on Working Capital</b> | <b>52.96</b>   | <b>53.16</b>   | <b>53.38</b>   | <b>53.34</b>   | <b>53.30</b>   |

**Weighted Average Life (WAL)**

11. The instant transmission assets' tariff, from COD to 31.3.2014, was determined vide order dated 28.7.2011 in Petition No. 282/2010 on the basis of Notional COD, wherein capital costs of the transmission assets of the transmission project were progressively combined considering their dates of commercial operation. The COD of the last asset was considered as the Notional COD, which in case of the said assets was determined as 1.10.2010. Commission, vide true-up order dated 28.4.2016 in Petition No. 533/TT/2014, recognised 25 years as the weighted average useful life of the assets as per the 2009 Tariff Regulations.

12. Regulation 27(1) of the 2014 Tariff Regulations introduced the concept of Effective COD and similar provisions were provided for in the 2019 Tariff Regulations. Since tariff for the transmission assets for 2009-14 tariff period was determined and trued-up on the basis of Notional COD and tariff for 2014-19 period was also determined on the basis of Notional COD of 1.10.2010, we are of the view that it is appropriate to continue with the same Notional COD in case of the instant



transmission assets. Accordingly, tariff is being trued-up on basis of Notional COD instead of on the basis of Effective COD. Therefore, the useful life of the Combined Asset would remain the same as decided earlier. The elapsed life works out as three years as on 1.4.2014 (i.e. the number of completed years as on 1.4.2014 from Notional COD). Accordingly, the remaining useful life as on 31.3.2014 of the Combined Asset in the instant petition is considered as 22 years.

13. However, in order dated 28.4.2016 in Petition No. 533/TT/2014, elapsed life of Combined Asset was erroneously considered as 4 (four) years at the beginning of 2014-15 instead of 3 (three) years. The same is being corrected as 3 (three) years in the instant order. Accordingly, the WAL of the Combined Asset is also being considered as 25 years and the elapsed life as on 1.4.2014 is considered as 3 (three) years.

### **Capital Cost**

14. The Commission vide order dated 28.4.2016 in Petition No. 533/TT/2014 approved the capital cost as on 31.3.2014 of ₹8366.51 lakh and ACE of ₹115.60 lakh for Combined Asset for determination of tariff for 2014-19 period.

15. The Petitioner vide Auditor's Certificates dated 31.7.2019 has submitted the capital cost incurred upto 31.3.2014, ACE upto 31.3.2019 and estimated ACE during the period 1.4.2019 to 31.3.2020. The details of approved apportioned capital cost, capital cost as on COD, ACE incurred upto 31.3.2019 as claimed by the Petitioner for the transmission assets are as under:

| Assets  | FR Approved Apportioned Capital Cost | Expenditure up to 31.3.2014 (Admitted) | Expenditure up to 31.3.2014 (As per Books) | ACE     |         | Total Capital Cost as on 31.3.2019 |
|---------|--------------------------------------|--|--|---------|---------|------------------------------------|
|         |                                      |  |  | 2015-16 | 2016-17 |                                    |
| Asset-1 | 10584                                | 1113.74                                | 1113.74                                    | 43.08   | 0       | 1156.82                            |



|              |              |                |                |               |              |                |
|--------------|--------------|----------------|----------------|---------------|--------------|----------------|
| Asset-2      |              | 1552.07        | 1552.07        | 21.87         | 0            | 1573.94        |
| Asset-3      |              | 719.56         | 719.56         | 21.56         | 0            | 741.12         |
| Asset-4      |              | 2624.07        | 2624.07        | 0             | 0            | 2624.07        |
| Asset-5      |              | 1232.06        | 1232.06        | 0             | 0            | 1232.06        |
| Asset-6      |              | 496.46         | 582.35         | 20.52         | 0            | 602.87         |
| Asset-7      |              | 628.55         | 628.55         | 34.73         | 29.50        | 692.78         |
| <b>Total</b> | <b>10584</b> | <b>8366.51</b> | <b>8452.40</b> | <b>141.76</b> | <b>29.50</b> | <b>8623.66</b> |

16. The Petitioner has claimed capital cost of ₹8452.40 lakh as on 31.3.2014 and ₹171.26 lakh (₹141.76 lakh during 2015-16 and ₹29.50 lakh during 2016-17) as ACE during 2014-19 period for the Combined Asset.

17. The completion cost including ACE is within the approved apportioned capital cost. Therefore, there is no cost over-run in respect of the transmission assets.

### **Initial Spares**

18. The Commission in order dated 28.4.2016 in Petition No. 533/TT/2014 trued up the transmission tariff of the 2009-14 tariff period after restricting the excess Initial Spares amounting to ₹85.90 lakh (₹14.34 for Asset-2, ₹6.72 for Asset-3, ₹45.53 for Asset-4 and ₹19.31 for Asset-5) from the capital cost as on COD.

19. The Petitioner has claimed the following Initial Spares for the transmission assets and submitted the Auditor's Certificate in support of the same. The Petitioner has prayed to revise the Initial Spares allowed earlier for the transmission assets in light of the judgement of the Appellate Tribunal for Electricity (APTEL) dated 14.9.2019 in Appeal No.74 of 2017. The details of Initial Spares claimed by the Petitioner are as follows:

| Assets  | Estimated Completion Cost (A)<br>(₹ in lakh) | Initial Spares Claimed (B)<br>(₹ in lakh) | Ceiling Limit (%) (C) | Initial Spares Worked out<br>(₹ in lakh) | Excess Initial Spares<br>E = B – D<br>(₹ in lakh) |
|---------|--|---|-----------------------|--|---|
|         |  |   |                       | $D = [(A-B)*C / (100-C)]$                |   |
| Asset-1 | 1156.82                                      | 22.54                                     | 2.50                  | 29.08                                    | -6.54   |
| Asset-2 | 1573.93                                      | 52.78                                     | 2.50                  | 39.00                                    | 13.78   |
| Asset-3 | 741.12                                       | 17.82                                     | 2.50                  | 18.55                                    | -0.73   |
| Asset-4 | 2624.07                                      | 109.99                                    | 2.50                  | 64.46                                    | 45.53   |



|              |                |               |             |               |              |
|--------------|----------------|---------------|-------------|---------------|--------------|
| Asset-5      | 1232.06        | 49.63         | 2.50        | 30.32         | 19.31        |
| Asset-6      | 602.87         | 12.02         | 2.50        | 15.15         | -3.13        |
| Asset-7      | 692.78         | 12.02         | 2.50        | 17.46         | -5.44        |
| <b>Total</b> | <b>8623.65</b> | <b>276.80</b> | <b>2.50</b> | <b>214.02</b> | <b>62.78</b> |

20. TANGEDCO has submitted that in the instant petition, the Petitioner has claimed Initial Spares as per the APTEL's judgement dated 14.9.2019 in Appeal No. 74 of 2017. TANGEDCO has further submitted that the Commission vide order dated 7.9.2016 in Petition No.35/RP/2016 allowed Initial Spares on the basis of the apportioned cost of the individual asset based on judgement of the APTEL dated 28.11.2013 in Appeal No. 165 of 2012. TANGEDCO has submitted that the judgment in Appeal No. 74 of 2017 relating to calculation of Initial Spares is based on the project cost as per the 2009 Tariff Regulations. TANGEDCO has further submitted that the Petitioner has not provided the inventory details of retained, used and leftover Initial Spares in the true up petition for claiming spares under O&M Expenses. TANGEDCO has also submitted that the judgment in Appeal No. 74 of 2017 cannot be made applicable to the instant case as the method of calculation of Initial Spares is different in the 2009 Tariff Regulations, the 2014 Tariff Regulations and the 2019 Tariff Regulations. TANGEDCO has requested to restrict the Initial Spares in the instant case considering the normative ceiling of individual element. TANGEDCO has submitted that the judgment of APTEL in Appeal No. 74 of 2017 is *per incuriam* as it has been passed without considering its earlier judgment in Appeal No. 165 of 2012 and as such the same requires to be clarified by a larger Bench of APTEL.

21. In response, the Petitioner has submitted that as per proviso (iii) to Regulation 13 of the 2014 Tariff Regulations once the transmission project has been executed, then at the time of truing up, plant and machinery cost corresponding to the transmission project shall be the basis for restricting the Initial Spares. The Petitioner



has further submitted that APTEL in its judgement in Appeal No. 74 of 2017 has allowed the computation of Initial Spares based on overall project cost after taking into consideration its previous judgements.

22. We have considered the submissions of the Petitioner and TANGEDCO. As regards TANGEDCO's contention that the judgment in Appeal No. 74 of 2017 is *per incuriam*, we would like to state that the Commission is bound by the judgements of the APTEL. APTEL vide its judgement dated 14.9.2019 in Appeal No. 74 of 2017 observed that the Commission for the purpose of prudence check may restrict the Initial Spares to the cost of the individual asset and later at the time of truing up allow Initial Spares as per the ceiling limits on the overall project cost. The relevant portion of the said judgement is extracted here under:

*"18.13. .... We do not agree with this methodology of restricting initial spares asset / element wise as adopted by the Central Commission. The Central Commission to have a prudence check on the initial spares, being restricted based on the individual asset wise cost initially, but subsequently ought to have allowed as per the ceiling limits on the overall project cost basis during the true- up."*

23. As per the APTEL's judgement dated 14.9.2019 in Appeal No. 74 of 2017, the Initial Spares are to be allowed as a percentage of the project cost as a whole as on the cut-off date. Regulation 3(29) of the 2009 Tariff Regulations defines "project cost" as under:

*"(29) 'original project cost' means the capital expenditure incurred by the generating company or the transmission licensee, as the case may be, within the original scope of the project up to the cut-off date as admitted by the Commission;*

24. The transmission assets were put into commercial operation in the 2009-14 tariff period. Therefore, the 2009 Tariff Regulations are applicable for the transmission assets. Regulation 8(iv) of the 2009 Tariff Regulations specifies the norms for the Initial Spares for the transmission systems as under:

*"(iv) Transmission system*



- (a) Transmission line - 0.75%  
 (b) Transmission Sub-station - 2.5%  
 (c) Series Compensation devices and HVDC Station - 3.5%  
 (d) Gas Insulated Sub-station (GIS) - 3.5%”

25. The transmission assets covered in the instant petition have been combined on the basis of notional date of commercial operation as 1.10.2010 vide order dated 28.4.2016 in Petition No. 533/TT/2014. Accordingly, the cut-off date of the transmission assets is 31.3.2013. The Initial Spares for the transmission assets, which were put into commercial operation during the 2009-14 tariff period, are allowed as per Regulation 8(iv) of the 2009 Tariff Regulations taking into consideration the capital cost of the transmission line and sub-station as on the cut-off date. The details of the Initial Spares claimed by the Petitioner and allowed as per the norms specified in the 2009 Tariff Regulations are as under:

(₹ in lakh)

| Particulars    | Project Cost approved in Petition No. 533/TT/2014 as on cut-off date | Initial Spares disallowed in Petition No. 533/TT/2014 | Project cost as on cut-off date for calculating Initial Spares | Initial Spares claimed by the Petitioner | Ceiling Limit as per the 2009 Tariff Regulations (%) | Initial Spares worked out as per the APTEL judgment | Initial Spares allowed in Petition No. 533/TT/2014 | Additional Initial Spares |
|----------------|--|---|--|--|--|---|--|---------------------------|
|                | A  | B   | C=A+B  | D  | E  | $F=E*(A-D)/(1-E)$                                   | G  | H=F-G                     |
| Combined Asset | 8366.51  | 85.90   | 8452.41  | 276.80                                   | 2.50%  | 209.63  | 197.62   | 12.01                     |

**Capital Cost as on 1.4.2014:**

26. The capital cost as on 1.4.2014 considered for true up of tariff of the 2014-19 tariff period is as under:

(₹ in lakh)

| Capital Cost as on 31.3.2014 approved vide order dated 25.8.2016 in Petition No. 533/TT/2014 | Initial Spares allowed as per the APTEL Judgment dated 14.7.2019 in Appeal No. 74 of 2017 | Capital Cost as on 1.4.2014 |
|--|---|-----------------------------|
| 8366.51  | 12.01   | 8378.52                     |



**Additional Capital Expenditure (ACE)**

27. The Petitioner has claimed the following ACE for the transmission assets and submitted the Auditor's Certificates in support of the same:

(₹ in lakh)

| Assets       | ACE           |              |
|--------------|---------------|--------------|
|              | 2015-16       | 2016-17      |
| Asset-1      | 43.08         | 0.00         |
| Asset-2      | 21.87         | 0.00         |
| Asset-3      | 21.56         | 0.00         |
| Asset-6      | 20.52         | 0.00         |
| Asset-7      | 34.73         | 29.50        |
| <b>Total</b> | <b>141.76</b> | <b>29.50</b> |

28. The Petitioner has submitted that ACE is on account of balance and retention payments due to un-discharged liability towards final payment/ withheld payment due to contractual exigencies for works executed within the cut-off date and payments made after the cut-off date. The ACE beyond the cut-off date has been claimed under Regulation 14(3)(v) of the 2014 Tariff Regulations.

29. TANGEDCO has submitted that the Petitioner has claimed total ACE of ₹141.76 lakh and ₹29.50 lakh for the years 2015-16 and 2016-17 respectively for the transmission assets. The cut-off date of the transmission assets is 31.3.2013. The Petitioner vide Form 7 has only mentioned that ACE is due to balance and retention payment for the years 2015-16 and 2016-17 which are beyond the cut-off date. The Petitioner has not furnished any reasons or justifications for deferring the work for two years beyond the COD nor has given any reasons in the petition for retaining the payment beyond the cut-off date. TANGEDCO has submitted that the regulations specifically require valid reasons for claiming ACE beyond the cut-off date and as such in the circumstances, the Petitioner is not entitled to claim any ACE.



30. In response, the Petitioner has submitted that the contracts were not closed and liabilities were also not finalized at the time of projecting the estimated ACE. However, in the instant true up petition, ACE has been claimed on the basis of actual payments made to the contractor after receipt of final invoices from the contractor and incorporating the amendments. The Petitioner has further submitted that the actual capital expenditure incurred by the Petitioner after closing of contract may happen to be higher or lower than the estimated ACE. The Petitioner has submitted that payments were made after submission of invoice and after reconciliation in accordance with contractual clause as per provisions of contract. The Petitioner has submitted that ACE is claimed as per Regulation 14(3)(v) of the 2014 Tariff Regulations.

31. We have considered the above submissions of the Petitioner and TANGEDCO. The cut-off date of the transmission assets is 31.3.2013. The actual audited ACE claimed by the Petitioner for 2015-16 and 2016-17 is beyond the cut-off date and is permitted under Regulation 14(3)(v) of the 2014 Tariff Regulations. Based on the submissions made by the Petitioner, the same has been considered for computation of total capital cost as on 31.3.2019. Accordingly, the ACE claimed for the periods 2015-16 and 2016-17 is allowed under Regulation 14(3)(v) of the 2014 Tariff Regulations.

32. The details of capital cost allowed as on 31.3.2019 including ACE allowed are as under:

| Particulars | Capital cost as on 1.4.2014 on cash basis | ACE     |         |         | Total capital cost as on 31.3.2019 |
|-------------|---|---------|---------|---------|------------------------------------|
|             |   | 2014-15 | 2015-16 | 2016-17 |                                    |
|             |   |         |         |         |                                    |





|   |         |        |        |       |         |
|---|---------|--------|--------|-------|---------|
| Approved vide order dated 28.4.2016 in Petition No. 533/TT/2014 | 8366.51 | 115.60 | 0.00   | 0.00  | 8482.11 |
| Claimed by the Petitioner in the instant petition               | 8452.39 | 0.00   | 141.76 | 29.50 | 8623.65 |
| Allowed after true-up in this order                             | 8378.52 | 0.00   | 141.76 | 29.50 | 8549.78 |

### **Debt-Equity Ratio**

33. The Petitioner has claimed the debt-equity ratio of 70:30 as on 1.4.2014 and for ACE for the 2014-19 tariff period. The details of the debt-equity ratio of 70:30 has been considered for capital cost as on 1.4.2014 and ACE during the 2014-19 period as provided under Regulation 19 of the 2014 Tariff Regulations. The same has been summarised as under:

| <b>Combined Asset</b> | <b>As on 1.4.2014</b>    |               | <b>As on 31.3.2019</b>   |               |
|-----------------------|--------------------------|---------------|--------------------------|---------------|
|                       | <b>Amount ( in lakh)</b> | <b>(%)</b>    | <b>Amount ( in lakh)</b> | <b>(%)</b>    |
| Debt                  | 5864.97                  | 70.00         | 5984.85                  | 70.00         |
| Equity                | 2513.55                  | 30.00         | 2564.93                  | 30.00         |
| <b>Total</b>          | <b>8378.52</b>           | <b>100.00</b> | <b>8549.78</b>           | <b>100.00</b> |

### **Interest on Loan (“IoL”)**

34. The Petitioner has claimed IoL based on actual interest rates for each year during the 2014-19 period. The Petitioner has prayed for change in interest rates prevailing as on 1.4.2014 for respective loans.

35. We have considered the submissions of the Petitioner and accordingly calculated the IoL based on actual interest rate in accordance with Regulation 26 of the 2014 Tariff Regulations. The IoL has been worked out as detailed below:

- (i) Gross amount of loan, repayment of instalments and weighted average rate of interest on actual average loan have been considered as per the petition.



(ii) The repayment for the tariff period 2014-19 has been considered to be equal to the depreciation allowed for that period.

36. The details of IoL approved are as follows:

| (₹ in lakh)                                   |               |               |               |               |               |
|---|---------------|---------------|---------------|---------------|---------------|
| Particulars                                   | 2014-15       | 2015-16       | 2016-17       | 2017-18       | 2018-19       |
| Gross Normative Loan                          | 5864.97       | 5864.97       | 5964.20       | 5984.85       | 5984.85       |
| Cumulative Repayments upto Previous Year      | 1694.48       | 2136.87       | 2582.99       | 3033.64       | 3485.07       |
| Net Loan-Opening                              | 4170.49       | 3728.10       | 3381.21       | 2951.21       | 2499.78       |
| Additions                                     | 0.00          | 99.23         | 20.65         | 0.00          | 0.00          |
| Repayment during the year                     | 442.39        | 446.13        | 450.65        | 451.43        | 451.43        |
| Net Loan-Closing                              | 3728.10       | 3381.21       | 2951.21       | 2499.78       | 2048.35       |
| Average Loan                                  | 3949.29       | 3554.65       | 3166.21       | 2725.49       | 2274.06       |
| Weighted Average Rate of Interest on Loan (%) | 8.863         | 8.862         | 8.860         | 8.855         | 8.852         |
| <b>Interest on Loan</b>                       | <b>350.04</b> | <b>315.01</b> | <b>280.53</b> | <b>241.35</b> | <b>201.31</b> |

37. The IoL approved vide order dated 28.4.2016 in Petition No. 533/TT/2014, IoL claimed in the instant petition and true up IoL allowed in respect of the Combined Asset is shown in the table below:

| (₹ in lakh)   |         |         |         |         |         |
|---|---------|---------|---------|---------|---------|
| Combined Asset  | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Approved vide order dated 28.4.2016 in Petition No. 533/TT/2014 | 352.77  | 316.86  | 277.18  | 237.48  | 197.77  |
| Claimed by the Petitioner in the instant petition               | 350.70  | 315.62  | 281.09  | 241.86  | 201.76  |
| Allowed after true-up in this order                             | 350.04  | 315.01  | 280.53  | 241.35  | 201.31  |

### **Return on Equity ("RoE")**

38. The Petitioner is entitled to RoE for the Combined Asset in terms of Regulations 24 and 25 of the 2014 Tariff Regulations. The Petitioner has submitted that it is liable to pay income tax at MAT rates and has claimed following effective tax rates for the 2014-19 tariff period:



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

39. We have considered the submissions of the Petitioner. The Commission in order dated 27.4.2020 in Petition No. 274/TT/2019 has arrived at the effective tax rate based on the notified MAT rates for the Petitioner. The relevant portion of the order 27.4.2020 is as under:

*26. We are conscious that the entities covered under MAT regime are paying Income Tax as per MAT rate notified for respective financial year under IT Act, 1961, which is levied on the book profit of the entity computed as per the Section 115JB of the IT Act, 1961. The Section 115JB(2) defines book profit as net profit in the statement of Profit & Loss prepared in accordance with Schedule-III of the Companies Act, 2013, subject to some additions and deductions as mentioned in the IT Act, 1961. Since the Petitioner has been paying income tax on income computed under Section 115JB of the IT Act, 1961 as per the MAT rates of the respective financial year, the notified MAT rate for respective financial year shall be considered as effective tax rate for the purpose of grossing up of RoE for truing up of the tariff of the 2014-19 tariff period in terms of the provisions of the 2014 Tariff Regulations. Interest imposed on any additional income tax demand as per the Assessment Order of the Income Tax authorities shall be considered on actual payment. However, penalty (for default on the part of the Assessee) if any imposed shall not be taken into account for the purpose of grossing up of rate of return on equity. 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 transmission customers/ DICs as the case may be on year to year basis.*

*27. Accordingly, following effective tax rates based on notified MAT rates are considered for the purpose of grossing up of rate of return on equity:*

| <b>Year</b> | <b>Notified MAT rates (inclusive of surcharge &amp; cess)</b> | <b>Effective tax (in %)</b> |
|-------------|---|-----------------------------|
| 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                      |

”

40. The same MAT rates as considered in 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 the 2014-19 tariff period in terms of the provisions of the 2014 Tariff Regulations and the same are as under:

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

41. Accordingly, RoE allowed for the Combined Asset is as follows:

| Particulars  | (₹ in lakh) |         |         |         |         |
|--|-------------|---------|---------|---------|---------|
|  | 2014-15     | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Net Opening Equity                                 | 2513.55     | 2513.55 | 2556.08 | 2564.93 | 2564.93 |
| Increase in Equity due to addition during the year | 0.00        | 42.53   | 8.85    | 0.00    | 0.00    |
| Closing Equity                                     | 2513.55     | 2556.08 | 2564.93 | 2564.93 | 2564.93 |
| Average Equity                                     | 2513.55     | 2534.82 | 2560.51 | 2564.93 | 2564.93 |
| Return on Equity (Base Rate) (%)                   | 15.500      | 15.500  | 15.500  | 15.500  | 15.500  |
| Tax Rate applicable (%)                            | 20.961      | 21.342  | 21.342  | 21.342  | 21.549  |
| Applicable RoE Rate (%)                            | 19.610      | 19.705  | 19.705  | 19.705  | 19.758  |
| Return on Equity for the year                      | 492.91      | 499.49  | 504.55  | 505.42  | 506.78  |

42. The RoE approved vide order dated 28.4.2016 in Petition No. 533/TT/2014, RoE claimed in the instant petition and true up RoE allowed in respect of the Combined Asset is shown in the table below:

| Particulars   | (₹ in lakh) |         |         |         |         |
|---|-------------|---------|---------|---------|---------|
|   | 2014-15     | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Approved vide order dated 28.4.2016 in Petition No. 533/TT/2014 | 495.60      | 499.00  | 499.00  | 499.00  | 499.00  |
| Claimed by the Petitioner in the instant petition               | 493.94      | 500.40  | 505.20  | 506.08  | 507.44  |
| Allowed after true-up in this order                             | 492.91      | 499.49  | 504.55  | 505.42  | 506.78  |

### Depreciation

43. The Petitioner has claimed depreciation considering the capital expenditure of ₹8389.61 lakh as on 1.4.2014 and ACE of ₹171.26 lakh during the 2014-19 tariff period for the Combined Asset.



44. The depreciation has been worked out as per the methodology provided under Regulation 27 of the 2014 Tariff Regulations. The gross block during the 2014-19 tariff period has been depreciated at weighted average rate of depreciation (WAROD) and working of WAROD is given in Annexure-I. WAROD has been worked out after taking into account the depreciation rate as prescribed in the 2014 Tariff Regulations and the trued up depreciation allowed for the 2014-19 tariff period is as under:

| (₹ in lakh)  |               |               |               |               |               |
|--|---------------|---------------|---------------|---------------|---------------|
| Particulars  | 2014-15       | 2015-16       | 2016-17       | 2017-18       | 2018-19       |
| Opening Gross Block  | 8378.52       | 8378.52       | 8520.28       | 8549.78       | 8549.78       |
| ACE  | 0.00          | 141.76        | 29.50         | 0.00          | 0.00          |
| Closing Gross Block  | 8378.52       | 8520.28       | 8549.78       | 8549.78       | 8549.78       |
| Average Gross Block  | 8378.52       | 8449.40       | 8535.03       | 8549.78       | 8549.78       |
| Rate of Depreciation (%)   | 5.28          | 5.28          | 5.28          | 5.28          | 5.28          |
| Balance useful life of Combined Asset at the beginning of the year | 22            | 21            | 20            | 19            | 18            |
| Aggregate Depreciable Value  | 7540.67       | 7604.46       | 7681.53       | 7694.80       | 7694.80       |
| <b>Depreciation during the year</b>                                | <b>442.39</b> | <b>446.13</b> | <b>450.65</b> | <b>451.43</b> | <b>451.43</b> |
| Cumulative Aggregate Depreciation at the end of the year           | 2136.87       | 2582.99       | 3033.64       | 3485.07       | 3936.50       |
| Remaining Aggregate Depreciable Value at the end of the year       | 5403.80       | 5021.47       | 4647.88       | 4209.73       | 3758.30       |

45. The depreciation approved vide order dated 28.4.2016 in Petition No. 533/TT/2014, depreciation claimed in the instant petition and trued up depreciation allowed in respect of Combined Asset is shown in the table below:

| (₹ in lakh)   |         |         |         |         |         |
|---|---------|---------|---------|---------|---------|
| Particulars   | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Approved vide order dated 28.4.2016 in Petition No. 533/TT/2014 | 444.80  | 447.86  | 447.86  | 447.86  | 447.86  |
| Claimed by the Petitioner in the instant petition               | 442.97  | 446.71  | 451.24  | 452.01  | 452.01  |
| Allowed after true-up in this order                             | 442.39  | 446.13  | 450.65  | 451.43  | 451.43  |



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

46. The details of the O&M Expenses claimed by the Petitioner for the Combined Asset are as under:

| (₹ in lakh)             |         |         |         |         |         |
|-------------------------|---------|---------|---------|---------|---------|
| Particulars             | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| <b>O&amp;M Expenses</b> | 422.10  | 436.10  | 450.59  | 465.57  | 480.97  |

47. The O&M Expenses as claimed by the Petitioner are within the norms specified under the 2014 Tariff Regulations. The allowable O&M Expenses in respect of the Combined Asset are as follows:

| (₹ in lakh)   |               |               |               |               |               |
|---|---------------|---------------|---------------|---------------|---------------|
| Particulars   | 2014-15       | 2015-16       | 2016-17       | 2017-18       | 2018-19       |
| <b>Sub-station Bays (At Hiriyyur, Hossur, Hyderabad, Salem, Kolar, Munirabad, Sriperumbudur Sub-stations)</b> |               |               |               |               |               |
| 400 kV Bay (AIS)  | 7             | 7             | 7             | 7             | 7             |
| Norm (₹ lakh/bay)   | 60.30         | 62.30         | 64.37         | 66.51         | 68.71         |
| <b>Total O&amp;M Expenses</b>   | <b>422.10</b> | <b>436.10</b> | <b>450.59</b> | <b>465.57</b> | <b>480.97</b> |

The O&M Expenses approved vide order dated 28.4.2016 in Petition No. 533/TT/2014, O&M Expenses claimed in the instant petition and trued up O&M Expenses allowed in respect of the Combined Asset are the same.

### **Interest on Working Capital (“IWC”)**

48. IWC has been worked out as per the methodology provided in Regulation 28 of the 2014 Tariff Regulations and allowed in respect of the Combined Asset as under:

**(i) Maintenance spares:**

Maintenance spares have been worked out based on 15% of Operation and Maintenance Expenses specified in Regulation 28.

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

O&M Expenses have been considered for one month of the allowed O&M Expenses.

**(iii) Receivables:**



The receivables have been worked out on the basis of 2 months of annual transmission charges as worked out above.

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

Rate of interest on working capital is considered on normative basis in accordance with Clause (3) of Regulation 28 of the 2014 Tariff Regulations.

49. The IWC allowed for the Combined Asset is shown as under:

| (₹ in lakh)                  |               |               |               |               |               |
|------------------------------|---------------|---------------|---------------|---------------|---------------|
| Particulars                  | 2014-15       | 2015-16       | 2016-17       | 2017-18       | 2018-19       |
| O & M Expenses               | 35.18         | 36.34         | 37.55         | 38.80         | 40.08         |
| Maintenance Spares           | 63.32         | 65.42         | 67.59         | 69.84         | 72.15         |
| Receivables                  | 293.39        | 291.64        | 289.94        | 286.18        | 282.29        |
| <b>Total Working Capital</b> | <b>391.88</b> | <b>393.40</b> | <b>395.08</b> | <b>394.81</b> | <b>394.52</b> |
| Rate of Interest (%)         | 13.50         | 13.50         | 13.50         | 13.50         | 13.50         |
| Interest on working capital  | 52.90         | 53.11         | 53.34         | 53.30         | 53.26         |

50. The IWC approved vide order dated 28.4.2016 in Petition No. 533/TT/2014, IWC claimed in the instant petition and trued up IWC allowed in respect of the Combined Asset is shown in the table below:

| (₹ in lakh)   |         |         |         |         |         |
|---|---------|---------|---------|---------|---------|
| Particulars   | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Approved vide order dated 28.4.2016 in Petition No. 533/TT/2014 | 53.08   | 53.18   | 53.07   | 52.98   | 52.92   |
| Claimed by the Petitioner in the instant petition               | 52.96   | 53.16   | 53.38   | 53.34   | 53.30   |
| Allowed after true-up in this order                             | 52.90   | 53.11   | 53.34   | 53.30   | 53.26   |

**Approved Annual Fixed Charges for 2014-19 Tariff Period**

51. Accordingly, the annual fixed charges after truing up for the 2014-19 tariff period in respect of the Combined Asset are as under:

| (₹ in lakh)                        |         |         |         |         |         |
|------------------------------------|---------|---------|---------|---------|---------|
| Particulars                        | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Depreciation                       | 442.39  | 446.13  | 450.65  | 451.43  | 451.43  |
| Interest on Loan                   | 350.04  | 315.01  | 280.53  | 241.35  | 201.31  |
| Return on Equity                   | 492.91  | 499.49  | 504.55  | 505.42  | 506.78  |
| Interest on Working Capital        | 52.90   | 53.11   | 53.34   | 53.30   | 53.26   |
| Operation and Maintenance Expenses | 422.10  | 436.10  | 450.59  | 465.57  | 480.97  |



|              |                |                |                |                |                |
|--------------|----------------|----------------|----------------|----------------|----------------|
| <b>Total</b> | <b>1760.34</b> | <b>1749.83</b> | <b>1739.65</b> | <b>1717.07</b> | <b>1693.75</b> |
|--------------|----------------|----------------|----------------|----------------|----------------|

52. The details of the Annual Transmission Charges approved vide order dated 28.4.2016 in Petition No. 533/TT/2014, the Annual Transmission Charges claimed in the instant petition and true up Annual Transmission Charges allowed in respect of the Combined Asset are shown in the table below:

| <b>Particulars</b>  | <b>(₹ in lakh)</b> |                |                |                |                |
|---|--------------------|----------------|----------------|----------------|----------------|
|   | <b>2014-15</b>     | <b>2015-16</b> | <b>2016-17</b> | <b>2017-18</b> | <b>2018-19</b> |
| Approved vide order dated 28.4.2016 in Petition No. 533/TT/2014 | 1768.35            | 1753.00        | 1727.70        | 1702.89        | 1678.52        |
| Claimed by the Petitioner in the instant petition               | 1762.67            | 1751.99        | 1741.50        | 1718.86        | 1695.48        |
| Allowed after true-up in this order                             | 1760.34            | 1749.83        | 1739.65        | 1717.07        | 1693.75        |

#### **Determination of Annual Fixed Charges for the 2019-24 Tariff Period**

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

| <b>Particulars</b>          | <b>(₹ in lakh)</b> |                |                |                |                |
|-----------------------------|--------------------|----------------|----------------|----------------|----------------|
|                             | <b>2019-20</b>     | <b>2020-21</b> | <b>2021-22</b> | <b>2022-23</b> | <b>2023-24</b> |
| Depreciation                | 452.01             | 452.01         | 452.01         | 452.01         | 150.56         |
| Interest on Loan            | 161.75             | 121.72         | 81.70          | 41.69          | 15.02          |
| Return on equity            | 482.37             | 482.37         | 482.37         | 482.37         | 482.37         |
| Interest on Working Capital | 26.29              | 26.09          | 25.84          | 25.61          | 21.00          |
| O & M Expenses              | 225.05             | 232.96         | 241.15         | 249.62         | 258.37         |
| <b>Total</b>                | <b>1347.47</b>     | <b>1315.15</b> | <b>1283.07</b> | <b>1251.30</b> | <b>927.32</b>  |

54. The Petitioner has claimed the following IWC in respect of the Combined Asset for the 2019-24 tariff period:

| <b>Particulars</b>   | <b>(₹ in lakh)</b> |                |                |                |                |
|----------------------|--------------------|----------------|----------------|----------------|----------------|
|                      | <b>2014-15</b>     | <b>2015-16</b> | <b>2016-17</b> | <b>2017-18</b> | <b>2018-19</b> |
| O & M Expenses       | 18.75              | 19.41          | 20.10          | 20.80          | 21.53          |
| Maintenance Spares   | 33.76              | 34.94          | 36.17          | 37.44          | 38.76          |
| Receivables          | 165.67             | 162.14         | 158.19         | 154.27         | 114.01         |
| <b>Total</b>         | <b>218.18</b>      | <b>216.49</b>  | <b>214.46</b>  | <b>212.51</b>  | <b>174.30</b>  |
| Rate of Interest (%) | 12.05              | 12.05          | 12.05          | 12.05          | 12.05          |
| Interest             | 26.29              | 26.09          | 25.84          | 25.61          | 21.00          |

#### **Capital Cost**

55. Regulations 19 of the 2019 Tariff Regulations provide 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 renovation and modernisation as admitted by this Commission in accordance with these regulations;
- (d) Capital expenditure on account of ash disposal and utilization including



handling and transportation facility;

(e) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and

(f) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.

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

(a) cost of approved rehabilitation and resettlement (R&R) plan of the project in conformity with National R&R Policy and R&R package as approved; and

(b) cost of the developer's 10% contribution towards Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) and Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) project in the affected area.

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

(a) The assets forming part of the project, but not in use, as declared in the tariff petition;

(b) De-capitalised Assets after the date of commercial operation on account of replacement or removal on account of obsolescence or shifting from one project to another project:

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

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

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

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

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

56. The Petitioner has claimed the capital cost of Combined Asset as ₹8560.70 lakh as on 31.3.2019.

57. The admitted tried up capital cost of ₹8549.78 lakh as on 31.3.2019 has been considered as the opening capital cost as on 1.4.2019 for determination of tariff for the 2019-24 tariff period in accordance with Regulation 19 of the 2019 Tariff



Regulations. The element-wise capital cost (i.e. land, building, transmission line, sub-station and PLCC) as admitted by the Commission as on 31.3.2019 for the Combined Asset has been considered as capital cost for the Combined Asset as on 1.4.2019, as per the following details:

| Particulars                  | (₹ in lakh)  |
|------------------------------|--|
|                              | Capital Cost for the Combined Asset as on 1.4.2019 |
| Freehold Land                | 0.00   |
| Leasehold Land               | 0.00   |
| Building & Other Civil Works | 0.00   |
| Transmission Line            | 0.00   |
| Sub-Station Equipment        | 8549.78  |
| PLCC                         | 0.00   |
| IT Equipment and Software    | 0.00   |
| <b>Total</b>                 | <b>8549.78</b>                                     |

### **Additional Capital Expenditure (ACE)**

58. The Petitioner has not claimed any ACE for the Combined Asset during the 2019-24 tariff period.

### **Debt-Equity Ratio**

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

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

*Provided that:*

- 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.”

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

| Particulars  | Capital Cost as on 1.4.2019<br>(₹ in lakh) | (%)           | Total Capital Cost as on 31.3.2024<br>(₹ in lakh) | (%)           |
|--------------|--|---------------|---|---------------|
| Debt         | 5984.85                                    | 70.00         | 5984.85   | 70.00         |
| Equity       | 2564.93                                    | 30.00         | 2564.93   | 30.00         |
| <b>Total</b> | <b>8549.78</b>                             | <b>100.00</b> | <b>8549.78</b>                                    | <b>100.00</b> |

### **Return on Equity (“RoE”)**

61. Regulations 30 and 31 of the 2019 Tariff Regulations provide as under:

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

(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating station, transmission system including communication system and run-of-



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

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

Provided further that:

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

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

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

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

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

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

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

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

Where “t” is the effective tax rate in accordance with clause (1) of this Regulation and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the company on pro-rata basis by excluding the income of non-generation or non-transmission business, as the case may be, and the





corresponding tax thereon. In case of generating company or transmission licensee paying Minimum Alternate Tax (MAT), “t” shall be considered as MAT rate including surcharge and cess.

**Illustration-**

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

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

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

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

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

62. The Petitioner has submitted that MAT rate is applicable to the Petitioner's Company. Accordingly, the MAT rate applicable during the 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. The RoE allowed for the Combined Asset under Regulation 30 of the 2019 Tariff Regulations is as under:

| Particulars  | (₹ in lakh) |         |         |         |         |
|--|-------------|---------|---------|---------|---------|
|  | 2019-20     | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| Net Opening Equity                                 | 2564.93     | 2564.93 | 2564.93 | 2564.93 | 2564.93 |
| Increase in Equity due to addition during the year | 0.00        | 0.00    | 0.00    | 0.00    | 0.00    |
| Closing Equity                                     | 2564.93     | 2564.93 | 2564.93 | 2564.93 | 2564.93 |
| Average Equity                                     | 2564.93     | 2564.93 | 2564.93 | 2564.93 | 2564.93 |
| Return on Equity (Base Rate) (%)                   | 15.500      | 15.500  | 15.500  | 15.500  | 15.500  |
| MAT Rate for respective year (%)                   | 17.472      | 17.472  | 17.472  | 17.472  | 17.472  |
| Applicable RoE Rate (%)                            | 18.782      | 18.782  | 18.782  | 18.782  | 18.782  |



|                               |        |        |        |        |        |
|-------------------------------|--------|--------|--------|--------|--------|
| Return on Equity for the year | 481.75 | 481.75 | 481.75 | 481.75 | 481.75 |
|-------------------------------|--------|--------|--------|--------|--------|

### **Interest on Loan (“IoL”)**

63. Regulation 32 of the 2019 Tariff Regulations provides as under:

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

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

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

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

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

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

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

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

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

64. The weighted average rate of IoL has been considered on the basis of rate prevailing as on 1.4.2019. The Petitioner has prayed that the change in interest rate due to floating rate of interest applicable, if any, during 2019-24 tariff period will be adjusted. The Petitioner is directed to furnish computation of interest upto the COD and thereafter at the time of truing up of tariff of the 2019-24 tariff period. Accordingly,



the floating rate of interest, if any, shall be considered at the time of truing up. Therefore, IoL has been allowed in accordance with Regulation 32 of the 2019 Tariff Regulations which is as under:

| (₹in lakh)                                    |               |               |              |              |              |
|---|---------------|---------------|--------------|--------------|--------------|
| Particulars                                   | 2019-20       | 2020-21       | 2021-22      | 2022-23      | 2023-24      |
| Gross Normative Loan                          | 5984.85       | 5984.85       | 5984.85      | 5984.85      | 5984.85      |
| Cumulative Repayments upto Previous Year      | 3936.50       | 4387.93       | 4839.36      | 5290.79      | 5742.21      |
| Net Loan-Opening                              | 2048.35       | 1596.92       | 1145.49      | 694.06       | 242.64       |
| Additions                                     | 0.00          | 0.00          | 0.00         | 0.00         | 0.00         |
| Repayment during the year                     | 451.43        | 451.43        | 451.43       | 451.43       | 175.20       |
| Net Loan-Closing                              | 1596.92       | 1145.49       | 694.06       | 242.64       | 67.43        |
| Average Loan                                  | 1822.63       | 1371.21       | 919.78       | 468.35       | 155.03       |
| Weighted Average Rate of Interest on Loan (%) | 8.852         | 8.851         | 8.850        | 8.849        | 8.844        |
| <b>Interest on Loan</b>                       | <b>161.34</b> | <b>121.36</b> | <b>81.40</b> | <b>41.44</b> | <b>13.71</b> |

### Depreciation

65. Regulation 33 of the 2019 Tariff Regulations provides as under:

**“33. Depreciation:** (1) *Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission 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.*

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

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

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





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

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

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

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

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

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

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

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

66. WAROD (Annexure-II to this order) is allowed taking into account the depreciation rates specified in the 2019 Tariff Regulations. The depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and accumulated depreciation up to 31.3.2019. The depreciation approved for the Combined Asset is as follows:

(₹ in lakh)

| Particulars         | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---------------------|---------|---------|---------|---------|---------|
| Opening Gross Block | 8549.78 | 8549.78 | 8549.78 | 8549.78 | 8549.78 |
| ACE during the year | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    |
| Closing Gross Block | 8549.78 | 8549.78 | 8549.78 | 8549.78 | 8549.78 |



|  |               |               |               |               |               |
|--|---------------|---------------|---------------|---------------|---------------|
| Average Gross Block  | 8549.78       | 8549.78       | 8549.78       | 8549.78       | 8549.78       |
| Rate of Depreciation (%)                                     | 5.28          | 5.28          | 5.28          | 5.28          | 2.05          |
| Elapsed life at the beginning of the year                    | 8             | 9             | 10            | 11            | 12            |
| Balance useful life at the beginning of the year             | 17            | 16            | 15            | 14            | 13            |
| Aggregate Depreciable Value                                  | 7694.80       | 7694.80       | 7694.80       | 7694.80       | 7694.80       |
| <b>Depreciation during the year</b>                          | <b>451.43</b> | <b>451.43</b> | <b>451.43</b> | <b>451.43</b> | <b>175.20</b> |
| Cumulative Aggregate Depreciation                            | 4387.93       | 4839.36       | 5290.79       | 5742.21       | 5917.42       |
| Remaining Aggregate Depreciable Value at the end of the year | 3306.87       | 2855.45       | 2404.02       | 1952.59       | 1777.38       |

### **Operation & Maintenance Expenses (O&M Expenses)**

67. Regulation 35(3)(a) of the 2019 Tariff Regulations provides as under:

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

| <b>Particulars</b>  | <b>2019-20</b> | <b>2020-21</b> | <b>2021-22</b> | <b>2022-23</b> | <b>2023-24</b> |
|---|----------------|----------------|----------------|----------------|----------------|
| <i>Norms for sub-station Bays (₹ Lakh per bay)</i>                  |                |                |                |                |                |
| 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          |
| <i>Norms for Transformers (₹ Lakh per MVA)</i>                      |                |                |                |                |                |
| 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          |
| <i>Norms for AC and HVDC lines (₹ Lakh per km)</i>                  |                |                |                |                |                |
| 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)                                      | 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          |



|  |       |       |       |       |       |
|--|-------|-------|-------|-------|-------|
| <i>Double Circuit (Twin &amp; Triple Conductor)</i>                          | 0.881 | 0.912 | 0.944 | 0.977 | 1.011 |
| <i>Double Circuit (Single Conductor)</i>                                     | 0.377 | 0.391 | 0.404 | 0.419 | 0.433 |
| <i>Multi Circuit (Bundled Conductor with four or more sub-conductor)</i>     | 2.319 | 2.401 | 2.485 | 2.572 | 2.662 |
| <i>Multi Circuit (Twin &amp; Triple Conductor)</i>                           | 1.544 | 1.598 | 1.654 | 1.713 | 1.773 |
| <i>Norms for HVDC stations</i>   |       |       |       |       |       |
| <i>HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB)</i> | 834   | 864   | 894   | 925   | 958   |
| <i>Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW)</i>                | 1,666 | 1,725 | 1,785 | 1,848 | 1,913 |
| <i>500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)</i>            | 2,252 | 2,331 | 2,413 | 2,498 | 2,586 |
| <i>±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)</i>         | 2,468 | 2,555 | 2,645 | 2,738 | 2,834 |
| <i>±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500 MW)</i>          | 1,696 | 1,756 | 1,817 | 1,881 | 1,947 |
| <i>±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)</i>       | 2,563 | 2,653 | 2,746 | 2,842 | 2,942 |

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

*Provided further that:*

- i. the operation and maintenance expenses for new HVDC bi-pole schemes commissioned after 1.4.2019 for a particular year shall be allowed pro-rata on the basis of normative rate of operation and maintenance expenses of similar HVDC bi-pole scheme for the corresponding year of the tariff period;*
- ii. the O&M expenses norms for HVDC bi-pole line shall be considered as Double Circuit quad AC line;*
- iii. the O&M expenses of ±500 kV Mundra-Mohindergarh HVDC bipole scheme (2000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ±500 kV Talchar-Kolar HVDC bi-pole scheme (2000 MW);*
- iv. the O&M expenses of ±800 kV Champa-Kurukshetra HVDC bi-pole scheme*



(3000 MW) shall be on the basis of the normative O&M expenses for  $\pm 800$  kV, Bishwanath-Agra HVDC bi-pole scheme;

- v. the O&M expenses of  $\pm 800$  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  $\pm 800$  kV, Bishwanath-Agra HVDC bi-pole scheme; and
- vi. the O&M expenses of Static Synchronous Compensator and Static Var Compensator shall be worked at 1.5% of original project cost as on commercial operation which shall be escalated at the rate of 3.51% to work out the O&M expenses during the tariff period. The O&M expenses of Static Synchronous Compensator and Static Var Compensator, if required, may be reviewed after three years.

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

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

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

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

68. The O&M Expenses claimed by the Petitioner for the Combined Asset are as under:

| Particulars                  | (₹ in lakh) |         |         |         |         |
|------------------------------|-------------|---------|---------|---------|---------|
|                              | 2019-20     | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| O&M Expenses (7 No. of Bays) | 225.05      | 232.96  | 241.15  | 249.62  | 258.37  |

69. The O&M Expenses allowed as per the norms specified in the 2019 Tariff Regulations for the Combined Asset are as under:

| Particulars                   | (₹ in lakh)   |               |               |               |               |
|-------------------------------|---------------|---------------|---------------|---------------|---------------|
|                               | 2019-20       | 2020-21       | 201-22        | 2022-23       | 2023-24       |
| Norm (₹ lakh/bay)             | 32.15         | 33.28         | 34.45         | 35.66         | 36.91         |
| No. of Bays                   | 7             | 7             | 7             | 7             | 7             |
| <b>Total O&amp;M Expenses</b> | <b>225.05</b> | <b>232.96</b> | <b>241.15</b> | <b>249.62</b> | <b>258.37</b> |



## **Interest on Working Capital (“IWC”)**

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

*“34. Interest on Working Capital:*

*(1) The working capital shall cover:*

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

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

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

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

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

**“3. Definition** - *In these regulations, unless the context otherwise requires:-*

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

71. The Petitioner has submitted that it has claimed IWC for the 2019-24 period considering the SBI base rate plus 350 basis points as on 1.4.2019. The Petitioner has considered the rate of interest on working capital as 12.05%. The IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The rate of IWC considered is 12.05% (SBI 1-year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20 and 11.25% (SBI 1-year MCLR applicable as on 1.4.2020 of



7.75% plus 350 basis points) for 2020-24. The components of the working capital and interest allowed thereon are as follows:

| (₹ in lakh)                  |               |               |               |               |               |
|------------------------------|---------------|---------------|---------------|---------------|---------------|
| Particulars                  | 2019-20       | 2020-21       | 2021-22       | 2022-23       | 2023-24       |
| O&M Expenses                 | 18.75         | 19.41         | 20.10         | 20.80         | 21.53         |
| Maintenance Spares           | 33.76         | 34.94         | 36.17         | 37.44         | 38.76         |
| Receivables                  | 165.47        | 161.73        | 157.78        | 153.88        | 116.67        |
| <b>Total Working Capital</b> | <b>217.98</b> | <b>216.09</b> | <b>214.05</b> | <b>212.12</b> | <b>176.96</b> |
| Rate of Interest (%)         | 12.05         | 11.25         | 11.25         | 11.25         | 11.25         |
| Interest on working capital  | 26.27         | 24.31         | 24.08         | 23.86         | 19.91         |

### **Annual Fixed Charges for the 2019-24 Tariff Period**

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

| (₹ in lakh)                        |                |                |                |                |               |
|------------------------------------|----------------|----------------|----------------|----------------|---------------|
| Particulars                        | 2019-20        | 2020-21        | 2021-22        | 2022-23        | 2023-24       |
| Depreciation                       | 451.43         | 451.43         | 451.43         | 451.43         | 175.20        |
| Interest on Loan                   | 161.34         | 121.36         | 81.40          | 41.44          | 13.71         |
| Return on Equity                   | 481.75         | 481.75         | 481.75         | 481.75         | 481.75        |
| Int. on Working Capital            | 26.27          | 24.31          | 24.08          | 23.86          | 19.91         |
| Operation and Maintenance Expenses | 225.05         | 232.96         | 241.15         | 249.62         | 258.37        |
| <b>Total</b>                       | <b>1345.83</b> | <b>1311.81</b> | <b>1279.81</b> | <b>1248.10</b> | <b>948.94</b> |

### **Filing Fee and Publication Expenses**

73. 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 terms of Regulation 70(1) of the 2019 Tariff Regulations.

### **Licence Fee and RLDC Fees and Charges**

74. The Petitioner shall be entitled for reimbursement of licence fee in accordance with Regulation 70(4) of the 2019 Tariff Regulations for the 2019-24 tariff period. The



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

### **Goods and Services Tax**

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

### **Security Expenses**

76. The Petitioner has submitted that security expenses for the Combined Asset are not claimed in the instant petition and it would file a separate petition for claiming the overall security expenses and the consequential IWC. The Petitioner has requested to consider the actual security expenses incurred during 2018-19 for claiming estimated security expenses for 2019-20 which shall be subject to true up at the end of the year based on the actuals. The Petitioner has submitted that similar petition for security expenses for 2020-21, 2021-22, 2022-23 and 2023-24 shall be filed on a yearly basis on the basis of the actual expenses of previous year subject to true up at the end of the year on actual expenses. The Petitioner has submitted that the difference, if any, between the estimated security expenses and actual security expenses as per the audited accounts may be allowed to be recovered from the beneficiaries on yearly basis.

77. We have considered the submissions of the Petitioner. We are of the view that the Petitioner should claim security expenses for all the transmission assets in one petition. It is observed that the Petitioner has already filed Petition No. 260/MP/2020





claiming consolidated security expenses on projected basis for the 2019-24 tariff period on the basis of actual security expenses incurred in 2018-19. Therefore, security expenses will be dealt with in Petition No. 260/MP/2020 in accordance with the applicable provisions of the 2019 Tariff Regulations.

### **Capital Spares**

78. 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**

79. The billing, collection and disbursement of the transmission charges approved in this order shall be governed by the provisions of the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010 or the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020, as applicable, as provided in Regulation 43 of 2014 Tariff Regulations for the 2014-19 tariff period and Regulation 57 of the 2019 Tariff Regulations for the 2019-24 tariff period.

80. To summarise, the trued up Annual Fixed Charges allowed for the Combined Asset for the 2014-19 tariff period are as under:

|                    | (₹ in lakh)    |                |                |                |                |
|--------------------|----------------|----------------|----------------|----------------|----------------|
| <b>Particulars</b> | <b>2014-15</b> | <b>2015-16</b> | <b>2016-17</b> | <b>2017-18</b> | <b>2018-19</b> |
| Combined Asset     | 1760.34        | 1749.83        | 1739.65        | 1717.07        | 1693.75        |

81. The Annual Fixed Charges allowed for the Combined Asset for the 2019-24 tariff period are as under:

|                      | (₹ in lakh)    |                |                |                |                |
|----------------------|----------------|----------------|----------------|----------------|----------------|
| <b>Particulars</b>   | <b>2019-20</b> | <b>2020-21</b> | <b>2021-22</b> | <b>2022-23</b> | <b>2023-24</b> |
| Annual Fixed Charges | <b>1345.83</b> | <b>1311.81</b> | <b>1279.81</b> | <b>1248.10</b> | <b>948.94</b>  |





82. This order disposes of Petition No. 117/TT/2020.

Sd/  
**(Arun Goyal)**  
Member

Sd/  
**(I. S. Jha)**  
Member

Sd/  
**(P. K. Pujari)**  
Chairperson



## Annexure-I

| Asset  |              | Admitted Capital Cost as on 1.4.2014 (₹ in lakh) | Additional Capitalization 2014-19 (₹ in lakh) |              | Admitted Capital Cost as on 31.3.2019 (₹ in lakh) | Rate of Depreciation as per Regulations | Annual Depreciation as per Regulations |                     |                     |                     |                     |
|--|--------------|--|---|--------------|---|---|--|---------------------|---------------------|---------------------|---------------------|
|  |              |  | 2015-16                                       | 2016-17      |   |   | 2014-15 (₹ in lakh)                    | 2015-16 (₹ in lakh) | 2016-17 (₹ in lakh) | 2017-18 (₹ in lakh) | 2018-19 (₹ in lakh) |
| <b>Combined Asset</b>                                    | Sub Station  | 8378.52  | 141.76  | 29.50        | 8549.78   | 5.28%                                   | 442.39                                 | 446.13              | 450.65              | 451.43              | 451.43              |
|  | <b>TOTAL</b> | <b>8378.52</b>                                   | <b>141.76</b>                                 | <b>29.50</b> | <b>8549.78</b>                                    |   | 442.39                                 | 446.13              | 450.65              | 451.43              | 451.43              |
| <b>Average Gross Block (₹ in lakh)</b>                   |              |  |   |              |   |   | <b>8378.52</b>                         | <b>8449.40</b>      | <b>8535.03</b>      | <b>8549.78</b>      | <b>8549.78</b>      |
| <b>Weighted Average Rate of Depreciation (₹ in lakh)</b> |              |  |   |              |   |   | <b>5.28</b>                            | <b>5.28</b>         | <b>5.28</b>         | <b>5.28</b>         | <b>5.28</b>         |



## Annexure-II

| Asset  |              | Admitted Capital Cost as on 1.4.2019 (₹ in lakh) | Additional Capitalization 2091-24 (₹ in lakh) | Admitted Capital Cost as on 31.3.2019 (₹ in lakh) | Rate of Depreciation as per Regulations | Annual Depreciation as per Regulations |                     |                     |                     |                     |
|--|--------------|--|---|---|---|--|---------------------|---------------------|---------------------|---------------------|
|  |              |  |   |   |   | 2014-15 (₹ in lakh)                    | 2015-16 (₹ in lakh) | 2016-17 (₹ in lakh) | 2017-18 (₹ in lakh) | 2018-19 (₹ in lakh) |
| <b>Combined Asset</b>                                    | Sub Station  | 8549.78  | 0.00  | 8549.78   | 5.28%                                   | 451.43                                 | 451.43              | 451.43              | 451.43              | 175.20              |
|  | <b>TOTAL</b> | <b>8549.78</b>                                   | <b>0.00</b>                                   | <b>8549.78</b>                                    |   | 451.43                                 | 451.43              | 451.43              | 451.43              | 175.20              |
| <b>Average Gross Block (₹ in lakh)</b>                   |              |  |   |   |   | <b>8549.78</b>                         | <b>8549.78</b>      | <b>8549.78</b>      | <b>8549.78</b>      | <b>8549.78</b>      |
| <b>Weighted Average Rate of Depreciation (₹ in lakh)</b> |              |  |   |   |   | <b>5.28</b>                            | <b>5.28</b>         | <b>5.28</b>         | <b>5.28</b>         | <b>5.28</b>         |

