

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 379/TT/2020**

**Coram:**

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

**Date of Order: 11.07.2022**

**In the matter of:**

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and truing up of transmission tariff of the 2014-19 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 A1:** 80 MVAR line reactor of Barh-I Line (charged as bus reactor) at Gorakhpur Sub-station, **Asset A2:** 80 MVAR line reactor of Barh-II Line (charged as bus reactor) at Gorakhpur Sub-station, **Asset B:** Barh-II TPS-Gorakhpur 400 kV D/C (Quad) line alongwith 400 kV line bays at Gorakhpur Sub-station (excluding switchable line reactor), **Asset C:** 125 MVAR Bus Reactor at Gorakhpur Sub-station, **Asset D:** Converting 2X80 MVAR Line Reactors at Gorakhpur end of 400 kV Barh – Gorakhpur (Quad) transmission line to 2X80 MVAR Switchable Line Reactors under “Immediate Evacuation System associated with Barh-II TPS” in Northern Region

**And in the matter of:**

Power Grid Corporation of India Limited,  
“Saudamini”, Plot No. 2,  
Sector 29, Gurgaon-122001.

**....Petitioner**

**Vs**

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



Jaipur - 302017.

3. Jaipur Vidyut Vitran Nigam Limited,  
132kV, GSS RVPNL Sub-station Building,  
Caligiri Road, Malviya Nagar,  
Jaipur - 302017.
4. Jodhpur Vidyut Vitran Nigam Limited,,  
132kV, GSS RVPNL Sub-station Building,  
Caligiri Road, Malviya Nagar,  
Jaipur - 302017.
5. Himachal Pradesh State Electricity Board.,  
Vidyut Bhawan,Kumar House Complex Building II,  
Shimla-171004.
6. Punjab State Electricity Board,  
Thermal Shed Tia,Near 22 Phatak,  
Patiala-147001.
7. Haryana Power Purchase Centre.,  
Shakti Bhawan, Sector-6,  
Panchkula-134109.
8. Power Development Department,  
Government of Jammu & Kashmir,  
Mini Secretariat, Jammu.
9. Uttar Pradesh Power Corporation Limited,  
(Formerly Uttar Pradesh State Electricity Board),  
Shakti Bhawan, 14, Ashok Marg,  
Lucknow - 226001.
10. Delhi Transco Limited,  
Shakti Sadan,KotlaRoad,  
New Delhi - 110002.
11. BSES Yamuna Power Limited,  
B-Block, Shakti Kiran, Bldg.(Near Karkardooma Court),  
Karkardooma, 2<sup>nd</sup> Floor,  
Delhi-110092.
12. BSES Rajdhani Power Limited,  
BSES Bhawan, Nehru Place,  
New Delhi – 110019.



13. TATA Power Delhi Distribution Limited,  
NDPL house, Hudson Lines Kingsway Camp,  
Delhi – 110009.
14. Chandigarh Administration,  
Sector -9, Chandigarh,
15. Uttarakhand Power Corporation Limited,  
Urja Bhawan,  
Kanwali Road, Dehradun.
16. North Central Railway,  
Allahabad.
17. New Delhi Municipal Council,  
Palika Kendra, Sansad Marg,  
New Delhi-110002,
18. National Thermal Power Corporation,  
4<sup>th</sup> Floor, 6<sup>th</sup> Core, NTPC Bhawan,  
Scope Complex, Institutional Area, Lodhi Road  
Delhi-110003
19. Bihar State Power (Holding) Company Limited,  
(Formerly Bihar State Electricity Board),  
Vidyut Bhawan, Bailey Road, Patna-800001
20. West Bengal State Electricity Distribution Company,  
Bidyut Bhawan, Bidhan Nagar, Block DJ, Sector-II,  
Salt Lake City, Calcutta-700091
21. Grid Corporation of Orissa Limited,  
Shahid Nagar,  
Bhubneshwar-751007
22. Damodar Valley Corporation, DVC Tower,  
Maniktala, Civic Centre, VIP Road,  
Calcutta
23. Power of Department, Government of Sikkim,  
Gangtok- 737101
24. Jharkhand State of Electricity Board,  
In Front of Main Secretariat,  
Doranda, Ranchi-834002

....Respondent(s)



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

**For Respondents** : Ms. Rohini Prasad, Advocate, BSPHCL

### **ORDER**

The Petitioner, Power Grid Corporation of India Limited, has filed the instant petition for truing up of transmission tariff for the period from COD 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 determination of transmission tariff for the period from 1.4.2019 to 31.3.2024 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) in respect of the following assets under “Immediate Evacuation System associated with Barh-II TPS” in Northern Region (hereinafter referred to as the “transmission project”).

**Asset-A1:** 80 MVAR line reactor of Barh-I Line (charged as bus reactor) at Gorakhpur Sub-station;

**Asset-A2:** 80 MVAR line reactor of Barh-II Line (charged as bus reactor) at Gorakhpur Sub-station;

**Asset-B:** Barh-II TPS-Gorakhpur 400 kV D/C (Quad) line alongwith 400 kV line bays at Gorakhpur Sub-station (excluding switchable line reactor);

**Asset-C:** 125 MVAR Bus Reactor at Gorakhpur Sub-station;

**Asset-D :** Converting 2X80 MVAR Line Reactors at Gorakhpur end of 400 kV Barh-Gorakhpur (Quad) transmission line to 2X80 MVAR Switchable Line Reactors (hereinafter referred to as “the transmission assets”).



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

*“1) Allow the Add Cap for 2014-19 and 2019-24 tariff block as claimed as per Para 7.5 and 8.1 above.*

*2) Approve the trued up Transmission Tariff for 2014-19 block and transmission tariff for 2019-24 block for the assets covered under this petition, as per para 7.7 and 8.2 above.*

*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 7.7 and 8.2 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 8.8 above.*

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

*9) 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 follows:

(a) The Investment Approval (IA) and expenditure sanction for the transmission project was accorded by the Board of Directors of the Petitioner Company vide Memorandum No. C/CP/Barh-II TPS dated 27.12.2011 for the entire scheme of “Immediate Evacuation System associated with Barh-II TPS (1320MW)” at an estimated cost of ₹90177 lakh, which included IDC of ₹5650 lakh, based on 3<sup>rd</sup> Quarter, 2011 price level. The Revised Cost Estimate (RCE) of the project was approved by the Board of Directors of the Petitioner company vide Memorandum No. C/CP/RCE-ER dated 23.2.2015 with an estimated cost of ₹102528 lakh including IDC of ₹8899 lakh, based on August, 2014 price level. Further, The Revised Cost Estimate-II (RCE-II) of the project was approved by the Board of Directors of the Petitioner Company vide Memorandum No. C/CP/PA2021-06-01-RCE003 dated 17.9.2020 with an estimated cost of ₹104277 lakh including IDC of ₹7640 lakh, based on December, 2019 price level.

(b) The scope of work under “Immediate Evacuation System associated with Barh-II TPS” is as follows :

### **Transmission Lines:**

(i) Barh-II TPS-Gorakhpur 400 kV D/C (Quad) line

### **Sub-stations:**

(i) Extension of 400 kV Sub-station  
a. 2 numbers 400 kV line bays including 2 numbers 80 MVAR line reactor



- b. 1 number 400 kV,125 MVAR Bus Reactor including bays
- (ii) 400 kV Switchyard at Barh (under the scope of generation switchyard of NTPC).
- (c) The entire scope of work under the transmission project “Immediate Evacuation System associated with Barh-II TPS”has been completed and is covered under the instant petition.
- (d) As per IA dated 27.12.2011, the instant transmission assets were scheduled to be put into commercial operation within 32 months from the date of investment approval. Therefore, the scheduled date of commercial operation (SCOD) of the transmission assets works out to 28.8.2014.
- (e) The details regarding nomenclature of transmission assets, their scheduled date of commercial operation (SCOD), date of commercial operation (COD), and time over-run are as follows:

| <b>Assets Nomenclature in the previous orders</b> | <b>Assets nomenclature in the instant petition</b> | <b>SCOD</b> | <b>COD</b> | <b>Time over-run</b> |
|---|--|-------------|------------|----------------------|
| Asset-I   | Asset-A1   | 27.8.2014   | 4.11.2014  | 69 days              |
| Asset-II  | Asset-A2   |             | 2.11.2014  | 67 days              |
| Asset   | Asset-B  |             | 7.6.2015   | 9 months 11 days     |
| Asset   | Asset-C  |             | 26.5.2014  | -                    |
| Asset-X   | Asset-D  | 26.2.2016   | 9.2.2017   | 349 days             |

- (f) The transmission tariff in respect of Assets-A1 and A2 was allowed by the Commission from their respective COD to 31.3.2019 vide order dated 30.12.2015 in Petition No. 78/TT/2015. The transmission tariff in respect of Asset-B was allowed by the Commission from their respective COD to 31.3.2019 vide order dated 23.3.2016 in Petition No. 184/TT/2015. The transmission tariff in respect of Asset-C was approved by the Commission from their respective COD to 31.3.2019



vide order dated 18.12.2015 in Petition No. 241/TT/2014. The Commission in order dated 22.5.2019 in Petition No. 38/TT/2017 did not allow the transmission tariff in respect of Asset-D and granted liberty to the Petitioner to claim the conversion cost of the said line reactor in the respective tariff petitions.

(g) The AFC allowed by the Commission in previous orders and the trued-up tariff claimed by the Petitioner in respect of the transmission assets for the 2014-19 tariff period are as follows:

|          |   |         |          |          |          |          | (₹ in lakh) |
|----------|---|---------|----------|----------|----------|----------|-------------|
| Assets   | Particulars   | 2014-15 | 2015-16  | 2016-17  | 2017-18  | 2018-19  |             |
| Asset-A1 | Allowed vide order dated 30.12.2015 in Petition No. 78/TT/2015  | 70.42   | 180.17   | 183.16   | 182.04   | 181.00   |             |
|          | Claimed by the Petitioner in the instant petition               | 69.95   | 177.83   | 177.92   | 177.70   | 178.16   |             |
| Asset-A2 | Allowed vide order dated 30.12.2015 in Petition No. 78/TT/2015  | 74.40   | 187.94   | 191.29   | 189.89   | 188.61   |             |
|          | Claimed by the Petitioner in the instant petition               | 74.05   | 184.75   | 184.36   | 183.46   | 183.63   |             |
| Asset-B  | Allowed vide order dated 23.3.2016 in Petition No. 184/TT/2015  | 0.00    | 14050.22 | 17159.45 | 16733.60 | 16294.41 |             |
|          | Claimed by the Petitioner in the instant petition               | 0.00    | 14191.01 | 17540.11 | 17174.00 | 16834.15 |             |
| Asset-C  | Allowed vide order dated 18.12.2015 in Petition No. 241/TT/2014 | 178.53  | 231.29   | 228.69   | 226.17   | 223.76   |             |
|          | Claimed by the Petitioner in the instant petition               | 167.58  | 207.75   | 208.38   | 207.50   | 207.70   |             |
| Asset-D  | Allowed vide order dated 22.5.2019 in Petition No. 38/TT/2017   | 0.00    | 0.00     | 0.00     | 0.00     | 0.00     |             |
|          | Claimed by the Petitioner in the instant petition               | 0.00    | 0.00     | 20.66    | 156.09   | 164.39   |             |

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





5. The Petitioner has served the petition on the Respondents and notice of this application has also been published in the newspapers in accordance with Section 64 of the Electricity Act 2003 (hereinafter referred to as “the Act”). No comments or suggestions have been received from the general public in response to the aforesaid notices published in the newspapers by the Petitioner. Bihar State Power (Holding) Company Limited (BSPHCL), Respondent No. 19, has filed its reply vide affidavit dated 28.8.2021 and has raised issues such as cost of conversion of line reactor, difference in the admitted and claimed tariff, time over-run, RoE, RCE for Asset-B, IDC, IEDC, statutory charges, flating rate of interest and filing fees. In response, the Petitioner has submitted rejoinder vide affidavit dated 20.9.2021.

6. The hearing in this matter was held on 31.8.2021 through video conference and the order was reserved. However, the order could not be issued before Shri P.K. Pujari, former Chairperson, demitted the office. Therefore, the matter was heard again on 23.6.2022 and the representative of the Petitioner submitted all the required information has already been filed. Learned counsel for BSPHCL submitted that the reply filed may be considered and further prayed for one week time to make additional submissions with regard to ‘Works and Procurement Policy and Procedure’ of the Petitioner, which was allowed by the Commissoin. After hearing the parties, the order was reserved.

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

8. This order is issued considering the submissions made by the Petitioner in



the petition, affidavits dated 26.8.2021, 20.9.2021, the reply of BSPHCL vide affidavit dated 28.8.2021 and the Petitioner's rejoinder thereto vide affidavit dated 20.9.2021. BSPHCL has made additional submissions regarding the "Works and Procurement Policy and Procedure" of the Petitioner vide affidavit dated 1.7.2022.

9. It is observed that BSPHCL has raised the issue of grossing up of RoE and MAT rates in this petition and several other petitions in the past. The Commission has considered and rejected said submissions in various petitions including in Petition No. 25/TT/2021 and Petition No. 476/TT/2019 and as no appeal has been preferred against the said orders by BSPHCL, said orders have attained finality. Hence, the issues raised by BSPHCL regarding grossing up of RoE and MAT rates are not being dealt with in the instant order. However, issues specific to the present petition have been dealt with in relevant portions of this order.

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

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

| (₹ in lakh)                 |  |                |                |                |                |
|-----------------------------|--|----------------|----------------|----------------|----------------|
| <b>Asset-A1</b>             |  |                |                |                |                |
| <b>Particulars</b>          | <b>2014-15<br/>(Pro-rata for<br/>148 days)</b> | <b>2015-16</b> | <b>2016-17</b> | <b>2017-18</b> | <b>2018-19</b> |
| Depreciation                | 13.02  | 33.71          | 34.07          | 34.34          | 34.73          |
| Interest on Loan            | 15.63  | 38.10          | 35.31          | 32.32          | 29.57          |
| Return on Equity            | 14.51  | 37.76          | 38.14          | 38.44          | 38.98          |
| Interest on working capital | 2.34   | 5.96           | 6.03           | 6.09           | 6.17           |
| O & M Expenses              | 24.45  | 62.30          | 64.37          | 66.51          | 68.71          |
| <b>Total</b>                | <b>69.95</b>                                   | <b>177.83</b>  | <b>177.92</b>  | <b>177.70</b>  | <b>178.16</b>  |



(₹ in lakh)

| Asset-A2                    |                                       |               |               |               |               |
|-----------------------------|---------------------------------------|---------------|---------------|---------------|---------------|
| Particulars                 | 2014-15<br>(Pro-rata for<br>150 days) | 2015-16       | 2016-17       | 2017-18       | 2018-19       |
| Depreciation                | 13.99                                 | 35.56         | 35.92         | 36.19         | 36.58         |
| Interest on Loan            | 17.23                                 | 40.93         | 37.67         | 34.02         | 30.97         |
| Return on Equity            | 15.60                                 | 39.84         | 40.22         | 40.52         | 41.07         |
| Interest on working capital | 2.45                                  | 6.12          | 6.18          | 6.22          | 6.30          |
| O & M Expenses              | 24.78                                 | 62.30         | 64.37         | 66.51         | 68.71         |
| <b>Total</b>                | <b>74.05</b>                          | <b>184.75</b> | <b>184.36</b> | <b>183.46</b> | <b>183.63</b> |

(₹ in lakh)

| Asset-B                     |                                       |                 |                 |                 |
|-----------------------------|---------------------------------------|-----------------|-----------------|-----------------|
| Particulars                 | 2015-16<br>(Pro-rata for<br>299 days) | 2016-17         | 2017-18         | 2018-19         |
| Depreciation                | 4152.70                               | 5270.00         | 5326.97         | 5365.03         |
| Interest on Loan            | 4745.37                               | 5568.17         | 5075.86         | 4632.78         |
| Return on Equity            | 4650.86                               | 5899.21         | 5962.99         | 6021.76         |
| Interest on working capital | 329.15                                | 407.11          | 399.29          | 392.08          |
| O & M Expenses              | 312.93                                | 395.62          | 408.89          | 422.50          |
| <b>Total</b>                | <b>14191.01</b>                       | <b>17540.11</b> | <b>17174.00</b> | <b>16834.15</b> |

(₹ in lakh)

| Asset-C                     |                                       |               |               |               |               |
|-----------------------------|---------------------------------------|---------------|---------------|---------------|---------------|
| Particulars                 | 2014-15<br>(Pro-rata for<br>310 days) | 2015-16       | 2016-17       | 2017-18       | 2018-19       |
| Depreciation                | 33.56                                 | 43.23         | 44.20         | 44.91         | 45.57         |
| Interest on Loan            | 40.01                                 | 47.15         | 43.60         | 39.04         | 35.42         |
| Return on Equity            | 37.42                                 | 48.43         | 49.49         | 50.28         | 51.16         |
| Interest on working capital | 5.38                                  | 6.64          | 6.72          | 6.76          | 6.84          |
| O & M Expenses              | 51.21                                 | 62.30         | 64.37         | 66.51         | 68.71         |
| <b>Total</b>                | <b>167.58</b>                         | <b>207.75</b> | <b>208.38</b> | <b>207.50</b> | <b>207.70</b> |

(₹ in lakh)

| Asset-D                     |                                      |               |               |
|-----------------------------|--------------------------------------|---------------|---------------|
| Particulars                 | 2016-17<br>(Pro-rata for<br>51 days) | 2017-18       | 2018-19       |
| Depreciation                | 0.54                                 | 5.09          | 6.39          |
| Interest on Loan            | 0.56                                 | 4.98          | 5.79          |
| Return on Equity            | 0.60                                 | 5.70          | 7.18          |
| Interest on working capital | 0.98                                 | 7.30          | 7.61          |
| O & M Expenses              | 17.98                                | 133.02        | 137.42        |
| <b>Total</b>                | <b>20.66</b>                         | <b>156.09</b> | <b>164.39</b> |



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

(₹ in lakh)

| Asset-A1                           |                                       |              |              |              |              |
|------------------------------------|---------------------------------------|--------------|--------------|--------------|--------------|
| Particulars                        | 2014-15<br>(Pro-rata for<br>148 days) | 2015-16      | 2016-17      | 2017-18      | 2018-19      |
| O&M expenses                       | 5.03                                  | 5.19         | 5.36         | 5.54         | 5.73         |
| Maintenance Spares                 | 9.05                                  | 9.35         | 9.66         | 9.98         | 10.31        |
| Receivables                        | 28.75                                 | 29.64        | 29.65        | 29.62        | 29.70        |
| <b>Total</b>                       | <b>42.83</b>                          | <b>44.18</b> | <b>44.67</b> | <b>45.14</b> | <b>45.74</b> |
| Rate of Interest (%)               | 13.50                                 | 13.50        | 13.50        | 13.50        | 13.50        |
| <b>Interest on Working Capital</b> | <b>2.34</b>                           | <b>5.96</b>  | <b>6.03</b>  | <b>6.09</b>  | <b>6.17</b>  |

(₹ in lakh)

| Asset-A2                           |                                       |              |              |              |              |
|------------------------------------|---------------------------------------|--------------|--------------|--------------|--------------|
| Particulars                        | 2014-15<br>(Pro-rata for<br>150 days) | 2015-16      | 2016-17      | 2017-18      | 2018-19      |
| O&M expenses                       | 5.03                                  | 5.19         | 5.36         | 5.54         | 5.73         |
| Maintenance Spares                 | 9.05                                  | 9.35         | 9.66         | 9.98         | 10.31        |
| Receivables                        | 30.03                                 | 30.79        | 30.73        | 30.58        | 30.61        |
| <b>Total</b>                       | <b>44.11</b>                          | <b>45.33</b> | <b>45.75</b> | <b>46.10</b> | <b>46.65</b> |
| Rate of Interest (%)               | 13.50                                 | 13.50        | 13.50        | 13.50        | 13.50        |
| <b>Interest on Working Capital</b> | <b>2.45</b>                           | <b>6.12</b>  | <b>6.18</b>  | <b>6.22</b>  | <b>6.30</b>  |

(₹ in lakh)

| Asset-B                            |                                       |                |                |                |
|------------------------------------|---------------------------------------|----------------|----------------|----------------|
| Particulars                        | 2015-16<br>(Pro-rata for<br>299 days) | 2016-17        | 2017-18        | 2018-19        |
| O&M expenses                       | 31.92                                 | 32.97          | 34.07          | 35.21          |
| Maintenance Spares                 | 57.46                                 | 59.34          | 61.33          | 63.38          |
| Receivables                        | 2895.16                               | 2923.35        | 2862.34        | 2805.69        |
| <b>Total</b>                       | <b>2984.54</b>                        | <b>3015.66</b> | <b>2957.74</b> | <b>2904.28</b> |
| Rate of Interest (%)               | 13.50                                 | 13.50          | 13.50          | 13.50          |
| <b>Interest on Working Capital</b> | <b>329.15</b>                         | <b>407.11</b>  | <b>399.29</b>  | <b>392.08</b>  |

(₹ in lakh)

| Asset-C            |                                       |         |         |         |         |
|--------------------|---------------------------------------|---------|---------|---------|---------|
| Particulars        | 2014-15<br>(Pro-rata for<br>310 days) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| O&M expenses       | 5.03                                  | 5.19    | 5.36    | 5.54    | 5.73    |
| Maintenance Spares | 9.05                                  | 9.35    | 9.66    | 9.98    | 10.31   |
| Receivables        | 32.89                                 | 34.62   | 34.73   | 34.59   | 34.62   |



|                                    |              |              |              |              |              |
|------------------------------------|--------------|--------------|--------------|--------------|--------------|
| <b>Total</b>                       | <b>46.97</b> | <b>49.16</b> | <b>49.75</b> | <b>50.11</b> | <b>50.66</b> |
| Rate of Interest (%)               | 13.50        | 13.50        | 13.50        | 13.50        | 13.50        |
| <b>Interest on Working Capital</b> | <b>5.38</b>  | <b>6.64</b>  | <b>6.72</b>  | <b>6.76</b>  | <b>6.84</b>  |

(₹ in lakh)

| <b>Asset-D</b>                     |   |                |                |
|------------------------------------|---|----------------|----------------|
| <b>Particulars</b>                 | <b>2016-17<br/>(Pro-rata for<br/>51 days)</b> | <b>2017-18</b> | <b>2018-19</b> |
| O&M expenses                       | 10.73   | 11.09          | 11.45          |
| Maintenance Spares                 | 19.31   | 19.95          | 20.61          |
| Receivables                        | 24.65   | 26.02          | 27.40          |
| <b>Total</b>                       | <b>54.69</b>                                  | <b>57.06</b>   | <b>59.46</b>   |
| Rate of Interest (%)               | 12.80   | 12.80          | 12.80          |
| <b>Interest on Working Capital</b> | <b>0.98</b>                                   | <b>7.30</b>    | <b>7.61</b>    |

**Date of Commercial Operation (COD):**

12. The Commission vide order dated 22.05.2019 in Petition No. 38/TT/2017 has held as follows:

*“20. We have considered the submissions of the Petitioner and proceed to decide the COD of assets covered in the instant Petition as under:*

Xxx  
xxx

*h) Asset-X is conversion of 2X80 MVAr Line Reactor to 2X80 MVAr switchable line reactors at Gorakhpur end for 400 kV Barh-II-Gorakhpur transmission line for which the Petitioner has submitted RLDC Charging Certificate dated 30.3.2017 and CEA Energisation Certificate dated 23.1.2017. A similar issue has been considered by the Commission in its provisional order dated 31.12.2018 in Petition No. 259/TT/2018 where in the Commission has not granted tariff for conversion of fixed line Reactor to switchable line reactor. The relevant portion of the said order is extracted as under:*

*“7.----- Asset-III is conversion of 50 MVAR Fixed Line Reactor at Subhasagram end of Sagardighi-Subhasagram 400 kV S/C line to Switchable Line Reactor. The tariff for the existing 50 MVAR Fixed Line Reactor has already been granted and the petitioner should claim the cost of the conversion of the said line reactor in the respective tariff petition”.*

*In line with above decision, the Tariff for Asset-X is not allowed and the Petitioner should claim the cost of the conversion of the said line reactor in the respective tariff Petition.”*



13. The Petitioner in the instant petition has claimed COD of the Asset D, i.e. Converting 2X80 MVAR Line Reactors at Gorakhpur end of 400 kV Barh-Gorakhpur (Quad) transmission line to 2X80 MVAR Switchable Line Reactors as 9.2.2017. In support of actual COD of Asset-D, the Petitioner has submitted CEA energisation certificate dated 23.1.2017, RLDC charging certificate dated 30.3.2017, self-declaration COD letter and CMD certificate as required under Grid Code. Taking into consideration of CEA energisation certificate, RLDC charging certificate and CMD certificate, the COD of the Asset-D is approved as 9.2.2017.

### **Capital Cost**

14. The Commission vide order dated 30.12.2015 in Petition No. 78/TT/2015 for Assets-A1 and A2, vide order dated 23.3.2016 in Petition No. 184/TT/2015 for Asset-B and vide order dated 18.12.2015 in Petition No. 241/TT/2014 for Asset-C has approved the following capital cost as on COD and ACE up to 31.3.2019:

| Assets     | Capital Cost as on COD | ACE     |         |         |         | Total Capital Cost as on 31.3 2019 |
|------------|------------------------|---------|---------|---------|---------|------------------------------------|
|            |                        | 2014-15 | 2015-16 | 2016-17 | 2017-18 |                                    |
| Asset – A1 | 586.88                 | 42.59   | 45.61   | 0.00    | 0.00    | 675.08                             |
| Asset – A2 | 621.80                 | 42.59   | 52.29   | 0.00    | 0.00    | 716.68                             |
| Asset – B  | 93280.51               | 0.00    | 3985.53 | 203.31  | 203.30  | 97672.65                           |
| Asset – C  | 690.50                 | 255.68  | 0.00    | 0.00    | 0.00    | 946.18                             |

15. The Petitioner vide Auditor's Certificates dated 4.11.2019, 30.12.2019 and 14.10.2019 has submitted the capital cost as on COD and ACE up to 31.3.2019 in respect of the transmission assets and the details are as follows:



(₹ in lakh)

| Assets     | Appor-<br>tioned<br>Cost as<br>per FR | Apportio<br>ned Cost<br>as per<br>RCE-I | Apportion<br>ed Cost as<br>per RCE-II | Capital<br>Cost as<br>on COD | ACE         |         |         |         |             | Total Capital<br>Cost as on<br>31.3. 2019 |
|------------|---------------------------------------|---|---------------------------------------|------------------------------|-------------|---------|---------|---------|-------------|---|
|            |                                       |   |                                       |                              | 2014-<br>15 | 2015-16 | 2016-17 | 2017-18 | 2018-<br>19 |   |
| Asset – A1 | 649.78                                | 796.05                                  | 699.27                                | 590.86                       | 42.99       | 9.23    | 4.40    | 5.62    | 9.28        | 662.38                                    |
| Asset – A2 | 649.78                                | 796.05                                  | 700.93                                | 625.96                       | 42.99       | 9.23    | 4.40    | 5.62    | 9.28        | 697.48                                    |
| Asset – B  | 87898.25                              | 97691.86                                | 101983.12                             | 94869.70                     | 0.00        | 4370.74 | 1103.39 | 1054.36 | 387.73      | 101785.92                                 |
| Asset – C  | 979.19                                | 3244.04                                 | 893.68                                | 690.50                       | 115.84      | 24.86   | 11.85   | 15.14   | 9.74        | 867.93                                    |
| Asset – D* | 198.80                                | 198.01                                  | 198.01                                | 73.96                        | 0.00        | 0.00    | 0.00    | 46.33   | 1.56        | 121.85                                    |

*\*Asset-D has been approved in ERSS-IX and transferred to the instant transmission project. The competition cost is within the approved apportioned cost.*

16. BSPHCL has submitted that the Petitioner has not provided any details for cost of conversion of Asset-D and that the Petitioner can only claim conversion cost for Asset-D. In response, the Petitioner has submitted that the relevant information for conversion has already been submitted in its original Petition No. 38/TT/2017. Further, the information has been vetted and admitted by the Commission vide order dated 22.5.2019 in Petition No. 38/TT/2017 and directed the Petitioner to claim transmission tariff along with Associated Transmission Line i.e. Asset-C of the instant petition. Further, all the relevant documents have been submitted along with the present petition. BSPHCL has submitted that the cost of assets claimed by the Petitioner differs from the admitted cost as per the previous orders. In response, the Petitioner has reiterated its earlier submissions.

### **Cost Over-run**

17. The FR cost for the assets covered in the instant petition is ₹90375.80 lakh and the capital cost claimed by the Petitioner from their respective COD to 2019 is ₹104135.56 lakh. Accordingly, there is overall cost over-run of ₹13759.76 lakh with respect to FR cost. Further, the Petitioner has submitted the Revised Cost Estimate (RCE-I) of ₹102528 lakh and the capital cost claimed by the Petitioner from their respective COD to 2019 of all the assets covered in the instant petition is



₹104135.56 lakh. Accordingly, overall cost over-run is ₹1607.56 lakh with respect to RCE-I. Cost of Asset-A1, Asset-A2, Asset-C and Asset-D are within the RCE-I cost and therefore, there is no cost over-run in case of Assets-A1, Asset-A2, Asset-C and Asset-D. However, capital cost claimed by the Petitioner from COD to 2019 for Asset-B is exceeding the corresponding cost in RCE-I and therefore, there is cost over-run in case of Asset-B. Further, the Petitioner has submitted the RCE-II of ₹104277 lakh and the total capital cost claimed by the Petitioner from their respective COD to 2019 of all the assets covered in the instant petition is ₹104135.56 lakh which is within the RCE-II cost.

18. BSPHCL has submitted that there is cost over-run in case of Asset-B even after the RCE and the Petitioner has not explained the same. In response, the Petitioner, vide affidavit dated 20.9.2021 has submitted in detail the reasons for variation in RCE-I and RCE-II. BSPHCL has further submitted vide affidavit dated 1.7.2022 that complete lack of justification for RCE-II is all the more apparent from the Works & Procurement Policy and Procedure filed by Petitioner. Clauses 2.16.2 and 2.16.3 of the said Works & Procurement Policy and Procedure deal with review of RCE when actual expenditure incurred is approximately 50% of the approved cost estimate of the project (FR cost) and review of RCE six months prior to the anticipated completion of the project respectively and also the factors that are to be taken into account. RCE had to be prepared by PESM within 6 months from the date of completion of the project, and in all cases where RCE of the project exceeded the approved cost estimate (FR) the Cost Engineering Group of Corporate Engineering was required to take necessary action for management's





approval expeditiously for furnishing the same to Corporate Planning for obtaining approval as per requirement. Hence, RCE-II over five years after COD is unsubstantiated and not even as per the Petitioner's Works & Procurement Policy and Procedure filed by it. The Petitioner's case is that RCE-II was arrived at on the basis of December 2019 price levels while the COD was achieved in June, 2015, and it has not been averred that the instant petition falls in the instances in which RCE has been claimed to be prepared post COD as a practice. Further, most importantly the Works & Procurement Policy and Procedure filed by the Petitioner does not provide for any such eventuality / practice.

19. We have considered the submissions of the Petitioner and BSPHCL. The details of the capital cost of the transmission project approved by the Board of Directors of the Petitioner Company are as follows:

| Date                                       | Project cost                             |
|--|--|
| Investment Approval (IA) 27.12.2011        | ₹90177 lakh including IDC of ₹5650 lakh  |
| Revised Cost Estimate-I (RCE-I) 26.9.2012  | ₹102528 lakh including IDC of ₹5650 lakh |
| Revised Cost Estimate-I (RCE-II) 10.8.2020 | ₹104277 lakh including IDC of ₹7640 lakh |

20. It is observed that the completion cost of Asset-A1, A2 and C is within RCE-I cost. The completion cost of Asset-B is more than the RCE-I cost by ₹4270.25 lakh. The main reasons for the cost variation are increase in quantity of MT pertaining to towers associated with transmission line and increase in pile foundation and increase in the cost towards compensation for the damages to the owners during various works associated with construction of line. Based on the estimated completion cost of Asset-B, the Petitioner has submitted Revised Cost



Estimate-II duly approved by the Board of Directors in its 378<sup>th</sup> meeting held on 10.8.2020. As per RCE-II, the estimated completion of cost of Asset-B is within in RCE-II cost. Therefore, the cost variation in case of Asset-B is allowed.

### **Time Over-run**

21. The time over-run 9 months and 11 days in case of Asset-B was condoned in order dated 23.3.2016 in Petition No.184/TT/2015. There is no time over-run in case of Asset-C. The Commission vide order dated 30.12.2015 in Petition No.78/TT/2015 has not condoned the time over-run of 69 days and 67 days in case of Asset-A1 and Asset-A2 and gave liberty to the Petitioner to place the matter for final view at the time of true up. The relevant extract of the order dated 30.12.2015 in Petition No.78/TT/2015 is as follows:

*“21. We have considered the submissions made by the Petitioner regarding the time over-run. We are of the considered view that the time over-run should be considered with reference to the timeline approved in the original Investment approval. Time over-run beyond this period needs to be considered in the light of the principles laid down by the Appellate Tribunal for Electricity in Judgment dated 5.5.2015 in Appeal No. 129 of 2014. The representative of the Petitioner in the hearing dated 23.11.2015 submitted that the time over-run in the case of transmission assets was approved in the 34th meeting of the Standing Committee of Power System Planning for Northern Region held on 8.8.2014 and in the 32nd NRPC Meeting held on September, 2014. It is also observed from the minutes of 34th Standing Committee meeting dated 8.8.2014 that the transmission asset was ready for commissioning but the associated Barh-Gorakhpur transmission line was not ready due to delay in obtaining forest clearance, ROW issues, etc., for which the commissioning of the assets got delayed and was finally commissioned as bus reactor.*

*22. We have considered the submissions made by the Petitioner regarding the time over-run on account of delay in execution of some other assets, which is not a subject matter of the instant petition and therefore, the merits of the same have not been looked into. We are therefore, in the instant order, not inclined to condone the delay of two months. However, liberty is granted to the Petitioner to place the matter for final view at the time of trueing up.”*

22. The Petitioner has submitted that Asset-A1 and Asset-A2 were put into commercial operation on 4.11.2014 and 2.11.2014. Thus, there is time over-run of



69 days and 67 days in case of Asset-A1 and Asset-A2, respectively. The Petitioner has submitted that 400 kV D/C Barh-II TPS - Gorakhpur line was not ready and hence the line reactors could not be put into commercial operation. The said line is dealt in separate Petition No. 184/TT/2015. The time over-run was not condoned as the time over-run in case of Asset-A1 and Asset-A2 was due to delay in execution of some other assets, which was not the subject matter in Petition No. 78/TT/2015.

23. The BSPHCL has submitted that the Petitioner has failed to justify the time over-run in case of Asset-A1 and Asset-A2. In response, the Petitioner has submitted that Asset-A1 and Asset-A2 were supposed to be put into commercial operation along with Asset-B i.e. Barh-Gorakhpur Transmission Line and Asset-B was getting delayed due to the uncontrollable factors as submitted in the petition. Further, 32<sup>nd</sup> (Special) meeting of the Northern Regional Power Committee was held on 10.9.2014 at New Delhi wherein using these line reactors as bus reactors was discussed and agreed. After approval by NRPC, the Petitioner mobilised the gangs and finally commissioned Assets-A1 and A2 in November 2014 as bus reactors prior to the COD of Asset-B i.e. Barh-Gorakhpur Transmission Line.

24. The Commission in order dated 23.3.2016 in Petition No.184/TT/2015 has condoned the time over-run of associated transmission line i.e. 400 kV D/C Barh-II TPS-Gorakhpur line along with associated bays at Gorakhpur. The relevant extract of the order is as follows:

*“17. We have considered the submissions of the Petitioner. The time over-run of 9 months and 11 days in the commissioning of the asset has been attributed to delay*



*in obtaining forest clearance, court cases, approval of railway crossings from Department of Railway, clearance from aviation department and ROW problem. The instant transmission line is passing through the forest land in Patna, Samastipur, Saran and Gopalganj Forest Division in Bihar Gorakhpur District of Uttar Pradesh and 3.8134 ha of forest land in Bihar was to be diverted for the construction of the line. The Petitioner has approached the Divisional Forest Officer, Gorakhpur on 26.6.2012 and the final approval for diversion of forest land in Bihar was issued by the Ministry of Environment, Forests & Climate Change was issued on 13.5.2015. Thus, it took 32 months for obtaining the clearance of the forest department. The time taken by the Petitioner for obtaining aviation clearance, railway crossing approvals, RoW issues and court cases are subsumed by the time taken for obtaining forest clearance. As such, we are not going to the other reasons of time over-run submitted by the Petitioner. The Petitioner could obtain forest clearance after a period of 32 months on 13.5.2015. The Petitioner could not take up the stringing work without the mandatory forest clearance. The Petitioner has commissioned the instant asset on 7.6.2015 after obtaining the mandatory forest clearance and the disposal of a case filed by one of the land by the Hon<sup>ble</sup> Allahabad High Court on 29.5.2015. We are of the view that the time over-run in commissioning of the instant asset cannot be attributed to the Petitioner.”*

xxx  
xxx

*17. The time over-run 9 months and 11 days in commissioning of the instant asset is beyond the control of the Petitioner and it cannot be attributed to the Petitioner. As per the judgement of Hon<sup>ble</sup> Tribunal, the additional cost due to time over-run not attributable to the Petitioner shall be capitalised. Accordingly, the time over-run in case of the instant assets is condoned and accordingly IDC and IEDC for 9 months and 11 days are allowed to be capitalised.”*

25. Asset-A1 and Asset-A2 both are line reactors and the COD of the line reactors is dependant on the transmission line. The Commission has already condoned the time over-run of associated transmission line. Therefore, we condone the time over-run of 69 days and 67 days in case of Asset-A1 and Asset-A2 respectively.

#### **Asset-D**

26. The Asset-D was put into under commercial operation on 9.2.2017 with time over-run of 349 days. The Petitioner has submitted that time over-run was due to the work got delayed because being very small quantum & value of work, BHEL took substantial time in finalisation of sub-contractors for civil and ETC contract and



the work commenced in October 2016. Further, civil work carried out manually due to unavailability of shutdown for civil work. The Petitioner has prayed to condone the time over-run under Regulations 12(2)(i) of the 2014 Tariff Regulations.

27. In response, BSPHCL has submitted that the reasons given by the Petitioner for time over-run in Asset-D are not “uncontrollable factors” in line with Regulation 12(2)(i) of the 2014 Tariff Regulations. Rather such reasons show lack of efficiency, planning and co-ordination on the part of the Petitioner. Further, nothing has been filed by the Petitioner to substantiate the alleged reasons for delay.

28. We have considered the submission of the Petitioner and BSPHCL. As per Regulation 12(1)(c) of the 2014 Tariff Regulation the reasons given by the Petitioner for time over-run of 349 days are due to “controllable factors” and attributable to the Petitioner. Therefore, the time over-run of 349 days is not condoned. Accordingly, IDC and IEDC of 349 days in case of Asset-D is not capitalised.

**Interest During Construction (IDC) and Incidental Expenditure during Construction (IEDC)**

29. BSPHCL has submitted that IDC may only be considered as per the relevant regulations. Further, as the Commission vide order dated 30.12.2015 in Petition No. 78/TT/2015 has not allowed the time over-run beyond SCOD for Assets-A1 and A2, thus IDC beyond SCOD should not be allowed. Further, the Petitioner has not provided details of time over-run of Asset-D.

30. In response, the Petitioner has prayed that time over-run for Assets-A1 and



A2 may be condoned based on the justification furnished in the rejoinder.

31. The Petitioner has claimed IDC for the transmission assets and has submitted the Auditor's Certificates dated 4.11.2019, 30.12.2019 and 14.10.2019 in support of the same. The Petitioner has submitted the computation of IDC along with year-wise details of the IDC discharged.

32. The allowable IDC has been worked out considering the information submitted by the Petitioner for the transmission assets separately on cash basis. The loan details submitted in Form-9C for the 2014-19 tariff period and the IDC computation sheet have been considered for the purpose of IDC calculation on cash and accrued basis. The un-discharged IDC as on COD has been considered as ACE during the year in which it has been discharged.

33. Accordingly, based on the information furnished by the Petitioner, the IDC considered, is summarized as follows:

| Assets   | IDC as per Auditor's Certificate | IDC Admissible | IDC disallowed due to computational difference/ Time Over-run | IDC Discharged as on COD | IDC Undischarged as on COD | IDC Discharge During |         |
|----------|----------------------------------|----------------|---|--------------------------|----------------------------|----------------------|---------|
|          |                                  |                |   |                          |                            | 2014-15              | 2015-16 |
|          |                                  |                |   |                          |                            | A                    | B       |
| Asset-A1 | 18.47                            | 18.47          | 0.00  | 9.68                     | 8.79                       | 8.79                 | 0.00    |
| Asset-A2 | 19.71                            | 19.71          | 0.00  | 14.54                    | 5.17                       | 5.17                 | 0.00    |
| Asset-B  | 7592.96                          | 7592.96        | 0.00  | 5993.44                  | 1599.52                    | 0.00                 | 1599.52 |
| Asset-C  | 8.79                             | 8.79           | 0.00  | 8.79                     | 0.00                       | 0.00                 | 0.00    |
| Asset-D  | 1.39                             | 0.00           | 1.39  | 0.00                     | 0.00                       | 0.00                 | 0.00    |

34. The Petitioner has claimed an IEDC of ₹6.12 lakh, ₹6.54 lakh, ₹351.04 lakh, ₹6.73 lakh and ₹7.33 lakh for Asset-A1, Asset-A2, Asset-B, Asset-C and Asset-D, respectively, and has submitted an Auditor's Certificate in support of the same. The



Petitioner has also submitted that the entire IEDC has been discharged as on COD in respect of the transmission assets. The IEDC allowed for the transmission assets is as follows:

(₹ in lakh)

| Asset    | IEDC claimed | IEDC disallowed due to time over-run | IEDC allowed |
|----------|--------------|--------------------------------------|--------------|
| Asset-A1 | 6.12         | 0.00                                 | 6.12         |
| Asset-A2 | 6.54         | 0.00                                 | 6.54         |
| Asset-B  | 351.04       | 0.00                                 | 351.04       |
| Asset-C  | 6.73         | 0.00                                 | 6.73         |
| Asset-D  | 7.33         | 2.37                                 | 4.96         |

### Initial Spares

35. The Petitioner has claimed the following initial spares for the transmission assets on overall project basis and prayed to allow the same:

| Assets       | Particulars       | Plant & Machinery Cost up to cut-off date (excluding IDC and IEDC) (₹ in lakh) | Initial Spares Claimed (₹ in lakh) | Ceiling Limit (in %) |
|--------------|-------------------|--|------------------------------------|----------------------|
| Asset-A1     | Sub-station       | 637.79   | 0.00                               | 6                    |
| Asset-A2     | Sub-station       | 671.23   | 0.00                               | 6                    |
| Asset-B      | Sub-station       | 421.23   | 5.99                               | 6                    |
| Asset-C      | Sub-station       | 852.41   | 52.48                              | 6                    |
| Asset-D      | Sub-station       | 188.34   | 0.00                               | 6                    |
| <b>Total</b> |                   | <b>2771.00</b>   | <b>58.47</b>                       |                      |
| Asset-B      | Transmission Line | 92840.51   | 893.00                             | 1                    |
| <b>Total</b> |                   | <b>92840.51</b>  | <b>893.00</b>                      |                      |

36. We have considered the submissions of the Petitioner. As per the APTEL's judgment dated 14.9.2019 in Appeal No. 74 of 2017, the Initial Spares are to be allowed as per the ceiling limits on overall project cost. The APTEL in judgement dated 14.9.2019 in Appeal No. 74 of 2017 held as follows:

*"8.13.....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.”*

37. We have considered the submissions of the Petitioner. As per the APTEL’s judgement dated 14.9.2019 in Appeal No. 74 of 2017, Initial Spares are to be allowed as a percentage of the project cost as a whole. In the present case, the transmission assets were put into commercial operation during 2014-19 tariff period and 2014 Tariff Regulations are applicable for the instant transmission assets. The entire transmission project was completed during 2014-19 tariff period, the overall project cost of the transmission assets is arrived at only when all the transmission assets are combined while claiming the tariff for the 2019-24 tariff period. Therefore, the Initial Spares are allowed on the basis of the cost of the individual assets in the 2014-19 tariff period and the Initial Spares are allowed on the basis of the overall project cost in the 2019- 24 tariff period.

38. The details of the Initial Spares allowed for the transmission assets for the 2014- 19 tariff period are as follows:

**Sub-stations:**

| <b>Assets</b> | <b>Capital Cost/P&amp;M cost considered as on cut-off date (₹ in lakh)</b> | <b>Initial Spares claimed (₹ in lakh)</b> | <b>Norms as per 2014 Tariff Regulations (in %)</b> | <b>Initial Spares allowable as per 2014 Tariff Regulations (₹ in lakh)</b> | <b>Initial Spares allowed (₹ in lakh)</b> |
|---------------|--|---|--|--|---|
| Asset-A1      | 622.89   | 0.00                                      | 6.00   | 39.76  | 0.00                                      |
| Asset-A2      | 656.33   | 0.00                                      | 6.00   | 41.89  | 0.00                                      |
| Asset-B       | 420.39   | 5.99                                      | 6.00   | 26.45  | 5.99                                      |
| Asset-C       | 827.53   | 52.48                                     | 6.00   | 49.47  | 49.47                                     |
| Asset-D       | 188.33   | 0.00                                      | 6.00   | 12.02  | 0.00                                      |





### Transmission Line:

| Asset   | Capital Cost/P&M cost considered as on cut-off date (₹ in lakh) | Initial Spares claimed (₹ in lakh) | Norms as per 2014 Tariff Regulations (in %) | Initial Spares allowable as per 2014 Tariff Regulations (₹ in lakh) | Initial Spares allowed (₹ in lakh) |
|---------|---|------------------------------------|---|---|------------------------------------|
| Asset-B | 93033.80  | 893.00                             | 1.00  | 930.72  | 893.00                             |

### Capital Cost allowed as on COD

39. Accordingly, the capital cost allowed as on COD is as follows:

| Assets   | Capital Cost as on COD as per Auditor's Certificate | Less: IDC as on COD due to |                   | IEDC disallowed due to time over-run | Excess Initial Spares | Capital Cost as on COD (on cash basis) |
|----------|---|----------------------------|-------------------|--------------------------------------|-----------------------|--|
|          |   | IDC Disallowed             | Un-discharged IDC |                                      |                       |  |
| Asset-A1 | 590.86  | 0.00                       | 8.79              | 0.00                                 | 0.00                  | 582.07                                 |
| Asset-A2 | 625.96  | 0.00                       | 5.17              | 0.00                                 | 0.00                  | 620.79                                 |
| Asset-B  | 94869.70  | 0.00                       | 1599.52           | 0.00                                 | 0.00                  | 93270.18                               |
| Asset-C  | 690.50  | 0.00                       | 0.00              | 0.00                                 | 3.01                  | 687.49                                 |
| Asset-D  | 73.96   | 0.00                       | 1.39              | 2.37                                 | 0.00                  | 70.20                                  |

### Additional Capital Expenditure (ACE)

40. The Petitioner has claimed the following ACE after adjustment of IDC and liability for the assets covered in the instant petition:

| Assets     | ACE     |         |         |         |         |
|------------|---------|---------|---------|---------|---------|
|            | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Asset – A1 | 42.99   | 9.23    | 4.40    | 5.62    | 9.28    |
| Asset– A2  | 42.99   | 9.23    | 4.40    | 5.62    | 9.28    |
| Asset – B  | 0.00    | 4370.74 | 1103.39 | 1054.36 | 387.73  |
| Asset – C  | 115.84  | 24.86   | 11.85   | 15.14   | 9.74    |
| Asset – D  | 0.00    | 0.00    | 0.00    | 46.33   | 1.56    |

41. BSPHCL has submitted that ACE claim should be dealt as per Regulation 14(3)(v) of the 2014 Tariff Regulations.



42. The Petitioner has submitted that ACE has been claimed under Regulation 14(1)(i) (undischarged liabilities) and under Regulation 14(1)(ii) (works deferred for execution) of the 2014 Tariff Regulations and is within cut-off date. Further, the Petitioner has submitted that the ACE beyond cut-off date is claimed under Regulation 14(2)(iv) of the 2014 Tariff Regulations. The Petitioner has submitted Auditor's Certificate in support of the same. The Petitioner vide affidavit dated 26.8.2021 has submitted party-wise details of undischarged liabilities.

43. We have considered the submissions made by the Petitioner. The undischarged IDCas on COD has been allowed as ACE during the year of discharge. ACE claimed by the Petitioner has been allowed under Regulation 14(1)(i), 14(1)(ii) and 14(2)(iv) of the 2014 Tariff Regulations which pertain to undischarged liabilities recognized to be payable at a future date and liabilities toward works deferred for execution respectively. Accordingly, ACE allowed for the 2014-19 period is as follows:

**(₹ in lakh)**

| <b>ACE</b>    |                |                |                |                |                |
|---------------|----------------|----------------|----------------|----------------|----------------|
| <b>Assets</b> | <b>2014-15</b> | <b>2015-16</b> | <b>2016-17</b> | <b>2017-18</b> | <b>2018-19</b> |
| Asset – A1    | 51.78          | 9.23           | 4.40           | 5.62           | 9.28           |
| Asset– A2     | 48.16          | 9.23           | 4.40           | 5.62           | 9.28           |
| Asset – B     | 0.00           | 5970.26        | 1103.39        | 1054.36        | 387.73         |
| Asset – C     | 115.84         | 24.86          | 11.85          | 15.14          | 9.74           |
| Asset – D     | 0.00           | 0.00           | 0.00           | 46.33          | 1.56           |

44. The capital cost allowed as on 31.3.2019 after including ACE in respect of the transmission assets is as follows:



(₹ in lakh)

| Assets   | Particulars   | Capital cost as on COD on cash basis | ACE     |         |         |         |         | Total Capital cost including ACE as on 31.3.2019 |
|----------|---|--------------------------------------|---------|---------|---------|---------|---------|--|
|          |   |                                      | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |  |
| Asset-A1 | Allowed vide order dated 30.12.2015 in Petition No. 78/TT/2015  | 586.88                               | 42.59   | 45.61   | 0.00    | 0.00    | 0.00    | 675.08   |
|          | Claimed by the Petitioner in the instant petition               | 590.86                               | 42.99   | 9.23    | 4.40    | 5.62    | 9.28    | 662.38   |
|          | Approved after true-up in this order                            | 582.07                               | 51.78   | 9.23    | 4.40    | 5.62    | 9.28    | 662.38   |
| Asset-A2 | Allowed vide order dated 30.12.2015 in Petition No. 78/TT/2015  | 621.80                               | 42.59   | 52.29   | 0.00    | 0.00    | 0.00    | 716.68   |
|          | Claimed by the Petitioner in the instant petition               | 625.96                               | 42.99   | 9.23    | 4.40    | 5.62    | 9.28    | 697.48   |
|          | Approved after true-up in this order                            | 620.79                               | 48.16   | 9.23    | 4.40    | 5.62    | 9.28    | 697.48   |
| Asset-B  | Allowed vide order dated 23.3.2016 in Petition No. 184/TT/2015  | 93280.51                             | 0.00    | 3985.53 | 203.31  | 203.30  | 0.00    | 97672.65   |
|          | Claimed by the Petitioner in the instant petition               | 94869.70                             | 0.00    | 4370.74 | 1103.39 | 1054.36 | 387.73  | 101785.92  |
|          | Approved after true-up in this order                            | 93270.18                             | 0.00    | 5970.26 | 1103.39 | 1054.36 | 387.73  | 101785.92  |
| Asset-C  | Allowed vide order dated 18.12.2015 in Petition No. 241/TT/2014 | 690.50                               | 255.68  | 0.00    | 0.00    | 0.00    | 0.00    | 946.18   |
|          | Claimed by the Petitioner in the instant petition               | 690.50                               | 115.84  | 24.86   | 11.85   | 15.14   | 9.74    | 867.93   |
|          | Approved after true-up in this order                            | 687.49                               | 115.84  | 24.86   | 11.85   | 15.14   | 9.74    | 864.92   |
| Asset-D  | Claimed by the Petitioner in the instant petition               | 73.96                                | 0.00    | 0.00    | 0.00    | 46.33   | 1.56    | 121.85   |
|          | Approved after true-up in this order                            | 70.20                                | 0.00    | 0.00    | 0.00    | 46.33   | 1.56    | 118.09   |

### **Debt-Equity Ratio**

45. The Petitioner has claimed debt-equity ratio of 70:30 as on COD and for ACE post 31.3.2014. The debt-equity ratio of 70:30 has been considered for capital cost as on COD and ACE during 2014-19 tariff period as provided under Regulation 19 of the 2014 Tariff Regulations. The details of debt-equity ratio in respect of the transmission assets as on COD and 31.3.2019 are as follows:



| <b>Funding Asset - A1</b> | <b>Amount as on COD (₹ in lakh)</b> | <b>(%)</b>    | <b>Amount as on 31.3.2019 (₹ in lakh)</b> | <b>(%)</b>    |
|---------------------------|-------------------------------------|---------------|---|---------------|
| Debt                      | 407.45                              | 70.00         | 463.68                                    | 70.00         |
| Equity                    | 174.62                              | 30.00         | 198.70                                    | 30.00         |
| <b>Total</b>              | <b>582.07</b>                       | <b>100.00</b> | <b>662.38</b>                             | <b>100.00</b> |
| <b>Funding Asset - A2</b> | <b>Amount as on COD (₹ in lakh)</b> | <b>(%)</b>    | <b>Amount as on 31.3.2019 (₹ in lakh)</b> | <b>(%)</b>    |
| Debt                      | 434.55                              | 70.00         | 488.24                                    | 70.00         |
| Equity                    | 186.24                              | 30.00         | 209.24                                    | 30.00         |
| <b>Total</b>              | <b>620.79</b>                       | <b>100.00</b> | <b>697.48</b>                             | <b>100.00</b> |
| <b>Funding Asset -B</b>   | <b>Amount as on COD (₹ in lakh)</b> | <b>(%)</b>    | <b>Amount as on 31.3.2019 (₹ in lakh)</b> | <b>(%)</b>    |
| Debt                      | 65289.13                            | 70.00         | 71250.16                                  | 70.00         |
| Equity                    | 27981.05                            | 30.00         | 30535.76                                  | 30.00         |
| <b>Total</b>              | <b>93270.18</b>                     | <b>100.00</b> | <b>101785.92</b>                          | <b>100.00</b> |
| <b>Funding Asset -C</b>   | <b>Amount as on COD (₹ in lakh)</b> | <b>(%)</b>    | <b>Amount as on 31.3.2019 (₹ in lakh)</b> | <b>(%)</b>    |
| Debt                      | 481.24                              | 70.00         | 605.46                                    | 70.00         |
| Equity                    | 206.25                              | 30.00         | 259.47                                    | 30.00         |
| <b>Total</b>              | <b>687.49</b>                       | <b>100.00</b> | <b>864.92</b>                             | <b>100.00</b> |
| <b>Funding Asset -D</b>   | <b>Amount as on COD (₹ in lakh)</b> | <b>(%)</b>    | <b>Amount as on 31.3.2019 (₹ in lakh)</b> | <b>(%)</b>    |
| Debt                      | 49.14                               | 70.00         | 82.66                                     | 70.00         |
| Equity                    | 21.06                               | 30.00         | 35.43                                     | 30.00         |
| <b>Total</b>              | <b>70.20</b>                        | <b>100.00</b> | <b>118.09</b>                             | <b>100.00</b> |

### **Depreciation**

46. Depreciation has been allowed as per the methodology provided in Regulation 27 of the 2014 Tariff Regulations. Depreciation has been allowed considering capital expenditure as on COD and approved ACE during the 2014- 19 tariff period. The Gross Block during the 2014-19 tariff period has been depreciated at Weighted Average Rate of Depreciation (WAROD). WAROD at Annexure-I has been worked out after taking into account the depreciation rates of asset as prescribed in the 2014 Tariff Regulations and depreciation allowed during the 2014-19 tariff period is as follows:



(₹ in lakh)

| Asset- A1 |  |                                       |              |              |              |              |
|-----------|--|---------------------------------------|--------------|--------------|--------------|--------------|
|           | Particulars  | 2014-15<br>(Pro-rata for<br>148 days) | 2015-16      | 2016-17      | 2017-18      | 2018-19      |
| A         | Opening Gross Block  | 582.07                                | 633.85       | 643.08       | 647.48       | 653.10       |
| B         | Additional Capitalisation  | 51.78                                 | 9.23         | 4.40         | 5.62         | 9.28         |
| C         | Closing Gross Block (A+B)  | 633.85                                | 643.08       | 647.48       | 653.10       | 662.38       |
| D         | Average Gross Block (A+C)/2                                      | 607.96                                | 638.47       | 645.28       | 650.29       | 657.74       |
| E         | Weighted average rate of<br>Depreciation (WAROD) (%)             | 5.28                                  | 5.28         | 5.28         | 5.28         | 5.28         |
| F         | Elapsed useful life of the Asset-at the<br>beginning of the year | 0.00                                  | 0.00         | 1.00         | 2.00         | 3.00         |
| G         | Balance useful life of the Asset-at the<br>beginning of the year | 25.00                                 | 25.00        | 24.00        | 23.00        | 22.00        |
| H         | Aggregated Depreciable Value<br>(D*90%)                          | 547.16                                | 574.62       | 580.75       | 585.26       | 591.97       |
| I         | <b>Combined Depreciation during the<br/>year</b>                 | <b>13.02</b>                          | <b>33.71</b> | <b>34.07</b> | <b>34.34</b> | <b>34.73</b> |
| J         | Remaining Aggregated Depreciable<br>Value                        | 534.15                                | 527.89       | 499.95       | 470.13       | 442.10       |

(₹ in lakh)

| Asset- A2 |  |                                       |              |              |              |              |
|-----------|--|---------------------------------------|--------------|--------------|--------------|--------------|
|           | Particulars  | 2014-15<br>(Pro-rata for<br>150 days) | 2015-16      | 2016-17      | 2017-18      | 2018-19      |
| A         | Opening Gross Block  | 620.79                                | 668.95       | 678.18       | 682.58       | 688.20       |
| B         | Additional Capitalisation  | 48.16                                 | 9.23         | 4.40         | 5.62         | 9.28         |
| C         | Closing Gross Block (A+B)  | 668.95                                | 678.18       | 682.58       | 688.20       | 697.48       |
| D         | Average Gross Block (A+C)/2                                      | 644.87                                | 673.57       | 680.38       | 685.39       | 692.84       |
| E         | Weighted average rate of<br>Depreciation (WAROD) (%)             | 5.28                                  | 5.28         | 5.28         | 5.28         | 5.28         |
| F         | Elapsed useful life of the Asset-at the<br>beginning of the year | 0.00                                  | 0.00         | 1.00         | 2.00         | 3.00         |
| G         | Balance useful life of the Asset-at the<br>beginning of the year | 25.00                                 | 25.00        | 24.00        | 23.00        | 22.00        |
| H         | Aggregated Depreciable Value<br>(D*90%)                          | 580.38                                | 606.21       | 612.34       | 616.85       | 623.56       |
| I         | <b>Combined Depreciation during the<br/>year</b>                 | <b>13.99</b>                          | <b>35.56</b> | <b>35.92</b> | <b>36.19</b> | <b>36.58</b> |
| J         | Remaining Aggregated Depreciable<br>Value                        | 566.39                                | 556.65       | 526.86       | 495.18       | 465.31       |



(₹ in lakh)

|   |   | Asset- B                              |                |                |                |
|---|---|---------------------------------------|----------------|----------------|----------------|
|   | Particulars   | 2015-16<br>(Pro-rata for<br>299 days) | 2016-17        | 2017-18        | 2018-19        |
| A | Opening Gross Block   | 93270.18                              | 99240.44       | 100343.83      | 101398.19      |
| B | Additional Capitalisation                                     | 5970.26                               | 1103.39        | 1054.36        | 387.73         |
| C | Closing Gross Block (A+B)                                     | 99240.44                              | 100343.83      | 101398.19      | 101785.92      |
| D | Average Gross Block (A+C)/2                                   | 96255.31                              | 99792.14       | 100871.01      | 101592.06      |
| E | Weighted average rate of Depreciation (WAROD) (%)             | 5.28                                  | 5.28           | 5.28           | 5.28           |
| F | Elapsed useful life of the Asset-at the beginning of the year | 0.00                                  | 0.00           | 1.00           | 2.00           |
| G | Balance useful life of the Asset-at the beginning of the year | 35.00                                 | 35.00          | 34.00          | 33.00          |
| H | Aggregated Depreciable Value (D*90%)                          | 86629.78                              | 89812.92       | 90783.91       | 91432.85       |
| I | <b>Combined Depreciation during the year</b>                  | <b>4152.71</b>                        | <b>5270.00</b> | <b>5326.97</b> | <b>5365.04</b> |
| J | Remaining Aggregated Depreciable Value                        | 82477.07                              | 80390.21       | 76034.23       | 71318.14       |

(₹ in lakh)

|   |   | Asset- C                                 |              |              |              |              |
|---|---|--|--------------|--------------|--------------|--------------|
|   | Particulars   | 2014-15<br>(Pro-rata<br>for 310<br>days) | 2015-16      | 2016-17      | 2017-18      | 2018-19      |
| A | Opening Gross Block   | 687.49                                   | 803.33       | 828.19       | 840.04       | 855.18       |
| B | Additional Capitalisation                                     | 115.84                                   | 24.86        | 11.85        | 15.14        | 9.74         |
| C | Closing Gross Block (A+B)                                     | 803.33                                   | 828.19       | 840.04       | 855.18       | 864.92       |
| D | Average Gross Block (A+C)/2                                   | 745.41                                   | 815.76       | 834.12       | 847.61       | 860.05       |
| E | Weighted average rate of Depreciation (WAROD) (%)             | 5.28                                     | 5.28         | 5.28         | 5.28         | 5.28         |
| F | Elapsed useful life of the Asset-at the beginning of the year | 0.00                                     | 0.00         | 1.00         | 2.00         | 3.00         |
| G | Balance useful life of the Asset-at the beginning of the year | 25.00                                    | 25.00        | 24.00        | 23.00        | 22.00        |
| H | Aggregated Depreciable Value (D*90%)                          | 670.87                                   | 734.19       | 750.70       | 762.85       | 774.05       |
| I | <b>Combined Depreciation during the year</b>                  | <b>33.43</b>                             | <b>43.07</b> | <b>44.04</b> | <b>44.75</b> | <b>45.41</b> |
| J | Remaining Aggregated Depreciable Value                        | 637.44                                   | 657.69       | 630.16       | 597.56       | 563.34       |



(₹ in lakh)

| Asset- D |   |                                |             |             |
|----------|---|--------------------------------|-------------|-------------|
|          | Particulars   | 2016-17 (Pro-rata for 51 days) | 2017-18     | 2018-19     |
| A        | Opening Gross Block   | 70.20                          | 70.20       | 116.53      |
| B        | Additional Capitalisation                                     | 0.00                           | 46.33       | 1.56        |
| C        | Closing Gross Block (A+B)                                     | 70.20                          | 116.53      | 118.09      |
| D        | Average Gross Block (A+C)/2                                   | 70.20                          | 93.36       | 117.31      |
| E        | Weighted average rate of Depreciation (WAROD) (%)             | 5.28                           | 5.28        | 5.28        |
| F        | Elapsed useful life of the Asset-at the beginning of the year | 0.00                           | 0.00        | 1.00        |
| G        | Balance useful life of the Asset-at the beginning of the year | 25.00                          | 25.00       | 24.00       |
| H        | Aggregated Depreciable Value (D*90%)                          | 63.18                          | 84.03       | 105.58      |
| I        | <b>Combined Depreciation during the year</b>                  | <b>0.52</b>                    | <b>4.93</b> | <b>6.19</b> |
| J        | Remaining Aggregated Depreciable Value                        | 62.66                          | 78.58       | 93.94       |

47. The details of the depreciation allowed in the previous orders for the transmission assets, claimed by the Petitioner in the instant petition and trued-up in the instant order is as follows:

| (₹ in lakh) |  |         |         |         |         |         |
|-------------|--|---------|---------|---------|---------|---------|
| Assets      | Particulars  | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Asset-A1    | Allowed vide order dated 30.12.2015 in Petition No. 78/TT/2015 | 13.11   | 34.44   | 35.64   | 35.64   | 35.64   |
|             | Claimed by the Petitioner in the instant petition              | 13.02   | 33.71   | 34.07   | 34.34   | 34.73   |
|             | Approved after true-up in this order                           | 13.02   | 33.71   | 34.07   | 34.34   | 34.73   |
| Asset-A2    | Allowed vide order dated 30.12.2015 in Petition No. 78/TT/2015 | 14.05   | 36.46   | 37.84   | 37.84   | 37.84   |
|             | Claimed by the Petitioner in the instant petition              | 13.99   | 35.56   | 35.92   | 36.19   | 36.58   |
|             | Approved after true-up in this order                           | 13.99   | 35.56   | 35.92   | 36.19   | 36.58   |
| Asset-B     | Allowed vide order dated 23.3.2016 in Petition No. 184/TT/2015 | 0.00    | 4110.41 | 5142.14 | 5152.88 | 5158.25 |
|             | Claimed by the Petitioner in the instant petition              | 0.00    | 4152.70 | 5270.00 | 5326.97 | 5365.03 |
|             | Approved after true-up in this order                           | 0.00    | 4152.71 | 5270.00 | 5326.97 | 5365.04 |



|         |   |       |       |       |       |       |
|---------|---|-------|-------|-------|-------|-------|
| Asset-C | Allowed vide order dated 18.12.2015 in Petition No. 241/TT/2014 | 36.70 | 49.96 | 49.96 | 49.96 | 49.96 |
|         | Claimed by the Petitioner in the instant petition               | 33.56 | 43.23 | 44.20 | 44.91 | 45.57 |
|         | Approved after true-up in this order                            | 33.43 | 43.07 | 44.04 | 44.75 | 45.41 |
| Asset-D | Claimed by the Petitioner in the instant petition               | 0.00  | 0.00  | 0.54  | 5.09  | 6.39  |
|         | Allowed in this order   | 0.00  | 0.00  | 0.52  | 4.93  | 6.19  |

### Interest on Loan (IoL)

48. The Petitioner has claimed the weighted average rate of IoL, based on its actual loan portfolio and rate of interest. Accordingly, IoL is calculated based on actual interest rate, in accordance with Regulation 26 of the 2014 Tariff Regulations. The details of IoL allowed are as follows:

(₹ in lakh)

|   |   | Asset-A1                                 |              |              |              |              |
|---|---|--|--------------|--------------|--------------|--------------|
|   | Particulars                                   | 2014-15<br>(Pro-rata<br>for 148<br>days) | 2015-16      | 2016-17      | 2017-18      | 2018-19      |
| A | Gross Normative Loan                          | 407.45                                   | 443.70       | 450.16       | 453.24       | 457.18       |
| B | Cumulative Repayments upto Previous Year      | 0.00                                     | 13.02        | 46.73        | 80.80        | 115.13       |
| C | Net Loan-Opening (A-B)                        | 407.45                                   | 430.68       | 403.43       | 372.44       | 342.05       |
| D | Addition due to Additional Capitalization     | 36.25                                    | 6.46         | 3.08         | 3.94         | 6.50         |
| E | Repayment during the year                     | 13.02                                    | 33.71        | 34.07        | 34.34        | 34.73        |
| F | Net Loan-Closing (C+D-E)                      | 430.68                                   | 403.43       | 372.44       | 342.05       | 313.82       |
| G | Average Loan (C+F)/2                          | 419.07                                   | 417.06       | 387.94       | 357.25       | 327.93       |
| H | Weighted Average Rate of Interest on Loan (%) | 9.20                                     | 9.13         | 9.10         | 9.05         | 9.02         |
| I | <b>Interest on Loan (G*H)</b>                 | <b>15.63</b>                             | <b>38.10</b> | <b>35.31</b> | <b>32.32</b> | <b>29.57</b> |

(₹ in lakh)

|   |                      | Asset-A2                                 |         |         |         |         |
|---|----------------------|--|---------|---------|---------|---------|
|   | Particulars          | 2014-15<br>(Pro-rata<br>for 150<br>days) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| A | Gross Normative Loan | 434.55                                   | 468.27  | 474.73  | 477.81  | 481.74  |





|   |   |              |              |              |              |              |
|---|---|--------------|--------------|--------------|--------------|--------------|
| B | Cumulative Repayments upto Previous Year      | 0.00         | 13.99        | 49.56        | 85.48        | 121.67       |
| C | Net Loan-Opening (A-B)                        | 434.55       | 454.27       | 425.17       | 392.33       | 360.07       |
| D | Addition due to Additional Capitalization     | 33.72        | 6.46         | 3.08         | 3.93         | 6.50         |
| E | Repayment during the year                     | 13.99        | 35.56        | 35.92        | 36.19        | 36.58        |
| F | Net Loan-Closing (C+D-E)                      | 454.27       | 425.17       | 392.33       | 360.07       | 329.99       |
| G | Average Loan (C+F)/2                          | 444.41       | 439.72       | 408.75       | 376.20       | 345.03       |
| H | Weighted Average Rate of Interest on Loan (%) | 9.43         | 9.31         | 9.22         | 9.04         | 8.98         |
| I | <b>Interest on Loan (G*H)</b>                 | <b>17.23</b> | <b>40.93</b> | <b>37.67</b> | <b>34.02</b> | <b>30.97</b> |

(₹ in lakh)

| Asset-B |   |  |                |                |                |
|---------|---|--|----------------|----------------|----------------|
|         | Particulars                                   | 2015-16<br>(Pro-rata<br>for 299<br>days) | 2016-17        | 2017-18        | 2018-19        |
| A       | Gross Normative Loan                          | 65289.13                                 | 69468.32       | 70240.69       | 70978.75       |
| B       | Cumulative Repayments upto Previous Year      | 0.00                                     | 4152.71        | 9422.71        | 14749.67       |
| C       | Net Loan-Opening (A-B)                        | 65289.13                                 | 65315.61       | 60817.98       | 56229.08       |
| D       | Addition due to Additional Capitalization     | 4179.19                                  | 772.37         | 738.06         | 271.41         |
| E       | Repayment during the year                     | 4152.71                                  | 5270.00        | 5326.97        | 5365.04        |
| F       | Net Loan-Closing (C+D-E)                      | 65315.61                                 | 60817.98       | 56229.08       | 51135.45       |
| G       | Average Loan (C+F)/2                          | 65302.37                                 | 63066.80       | 58523.53       | 53682.27       |
| H       | Weighted Average Rate of Interest on Loan (%) | 8.90                                     | 8.83           | 8.67           | 8.63           |
| I       | <b>Interest on Loan (G*H)</b>                 | <b>4745.36</b>                           | <b>5568.19</b> | <b>5075.89</b> | <b>4632.77</b> |

(₹ in lakh)

| Asset-C |   |  |              |              |              |              |
|---------|---|--|--------------|--------------|--------------|--------------|
|         | Particulars                                   | 2014-15<br>(Pro-rata<br>for 310<br>days) | 2015-16      | 2016-17      | 2017-18      | 2018-19      |
|         | Gross Normative Loan                          | 481.24                                   | 562.33       | 579.74       | 588.04       | 598.64       |
|         | Cumulative Repayments upto Previous Year      | 0.00                                     | 33.43        | 76.50        | 120.54       | 165.29       |
|         | Net Loan-Opening                              | 481.24                                   | 528.91       | 503.24       | 467.50       | 433.34       |
|         | Addition due to Additional Capitalization     | 81.09                                    | 17.40        | 8.30         | 10.60        | 6.82         |
|         | Repayment during the year                     | 33.43                                    | 43.07        | 44.04        | 44.75        | 45.41        |
|         | Net Loan-Closing                              | 528.91                                   | 503.24       | 467.50       | 433.34       | 394.75       |
|         | Average Loan                                  | 505.08                                   | 516.07       | 485.37       | 450.42       | 414.05       |
|         | Weighted Average Rate of Interest on Loan (%) | 9.29                                     | 9.10         | 8.95         | 8.64         | 8.53         |
|         | <b>Interest on Loan</b>                       | <b>39.85</b>                             | <b>46.98</b> | <b>43.45</b> | <b>38.90</b> | <b>35.30</b> |



(₹ in lakh)

| <b>Asset-D</b>                                |   |                |                |
|---|---|----------------|----------------|
| <b>Particulars</b>                            | <b>2016-17<br/>(Pro-rata<br/>for 51<br/>days)</b> | <b>2017-18</b> | <b>2018-19</b> |
| Gross Normative Loan                          | 49.14   | 49.14          | 81.57          |
| Cumulative Repayments upto Previous Year      | 0.00  | 0.52           | 5.45           |
| Net Loan-Opening                              | 49.14   | 48.62          | 76.12          |
| Addition due to Additional Capitalization     | 0.00  | 32.43          | 1.09           |
| Repayment during the year                     | 0.52  | 4.93           | 6.19           |
| Net Loan-Closing                              | 48.62   | 76.12          | 71.02          |
| Average Loan                                  | 48.88   | 62.37          | 73.57          |
| Weighted Average Rate of Interest on Loan (%) | 7.98  | 7.73           | 7.62           |
| <b>Interest on Loan</b>                       | <b>0.55</b>                                       | <b>4.82</b>    | <b>5.61</b>    |

49. The details of the IoL allowed in the previous orders for the transmission assets, claimed by the Petitioner in the instant petition and trued-up in the instant order is as follows:

(₹ in lakh)

| <b>Assets</b> | <b>Particulars</b>  | <b>2014-15</b> | <b>2015-16</b> | <b>2016-17</b> | <b>2017-18</b> | <b>2018-19</b> |
|---------------|---|----------------|----------------|----------------|----------------|----------------|
| Asset-A1      | Allowed vide order dated 30.12.2015 in Petition No. 78/TT/2015  | 15.73          | 39.04          | 37.28          | 33.98          | 30.70          |
|               | Claimed by the Petitioner in the instant petition               | 15.63          | 38.10          | 35.31          | 32.32          | 29.57          |
|               | Approved after true-up in this order                            | 15.63          | 38.10          | 35.31          | 32.32          | 29.57          |
| Asset-A2      | Allowed vide order dated 30.12.2015 in Petition No. 78/TT/2015  | 17.29          | 42.37          | 40.59          | 37.01          | 33.49          |
|               | Claimed by the Petitioner in the instant petition               | 17.23          | 40.93          | 37.67          | 34.02          | 30.97          |
|               | Approved after true-up in this order                            | 17.23          | 40.93          | 37.67          | 34.02          | 30.97          |
| Asset-B       | Allowed vide order dated 23.3.2016 in Petition No. 184/TT/2015  | 0.00           | 4722.01        | 5495.00        | 5042.35        | 4587.65        |
|               | Claimed by the Petitioner in the instant petition               | 0.00           | 4745.37        | 5568.17        | 5075.86        | 4632.78        |
|               | Approved after true-up in this order                            | 0.00           | 4745.36        | 5568.19        | 5075.89        | 4632.77        |
| Asset-C       | Allowed vide order dated 18.12.2015 in Petition No. 241/TT/2014 | 44.07          | 56.20          | 51.52          | 46.86          | 42.23          |



|         |   |       |       |       |       |       |
|---------|---|-------|-------|-------|-------|-------|
|         | Claimed by the Petitioner in the instant petition | 40.01 | 47.15 | 43.60 | 39.04 | 35.42 |
|         | Approved after true-up in this order              | 39.85 | 46.98 | 43.45 | 38.90 | 35.30 |
| Asset-D | Claimed by the Petitioner in the instant petition | 0.00  | 0.00  | 0.56  | 4.98  | 5.79  |
|         | Allowed in this order                             | 0.00  | 0.00  | 0.55  | 4.82  | 5.61  |

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

50. The Petitioner is entitled to RoE for the transmission assets in terms of Regulations 24 and 25 of the 2014 Tariff Regulations. The Petitioner has submitted that they are liable to pay income tax at MAT rates and has claimed the 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                              | 19.625   |
| 2015-16     | 21.382                              | 19.716   |
| 2016-17     | 21.338                              | 19.705   |
| 2017-18     | 21.337                              | 19.704   |
| 2018-19     | 21.549                              | 19.758   |

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

| <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                      |

52. The 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 the rate of RoE for



truing up of the tariff of the 2014-19 tariff period in terms of the provisions of the 2014 Tariff Regulations, which is as follows :

| Year    | MAT Rate<br>(in %) | Grossed-up RoE<br>[(Base Rate)/(1-t)]<br>(in %) |
|---------|--------------------|---|
| 2014-15 | 20.961             | 19.610  |
| 2015-16 | 21.342             | 19.705  |
| 2016-17 | 21.342             | 19.705  |
| 2017-18 | 21.342             | 19.705  |
| 2018-19 | 21.549             | 19.758  |

53. Accordingly, the RoE allowed for the transmission assets is as follows:

(₹ in lakh)

|   |   | Asset-A1                                 |              |              |              |              |
|---|---|--|--------------|--------------|--------------|--------------|
|   | Particulars                               | 2014-15<br>(Pro-rata<br>for 148<br>days) | 2015-16      | 2016-17      | 2017-18      | 2018-19      |
| A | Opening Equity                            | 174.62                                   | 190.15       | 192.92       | 194.24       | 195.92       |
| B | Addition due to Additional Capitalization | 15.53                                    | 2.77         | 1.32         | 1.68         | 2.78         |
| C | Closing Equity (A+B)                      | 190.15                                   | 192.92       | 194.24       | 195.92       | 198.70       |
| D | Average Equity (A+C)/2                    | 182.39                                   | 191.53       | 193.58       | 195.08       | 197.31       |
| E | Return on Equity (Base Rate) (%)          | 15.500                                   | 15.500       | 15.500       | 15.500       | 15.500       |
| F | Tax Rate applicable (%)                   | 20.961                                   | 21.342       | 21.342       | 21.342       | 21.549       |
| G | Rate of Return on Equity (Pre-tax)        | 19.610                                   | 19.705       | 19.705       | 19.705       | 19.758       |
| H | <b>Return on Equity (Pre-tax) (D*G)</b>   | <b>14.50</b>                             | <b>37.74</b> | <b>38.14</b> | <b>38.44</b> | <b>38.98</b> |

(₹ in lakh)

|   |   | Asset-A2                                 |         |         |         |         |
|---|---|--|---------|---------|---------|---------|
|   | Particulars                               | 2014-15<br>(Pro-rata<br>for 150<br>days) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| A | Opening Equity                            | 186.24                                   | 200.69  | 203.45  | 204.77  | 206.46  |
| B | Addition due to Additional Capitalization | 14.45                                    | 2.77    | 1.32    | 1.69    | 2.78    |
| C | Closing Equity (A+B)                      | 200.69                                   | 203.45  | 204.77  | 206.46  | 209.24  |
| D | Average Equity (A+C)/2                    | 193.46                                   | 202.07  | 204.11  | 205.62  | 207.85  |



|   |   |              |              |              |              |              |
|---|---|--------------|--------------|--------------|--------------|--------------|
| E | Return on Equity (Base Rate) (%)        | 15.500       | 15.500       | 15.500       | 15.500       | 15.500       |
| F | Tax Rate applicable (%)                 | 20.961       | 21.342       | 21.342       | 21.342       | 21.549       |
| G | Rate of Return on Equity (Pre-tax)      | 19.610       | 19.705       | 19.705       | 19.705       | 19.758       |
| H | <b>Return on Equity (Pre-tax) (D*G)</b> | <b>15.59</b> | <b>39.82</b> | <b>40.22</b> | <b>40.52</b> | <b>41.07</b> |

(₹ in lakh)

|   |   | Asset-B                                  |                |                |                |
|---|---|--|----------------|----------------|----------------|
|   | Particulars                               | 2015-16<br>(Pro-rata<br>for 299<br>days) | 2016-17        | 2017-18        | 2018-19        |
| A | Opening Equity                            | 27981.05                                 | 29772.12       | 30103.14       | 30419.44       |
| B | Addition due to Additional Capitalization | 1791.07                                  | 331.02         | 316.30         | 116.32         |
| C | Closing Equity (A+B)                      | 29772.12                                 | 30103.14       | 30419.44       | 30535.76       |
| D | Average Equity (A+C)/2                    | 28876.59                                 | 29937.63       | 30261.29       | 30477.60       |
| E | Return on Equity (Base Rate) (%)          | 15.500                                   | 15.500         | 15.500         | 15.500         |
| F | Tax Rate applicable (%)                   | 21.342                                   | 21.342         | 21.342         | 21.549         |
| G | Rate of Return on Equity (Pre-tax)        | 19.705                                   | 19.705         | 19.705         | 19.758         |
| H | <b>Return on Equity (Pre-tax) (D*G)</b>   | <b>4648.50</b>                           | <b>5899.21</b> | <b>5962.99</b> | <b>6021.76</b> |

(₹ in lakh)

|   |   | Asset-C                                  |              |              |              |              |
|---|---|--|--------------|--------------|--------------|--------------|
|   | Particulars                               | 2014-15<br>(Pro-rata<br>for 310<br>days) | 2015-16      | 2016-17      | 2017-18      | 2018-19      |
| A | Opening Equity                            | 206.25                                   | 241.00       | 248.46       | 252.01       | 256.55       |
| B | Addition due to Additional Capitalization | 34.75                                    | 7.46         | 3.55         | 4.54         | 2.92         |
| C | Closing Equity (A+B)                      | 241.00                                   | 248.46       | 252.01       | 256.55       | 259.47       |
| D | Average Equity (A+C)/2                    | 223.62                                   | 244.73       | 250.23       | 254.28       | 258.01       |
| E | Return on Equity (Base Rate) (%)          | 15.500                                   | 15.500       | 15.500       | 15.500       | 15.500       |
| F | Tax Rate applicable (%)                   | 20.961                                   | 21.342       | 21.342       | 21.342       | 21.549       |
| G | Rate of Return on Equity (Pre-tax)        | 19.610                                   | 19.705       | 19.705       | 19.705       | 19.758       |
| H | <b>Return on Equity (Pre-tax) (D*G)</b>   | <b>37.24</b>                             | <b>48.22</b> | <b>49.31</b> | <b>50.10</b> | <b>50.98</b> |

(₹ in lakh)

|   |   | Asset-D                                 |         |         |
|---|---|---|---------|---------|
|   | Particulars                               | 2016-17<br>(Pro-rata<br>for 51<br>days) | 2017-18 | 2018-19 |
| A | Opening Equity                            | 21.06                                   | 21.06   | 34.96   |
| B | Addition due to Additional Capitalization | 0.00                                    | 13.90   | 0.47    |
| C | Closing Equity (A+B)                      | 21.06                                   | 34.96   | 35.43   |
| D | Average Equity (A+C)/2                    | 21.06                                   | 28.01   | 35.19   |
| E | Return on Equity (Base Rate) (%)          | 15.500                                  | 15.500  | 15.500  |



|   |   |             |             |             |
|---|---|-------------|-------------|-------------|
| F | Tax Rate applicable (%)                 | 21.342      | 21.342      | 21.549      |
| G | Rate of Return on Equity (Pre-tax)      | 19.705      | 19.705      | 19.758      |
| H | <b>Return on Equity (Pre-tax) (D*G)</b> | <b>0.58</b> | <b>5.52</b> | <b>6.95</b> |

54. The details of the RoE allowed in the previous order for the transmission assets, claimed by the Petitioner in the instant petition and trued-up in the instant order is as follows:

|          |   | (₹ in lakh) |         |         |         |         |
|----------|---|-------------|---------|---------|---------|---------|
| Assets   | Particulars   | 2014-15     | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Asset-A1 | Allowed vide order dated 30.12.2015 in Petition No. 78/TT/2015  | 14.61       | 38.37   | 39.72   | 39.72   | 39.72   |
|          | Claimed by the Petitioner in the instant petition               | 14.51       | 37.76   | 38.14   | 38.44   | 38.98   |
|          | Approved after true-up in this order                            | 14.50       | 37.74   | 38.14   | 38.44   | 38.98   |
| Asset-A2 | Allowed vide order dated 30.12.2015 in Petition No. 78/TT/2015  | 15.65       | 40.63   | 42.16   | 42.16   | 42.16   |
|          | Claimed by the Petitioner in the instant petition               | 15.60       | 39.84   | 40.22   | 40.52   | 41.07   |
|          | Approved after true-up in this order                            | 15.59       | 39.82   | 40.22   | 40.52   | 41.07   |
| Asset-B  | Allowed vide order dated 23.3.2016 in Petition No. 184/TT/2015  | 0.00        | 4578.89 | 5728.14 | 5740.10 | 5746.08 |
|          | Claimed by the Petitioner in the instant petition               | 0.00        | 4650.86 | 5899.21 | 5962.99 | 6021.76 |
|          | Approved after true-up in this order                            | 0.00        | 4648.50 | 5899.21 | 5962.99 | 6021.76 |
| Asset-C  | Allowed vide order dated 18.12.2015 in Petition No. 241/TT/2014 | 40.90       | 55.67   | 55.67   | 55.67   | 55.67   |
|          | Claimed by the Petitioner in the instant petition               | 37.42       | 48.43   | 49.49   | 50.28   | 51.16   |
|          | Approved after true-up in this order                            | 37.24       | 48.22   | 49.31   | 50.10   | 50.98   |
| Asset-D  | Claimed by the Petitioner in the instant petition               | 0.00        | 0.00    | 0.60    | 5.70    | 7.18    |
|          | Allowed in this order   | 0.00        | 0.00    | 0.58    | 5.52    | 6.95    |

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

55. The details of the O&M Expenses claimed by the Petitioner for the



transmission assets and allowed under Regulation 29(4)(a) of the 2014 Tariff

Regulations for the purpose of tariff are as follows:

(₹ in lakh)

| <b>Asset-A1</b>                   |  |                |                |                |                |
|-----------------------------------|--|----------------|----------------|----------------|----------------|
| <b>Particulars</b>                | <b>2014-15<br/>(Pro-rata<br/>for 148<br/>days)</b> | <b>2015-16</b> | <b>2016-17</b> | <b>2017-18</b> | <b>2018-19</b> |
| <b>Sub-station Bays</b>           |  |                |                |                |                |
| 400 kV :Gorakhpur:Bus Reactor Bay | 1  | 1              | 1              | 1              | 1              |
| <b>Norm (₹ lakh/bay)</b>          |  |                |                |                |                |
| 400 kV                            | 60.30  | 62.30          | 64.37          | 66.51          | 68.71          |
| <b>Total Sub-station O&amp;M</b>  | <b>24.45</b>                                       | <b>62.30</b>   | <b>64.37</b>   | <b>66.51</b>   | <b>68.71</b>   |
| <b>Total O&amp;M Expenses</b>     | <b>24.45</b>                                       | <b>62.30</b>   | <b>64.37</b>   | <b>66.51</b>   | <b>68.71</b>   |

(₹ in lakh)

| <b>Asset-A2</b>   |  |                |                |                |                |
|---|--|----------------|----------------|----------------|----------------|
| <b>Particulars</b>  | <b>2014-15<br/>(Pro-rata<br/>for 150<br/>days)</b> | <b>2015-16</b> | <b>2016-17</b> | <b>2017-18</b> | <b>2018-19</b> |
| <b>Sub-station Bays</b>   |  |                |                |                |                |
| 400 kV :Gorakhpur:Line Reactor<br>Commissioned as Bus Reactor With<br>Bay | 1  | 1              | 1              | 1              | 1              |
| <b>Norm (₹ lakh/bay)</b>  |  |                |                |                |                |
| 400 kV  | 60.30  | 62.30          | 64.37          | 66.51          | 68.71          |
| <b>Total Sub-station O&amp;M</b>  | <b>24.78</b>                                       | <b>62.30</b>   | <b>64.37</b>   | <b>66.51</b>   | <b>68.71</b>   |
| <b>Total O&amp;M Expenses</b>   | <b>24.78</b>                                       | <b>62.30</b>   | <b>64.37</b>   | <b>66.51</b>   | <b>68.71</b>   |

(₹ in lakh)

| <b>Asset-B</b>   |  |                |                |                |
|--|--|----------------|----------------|----------------|
| <b>Particulars</b>   | <b>2015-16<br/>(Pro-rata<br/>for 299<br/>days)</b> | <b>2016-17</b> | <b>2017-18</b> | <b>2018-19</b> |
| <b>Transmission Line</b>                                       |  |                |                |                |
| 400 kV D/C (Quad) Barh II TPS - Gorakhpur<br>Transmission Line | 349.177  | 349.177        | 349.177        | 349.177        |
| <b>Norm (₹ lakh/bay)</b>                                       |  |                |                |                |
| D/C Bundled with 4 or more sub-conductor)                      | 1.097  | 1.133          | 1.171          | 1.210          |
| <b>Total Transmission Line O&amp;M</b>                         | <b>312.93</b>                                      | <b>395.62</b>  | <b>408.89</b>  | <b>422.50</b>  |
| <b>Total O&amp;M Expenses</b>                                  | <b>312.93</b>                                      | <b>395.62</b>  | <b>408.89</b>  | <b>422.50</b>  |



(₹ in lakh)

| Asset-C  |  |              |              |              |              |
|--|--|--------------|--------------|--------------|--------------|
| Particulars  | 2014-15<br>(Pro-rata<br>for 310<br>days) | 2015-16      | 2016-17      | 2017-18      | 2018-19      |
| <b>Sub-station Bays</b>                                      |  |              |              |              |              |
| 400 kV Gorakhpur:125 MVAR Bus Reactor at Gorakhpur Extension | 1  | 1            | 1            | 1            | 1            |
| <b>Norm (₹ lakh/bay)</b>                                     |  |              |              |              |              |
| 400 kV   | 60.30                                    | 62.30        | 64.37        | 66.51        | 68.71        |
| <b>Total Sub-station O&amp;M</b>                             | <b>51.21</b>                             | <b>62.30</b> | <b>64.37</b> | <b>66.51</b> | <b>68.71</b> |
| <b>Total O&amp;M Expenses</b>                                | <b>51.21</b>                             | <b>62.30</b> | <b>64.37</b> | <b>66.51</b> | <b>68.71</b> |

(₹ in lakh)

| Asset - D                        |                                   |               |               |
|----------------------------------|-----------------------------------|---------------|---------------|
| Particulars                      | 2016-17 (Pro-rata<br>for 51 days) | 2017-18       | 2018-19       |
| <b>Sub-station Bays</b>          |                                   |               |               |
| Gorakhpur:400kV SLRBayGorakhpur  | 2                                 | 2             | 2             |
| <b>Norm (₹ lakh/bay)</b>         |                                   |               |               |
| 400 kV                           | 64.37                             | 66.51         | 68.71         |
| <b>Total Sub-station O&amp;M</b> | <b>17.99</b>                      | <b>133.02</b> | <b>137.42</b> |
| <b>Total O&amp;M Expenses</b>    | <b>17.99</b>                      | <b>133.02</b> | <b>137.42</b> |

56. The details of the O&M allowed in the previous order for the transmission assets, claimed by the Petitioner in the instant petition and trued-up in the instant order is as follows:

(₹ in lakh)

| Assets   | Particulars  | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|----------|--|---------|---------|---------|---------|---------|
| Asset-A1 | Allowed vide order dated 30.12.2015 in Petition No. 78/TT/2015 | 24.62   | 62.30   | 64.37   | 66.51   | 68.71   |
|          | Claimed by the Petitioner in the instant petition              | 24.45   | 62.30   | 64.37   | 66.51   | 68.71   |
|          | Approved after true-up in this order                           | 24.45   | 62.30   | 64.37   | 66.51   | 68.71   |
| Asset-A2 | Allowed vide order dated 30.12.2015 in Petition No. 78/TT/2015 | 24.95   | 62.30   | 64.37   | 66.51   | 68.71   |
|          | Claimed by the Petitioner in the instant petition              | 24.78   | 62.30   | 64.37   | 66.51   | 68.71   |
|          | Approved after true-up in this order                           | 24.78   | 62.30   | 64.37   | 66.51   | 68.71   |





|         |   |       |        |        |        |        |
|---------|---|-------|--------|--------|--------|--------|
| Asset-B | Allowed vide order dated 23.3.2016 in Petition No. 184/TT/2015  | 0.00  | 312.93 | 395.62 | 408.89 | 422.50 |
|         | Claimed by the Petitioner in the instant petition               | 0.00  | 312.93 | 395.62 | 408.89 | 422.50 |
|         | Approved after true-up in this order                            | 0.00  | 312.93 | 395.62 | 408.89 | 422.50 |
| Asset-C | Allowed vide order dated 18.12.2015 in Petition No. 241/TT/2014 | 51.22 | 62.30  | 64.37  | 66.51  | 68.71  |
|         | Claimed by the Petitioner in the instant petition               | 51.21 | 62.30  | 64.37  | 66.51  | 68.71  |
|         | Approved after true-up in this order                            | 51.21 | 62.30  | 64.37  | 66.51  | 68.71  |
| Asset-D | Claimed by the Petitioner in the instant petition               | 0.00  | 0.00   | 17.98  | 133.02 | 137.42 |
|         | Allowed in this order   | 0.00  | 0.00   | 17.99  | 133.02 | 137.42 |

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

57. The Petitioner is entitled to claim IWC as per Regulation 28(1)(c) of the 2014

Tariff Regulations as follows:-

**i. Working Capital for Maintenance Spares :**

Maintenance spares have been worked out based on 15% of Operation and Maintenance Expenses.

**ii. Working Capital for O & M Expenses :**

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

**iii. Working Capital for 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.

58. The trued-up IWC allowed for the transmission assets is as follows:



(₹ in lakh)

| Asset-A1 |  |  |              |              |              |              |
|----------|--|--|--------------|--------------|--------------|--------------|
|          | Particulars  | 2014-15<br>(Pro-rata<br>for 148<br>days) | 2015-16      | 2016-17      | 2017-18      | 2018-19      |
| A        | Working Capital for O & M Expenses<br>(O&M expenses for 1 month)   | 5.03                                     | 5.19         | 5.36         | 5.54         | 5.73         |
| B        | Working Capital for Maintenance Spares<br>(15% of O&M expenses)  | 9.05                                     | 9.35         | 9.66         | 9.98         | 10.31        |
| C        | Working Capital for Receivables<br>(Equivalent to 2 months of annual fixed cost / annual transmission charges) | 28.75                                    | 29.64        | 29.65        | 29.62        | 29.69        |
| <b>D</b> | <b>Total of Working Capital (A+B+C)</b>  | <b>42.82</b>                             | <b>44.17</b> | <b>44.67</b> | <b>45.14</b> | <b>45.73</b> |
| E        | Rate of Interest on working capital(%)   | 13.50                                    | 13.50        | 13.50        | 13.50        | 13.50        |
| <b>F</b> | <b>Interest of working Capital (D*E)</b>   | <b>2.34</b>                              | <b>5.96</b>  | <b>6.03</b>  | <b>6.09</b>  | <b>6.17</b>  |

(₹ in lakh)

| Asset-A2 |  |  |              |              |              |              |
|----------|--|--|--------------|--------------|--------------|--------------|
|          | Particulars  | 2014-15<br>(Pro-rata<br>for 150<br>days) | 2015-16      | 2016-17      | 2017-18      | 2018-19      |
| A        | Working Capital for O & M Expenses<br>(O&M expenses for 1 month)   | 5.03                                     | 5.19         | 5.36         | 5.54         | 5.73         |
| B        | Working Capital for Maintenance Spares<br>(15% of O&M expenses)  | 9.05                                     | 9.35         | 9.66         | 9.98         | 10.31        |
| C        | Working Capital for Receivables<br>(Equivalent to 2 months of annual fixed cost / annual transmission charges) | 30.03                                    | 30.79        | 30.73        | 30.58        | 30.60        |
| <b>D</b> | <b>Total of Working Capital (A+B+C)</b>  | <b>44.10</b>                             | <b>45.32</b> | <b>45.75</b> | <b>46.09</b> | <b>46.64</b> |
| E        | Rate of Interest on working capital(%)   | 13.50                                    | 13.50        | 13.50        | 13.50        | 13.50        |
| <b>F</b> | <b>Interest of working Capital (D*E)</b>   | <b>2.45</b>                              | <b>6.12</b>  | <b>6.18</b>  | <b>6.22</b>  | <b>6.30</b>  |



(₹ in lakh)

|          |  | <b>Asset-B</b>                                 |                |                |                |
|----------|--|--|----------------|----------------|----------------|
|          | <b>Particulars</b>   | <b>2015-16<br/>(Pro-rata for<br/>299 days)</b> | <b>2016-17</b> | <b>2017-18</b> | <b>2018-19</b> |
| A        | Working Capital for O & M Expenses<br>(O&M expenses for 1 month)   | 31.92  | 32.97          | 34.07          | 35.21          |
| B        | Working Capital for Maintenance Spares<br>(15% of O&M expenses)  | 57.46  | 59.34          | 61.33          | 63.38          |
| C        | Working Capital for Receivables<br>(Equivalent to 2 months of annual fixed cost / annual transmission charges) | 2894.66  | 2923.36        | 2862.34        | 2805.69        |
| <b>D</b> | <b>Total of Working Capital (A+B+C)</b>  | <b>2984.04</b>                                 | <b>3015.67</b> | <b>2957.74</b> | <b>2904.28</b> |
| E        | Rate of Interest on working capital(%)   | 13.50  | 13.50          | 13.50          | 13.50          |
| <b>F</b> | <b>Interest of working Capital (D*E)</b>   | <b>329.10</b>                                  | <b>407.11</b>  | <b>399.30</b>  | <b>392.08</b>  |

(₹ in lakh)

|          |  | <b>Asset-C</b>                                     |                |                |                |                |
|----------|--|--|----------------|----------------|----------------|----------------|
|          | <b>Particulars</b>   | <b>2014-15<br/>(Pro-rata<br/>for 310<br/>days)</b> | <b>2015-16</b> | <b>2016-17</b> | <b>2017-18</b> | <b>2018-19</b> |
| A        | Working Capital for O & M Expenses<br>(O&M expenses for 1 month)   | 5.03   | 5.19           | 5.36           | 5.54           | 5.73           |
| B        | Working Capital for Maintenance Spares<br>(15% of O&M expenses)  | 9.05   | 9.35           | 9.66           | 9.98           | 10.31          |
| C        | Working Capital for Receivables<br>(Equivalent to 2 months of annual fixed cost / annual transmission charges) | 32.79  | 34.53          | 34.65          | 34.50          | 34.54          |
| <b>D</b> | <b>Total of Working Capital (A+B+C)</b>  | <b>46.86</b>                                       | <b>49.07</b>   | <b>49.66</b>   | <b>50.02</b>   | <b>50.57</b>   |
| E        | Rate of Interest on working capital(%)   | 13.50  | 13.50          | 13.50          | 13.50          | 13.50          |
| <b>F</b> | <b>Interest of working Capital (D*E)</b>   | <b>5.37</b>  | <b>6.62</b>    | <b>6.70</b>    | <b>6.75</b>    | <b>6.83</b>    |



(₹ in lakh)

|          |  | <b>Asset-D</b>                        |                |                |
|----------|--|---------------------------------------|----------------|----------------|
|          | <b>Particulars</b>   | <b>2016-17 (Pro-rata for 51 days)</b> | <b>2017-18</b> | <b>2018-19</b> |
| A        | Working Capital for O & M Expenses<br>(O&M expenses for 1 month)   | 10.73                                 | 11.09          | 11.45          |
| B        | Working Capital for Maintenance Spares<br>(15% of O&M expenses)  | 19.31                                 | 19.95          | 20.61          |
| C        | Working Capital for Receivables<br>(Equivalent to 2 months of annual fixed cost / annual transmission charges) | 24.58                                 | 25.93          | 27.30          |
| <b>D</b> | <b>Total of Working Capital (A+B+C)</b>  | <b>54.62</b>                          | <b>56.97</b>   | <b>59.36</b>   |
| E        | Rate of Interest on working capital(%)   | 12.80                                 | 12.80          | 12.80          |
| <b>F</b> | <b>Interest of working Capital (D*E)</b>   | <b>0.98</b>                           | <b>7.29</b>    | <b>7.60</b>    |

59. The details of the IWC allowed in the previous orders for the transmission assets, claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

(₹ in lakh)

| <b>Assets</b> | <b>Particulars</b>   | <b>2014-15</b> | <b>2015-16</b> | <b>2016-17</b> | <b>2017-18</b> | <b>2018-19</b> |
|---------------|--|----------------|----------------|----------------|----------------|----------------|
| Asset-A1      | Allowed vide order dated 30.12.2015 in Petition No. 78/TT/2015 | 2.36           | 6.02           | 6.15           | 6.19           | 6.24           |
|               | Claimed by the Petitioner in the instant petition              | 2.34           | 5.96           | 6.03           | 6.09           | 6.17           |
|               | Approved after true-up in this order                           | 2.34           | 5.96           | 6.03           | 6.09           | 6.17           |
| Asset-A2      | Allowed vide order dated 30.12.2015 in Petition No. 78/TT/2015 | 2.46           | 6.19           | 6.33           | 6.37           | 6.41           |
|               | Claimed by the Petitioner in the instant petition              | 2.45           | 6.12           | 6.18           | 6.22           | 6.30           |
|               | Approved after true-up in this order                           | 2.45           | 6.12           | 6.18           | 6.22           | 6.30           |
| Asset-B       | Allowed vide order dated 23.3.2016 in Petition No. 184/TT/2015 | 0.00           | 325.99         | 398.55         | 389.39         | 379.93         |
|               | Claimed by the Petitioner in the instant petition              | 0.00           | 329.15         | 407.11         | 399.29         | 392.08         |



|         |   |      |        |        |        |        |
|---------|---|------|--------|--------|--------|--------|
|         | Approved after true-up in this order                            | 0.00 | 329.10 | 407.11 | 399.30 | 392.08 |
| Asset-C | Allowed vide order dated 18.12.2015 in Petition No. 241/TT/2014 | 5.63 | 7.17   | 7.17   | 7.18   | 7.20   |
|         | Claimed by the Petitioner in the instant petition               | 5.38 | 6.64   | 6.72   | 6.76   | 6.84   |
|         | Approved after true-up in this order                            | 5.37 | 6.62   | 6.70   | 6.75   | 6.83   |
| Asset-D | Claimed by the Petitioner in the instant petition               | 0.00 | 0.00   | 0.98   | 7.30   | 7.61   |
|         | Allowed in this order   | 0.00 | 0.00   | 0.98   | 7.29   | 7.60   |

### Approved Annual Fixed Charges for the 2014-19 Tariff Period

60. The trued-up annual fixed charges allowed for the transmission assets for the 2014-19 tariff period are as follows:

(₹ in lakh)

| Asset-A1                     |  |               |               |               |               |
|------------------------------|--|---------------|---------------|---------------|---------------|
| Particulars                  | 2014-15<br>(Pro-rata<br>for 148<br>days) | 2015-16       | 2016-17       | 2017-18       | 2018-19       |
| Depreciation                 | 13.02                                    | 33.71         | 34.07         | 34.34         | 34.73         |
| Interest on Loan             | 15.63                                    | 38.10         | 35.31         | 32.32         | 29.57         |
| Return on Equity             | 14.50                                    | 37.74         | 38.14         | 38.44         | 38.98         |
| Op. and Maintenance Expenses | 24.45                                    | 62.30         | 64.37         | 66.51         | 68.71         |
| Int. on Working Capital      | 2.34                                     | 5.96          | 6.03          | 6.09          | 6.17          |
| <b>Total</b>                 | <b>69.94</b>                             | <b>177.81</b> | <b>177.92</b> | <b>177.70</b> | <b>178.17</b> |

(₹ in lakh)

| Asset-A2                     |  |               |               |               |               |
|------------------------------|--|---------------|---------------|---------------|---------------|
| Particulars                  | 2014-15<br>(Pro-rata<br>for 150<br>days) | 2015-16       | 2016-17       | 2017-18       | 2018-19       |
| Depreciation                 | 13.99                                    | 35.56         | 35.92         | 36.19         | 36.58         |
| Interest on Loan             | 17.23                                    | 40.93         | 37.67         | 34.02         | 30.97         |
| Return on Equity             | 15.59                                    | 39.82         | 40.22         | 40.52         | 41.07         |
| Op. and Maintenance Expenses | 24.78                                    | 62.30         | 64.37         | 66.51         | 68.71         |
| Int. on Working Capital      | 2.45                                     | 6.12          | 6.18          | 6.22          | 6.30          |
| <b>Total</b>                 | <b>74.04</b>                             | <b>184.73</b> | <b>184.36</b> | <b>183.46</b> | <b>183.63</b> |



(₹ in lakh)

| Asset-B                      |  |                 |                 |                 |
|------------------------------|--|-----------------|-----------------|-----------------|
| Particulars                  | 2015-16<br>(Pro-rata<br>for 299<br>days) | 2016-17         | 2017-18         | 2018-19         |
| Depreciation                 | 4152.71                                  | 5270.00         | 5326.97         | 5365.04         |
| Interest on Loan             | 4745.36                                  | 5568.19         | 5075.89         | 4632.77         |
| Return on Equity             | 4648.50                                  | 5899.21         | 5962.99         | 6021.76         |
| Op. and Maintenance Expenses | 312.93                                   | 395.62          | 408.89          | 422.50          |
| Int. on Working Capital      | 329.10                                   | 407.11          | 399.30          | 392.08          |
| <b>Total</b>                 | <b>14188.59</b>                          | <b>17540.13</b> | <b>17174.02</b> | <b>16834.15</b> |

(₹ in lakh)

| Asset-C                      |  |               |               |               |               |
|------------------------------|--|---------------|---------------|---------------|---------------|
| Particulars                  | 2014-15<br>(Pro-rata<br>for 310<br>days) | 2015-16       | 2016-17       | 2017-18       | 2018-19       |
| Depreciation                 | 33.43                                    | 43.07         | 44.04         | 44.75         | 45.41         |
| Interest on Loan             | 39.85                                    | 46.98         | 43.45         | 38.90         | 35.30         |
| Return on Equity             | 37.24                                    | 48.22         | 49.31         | 50.10         | 50.98         |
| Op. and Maintenance Expenses | 51.21                                    | 62.30         | 64.37         | 66.51         | 68.71         |
| Int. on Working Capital      | 5.37                                     | 6.62          | 6.70          | 6.75          | 6.83          |
| <b>Total</b>                 | <b>167.11</b>                            | <b>207.20</b> | <b>207.87</b> | <b>207.02</b> | <b>207.23</b> |

(₹ in lakh)

| Asset-D                      |                                      |               |               |
|------------------------------|--------------------------------------|---------------|---------------|
| Particulars                  | 2016-17<br>(Pro-rata for 51<br>days) | 2017-18       | 2018-19       |
| Depreciation                 | 0.52                                 | 4.93          | 6.19          |
| Interest on Loan             | 0.55                                 | 4.82          | 5.61          |
| Return on Equity             | 0.58                                 | 5.52          | 6.95          |
| Op. and Maintenance Expenses | 17.99                                | 133.02        | 137.42        |
| Int. on Working Capital      | 0.98                                 | 7.29          | 7.60          |
| <b>Total</b>                 | <b>20.61</b>                         | <b>155.58</b> | <b>163.77</b> |

61. The details of Annual Transmission Charges allowed in the previous order for the transmission assets, claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:



(₹ in lakh)

| Assets   | Particulars   | 2014-15 | 2015-16  | 2016-17  | 2017-18  | 2018-19  |
|----------|---|---------|----------|----------|----------|----------|
| Asset-A1 | Allowed vide order dated 30.12.2015 in Petition No. 78/TT/2015  | 70.42   | 180.17   | 183.16   | 182.04   | 181.00   |
|          | Claimed by the Petitioner in the instant petition               | 69.95   | 177.83   | 177.92   | 177.70   | 178.16   |
|          | Approved after true-up in this order                            | 69.94   | 177.81   | 177.92   | 177.70   | 178.17   |
| Asset-A2 | Allowed vide order dated 30.12.2015 in Petition No. 78/TT/2015  | 74.40   | 187.94   | 191.29   | 189.89   | 188.61   |
|          | Claimed by the Petitioner in the instant petition               | 74.05   | 184.75   | 184.36   | 183.46   | 183.63   |
|          | Approved after true-up in this order                            | 74.04   | 184.73   | 184.36   | 183.46   | 183.63   |
| Asset-B  | Allowed vide order dated 23.3.2016 in Petition No. 184/TT/2015  | 0.00    | 14050.23 | 17159.45 | 16733.60 | 16294.41 |
|          | Claimed by the Petitioner in the instant petition               | 0.00    | 14191.01 | 17540.11 | 17174.00 | 16834.15 |
|          | Approved after true-up in this order                            | 0.00    | 14188.59 | 17540.13 | 17174.02 | 16834.15 |
| Asset-C  | Allowed vide order dated 18.12.2015 in Petition No. 241/TT/2014 | 178.52  | 231.30   | 228.69   | 226.18   | 223.77   |
|          | Claimed by the Petitioner in the instant petition               | 167.58  | 207.75   | 208.38   | 207.50   | 207.70   |
|          | Approved after true-up in this order                            | 167.11  | 207.20   | 207.87   | 207.02   | 207.23   |
| Asset-D  | Claimed by the Petitioner in the instant petition               | 0.00    | 0.00     | 20.66    | 156.09   | 164.39   |
|          | Allowed in this order   | 0.00    | 0.00     | 20.61    | 155.58   | 163.77   |

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

62. The Petitioner has submitted the tariff forms combining all the assets into a single asset, namely, Combined Asset. Accordingly, as per proviso (i) of Regulation 8(1) of the 2019 Tariff Regulations, tariff for the Combined Asset has been worked out for the 2019-24 tariff period.

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



(₹ in lakh)

| Particulars                        | 2019-20         | 2020-21         | 201-22          | 2022-23         | 2023-24         |
|------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Depreciation                       | 5505.97         | 5512.61         | 5512.61         | 5512.61         | 5512.61         |
| Interest on Loan                   | 4299.10         | 3826.00         | 3353.79         | 2879.88         | 2398.80         |
| Return on Equity                   | 5874.70         | 5881.79         | 5881.79         | 5881.79         | 5881.79         |
| Interest on Working Capital        | 263.00          | 257.70          | 251.57          | 245.45          | 238.63          |
| Operation and Maintenance Expenses | 624.22          | 645.93          | 668.54          | 692.05          | 716.11          |
| <b>Total</b>                       | <b>16566.99</b> | <b>16124.03</b> | <b>15668.30</b> | <b>15211.78</b> | <b>14747.94</b> |

64. The Petitioner has claimed the following Interest on Working Capital for the Combined Asset for the 2019-24 tariff period:

(₹ in lakh)

| Particulars                        | 2019-20        | 2020-21        | 2021-22        | 2022-23        | 2023-24        |
|------------------------------------|----------------|----------------|----------------|----------------|----------------|
| O&M expenses                       | 52.02          | 53.83          | 55.71          | 57.67          | 59.68          |
| Maintenance Spares                 | 93.63          | 96.89          | 100.28         | 103.81         | 107.42         |
| Receivables                        | 2036.93        | 1987.89        | 1931.71        | 1875.42        | 1813.27        |
| <b>Total</b>                       | <b>2182.58</b> | <b>2138.61</b> | <b>2087.70</b> | <b>2036.90</b> | <b>1980.37</b> |
| Rate of Interest                   | 12.05          | 12.05          | 12.05          | 12.05          | 12.05          |
| <b>Interest on Working Capital</b> | <b>263.00</b>  | <b>257.70</b>  | <b>251.57</b>  | <b>245.45</b>  | <b>238.63</b>  |

### **Effective Date of Commercial Operation (E-COD)**

65. The Petitioner has claimed E-COD of the Combined Asset as 2.6.2015. Based on the trued-up admitted capital cost and actual COD of all the assets, the E-COD has been worked out as follows:

| Computation of Effective COD                                     |            |   |                        |                           |               |
|--|------------|---|------------------------|---------------------------|---------------|
| Asset  | Actual COD | Admitted Capital Cost as on 31.3.2019 (₹ in lakh) | Weight of the cost (%) | No. of Days from last COD | Weighted Days |
| Asset – A1   | 4.11.2014  | 662.38  | 0.64%                  | 828.00                    | 5.27          |
| Asset – A2   | 2.11.2014  | 697.48  | 0.67%                  | 830.00                    | 5.56          |
| Asset – B  | 7.6.2015   | 101785.92   | 97.75%                 | 613.00                    | 599.21        |
| Asset – C  | 26.5.2014  | 864.92  | 0.83%                  | 990.00                    | 8.22          |
| Asset – D  | 9.2.2017   | 118.09  | 0.11%                  | 0.00                      | 0.00          |
| <b>Total</b>   |            | <b>104128.79</b>                                  | <b>100.00%</b>         |                           | 618.26        |
| <b>Effective COD (Latest COD – Total weighted Days) 2.6.2015</b> |            |   |                        |                           |               |





66. The E-COD is used to determine the lapsed life of the project as a whole, which works out as Three (3) years as on 1.4.2019 (i.e. the number of completed years as on 1.4.2019 from E-COD).

**Weighted Average Life (WAL)**

67. The life as defined in Regulation 33 of the 2019 Tariff Regulations has been considered for determination of Weighted Average Life. The Combined Asset may have multiple elements such as land, building, transmission line, Sub-station and PLCC and each element may have different span of life. Therefore, the concept of Weighted Average Life (WAL) has been used as the useful life of the project as a whole.

68. WAL has been determined based on the admitted capital cost of individual elements as on 31.3.2019 and the irrespective of life as stipulated in the 2019 Tariff Regulations. The element-wise life as defined in the 2014 Tariff Regulations prevailing at the time of actual COD of individual assets has been ignored for this purpose. The life as defined in the 2019 Tariff Regulations has been considered for determination of WAL. Accordingly, WAL of the Combined Asset has been worked out as 35 years as follows:

| <b>Admitted Capital Cost as on 31.3.2019</b> |  |                              |   |   |
|--|--|------------------------------|---|---|
| <b>Particulars</b>                           | <b>Combined Asset Cost<br/>(in lakh)<br/>(1)</b> | <b>Life in Years<br/>(2)</b> | <b>Weighted Cost (3)=(1)<br/>x(2)<br/>(in lakh)<br/>(3)</b> | <b>Weighted Avg. Life of Asset<br/>(in years)<br/>(4)=(3)/(1)</b> |
| Transmission Line                            | 101320.92  | 35.00                        | 3546232.24  |   |
| Sub-Station Equipment                        | 2714.92  | 25.00                        | 67872.91  |   |
| PLCC   | 92.95  | 15.00                        | 1394.29   |   |
| <b>Total</b>                                 | <b>104128.79</b>                                 |                              | <b>3615499.44</b>   | <b>34.72 years,<br/>rounded off<br/>to 35 years</b>               |



69. WAL as on 1.4.2019 as determined above is applicable prospectively (i.e. for 2019-24 tariff period no retrospective adjustment of depreciation in previous tariff period is required to be done. As discussed, the E- COD of the assets is 2.6.2015 and the lapsed life of the project as a whole, works out as Three (3) years as on 1.4.2019 (i.e. the number of completed years as on 1.4.2019 from E- COD). Accordingly, WAL has been used to determine the remaining useful life as on 31.3.2019 to be 32 years.

### **Capital Cost**

70. Regulation 19 of the 2019 Tariff Regulations provides as follows:

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

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

- (a) *The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;*
- (b) *Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;*
- (c) *Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period;*
- (d) *Interest during construction and incidental expenditure during construction as computed in accordance with these regulations;*
- (e) *Capitalised Initial Spares subject to the ceiling rates in accordance with these regulations;*
- (f) *Expenditure on account of additional capitalization and de-capitalisation determined in accordance with these regulations;*
- (g) *Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the date of commercial operation as specified under Regulation 7 of these regulations;*
- (h) *Adjustment of revenue earned by the transmission licensee by using the Asset-before the date of commercial operation;*
- (i) *Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*
- (j) *Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of the*



generating station but does not include the transportation cost and any other appurtenant cost paid to the railway;  
(k) Capital expenditure on account of biomass handling equipment and facilities, for co-firing;  
(l) Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;  
(m) Expenditure on account of fulfilment of any conditions for obtaining environment clearance for the project;  
(n) Expenditure on account of change in law and force majeure events; and  
(o) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.

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

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

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

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

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

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



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

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

*(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.”*

71. The trued-up capital cost as on 31.3.2019 for Assets-A1, A2, B, C and D has been considered as capital cost as on 31.3.2019 for the Combined Asset. The capital cost has been dealt in line with Regulation 19(3) 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 transmission assets are clubbed together and the capital cost has been considered as capital cost for Combined Asset as on 31.3.2019 as per following details:

|                              |               |               |                  |               |               | (₹ in lakh)                                      |
|------------------------------|---------------|---------------|------------------|---------------|---------------|--|
| Elements                     | Asset-A1      | Asset-A2      | Asset-B          | Asset-C       | Asset-D       | Capital cost for combined assets as on 31.3.2019 |
| Free hold Land               | 0.00          | 0.00          | 0.00             | 0.00          | 0.00          | 0.00   |
| Building & Other Civil Works | 0.00          | 0.00          | 0.00             | 0.00          | 0.00          | 0.00   |
| Transmission Line            | 0.00          | 0.00          | 101320.92        | 0.00          | 0.00          | 101320.92  |
| Sub-Station Equipment        | 662.38        | 697.48        | 372.05           | 864.92        | 118.09        | 2714.92  |
| PLCC                         | 0.00          | 0.00          | 92.95            | 0.00          | 0.00          | 92.95  |
| Leasehold Land               | 0.00          | 0.00          | 0.00             | 0.00          | 0.00          | 0.00   |
| IT Equipment and Software    | 0.00          | 0.00          | 0.00             | 0.00          | 0.00          | 0.00   |
| <b>Total</b>                 | <b>662.38</b> | <b>697.48</b> | <b>101785.92</b> | <b>864.92</b> | <b>118.09</b> | <b>104128.79</b>                                 |



72. The trued-up capital cost of ₹104128.79 lakh for Combined Asset is considered as admitted capital cost as on 31.3.2019 for working out tariff for 2019-24 tariff period.

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

73. Regulation 24 and Regulation 25 of the 2019 Tariff Regulations provide as follows:-

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

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

*Provided that in case of any replacement of the assets, the additional capitalization shall be worked out after adjusting the gross fixed assets and cumulative depreciation of the assets replaced on account of de-capitalization.*

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

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

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

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



g) Raising of ash dyke as a part of ash disposal system.”

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

(a) The useful life of the assets is not commensurate with the useful life of the project and such assets have been fully depreciated in accordance with the provisions of these regulations;

(b) The replacement of the asset or equipment is necessary on account of change in law or Force Majeure conditions;

(c) The replacement of such asset or equipment is necessary on account of obsolescence of technology; and

(d) The replacement of such asset or equipment has otherwise been allowed by the Commission.”

74. The Petitioner has claimed projected ACE for 2019-24 period on account of balance and retention payments due to undischarged liability projected for works executed within the cut-off date and unexecuted works within cut-off date. The details of the projected ACE in respect of the transmission assets are as follows:

(₹ in lakh)

| Assets       | ACE<br>(as per Auditor's Certificate) |
|--------------|---------------------------------------|
|              | 2019-20                               |
| Asset – A1   | 0.00                                  |
| Asset – A2   | 0.00                                  |
| Asset – B    | 176.19                                |
| Asset – C    | 0.00                                  |
| Asset – D    | 75.20                                 |
| <b>Total</b> | <b>251.39</b>                         |

75. We have considered the submissions of the Petitioner. ACE claimed on account of balance and retention payments and deferred works is allowed under Regulation 24(1)(d) of the 2019 Tariff Regulations. The ACE allowed is summarized below, which is subject to true-up:



(₹ in lakh)

| Assets                | Admitted ACE  |
|-----------------------|---------------|
|                       | 2019-20       |
| Asset – A1            | 0.00          |
| Asset – A2            | 0.00          |
| Asset – B             | 176.19        |
| Asset – C             | 0.00          |
| Asset – D             | 75.20         |
| <b>Combined Asset</b> | <b>251.39</b> |

### Initial Spares

76. As stated earlier in this order, Initial Spares are allowed for the 2014-19 period on the basis of the cost of individual assets. The assets covered in the transmission project are combined during the 2019-24 tariff period and hence, the Initial Spares are allowed on the basis of the overall project cost as per the APTEL's judgement dated 14.9.2019 in Appeal No. 74 of 2017.

77. Accordingly, Initial Spares allowed in the 2019-24 tariff period are as follows:

### **Sub-stations:**

| Assets                | Capital Cost/P&M cost considered as on cut-off date (₹ in lakh) | Initial Spares claimed (₹ in lakh) | Norms as per 2014 Tariff Regulations (in %) | Initial Spares allowable as per 2014 Tariff Regulations (₹ in lakh) | Initial Spares allowed during 2014-19 period (₹ in lakh) | Initial Spares allowed on combined asset (₹ in lakh) |
|-----------------------|---|------------------------------------|---|---|--|--|
| Asset-A1              | 622.89  | 0.00                               | 6   | 39.76   | 0.00   |  |
| Asset-A2              | 656.33  | 0.00                               | 6   | 41.89   | 0.00   |  |
| Asset-B               | 420.39  | 5.99                               | 6   | 26.45   | 5.99   |  |
| Asset-C               | 827.53  | 52.48                              | 6   | 49.47   | 49.47  |  |
| Asset-D               | 188.33  | 0.00                               | 6   | 12.02   | 0.00   |  |
| <b>Combined Asset</b> |   | <b>58.47</b>                       |   | <b>169.60</b>   | <b>55.46</b>   | <b>3.01</b>  |

*\*Additional Initial Spares of ₹3.01 lakh (₹58.47-₹55.46)lakh are allowed for Sub-station.*

78. Accordingly, the capital cost of the Combined Asset as on 1.4.2019 is as follows:



(₹ in lakh)

| Capital Cost as on 31.3.2019 | Initial Spares allowed as per APTEL's Judgement | Capital Cost as on 1.4.2019 |
|------------------------------|---|-----------------------------|
| 104128.79                    | 3.01  | 104131.80                   |

**Capital Cost considered for the 2019-24 tariff period**

79. Accordingly, the capital cost of the Combined Asset considered for the tariff period 2019-24 subject to truing-up is as follows:

(₹ in lakh)

| Capital Cost as on 1.4.2019 | Admitted ACE | Capital Cost as on 31.3.2024 |
|-----------------------------|--------------|------------------------------|
|                             | 2019-20      |                              |
| 104131.80                   | 251.39       | 104383.19                    |

**Debt-Equity Ratio**

80. Regulations 18 of the 2019 Tariff Regulations provides as follows:-

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

*Provided that:*

- i. where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:*
- ii. the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:*
- iii. any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt: equity ratio.*

**Explanation-***The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, only if such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.*

*(2) The generating company or the transmission licensee, as the case may be, shall submit the resolution of the Board of the company or approval of the competent authority in other cases regarding infusion of funds from internal resources in support of the utilization made or proposed to be made to meet the capital expenditure of the*





generating station or the transmission system including communication system, as the case may be.

(3) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2019, debt: equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2019 shall be considered:

Provided that in case of a generating station or a transmission system including communication system which has completed its useful life as on or after 1.4.2019, if the equity actually deployed as on 1.4.2019 is more than 30% of the capital cost, equity in excess of 30% shall not be taken into account for tariff computation;

Provided further that in case of projects owned by Damodar Valley Corporation, the debt: equity ratio shall be governed as per sub-clause (ii) of clause (2) of Regulation 72 of these regulations.

(4) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2019, but where debt: equity ratio has not been determined by the Commission for determination of tariff for the period ending 31.3.2019, the Commission shall approve the debt: equity ratio in accordance with clause (1) of this Regulation.

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

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

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

| <b>Funding</b> | <b>Capital Cost as on 1.4.2019 (₹ in lakh)</b> | <b>(in %)</b> | <b>Total Capital Cost as on 31.3.2024 (₹ in lakh)</b> | <b>(in %)</b> |
|----------------|--|---------------|---|---------------|
| Debt           | 72892.31                                       | 70.00         | 73068.28  | 70.00         |
| Equity         | 31239.49                                       | 30.00         | 31314.91  | 30.00         |
| <b>Total</b>   | <b>104131.80</b>                               | <b>100.00</b> | <b>104383.19</b>                                      | <b>100.00</b> |

### **Depreciation**

82. Regulation 33 of the 2019 Tariff Regulations provide as follows:-



*“33. Depreciation: (1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system or element thereof including communication system. In case of the tariff of all the units of a generating station or all elements of a transmission system including communication system for which a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission system taking into consideration the depreciation of individual units:*

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

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

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

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

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

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

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

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

*(5) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-I to these regulations for the Asset-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 asset.*

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

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

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

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

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

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

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

83. We have considered the submissions of the Petitioner. WAROD at Annexure-II has been worked out after taking into account the depreciation rates of assets as prescribed 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 allowed for the Combined Asset is as follows:

| (₹ in lakh)           |   |                |                |                |                |                |
|-----------------------|---|----------------|----------------|----------------|----------------|----------------|
| <b>Combined Asset</b> |   |                |                |                |                |                |
|                       | <b>Particulars</b>  | <b>2019-20</b> | <b>2020-21</b> | <b>2021-22</b> | <b>2022-23</b> | <b>2023-24</b> |
| A                     | Opening Gross Block   | 104131.80      | 104383.19      | 104383.19      | 104383.19      | 104383.19      |
| B                     | Addition during the year 2019-24 due to projected Additional Capitalisation | 251.39         | 0.00           | 0.00           | 0.00           | 0.00           |
| C                     | Closing Gross Block (A+B)   | 104383.19      | 104383.19      | 104383.19      | 104383.19      | 104383.19      |
| D                     | Average Gross Block (A+C)/2   | 104257.49      | 104383.19      | 104383.19      | 104383.19      | 104383.19      |
| E                     | Weighted average rate of Depreciation (WAROD) (%)                           | 5.28           | 5.28           | 5.28           | 5.28           | 5.28           |
| F                     | Elapsed useful life at the beginning of the year                            | 3.00           | 4.00           | 5.00           | 6.00           | 7.00           |
| G                     | Balance useful life at the beginning of the year                            | 32.00          | 31.00          | 30.00          | 29.00          | 28.00          |
| H                     | Depreciable Value (D*90%)   | 93831.74       | 93944.87       | 93944.87       | 93944.87       | 93944.87       |
| I                     | <b>Combined Depreciation during the year</b>                                | <b>5505.77</b> | <b>5512.41</b> | <b>5512.41</b> | <b>5512.41</b> | <b>5512.41</b> |
| J                     | Cumulative Depreciation at the end of the year                              | 26150.94       | 31663.35       | 37175.76       | 42688.17       | 48200.58       |
| K                     | Remaining Aggregate Depreciable Value at the end of the year                | 67680.80       | 62281.52       | 56769.11       | 51256.70       | 45744.29       |

### **Interest on Loan (IoL)**

84. Regulation 32 of the 2019 Tariff Regulations provides as follows:-

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

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

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



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

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

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

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

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

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

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

85. BSPHCL has submitted that the 2014 Tariff Regulations do not permit the change in interest rate due to floating rate of interest applicable, if any, to be adjusted/ claimed over the tariff period of 5 years directly from/ with the beneficiaries. In response, the Petitioner has submitted that IoL for the 2014-19 tariff period has been calculated on the basis of actual rate of interest of various loans deployed for each year.

86. The weighted average rate of interest of IoL has been considered on the basis of the rates prevailing as on 1.4.2019. The Petitioner has prayed that the change in interest rate due to floating rate of interest applicable, if any, during the 2019-24 tariff period will be adjusted. Accordingly, the floating rate of interest, if any, shall be considered at the



time of true up. In view of above, the IoL has been worked out in accordance with Regulation 32 of the 2019 Tariff Regulations. The IoL allowed is follows:

(₹ in lakh)

|   |   | <b>Combined Asset</b> |                |                |                |                |
|---|---|-----------------------|----------------|----------------|----------------|----------------|
|   | <b>Particular</b>                             | <b>2019-20</b>        | <b>2020-21</b> | <b>2021-22</b> | <b>2022-23</b> | <b>2023-24</b> |
| A | Gross Normative Loan                          | 72892.31              | 73068.28       | 73068.28       | 73068.28       | 73068.28       |
| B | Cumulative Repayments upto Previous Year      | 20645.17              | 26150.94       | 31663.35       | 37175.76       | 42688.17       |
| C | Net Loan-Opening (A-B)                        | 52247.13              | 46917.34       | 41404.93       | 35892.52       | 30380.11       |
| D | Addition due to Additional Capitalization     | 175.97                | 0.00           | 0.00           | 0.00           | 0.00           |
| E | Repayment during the year                     | 5505.77               | 5512.41        | 5512.41        | 5512.41        | 5512.41        |
| F | Net Loan-Closing (C+D-E)                      | 46917.34              | 41404.93       | 35892.52       | 30380.11       | 24867.70       |
| G | Average Loan (C+F)/2                          | 49582.24              | 44161.13       | 38648.72       | 33136.31       | 27623.91       |
| H | Weighted Average Rate of Interest on Loan (%) | 8.67                  | 8.66           | 8.68           | 8.69           | 8.68           |
| I | <b>Interest on Loan (G*H)</b>                 | <b>4298.96</b>        | <b>3825.91</b> | <b>3353.71</b> | <b>2879.80</b> | <b>2398.75</b> |

### Return on Equity(RoE)

87. Regulations 30 and 31 of the 2019 Tariff Regulations provide as follows:-

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

*(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating station, transmission system including communication system and run-of-river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run-of-river generating station with pondage:*

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

*Provided further that:*

*i. In case of a new project, the rate of return on equity shall be reduced by 1.00% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted*



*Governor Mode Operation (RGMO) or Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system based on the report submitted by the respective RLDC;*

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

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

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

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

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

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

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

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

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



**Illustration-**

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

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

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

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

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

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

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

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

88. The Petitioner has submitted that MAT rate is applicable to the Petitioner's company. We have considered the submissions of the Petitioner. The MAT rate applicable in 2019-20 has been considered for the purpose of RoE, which shall be trued-up with actual tax rate in accordance with Regulation 31(3) of the 2019 Tariff Regulations. The RoE allowed for the Combined Asset under Regulation 30 of the 2019 Tariff Regulations is as follows:

|   |   | (₹ in lakh)           |                |                |                |                |
|---|---|-----------------------|----------------|----------------|----------------|----------------|
|   |   | <b>Combined Asset</b> |                |                |                |                |
|   | <b>Particulars</b>                        | <b>2019-20</b>        | <b>2020-21</b> | <b>2021-22</b> | <b>2022-23</b> | <b>2023-24</b> |
| A | Opening Equity                            | 31239.49              | 31314.91       | 31314.91       | 31314.91       | 31314.91       |
| B | Addition due to Additional Capitalization | 75.42                 | 0.00           | 0.00           | 0.00           | 0.00           |
| C | Closing Equity (A+B)                      | 31314.91              | 31314.91       | 31314.91       | 31314.91       | 31314.91       |





|   |   |                |                |                |                |                |
|---|---|----------------|----------------|----------------|----------------|----------------|
| D | Average Equity (A+C)/2                  | 31277.20       | 31314.91       | 31314.91       | 31314.91       | 31314.91       |
| E | Return on Equity (Base Rate) (%)        | 15.500         | 15.500         | 15.500         | 15.500         | 15.500         |
| F | Tax Rate applicable (%)                 | 17.472         | 17.472         | 17.472         | 17.472         | 17.472         |
| G | Rate of Return on Equity (Pre-tax)      | 18.782         | 18.782         | 18.782         | 18.782         | 18.782         |
| H | <b>Return on Equity (Pre-tax) (D*G)</b> | <b>5874.48</b> | <b>5881.57</b> | <b>5881.57</b> | <b>5881.57</b> | <b>5881.57</b> |

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

89. Regulation 35(3)(a) of the 2019 Tariff Regulations provides as follows:

*“35 (3) Transmission system: (a) The following normative operation and maintenance expenses shall be admissible for the combined 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>                         |                |                |                |                |                |
| <i>Single Circuit (Bundled Conductor with six or more sub-conductors)</i>  | 0.881          | 0.912          | 0.944          | 0.977          | 1.011          |
| <i>Single Circuit (Bundled conductor with four sub-conductors)</i>         | 0.755          | 0.781          | 0.809          | 0.837          | 0.867          |
| <i>Single Circuit (Twin &amp; Triple Conductor)</i>                        | 0.503          | 0.521          | 0.539          | 0.558          | 0.578          |
| <i>Single Circuit (Single Conductor)</i>                                   | 0.252          | 0.260          | 0.270          | 0.279          | 0.289          |
| <i>Double Circuit (Bundled conductor with four or more sub-conductors)</i> | 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          |



|   |       |       |       |       |       |
|---|-------|-------|-------|-------|-------|
| Multi Circuit (Twin & Triple Conductor)                               | 1.544 | 1.598 | 1.654 | 1.713 | 1.773 |
| Norms for HVDC stations   |       |       |       |       |       |
| HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB) | 834   | 864   | 894   | 925   | 958   |
| Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW)                | 1,666 | 1,725 | 1,785 | 1,848 | 1,913 |
| 500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)            | 2,252 | 2,331 | 2,413 | 2,498 | 2,586 |
| ±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)         | 2,468 | 2,555 | 2,645 | 2,738 | 2,834 |
| ±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500 MW)          | 1,696 | 1,756 | 1,817 | 1,881 | 1,947 |
| ±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)       | 2,563 | 2,653 | 2,746 | 2,842 | 2,942 |

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

*Provided further that:*

- i. the operation and maintenance expenses for new HVDC bi-pole schemes commissioned after 1.4.2019 for a particular year shall be allowed pro-rata on the basis of normative rate of operation and maintenance expenses of similar HVDC bi-pole scheme for the corresponding year of the tariff period;*
- ii. the O&M expenses norms for HVDC bi-pole line shall be considered as Double Circuit quad AC line;*
- iii. the O&M expenses of ±500 kV Mundra-Mohindergarh HVDC bipole scheme (2000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ±500 kV Talchar-Kolar HVDC bi-pole scheme (2000 MW);*
- iv. the O&M expenses of ±800 kV Champa-Kurukshetra HVDC bi-pole scheme (3000 MW) shall be on the basis of the normative O&M expenses for ±800 kV, Bishwanath-Agra HVDC bi-pole scheme;*
- v. the O&M expenses of ±800 kV, Alipurduar-Agra HVDC bi-pole scheme (3000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ±800 kV, Bishwanath-Agra HVDC bi-pole scheme; and*



vi. the O&M expenses of Static Synchronous Compensator and Static Var Compensator shall be worked at 1.5% of original project cost as on commercial operation which shall be escalated at the rate of 3.51% to work out the O&M expenses during the tariff period. The O&M expenses of Static Synchronous Compensator and Static Var Compensator, if required, may be reviewed after three years.

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

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

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

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

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

| (₹ in lakh)  |               |               |               |               |               |
|--|---------------|---------------|---------------|---------------|---------------|
| <b>Combined Asset</b>  |               |               |               |               |               |
| Particulars  | 2019-20       | 2020-21       | 2021-22       | 2022-23       | 2023-24       |
| <b>Sub-station Bays</b>  |               |               |               |               |               |
| 400 kV : Gorakhpur : Bus Reactor Bay                                   | 1             | 1             | 1             | 1             | 1             |
| 400 kV : Gorakhpur : Line Reactor Commissioned as Bus Reactor With Bay | 1             | 1             | 1             | 1             | 1             |
| 400 kV Gorakhpur : 125 MVAR Bus Reactor at Gorakhpur Extension         | 1             | 1             | 1             | 1             | 1             |
| Gorakhpur:400kV SLR Bay Gorakhpur                                      | 2             | 2             | 2             | 2             | 2             |
| <b>Norm (₹ lakh/bay)</b>   |               |               |               |               |               |
| 400 kV   | 32.15         | 33.28         | 34.45         | 35.66         | 36.91         |
| <b>Total Sub-station O&amp;M (A)</b>                                   | <b>160.75</b> | <b>166.40</b> | <b>172.25</b> | <b>178.30</b> | <b>184.55</b> |
| <b>Transmission Line</b>   |               |               |               |               |               |
| 400 kV D/C (Quad) Barh II TPS - Gorakhpur Transmission Line            | 349.177       | 349.177       | 349.177       | 349.177       | 349.177       |
| <b>Norm (₹ lakh/bay)</b>   |               |               |               |               |               |



|  |               |               |               |               |               |
|--|---------------|---------------|---------------|---------------|---------------|
| D/C Bundled with 4 or more sub-conductor)    | 1.322         | 1.368         | 1.416         | 1.466         | 1.517         |
| <b>Total Transmission Line O&amp;M (B)</b>   | <b>461.61</b> | <b>477.67</b> | <b>494.43</b> | <b>511.89</b> | <b>529.70</b> |
| <b>Communication System</b>                  |               |               |               |               |               |
| PLCC (₹ in lakh)                             | 92.95         | 92.95         | 92.95         | 92.95         | 92.95         |
| <b>Norms (%)</b>                             | <b>2</b>      | <b>2</b>      | <b>2</b>      | <b>2</b>      | <b>2</b>      |
| <b>Total Communication System (C)</b>        | <b>1.86</b>   | <b>1.86</b>   | <b>1.86</b>   | <b>1.86</b>   | <b>1.86</b>   |
| <b>Total O&amp;M Expenses D= (A)+(B)+(C)</b> | <b>624.22</b> | <b>645.93</b> | <b>668.54</b> | <b>692.05</b> | <b>716.11</b> |

91. The Petitioner has claimed O&M Expenses separately for the PLCC under Regulation 35(4) of the 2019 @2% of its original project cost in the instant petition and the Petitioner has made similar claim in other petitions as well. Though PLCC is a communication system, it has been considered as part of the sub-station in the 2014 and 2019 Tariff Regulations and the norms for sub-station has been specified accordingly. Accordingly, the Commission vide order dated 24.1.2021 in Petition No.126/TT/2020 has already concluded that no separate O&M Expenses can be allowed for PLCC under Regulation 35(4) of the 2019 Tariff Regulations even though PLCC is a communication system. Therefore, the Petitioner's claim for separate O&M Expenses for PLCC @2% is not allowed.

92. The O&M Expenses allowed for Combined Asset are as follows:

| (₹ in lakh)  |                |                |                |                |                |
|--|----------------|----------------|----------------|----------------|----------------|
| <b>Combined Asset</b>  |                |                |                |                |                |
| <b>Particulars</b>   | <b>2019-20</b> | <b>2020-21</b> | <b>2021-22</b> | <b>2022-23</b> | <b>2023-24</b> |
| <b>Sub-station Bays</b>  |                |                |                |                |                |
| 400 kV : Gorakhpur : Bus Reactor Bay                                   | 1              | 1              | 1              | 1              | 1              |
| 400 kV : Gorakhpur : Line Reactor Commissioned as Bus Reactor With Bay | 1              | 1              | 1              | 1              | 1              |
| 400 kV Gorakhpur : 125 MVAR Bus Reactor at Gorakhpur Extension         | 1              | 1              | 1              | 1              | 1              |
| Gorakhpur:400kV SLR Bay Gorakhpur                                      | 2              | 2              | 2              | 2              | 2              |
| <b>Norm (₹ lakh/bay)</b>   |                |                |                |                |                |
| 400 kV   | 32.15          | 33.28          | 34.45          | 35.66          | 36.91          |
| <b>Total Sub-station O&amp;M (A)</b>                                   | <b>160.75</b>  | <b>166.40</b>  | <b>172.25</b>  | <b>178.30</b>  | <b>184.55</b>  |
| <b>Transmission Line</b>   |                |                |                |                |                |



|   |               |               |               |               |               |
|---|---------------|---------------|---------------|---------------|---------------|
| 400 kV D/C (Quad) Barh II TPS - Gorakhpur Transmission Line | 349.177       | 349.177       | 349.177       | 349.177       | 349.177       |
| <b>Norm (₹ lakh/bay)</b>                                    |               |               |               |               |               |
| D/C Bundled with 4 or more sub-conductor)                   | 1.322         | 1.368         | 1.416         | 1.466         | 1.517         |
| <b>Total Transmission Line O&amp;M (B)</b>                  | <b>461.61</b> | <b>477.67</b> | <b>494.43</b> | <b>511.89</b> | <b>529.70</b> |
| <b>Total O&amp;M Expenses C= (A)+(B)</b>                    | <b>622.36</b> | <b>644.07</b> | <b>666.68</b> | <b>690.19</b> | <b>714.25</b> |

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

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

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

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

*(i) Receivables equivalent to 45 days of 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;”*

94. The Petitioner has submitted that it has computed the IWC for the 2019-24 period considering the SBI Base Rate plus 350 basis points as on 1.4.2019. The



Petitioner has considered the rate of IWC as 12.05%.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, 11.25% (SBI 1 year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) for 2020-21,10.50% (SBI 1 year MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points) for 2021-22 and 10.60% (SBI 1 year MCLR applicable as on 1.4.2022 of 7.10% plus 350 basis points) for 2022-23 onwards. The components of the working capital and interest allowed thereon are as follows:

| (₹ in lakh)  |                |                |                |                |                |
|--|----------------|----------------|----------------|----------------|----------------|
| <b>Combined Asset</b>  |                |                |                |                |                |
| <b>Particulars</b>   | <b>2019-20</b> | <b>2020-21</b> | <b>2021-22</b> | <b>2022-23</b> | <b>2023-24</b> |
| Working Capital for O & M Expenses (O&M expenses for 1 month)  | 51.86          | 53.67          | 55.56          | 57.52          | 59.52          |
| Working Capital for Maintenance Spares (15% of O&M expenses)   | 93.35          | 96.61          | 100.00         | 103.53         | 107.14         |
| Working Capital for Receivables (Equivalent to 45 days of annual fixed cost / annual transmission charges) | <b>2036.62</b> | <b>1985.45</b> | <b>1927.37</b> | <b>1871.43</b> | <b>1809.40</b> |
| <b>Total of Working Capital</b>  | <b>2181.84</b> | <b>2135.74</b> | <b>2082.92</b> | <b>2032.48</b> | <b>1976.06</b> |
| Rate of Interest for Working Capital (%)   | 12.05          | 11.25          | 10.50          | 10.60          | 10.60          |
| <b>Interest of working capital</b>   | <b>262.91</b>  | <b>240.27</b>  | <b>218.71</b>  | <b>215.44</b>  | <b>209.46</b>  |

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

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

| (₹ in lakh)           |                |                |                |                |                |
|-----------------------|----------------|----------------|----------------|----------------|----------------|
| <b>Combined Asset</b> |                |                |                |                |                |
| <b>Particulars</b>    | <b>2019-20</b> | <b>2020-21</b> | <b>2021-22</b> | <b>2022-23</b> | <b>2023-24</b> |
| Depreciation          | 5505.77        | 5512.41        | 5512.41        | 5512.41        | 5512.41        |
| Interest on Loan      | 4298.96        | 3825.91        | 3353.71        | 2879.80        | 2398.75        |



| <b>Combined Asset</b>              |                 |                 |                 |                 |                 |
|------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| <b>Particulars</b>                 | <b>2019-20</b>  | <b>2020-21</b>  | <b>2021-22</b>  | <b>2022-23</b>  | <b>2023-24</b>  |
| Return on Equity                   | 5874.48         | 5881.57         | 5881.57         | 5881.57         | 5881.57         |
| Operation and Maintenance Expenses | 622.36          | 644.07          | 666.68          | 690.19          | 714.25          |
| Interest on Working Capital        | 262.91          | 240.27          | 218.71          | 215.44          | 209.46          |
| <b>Total</b>                       | <b>16564.49</b> | <b>16104.23</b> | <b>15633.07</b> | <b>15179.41</b> | <b>14716.44</b> |

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

96. The Petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses in terms of Regulation 70(1) of the 2019 Tariff Regulations. BSPHCL has submitted that grant of filing fee and expenses incurred is in the discretion of the Commission and need not necessarily be allowed in all cases and further nothing beyond as contemplated by the 2019 Tariff Regulations may be granted. In response, the Petitioner has submitted that it has requested for reimbursement of expenditure towards petition filing fee and publication expense in terms of Regulation 70(1) of the 2019 Tariff Regulations.

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

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

98. 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**

99. 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. Referring to the provision of Regulation 56 of the 2019 Tariff Regulations, BSPHCL has submitted that the said Regulation contemplates recovery of statutory charges by generating company and not by transmission licensee and hence the said claim is liable to be rejected as the same is premature also.

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

### **Security Expenses**

101. The Petitioner has submitted that security expenses for the transmission assets are not claimed in the instant petition and it would file a separate petition for claiming the overall security expenses and the consequential IWC. The Petitioner has requested to consider the actual security expenses incurred during 2018-19 for claiming estimated security expenses for 2019-20 which shall be subject to true up at the end of the year based on the actuals. The Petitioner has submitted that similar petition for security expenses for 2020-21, 2021-22, 2022-23 and 2023-24 will be filed on yearly basis on the basis of the actual expenses of previous year subject to true up at the end of the year on actual expenses. The Petitioner has





submitted that the difference, if any, between the estimated security expenses and actual security expenses as the audited accounts may be allowed to be recovered from the beneficiaries on a yearly basis.

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

### **Capital Spares**

103. 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**

104. With effect from 1.7.2011, sharing of transmission charges for inter-State transmission systems is governed by 2010 Sharing Regulations. With effect from 1.11.2020, sharing is governed 2020 Sharing Regulations. Accordingly, the liabilities of the DICs for arrears of transmission charges determined through this order shall be computed DIC-wise in accordance with the provisions of respective Tariff Regulations and shall be recovered from the concerned DICs through Bill 2



under Regulation 15(2)(b) of the 2020 Sharing Regulations. For subsequent period, the billing, collection and disbursement of the transmission charges approved in this order shall be governed by the provisions of the 2020 Sharing Regulations as provided in Regulation 57 of the 2019 Tariff Regulations.

105. To summarise,

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

(₹ in lakh)

| Particulars | Asset-A1                        |         |         |         |         |
|-------------|---------------------------------|---------|---------|---------|---------|
|             | 2014-15 (Pro-rata for 148 days) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| AFC         | 69.94                           | 177.81  | 177.92  | 177.70  | 178.17  |

(₹ in lakh)

| Particulars | Asset-A2                        |         |         |         |         |
|-------------|---------------------------------|---------|---------|---------|---------|
|             | 2014-15 (Pro-rata for 150 days) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| AFC         | 74.04                           | 184.73  | 184.36  | 183.46  | 183.63  |

(₹ in lakh)

| Particulars | Asset-B                         |          |          |          |
|-------------|---------------------------------|----------|----------|----------|
|             | 2015-16 (Pro-rata for 299 days) | 2016-17  | 2017-18  | 2018-19  |
| AFC         | 14188.59                        | 17540.13 | 17174.02 | 16834.15 |

(₹ in lakh)

| Particulars | Asset-C                         |         |         |         |         |
|-------------|---------------------------------|---------|---------|---------|---------|
|             | 2014-15 (Pro-rata for 310 days) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| AFC         | 167.11                          | 207.20  | 207.87  | 207.02  | 207.23  |

(₹ in lakh)

| Particulars | Asset-D                        |         |         |
|-------------|--------------------------------|---------|---------|
|             | 2016-17 (Pro-rata for 51 days) | 2017-18 | 2018-19 |
| AFC         | 20.61                          | 155.58  | 163.77  |



(b) The Annual Fixed Charges allowed for the Combined Asset for the 2019-24 tariff period in this order are as follows:

| <b>Asset</b>   | <b>2019-20</b> | <b>2020-21</b> | <b>2021-22</b> | <b>2022-23</b> | <b>2023-24</b> |
|----------------|----------------|----------------|----------------|----------------|----------------|
| Combined Asset | 16564.49       | 16104.23       | 15633.07       | 15179.41       | 14716.44       |

(₹ in lakh)

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

107. This order disposes of Petition No. 379/TT/2020 in terms of the above discussions and findings.

**sd/-**  
**(P. K. Singh)**  
**Member**

**sd/-**  
**(Arun Goyal)**  
**Member**

**sd/-**  
**(I. S. Jha)**  
**Member**



## Asset - A1

## Annexure – I

| 2014-19<br>Capital<br>Expenditure as on<br>COD           | Admitted<br>Capital<br>Cost as<br>on COD<br>(₹ in lakh) | ACE<br>(₹ in lakh)<br><br>2014-19 | Admitted<br>Capital<br>Cost as<br>on<br>31.3.2019<br>(₹ in lakh) | Rate<br>of<br>Depre<br>ciatio<br>n<br>(%) | Annual Depreciation as per Regulations |                        |                        |                        |                        |
|--|---|-----------------------------------|--|---|--|------------------------|------------------------|------------------------|------------------------|
|  |   |                                   |  |   | 2014-15<br>(₹ in lakh)                 | 2015-16<br>(₹ in lakh) | 2016-17<br>(₹ in lakh) | 2017-18<br>(₹ in lakh) | 2018-19<br>(₹ in lakh) |
| Sub Station  | 582.07  | 80.31                             | 662.38   | 5.28                                      | 32.10                                  | 33.71                  | 34.07                  | 34.34                  | 34.73                  |
| <b>TOTAL</b>   | <b>582.07</b>   | <b>80.31</b>                      | <b>662.38</b>  |   | <b>32.10</b>                           | <b>33.71</b>           | <b>34.07</b>           | <b>34.34</b>           | <b>34.73</b>           |
| <b>Average Gross<br/>Block (₹ in lakh)</b>               |   |                                   |  |   | 607.96                                 | 638.47                 | 645.28                 | 650.29                 | 657.74                 |
| <b>Weighted<br/>Average Rate of<br/>Depreciation (%)</b> |   |                                   |  |   | 5.28                                   | 5.28                   | 5.28                   | 5.28                   | 5.28                   |



| 2014-19<br>Capital<br>Expenditure as on<br>COD           | Admitted<br>Capital<br>Cost as<br>on COD<br>(₹ in lakh) | ACE<br>(₹ in lakh) | Admitted<br>Capital<br>Cost as<br>on<br>31.3.2019<br>(₹ in lakh) | Rate<br>of<br>Depre<br>ciatio<br>n<br>(%) | Annual Depreciation as per Regulations |                        |                        |                        |                        |
|--|---|--------------------|--|---|--|------------------------|------------------------|------------------------|------------------------|
|  |   | 2014-19            |  |   | 2014-15<br>(₹ in lakh)                 | 2015-16<br>(₹ in lakh) | 2016-17<br>(₹ in lakh) | 2017-18<br>(₹ in lakh) | 2018-19<br>(₹ in lakh) |
| Sub Station  | 620.79  | 76.69              | 697.48   | 5.28                                      | 34.05                                  | 35.56                  | 35.92                  | 36.19                  | 36.58                  |
| <b>TOTAL</b>   | <b>620.79</b>   | <b>76.69</b>       | <b>697.48</b>  |   | <b>34.05</b>                           | <b>35.56</b>           | <b>35.92</b>           | <b>36.19</b>           | <b>36.58</b>           |
| <b>Average Gross<br/>Block (₹ in lakh)</b>               |   |                    |  |   | 644.87                                 | 673.57                 | 680.38                 | 685.39                 | 692.84                 |
| <b>Weighted<br/>Average Rate of<br/>Depreciation (%)</b> |   |                    |  |   | 5.28                                   | 5.28                   | 5.28                   | 5.28                   | 5.28                   |



## Asset - B

## Annexure – I

| 2014-19                       | Admitted Capital Cost as on COD (₹ in lakh) | ACE (₹ in lakh) | Admitted Capital Cost as on 31.3.2019 (₹ in lakh) | Rate of Depreciation (%) | Annual Depreciation as per Regulations |                     |                     |                     |                     |
|-------------------------------|---|-----------------|---|--------------------------|--|---------------------|---------------------|---------------------|---------------------|
| Capital Expenditure as on COD |   | 2014-19         |   |                          | 2014-15 (₹ in lakh)                    | 2015-16 (₹ in lakh) | 2016-17 (₹ in lakh) | 2017-18 (₹ in lakh) | 2018-19 (₹ in lakh) |
| Transmission Line             | 92925.49                                    | 8395.43         | 101320.92   | 5.28                     | 0.00                                   | 5061.74             | 5245.96             | 5302.49             | 5339.91             |
| Sub Station                   | 253.31                                      | 118.74          | 372.05  | 5.28                     | 0.00                                   | 15.67               | 18.16               | 18.59               | 19.24               |
| PLCC                          | 91.38                                       | 1.57            | 92.95   | 6.33                     | 0.00                                   | 5.83                | 5.88                | 5.88                | 5.88                |
| <b>TOTAL</b>                  | <b>93270.18</b>                             | <b>8515.74</b>  | <b>101785.92</b>                                  |                          | <b>0.00</b>                            | <b>5083.25</b>      | <b>5270.00</b>      | <b>5326.97</b>      | <b>5365.04</b>      |
|                               |   |                 | <b>Average Gross Block (₹ in lakh)</b>            |                          | 0.00                                   | 96255.31            | 99792.14            | 100871.01           | 101592.06           |
|                               |   |                 | <b>Weighted Average Rate of Depreciation (%)</b>  |                          | 0.00                                   | 5.28                | 5.28                | 5.28                | 5.28                |



## Asset - C

## Annexure – I

| 2014-19<br>Capital<br>Expenditure as on<br>COD           | Admitted<br>Capital<br>Cost as<br>on COD<br>(₹ in lakh) | ACE<br>(₹ in lakh)<br>2014-19 | Admitted<br>Capital<br>Cost as<br>on<br>31.3.2019<br>(₹ in lakh) | Rate<br>of<br>Depre<br>ciatio<br>n<br>(%) | Annual Depreciation as per Regulations |                        |                        |                        |                        |
|--|---|-------------------------------|--|---|--|------------------------|------------------------|------------------------|------------------------|
|  |   |                               |  |   | 2014-15<br>(₹ in lakh)                 | 2015-16<br>(₹ in lakh) | 2016-17<br>(₹ in lakh) | 2017-18<br>(₹ in lakh) | 2018-19<br>(₹ in lakh) |
| Sub Station  | 687.49  | 177.43                        | 864.92   | 5.28                                      | 39.36                                  | 43.07                  | 44.04                  | 44.75                  | 45.41                  |
| <b>TOTAL</b>   | <b>687.49</b>   | <b>177.43</b>                 | <b>864.92</b>  |   | <b>39.36</b>                           | <b>43.07</b>           | <b>44.04</b>           | <b>44.75</b>           | <b>45.41</b>           |
| <b>Average Gross<br/>Block (₹ in lakh)</b>               |   |                               |  |   | 745.41                                 | 815.76                 | 834.12                 | 847.61                 | 860.05                 |
| <b>Weighted<br/>Average Rate of<br/>Depreciation (%)</b> |   |                               |  |   | 5.28                                   | 5.28                   | 5.28                   | 5.28                   | 5.28                   |



## Asset - D

## Annexure – I

| 2014-19<br>Capital<br>Expenditure as on<br>COD | Admitted<br>Capital<br>Cost as<br>on COD<br>(₹ in lakh) | ACE<br>(₹ in lakh)<br><br>2014-19 | Admitted<br>Capital<br>Cost as<br>on<br>31.3.2019<br>(₹ in lakh) | Rate<br>of<br>Depre<br>ciatio<br>n<br>(%) | Annual Depreciation as per Regulations |                        |                        |                        |                        |
|--|---|-----------------------------------|--|---|--|------------------------|------------------------|------------------------|------------------------|
|  |   |                                   |  |   | 2014-15<br>(₹ in lakh)                 | 2015-16<br>(₹ in lakh) | 2016-17<br>(₹ in lakh) | 2017-18<br>(₹ in lakh) | 2018-19<br>(₹ in lakh) |
| Sub Station                                    | 70.20   | 47.89                             | 118.09   | 5.28                                      | 0.00                                   | 0.00                   | 3.71                   | 4.93                   | 6.19                   |
| <b>TOTAL</b>                                   | <b>70.20</b>  | <b>47.89</b>                      | <b>118.09</b>  |   | <b>0.00</b>                            | <b>0.00</b>            | <b>3.71</b>            | <b>4.93</b>            | <b>6.19</b>            |
|  |   |                                   | <b>Average Gross<br/>Block (₹ in lakh)</b>                       |   | 0.00                                   | 0.00                   | 70.20                  | 93.36                  | 117.31                 |
|  |   |                                   | <b>Weighted<br/>Average Rate of<br/>Depreciation (%)</b>         |   | 0.00                                   | 0.00                   | 5.28                   | 5.28                   | 5.28                   |





| Combined Assets                                  |  |               |   |                          |  |                     |                     |                     |                     |
|--|--|---------------|---|--------------------------|--|---------------------|---------------------|---------------------|---------------------|
| 2019-24  | Admitted Capital Cost as on 1.4.2019 (₹ in lakh) | ACE           | Admitted Capital Cost as on 31.3.2019 (₹ in lakh) | Rate of Depreciation (%) | Annual Depreciation as per Regulations |                     |                     |                     |                     |
| Capital Expenditure as on 1.4.2019               |  | 2019-24       |   |                          | 2019-20 (₹ in lakh)                    | 2020-21 (₹ in lakh) | 2021-22 (₹ in lakh) | 2022-23 (₹ in lakh) | 2023-24 (₹ in lakh) |
| Transmission Line                                | 101320.92  | 176.19        | 101497.11   | 5.28                     | 5354.40                                | 5359.05             | 5359.05             | 5359.05             | 5359.05             |
| Sub Station                                      | 2717.93  | 75.20         | 2793.13   | 5.28                     | 145.49                                 | 147.48              | 147.48              | 147.48              | 147.48              |
| PLCC   | 92.95  | 0.00          | 92.95   | 6.33                     | 5.88                                   | 5.88                | 5.88                | 5.88                | 5.88                |
| <b>TOTAL</b>                                     | <b>104131.80</b>                                 | <b>251.39</b> | <b>104383.19</b>                                  |                          | 5505.77                                | 5512.41             | 5512.41             | 5512.41             | 5512.41             |
| <b>Average Gross Block (₹ in lakh)</b>           |  |               |   |                          | 104257.49                              | 104383.19           | 104383.19           | 104383.19           | 104383.19           |
| <b>Weighted Average Rate of Depreciation (%)</b> |  |               |   |                          | 5.28                                   | 5.28                | 5.28                | 5.28                | 5.28                |

