

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 356/TT/2020**

**Coram:**

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

**Date of Order: 05.08.2021**

**In the matter of:**

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and truing up of transmission tariff of the 2014-19 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of the 2019-24 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 in respect of **Asset 1**: Combined Asset of WRSS-II Set A (Part 1), **Asset 2**: Combined Asset of WRSS-II Set A (Part 2), **Asset 3**: Combined Asset of WRSS-II Set B, **Asset 4**: Combined Asset of WRSS-II Set C, **Asset 5**: Combined Asset of WRSS-II Set D (Part 1) and **Asset 6**: Combined Asset of WRSS-II Set D (Part 2) under Western Regional System Strengthening Scheme-II in Western Region.

**And in the matter of:**

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

**.....Petitioner**

**Versus**

1. Madhya Pradesh Power Management Company Ltd.,  
Shakti Bhawan, Rampur,  
Jabalpur-482008.
2. Madhya Pradesh Power Transmission Company Ltd.,  
Shakti Bhawan, Rampur,  
Jabalpur-482008.
3. Madhya Pradesh Audyogik Kendra Vikas Nigam (Indore) Ltd.,  
3/54, Press Complex, Agra-Bombay Road, Indore-452008.



4. Maharashtra State Electricity Distribution Co. Ltd.,  
Hongkong Bank Building, 3<sup>rd</sup> Floor,  
M.G. Road, Fort, Mumbai-400001.
5. Maharashtra State Electricity Transmission Co. Ltd.,  
Prakashganga, 6<sup>th</sup> Floor, Plot No. C-19, E-Block,  
Bandra Kurla Complex, Bandra (East) Mumbai-400051.
6. Gujarat Urja Vikas Nigam Ltd.,  
Sardar Patel Vidyut Bhawan,  
Race Course Road, Vadodara-390007.
7. Electricity Department,  
Govt. of Goa, Vidyut Bhawan, Panaji,  
Near Mandvi Hotel, Goa-403001.
8. Electricity Department,  
Administration of Daman & Diu,  
Daman-396210.
9. DNH Power Distribution Corporation Ltd.,  
Vidyut Bhawan, 66 kV Road, Near Secretariat Amli,  
Silvassa-396230.
10. Chhattisgarh State Power Transmission Co. Ltd.,  
State Load Despatch Building,  
Dangania, Raipur-492013.
11. Chhattisgarh State Power Distribution Co. Ltd.,  
P. O. Sunder Nagar, Dangania, Raipur,  
Chhattisgarh-492013.

.....Respondent(s)

**For Petitioner:** Shri S. S. Raju, PGCIL  
Shri D.K. Biswal, PGCIL  
Shri B. Dash, PGCIL  
Shri A.K. Verma, PGCIL  
Shri V.P. Rastogi, PGCIL

**For Respondent:** Shri Anindya Kumar Khare, MPPMCL

### **ORDER**

The instant petition has been filed by the Petitioner, Power Grid Corporation of India Ltd., a deemed transmission licensee, for truing up of transmission tariff of the 2014-19 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 transmission assets under Western Regional System Strengthening Scheme-II in Western Region (hereinafter referred to as “the transmission project”):

**Asset 1:** Combined Asset of WRSS-II Set A (Part 1);

**Asset 2:** Combined Asset of WRSS-II Set A (Part 2);

**Asset 3:** Combined Asset of WRSS-II Set B;

**Asset 4:** Combined Asset of WRSS-II Set C;

**Asset 5:** Combined Asset of WRSS-II Set D (Part 1); and

**Asset 6:** Combined Asset of WRSS-II Set D (Part 2).

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

*“1) Allow the add cap for 2014-19 and 2019-24 tariff block as claimed as per Para 5.9 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 9.1 and 10.1 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 Hon'ble Commission as provided in Tariff Regulation 2014 and Tariff regulations 2019 as per para 9.1 and 10.1 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 beneficiaries 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 beneficiaries.*



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 10.7 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 beneficiaries, if GST on transmission is withdrawn from negative list at any time in future. Further, any taxes including GST and duties including cess etc. imposed by any statutory/Govt./municipal authorities shall be allowed to be recovered from the beneficiaries.

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

### 3. **Backdrop of the case**

a) The Investment Approval (IA) for the transmission project was accorded by the Ministry of Power under its letter dated 24.7.2006 at an estimated cost of ₹522123 lakh including IDC of ₹38042 lakh, based on 4<sup>th</sup> quarter, 2005 price level, consisting of (i) ₹358140 lakh (including IDC of ₹25062 lakh) for the work to be executed by the Petitioner and (ii) ₹163983 lakh (including IDC of ₹12980 lakh) for the work to be executed by IPTC.

b) The assets under the transmission project are combined into four sets of Combined Assets viz. Set A, Set B, Set C and Set D. The details of assets under the different Combined Assets are as given in the table under paragraph 3(c). Assets under Set A and Set D were to be implemented exclusively by the Petitioner. Sub-station portion of assets under Set B and Set C were to be implemented by the Petitioner while transmission line portion of Set B and Set C were to be implemented by IPTC.

c) Approval of RCE (revised cost estimate) for the transmission assets covered under the instant petition was accorded by the Board of Directors of the Petitioner's company vide Memorandum No. C/CP/RCE/ WR-II dated 22.7.2017 at an estimated cost of ₹360849 lakh including IDC of ₹15405 lakh. The entire scope of work is covered under the instant petition. The details of the transmission assets covered in the instant petition along with the dates of commercial operation are as follows:



Element	COD of Element	Previous Order	Asset Nomenclature in Previous Order for 2014-19 period	Asset Nomenclature in Instant Petition	COD of Asset
400 kV Parli Switching Station (New) with Bus Reactor and Bhadrawati-Parli 400 kV Transmission Line. Parli (POWERGRID)-Parli (MSETCL) Ckt.-I	1.6.2011	Order dated 29.8.2016 in Petition No. 34/TT/2015	SET A	Asset 1	1.8.2011
400 kV Parli (POWERGRID)-Parli (MSETCL) Ckt.-II	1.6.2011				
400 kV D/C Wardha-Parli line along with associated bays	1.8.2011				
765 kV S/C Seoni-Wardha Transmission Line	1.3.2012	Order dated 28.6.2016 in Petition No. 39/TT/2016	SET A	Asset 2	31.8.2012*
400 kV D/C Raipur-Wardha Transmission Line along with FSC at Wardha	1.1.2013				
400/220 kV ICT-I at Solapur along with bays	1.2.2011		SET B (Assets-II, III, V and VI)	Asset 3	1.9.2011*
400/220 kV ICT-II at Solapur along with bays	1.4.2011				
400/220 kV ICT-I at Pune Sub-station (New) and bays	1.5.2011				
400/220 kV ICT-II at Pune Sub-station (New) & bays	1.9.2011				
400/220 kV Solapur Sub-station with 63 MVAR Bus Reactor along with bays of LILO of 400 kV Solapur-Karad and Solapur-Kolhapur along with 2x50 MVAR Switchable Reactors in Kolhapur bays	1.2.2011	Order dated 29.8.2016 in Petition No. 34/TT/2015	SET B (Assets-I, IV, VII, VIII, IX, X and XI)		
400/220 kV Pune (New) Sub-station with Bus Reactor & bays for LILO of Ckt.-I of Lonikhand-Kalwa D/C at Pune and Kolhapur bays	1.5.2011				
400/220 kV Pune (New) Sub-station with Bus Reactor and bays for LILO of Ckt.-II of Lorikhand-Kalwa D/C at Pune	1.9.2011				
400 kV Bays for Solapur-Parli D/C line at Solapur Sub-station and Parli Sub-station	1.9.2011				
400 kV Bays for Soapur-Kolhapur D/C line at Kolhapur Sub-station	1.9.2011				
400 kV Bays for Pune-Parli D/C	1.9.2011				



line at Pune Sub-station and Parli Sus-station					
400 kV Bays for Pune-Aurangabad D/C line at Pune Sub-station and Aurangabad Sub-station	1.9.2011				
Bay extension 400/220 kV Limbdi Sub-station (GETCO) and Ranchchodpura (Vadavi) Sub-station (GETCO) for 400 kV D/C Limbdi- Vadavi (WRGL) Transmission Line Ckt. II	1.5.2011	Order dated 29.8.2016 in Petition No. 34/TT/2015	SET C	Asset 4	1.10.2011
Bay extension 400/220 kV Limbdi Sub-station (GETCO) and Ranchchodpura (Vadavi) Sub-station (GETCO) for 400 kV D/C Limbdi-Vadavi (WRGL) Transmission Line Ckt. I	1.6.2011				
Bay extension at 400/220 kV Ranchchodpura (Vadavi) and Zerda Sub-station (GETCO) for 400 kV D/C Vadavi-Zerda (WRGL) Transmission Line	1.9.2011				
Bay extension 400/220 kV Rajgarh Sub-station (POWERGRID) with 25% FSC and Karamsad (Kasor) Sub-station (GETCO) for 400 kV D/C Rajgarh-Kasor (WRGL) Transmission Lines	1.10.2011				
Korba-BALCO (Loc 179/2) 400 kV D/C transmission line-First Ckt.	1.10.2011	Order dated 28.6.2016 in Petition No. 39/TT/2016	SET D	Asset 5	20.2.2012*
BALCO (179/2)-Vandana (176/0) 400 kV D/C Transmission Line-First Ckt. and Korba-Vandana (176/0) 400 kV D/C Transmission Line-Second Ckt.	1.12.2011				
Korba-Vandana (176/0) 400 kV D/C Transmission Line-Second Ckt.	1.12.2011				
Birsinghpur 400 kV D/C Transmission Line-First Ckt.	1.3.2012				
Vandana (176/0)-Birsinghpur 400 kV D/C Transmission Line-Second Ckt.	1.4.2012				
765 kV S/C Bina-Gwalior Line-II along with associated bays	1.3.2010	Order dated 29.8.2016 in Petition No.	SET D	Asset 6	1.3.2011
400 kV D/C Damoh-Bhopal along with associated bays Ckt.-I	1.6.2010				
400 kV D/C Damoh-Bhopal along	1.7.2010				



with associated bays Ckt.-II		34/TT/2015			
400 kV 50 MVAR Bus Reactor at Gwalior Sub-station	1.9.2010				
400 kV D/C Damoh-Birsinghpur Transmission Line along with associated bays	1.3.2011				
*As elements of Asset 2, Asset 3 and Asset 5 are being combined during the 2014-19 tariff period i.e. as on 1.4.2014, effective COD has been determined for the aforementioned transmission assets in the instant order					

d) The transmission tariff of the 2009-14 tariff period was trued up and transmission tariff of the 2014-19 tariff period was allowed by the Commission vide order dated 29.8.2016 in Petition No. 34/TT/2015 for Asset 1, Asset 3, Asset 4 and Asset 6. Transmission tariff of the 2009-14 tariff period was trued up and transmission tariff of the 2014-19 tariff period was allowed vide order dated 28.6.2016 in Petition No. 39/TT/2016 for Asset 2 and Asset 5.

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

5. The Petitioner has served the petition on the Respondents and notice regarding filing of this petition has been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments or suggestions have been received from the general public in response to the aforesaid notices published in the newspapers. Madhya Pradesh Power Management Company Ltd. (MPPMCL), Respondent No. 1, has filed its reply vide affidavit dated 27.5.2020 and has raised the issues of effective tax rates considered for grossing up of Return on Equity (RoE) and effect of GST. The Petitioner has submitted its rejoinder vide affidavit dated 10.4.2021.

6. This order is issued considering submissions made by the Petitioner in the petition vide affidavit dated 22.1.2020, the Petitioner's affidavit dated 27.11.2020 filed in compliance of Technical Validation letter, MPPMCL's reply filed vide affidavit dated 27.5.2020 and Petitioner's rejoinder vide affidavit dated 10.4.2021 to MPPCL's reply



filed. The issues raised by MPPMCL and the clarifications given by the Petitioner are considered in the relevant portions of this order.

7. The hearing in this matter was held on 20.4.2021 through video conference and the order was reserved. Having heard the representatives of the Petitioner, MPPMCL and after perusal of the materials on record, we proceed to dispose of the petition.

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

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

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Asset 1</b>					
Depreciation	4671.17	4779.48	4820.37	4820.37	4820.37
Interest on Loan	837.08	951.10	1213.11	1225.52	1325.42
Return on Equity	5232.70	5380.58	5423.63	5426.58	5444.12
Interest on Working Capital	325.29	336.41	347.04	350.16	355.73
O&M Expenses	1412.96	1459.95	1508.19	1558.42	1610.14
<b>Total</b>	<b>12479.20</b>	<b>12907.52</b>	<b>13312.34</b>	<b>13381.05</b>	<b>13555.78</b>
<b>Asset 2</b>					
Depreciation	6210.89	6248.97	6262.94	6262.94	6262.94
Interest on Loan	1889.97	1862.70	2103.67	2074.67	2200.95
Return on Equity	6730.51	6804.59	6817.08	6817.08	6835.42
Interest on Working Capital	391.91	395.54	403.41	404.55	409.73
O&M Expenses	914.49	944.97	975.98	1008.69	1042.11
<b>Total</b>	<b>16137.77</b>	<b>16256.77</b>	<b>16563.08</b>	<b>16567.93</b>	<b>16751.15</b>
<b>Asset 3</b>					
Depreciation	1401.89	1408.96	1411.57	1411.57	1411.57
Interest on Loan	269.59	298.77	377.02	391.08	444.76
Return on Equity	1665.73	1700.50	1703.02	1703.02	1707.60
Interest on Working Capital	198.07	203.73	209.81	214.43	220.20
O&M Expenses	2194.92	2267.72	2343.08	2420.88	2501.08
<b>Total</b>	<b>5730.20</b>	<b>5879.68</b>	<b>6044.50</b>	<b>6140.98</b>	<b>6285.21</b>
<b>Asset 4</b>					
Depreciation	456.01	464.29	464.29	464.29	464.29





(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Interest on Loan	96.27	103.62	122.99	125.23	137.98
Return on Equity	504.93	516.52	516.26	516.26	517.65
Interest on Working Capital	70.97	73.14	75.19	76.89	78.92
O&M Expenses	844.20	872.20	901.18	931.14	961.94
<b>Total</b>	<b>1972.38</b>	<b>2029.77</b>	<b>2079.91</b>	<b>2113.81</b>	<b>2160.78</b>
<b>Asset 5</b>					
Depreciation	1431.41	1473.09	1482.67	1484.36	1484.36
Interest on Loan	691.55	680.37	681.11	635.52	618.99
Return on Equity	1584.75	1638.89	1648.79	1650.68	1655.12
Interest on Working Capital	108.91	111.65	112.93	112.80	113.38
O&M Expenses	426.59	441.00	455.71	470.70	486.37
<b>Total</b>	<b>4243.21</b>	<b>4345.00</b>	<b>4381.21</b>	<b>4354.06</b>	<b>4358.22</b>
<b>Asset 6</b>					
Depreciation	3779.91	3780.00	3780.00	3780.00	3780.00
Interest on Loan	863.23	809.03	899.02	863.11	891.36
Return on Equity	4191.50	4210.82	4208.68	4208.68	4220.00
Interest on Working Capital	265.11	266.39	270.51	271.88	275.05
O&M Expenses	1117.95	1155.48	1193.55	1233.30	1274.16
<b>Total</b>	<b>10217.70</b>	<b>10221.72</b>	<b>10351.76</b>	<b>10356.97</b>	<b>10440.57</b>

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

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Asset 1</b>					
O&M Expenses	117.75	121.66	125.68	129.87	134.18
Maintenance Spares	211.94	218.99	226.23	233.76	241.52
Receivables	2079.87	2151.25	2218.72	2230.18	2259.30
<b>Total Working Capital</b>	<b>2409.56</b>	<b>2491.90</b>	<b>2570.63</b>	<b>2593.81</b>	<b>2635.00</b>
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
<b>IWC</b>	<b>325.29</b>	<b>336.41</b>	<b>347.04</b>	<b>350.16</b>	<b>355.73</b>



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Asset 2</b>					
O&M Expenses	76.21	78.75	81.33	84.06	86.84
Maintenance Spares	137.17	141.75	146.40	151.30	156.32
Receivables	2689.63	2709.46	2760.51	2761.32	2791.86
<b>Total Working Capital</b>	<b>2903.01</b>	<b>2929.96</b>	<b>2988.24</b>	<b>2996.68</b>	<b>3035.02</b>
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
<b>IWC</b>	<b>391.91</b>	<b>395.54</b>	<b>403.41</b>	<b>404.55</b>	<b>409.73</b>
<b>Asset 3</b>					
O&M Expenses	182.91	188.98	195.26	201.74	208.42
Maintenance Spares	329.24	340.16	351.46	363.13	375.16
Receivables	955.03	979.95	1007.42	1023.50	1047.54
<b>Total Working Capital</b>	<b>1467.18</b>	<b>1509.09</b>	<b>1554.14</b>	<b>1588.37</b>	<b>1631.12</b>
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
<b>IWC</b>	<b>198.07</b>	<b>203.73</b>	<b>209.81</b>	<b>214.43</b>	<b>220.20</b>
<b>Asset 4</b>					
O&M Expenses	70.35	72.68	75.10	77.60	80.16
Maintenance Spares	126.63	130.83	135.18	139.67	144.29
Receivables	328.73	338.30	346.65	352.30	360.13
<b>Total Working Capital</b>	<b>525.71</b>	<b>541.81</b>	<b>556.93</b>	<b>569.57</b>	<b>584.58</b>
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
<b>IWC</b>	<b>70.97</b>	<b>73.14</b>	<b>75.19</b>	<b>76.89</b>	<b>78.92</b>
<b>Asset 5</b>					
O&M Expenses	35.55	36.75	37.98	39.23	40.53
Maintenance Spares	63.99	66.15	68.36	70.61	72.96
Receivables	707.20	724.17	730.20	725.68	726.37
<b>Total</b>	<b>806.74</b>	<b>827.07</b>	<b>836.54</b>	<b>835.52</b>	<b>839.86</b>



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Working Capital</b>					
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
<b>IWC</b>	<b>108.91</b>	<b>111.65</b>	<b>112.93</b>	<b>112.80</b>	<b>113.38</b>
<b>Asset 6</b>					
O&M Expenses	93.16	96.29	99.46	102.78	106.18
Maintenance Spares	167.69	173.32	179.03	185.00	191.12
Receivables	1702.95	1703.62	1725.29	1726.16	1740.10
<b>Total Working Capital</b>	<b>1963.80</b>	<b>1973.23</b>	<b>2003.78</b>	<b>2013.94</b>	<b>2037.40</b>
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
<b>IWC</b>	<b>265.11</b>	<b>266.39</b>	<b>270.51</b>	<b>271.88</b>	<b>275.05</b>

### Capital Cost

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

11. The capital cost in respect of the transmission assets as on 1.4.2014 was allowed vide order dated 29.8.2016 in Petition No. 34/TT/2015 for Asset 1, Asset 3, Asset 4 and Asset 6 and vide order dated 28.6.2016 in Petition No. 39/TT/2016 for Asset 2 and Asset 5. The details of capital cost as on 1.4.2014 allowed vide the above said orders and that claimed by the Petitioner in the instant Petition are summarised as follows:

(₹ in lakh)

Particulars	Apportioned Approved Cost as per RCE	Capital Cost as on 1.4.2014 (allowed vide order dated 29.8.2016 in Petition No. 34/TT/2015 and vide order dated 28.6.2016 in Petition No. 39/TT/2016)	Capital Cost as on 1.4.2014 (claimed)
Asset 1	91866.03	87558.22	87558.18
Asset 2	118552.90	117063.80	117063.81



(₹ in lakh)

Particulars	Apportioned Approved Cost as per RCE	Capital Cost as on 1.4.2014 (allowed vide order dated 29.8.2016 in Petition No. 34/TT/2015 and vide order dated 28.6.2016 in Petition No. 39/TT/2016)	Capital Cost as on 1.4.2014 (claimed)
Asset 3	29070.12	27890.97	27890.98
Asset 4	9459.51	8419.51	8419.51
Asset 5	27963.86	26583.28	26583.29
Asset 6	83936.63	71191.50	71191.50

The capital cost allowed by the Commission as on 1.4.2014 vide order dated 29.8.2016 in Petition No. 34/TT/2015 and vide order dated 28.6.2016 in Petition No. 39/TT/2016 for the respective transmission assets have been considered as opening capital cost as on 1.4.2014 for determination of tariff. Accordingly, the details of capital cost as on 1.4.2014 now approved are as follows:

(₹ in lakh)

Particulars	Apportioned Approved Cost as per RCE	Capital Cost approved as on 1.4.2014
Asset 1	91866.03	87558.22
Asset 2	118552.90	117063.80
Asset 3	29070.12	27890.97
Asset 4	9459.51	8419.51
Asset 5	27963.86	26583.28
Asset 6	83936.63	71191.50

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

12. The Commission vide order dated 29.8.2016 in Petition No. 34/TT/2015 for Asset 1, Asset 3, Asset 4 and Asset 6 and vide order dated 28.6.2016 in Petition No. 39/TT/2016 for Asset 2 and Asset 5 had allowed ACE as follows:

(₹ in lakh)

Particulars	Capital Cost (allowed earlier as on 1.4.2014)	ACE (allowed earlier)		Capital Cost (allowed earlier as on 31.3.2019)
		2014-15	2015-16	
Asset 1	87558.22	3805.00	-	91363.22



(₹ in lakh)

Particulars	Capital Cost (allowed earlier as on 1.4.2014)	ACE (allowed earlier)		Capital Cost (allowed earlier as on 31.3.2019)
		2014-15	2015-16	
Asset 2	117063.80	348.94	199.70	117612.44
Asset 3	27890.97	861.23	-	28752.20
Asset 4	8419.51	324.80	-	8744.31
Asset 5	26583.28	751.17	-	27334.45
Asset 6	71191.50	-	-	71191.50

13. The Petitioner has claimed the following ACE based on actual expenditure:

(₹ in lakh)

Particulars	Apportioned Approved Cost as per RCE	Capital Cost claimed as on 1.4.2014	ACE claimed				Capital Cost claimed as on 31.3.2019
			2014-15	2015-16	2016-17	2017-18	
Asset 1	91866.03	87558.18	2640.00	1549.00	-	99.55	91846.73
Asset 2	118552.90	117063.81	921.91	539.41	-	-	118525.13
Asset 3	29070.12	27890.98	803.23	114.41	-	-	28808.62
Asset 4	9459.51	8419.51	313.63	-	-	-	8733.14
Asset 5	27963.86	26583.29	1285.94	299.07	64.05	-	28232.35
Asset 6	83936.63	71191.50	3.34	-	-	-	71194.84

14. The Petitioner has submitted that ACE incurred during 2014-19 period for Asset 1, Asset 3, Asset 4, Asset 5 and Asset 6 is on account of un-discharged liabilities discharged after the cut-off date for works executed within the cut-off date under Regulation 14(2)(iv) of the 2014 Tariff Regulations and that ACE incurred during 2014-19 period for Asset 2 is on account of un-discharged liabilities within the cut-off date under Regulation 14(1)(i) of the 2014 Tariff Regulations. Further, the Petitioner vide affidavit dated 27.11.2020 has submitted the package-wise breakup as follows:



(₹ in lakh)

Vendor Name	2014-15	2015-16	2016-17	2017-18
<b>Asset 1</b>				
JSL	1065.91	598.41	-	-
L&T	728.34	408.89	-	-
ABB	226.85	170.30	-	-
Siemens	258.34	145.03	-	-
CGL	360.56	226.37	-	-
Bharat Heavy Electricals Limited	-	-	-	97.54
Avaid's Technovators Pvt. Ltd.	-	-	-	0.14
Bhartiya Caccialanza Fire Systems Ltd.	-	-	-	0.42
CG Power and Industrial Solutions Ltd.	-	-	-	0.08
Klemmen Engineering Corporation	-	-	-	0.51
Hi-Tech Electricals Pvt. Ltd.	-	-	-	0.86
<b>Total (Asset 1)</b>	<b>2640.00</b>	<b>1549.00</b>	-	<b>99.55</b>
<b>Asset 2</b>				
L&T	173.34	256.34	-	-
BHEL	-	60.14	-	-
WSI	79.77	-	-	-
IVRCL	304.77	101.59	-	-
KEC	364.04	121.35	-	-
<b>Total (Asset 2)</b>	<b>921.91</b>	<b>539.41</b>	-	-
<b>Asset 3</b>				
ABB	568.84	81.26	-	-
CGL	234.39	33.15	-	-
<b>Total (Asset 3)</b>	<b>803.23</b>	<b>114.41</b>	-	-
<b>Asset 4</b>				
Siemens AG & Siemens Ltd.	235.54			
Siemens Ltd.	78.09			
<b>Total (Asset 4)</b>	<b>313.63</b>	-	-	-



(₹ in lakh)

Vendor Name	2014-15	2015-16	2016-17	2017-18
<b>Asset 5</b>				
JV SPIC & ASTER	451.78	-	-	-
CGL	104.25	40.14	-	-
BHEL	180.47	28.90	-	-
Siemens	549.44	230.03	64.05	-
<b>Total (Asset 5)</b>	<b>1285.94</b>	<b>299.07</b>	<b>64.05</b>	<b>-</b>
<b>Asset 6</b>				
House Corporation Bhopal, Damoh line	3.34	-	-	-

15. ACE claimed by the Petitioner has been verified from the Auditor Certificates and are allowed under Regulation 14(2)(iv) and Regulation 14(1)(i) of the 2014 Tariff Regulations. Further, the capital cost claimed as on 31.3.2019 for Asset 1, Asset 2, Asset 3, Asset 4 and Asset 6 are within the apportioned approved cost as per RCE. However, the capital cost of ₹28232.35 lakh as on 31.3.2019 claimed for Asset 5 is higher than the apportioned approved capital cost of ₹27963.86 lakh as per RCE. Accordingly, ACE for Asset 5 has been restricted to ₹1380.58 lakh (₹1285.94 lakh for 2014-15 and ₹94.64 lakh for 2015-16) during the 2014-19 tariff period. ACE approved for the 2014-19 tariff period is as follows:

(₹ in lakh)

Particulars	Capital Cost approved as on 1.4.2014	ACE approved				Capital Cost approved as on 31.3.2019
		2014-15	2015-16	2016-17	2017-18	
Asset 1	87558.22	2640.00	1549.00	-	99.55	91846.77
Asset 2	117063.80	921.91	539.41	-	-	118525.12
Asset 3	27890.97	803.23	114.41	-	-	28808.61
Asset 4	8419.51	313.63	-	-	-	8733.14
Asset 5	26583.28	1285.94	94.64	-	-	27963.86
Asset 6	71191.50	3.34	-	-	-	71194.84



## Debt-Equity Ratio

16. The Petitioner has claimed debt-equity ratio of 70:30 as on 1.4.2014 for the transmission assets. Debt-equity ratio is considered as provided in Regulation 19 of the 2014 Tariff Regulations for the transmission assets. Accordingly, the details of debt-equity ratio as on 1.4.2014 and 31.3.2019 are as follows:

<b>Funding</b>	<b>Capital Cost as on 1.4.2014 (₹ in lakh)</b>	<b>(in %)</b>	<b>Total Capital Cost as on 31.3.2019 (₹ in lakh)</b>	<b>(in %)</b>
<b>Asset 1</b>				
Debt	61290.78	70.00	64292.77	70.00
Equity	26267.44	30.00	27554.01	30.00
<b>Total</b>	<b>87558.22</b>	<b>100.00</b>	<b>91846.77</b>	<b>100.00</b>
<b>Asset 2</b>				
Debt	82906.50	70.82	83929.42	70.81
Equity	34157.30	29.18	34595.70	29.19
<b>Total</b>	<b>117063.80</b>	<b>100.00</b>	<b>118525.12</b>	<b>100.00</b>
<b>Asset 3</b>				
Debt	19523.68	70.00	20166.03	70.00
Equity	8367.29	30.00	8642.58	30.00
<b>Total</b>	<b>27890.97</b>	<b>100.00</b>	<b>28808.61</b>	<b>100.00</b>
<b>Asset 4</b>				
Debt	5893.66	70.00	6113.20	70.00
Equity	2525.85	30.00	2619.94	30.00
<b>Total</b>	<b>8419.51</b>	<b>100.00</b>	<b>8733.14</b>	<b>100.00</b>
<b>Asset 5</b>				
Debt	18701.02	70.35	19667.43	70.33
Equity	7882.26	29.65	8296.43	29.67
<b>Total</b>	<b>26583.28</b>	<b>100.00</b>	<b>27963.86</b>	<b>100.00</b>
<b>Asset 6</b>				
Debt	49834.05	70.00	49836.39	70.00
Equity	21357.45	30.00	21358.45	30.00
<b>Total</b>	<b>71191.50</b>	<b>100.00</b>	<b>71194.84</b>	<b>100.00</b>





## **Depreciation**

17. The depreciation claimed by the Petitioner for Asset 1, Asset 3 and Asset 6 were found to be higher than the depreciation allowed for the transmission assets vide order dated 29.8.2016 in Petition No. 34/TT/2015. Similarly, the depreciation claimed by the Petitioner for Asset 2 was found to be higher than the depreciation allowed vide order dated 28.6.2016 in Petition No. 39/TT/2016. The Petitioner has not explained any reason for claiming higher depreciation nor made any specific prayer in this regard. It is noticed that the Petitioner has apportioned a part of capital expenditure to IT equipment (segregating the same from sub-station) and claimed higher depreciation @15% while in the earlier orders, the Petitioner had claimed depreciation @5.28% for these assets (as it was claimed under sub-station). Similar issue had come up in Petition No. 19/TT/2020 wherein the Commission vide order dated 9.5.2020 decided as under:

*“31. We have considered the submissions of the Petitioner. The instant assets were put into commercial operation during the 2009-14 period and the tariff from the respective CODs to 31.3.2014 was allowed vide orders dated 30.8.2012 and 9.5.2013 in Petition No.343/2010 and Petition No. 147/TT/2011 respectively. Further, the tariff of the 2009-14 period was trued up and tariff for the 2014-19 period was allowed vide order dated 25.2.2016 in Petition No.10/TT/2015. The Petitioner did not claim any capital expenditure towards “IT Equipment” in the above said three petitions where tariff for the instant assets for the 2009-14 period was allowed, tariff of the 2009-14 period was trued up and tariff for 2014-19 period was allowed even though there was a clear provision in the 2009 Tariff Regulations and 2014 Tariff Regulations providing depreciation @15% for IT Equipment. Having failed to make a claim as per the 2009 Tariff Regulations(the period during which COD of assets was achieved), the Petitioner has now, at the time of truing up of the tariff allowed for the 2014-19 period has apportioned a part of the capital expenditure to “IT Equipment”. The Petitioner has adopted similar methodology not only in this but in some of the other petitions listed along with the instant petition on 26.2.2020. It is observed that the Petitioner has for the first time apportioned a part of the capital expenditure towards IT Equipment and has claimed depreciation under the head “IT Equipment” @15% at the time of truing up of the tariff of 2014-19 period. Regulation 8(1) of the 2014 Tariff Regulations provides for truing up of the capital expenditure including the additional capital expenditure, incurred up to 31.3.2019, admitted by the Commission after prudence check. We are of the view that scope of truing up exercise is restricted to truing up of the capital expenditure already admitted and apportionment or reapportionment of the capital expenditure cannot be allowed at the time of truing up. Therefore, we are not inclined to consider the Petitioner’s prayer*



for apportionment of capital expenditure towards IT Equipment and allowing depreciation @ 15% from 1.4.2014 onwards. Accordingly, the depreciation @ 5.28% has been considered for IT Equipment as part of the sub-station up to 31.3.2019 while truing up the capital expenditure for the 2014-19 period. During the 2019-24 tariff period, the IT Equipment has been considered separately and depreciation has been allowed @ 15% for the balance depreciable value of IT Equipment in accordance with Regulation 33 read with Sr. No. (p) of the Appendix-I (Depreciation Schedule) of the 2019 Tariff Regulations.”

18. In line with the above-quoted order, depreciation @5.28% has been considered for IT Equipment as part of the sub-station up to 31.3.2019 while truing up the capital expenditure for the 2014-19 period. The Gross Block during the 2014-19 tariff period for the transmission assets has been depreciated at Weighted Average Rate of Depreciation (WAROD) and working of WAROD for the 2014-19 period for Asset 1, Asset 2, Asset 3, Asset 4, Asset 5 and Asset 6 is given at Annexure I, Annexure II, Annexure III, Annexure IV, Annexure V and Annexure VI respectively. WAROD has been worked out after taking into account the depreciation rates of assets as specified in the 2014 Tariff Regulations and depreciation approved during 2014-19 is as follows:

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Asset 1</b>					
Opening Gross Block	87558.22	90198.22	91747.22	91747.22	91846.77
ACE	2640.00	1549.00	0.00	99.55	0.00
Closing Gross Block	90198.22	91747.22	91747.22	91846.77	91846.77
Average Gross Block	88878.22	90972.72	91747.22	91797.00	91846.77
Freehold Land	73.11	73.11	73.11	122.89	172.66
Weighted Average Rate of Depreciation (WAROD) (in %)	5.23	5.23	5.23	5.23	5.22
Balance useful life of the asset (Year)	32	31	30	29	28
Lapsed life at the beginning of the year (Year)	2	3	4	5	6
Aggregate Depreciable Value	79924.60	81809.65	82506.70	82506.70	82506.70
<b>Combined Depreciation during the year</b>	<b>4647.72</b>	<b>4756.03</b>	<b>4796.92</b>	<b>4796.92</b>	<b>4796.92</b>
Cumulative Aggregate Depreciation at the end of the year	17014.22	21770.25	26567.17	31364.10	36161.02
Remaining Aggregate Depreciable Value at the end	62910.38	60039.40	55939.52	51142.60	46345.68



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
of the year					
<b>Asset 2</b>					
Opening Gross Block	117063.80	117985.71	118525.12	118525.12	118525.12
ACE	921.91	539.41	0.00	0.00	0.00
Closing Gross Block	117985.71	118525.12	118525.12	118525.12	118525.12
Average Gross Block	117524.76	118255.42	118525.12	118525.12	118525.12
Weighted Average Rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28	5.28	5.28
Balance useful life of the asset (Year)	33	32	31	30	29
Lapsed life at the beginning of the year (Year)	1	2	3	4	5
Aggregate Depreciable Value	105772.28	106429.87	106672.61	106672.61	106672.61
<b>Combined Depreciation during the year</b>	<b>6206.77</b>	<b>6244.84</b>	<b>6258.82</b>	<b>6258.82</b>	<b>6258.82</b>
Cumulative Aggregate Depreciation at the end of the year	15822.38	22067.22	28326.04	34584.86	40843.67
Remaining Aggregate Depreciable Value at the end of the year	89949.90	84362.65	78346.57	72087.75	65828.93
<b>Asset 3</b>					
Opening Gross Block	27890.97	28694.20	28808.61	28808.61	28808.61
ACE	803.23	114.41	0.00	0.00	0.00
Closing Gross Block	28694.20	28808.61	28808.61	28808.61	28808.61
Average Gross Block	28292.59	28751.41	28808.61	28808.61	28808.61
Freehold Land	1482.08	1773.70	1773.70	1773.70	1773.70
Weighted Average Rate of Depreciation (WAROD) (in %)	4.70	4.65	4.65	4.65	4.65
Balance useful life of the asset (Year)	22	21	20	19	18
Lapsed life at the beginning of the year (Year)	2	3	4	5	6
Aggregate Depreciable Value	24129.45	24279.94	24331.42	24331.42	24331.42
<b>Combined Depreciation during the year</b>	<b>1328.93</b>	<b>1336.02</b>	<b>1338.63</b>	<b>1338.63</b>	<b>1338.63</b>
Cumulative Aggregate Depreciation at the end of the year	4972.80	6308.82	7647.45	8986.08	10324.71
Remaining Aggregate Depreciable Value at the end of the year	19156.65	17971.12	16683.97	15345.34	14006.71
<b>Asset 4</b>					
Opening Gross Block	8419.51	8733.14	8733.14	8733.14	8733.14
ACE	313.63	0.00	0.00	0.00	0.00



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Closing Gross Block	8733.14	8733.14	8733.14	8733.14	8733.14
Average Gross Block	8576.33	8733.14	8733.14	8733.14	8733.14
Weighted Average Rate of Depreciation (WAROD) (in %)	5.32	5.32	5.32	5.32	5.32
Balance useful life of the asset (Year)	23	22	21	20	19
Lapsed life at the beginning of the year (Year)	2	3	4	5	6
Depreciable Value	7718.69	7859.83	7859.83	7859.83	7859.83
<b>Combined Depreciation during the year</b>	<b>456.01</b>	<b>464.29</b>	<b>464.29</b>	<b>464.29</b>	<b>464.29</b>
Cumulative Depreciation at the end of the year	1460.19	1924.48	2388.77	2853.05	3317.34
Remaining Depreciable Value at the end of the year	6258.50	5935.35	5471.06	5006.77	4542.48
<b>Asset 5</b>					
Opening Gross Block	26583.28	27869.22	27963.86	27963.86	27963.86
ACE	1285.94	94.64	0.00	0.00	0.00
Closing Gross Block	27869.22	27963.86	27963.86	27963.86	27963.86
Average Gross Block	27226.25	27916.54	27963.86	27963.86	27963.86
Weighted Average Rate of Depreciation (WAROD) (in %)	5.26	5.26	5.26	5.26	5.26
Balance useful life of the asset (Year)	31	30	29	28	27
Lapsed life at the beginning of the year (Year)	2	3	4	5	6
Depreciable Value	24503.63	25124.89	25167.47	25167.47	25167.47
<b>Combined Depreciation during the year</b>	<b>1431.42</b>	<b>1467.70</b>	<b>1470.20</b>	<b>1470.20</b>	<b>1470.20</b>
Cumulative Depreciation at the end of the year	4334.47	5802.17	7272.36	8742.56	10212.75
Remaining Depreciable Value at the end of the year	20169.16	19322.72	17895.11	16424.92	14954.72
<b>Asset 6</b>					
Opening Gross Block	71191.50	71194.84	71194.84	71194.84	71194.84
ACE	3.34	0.00	0.00	0.00	0.00
Closing Gross Block	71194.84	71194.84	71194.84	71194.84	71194.84
Average Gross Block	71193.17	71194.84	71194.84	71194.84	71194.84
Weighted Average Rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28	5.28	5.28
Balance useful life of the asset (Year)	32	31	30	29	28
Lapsed life at the beginning of the year (Year)	3	4	5	6	7
Aggregate Depreciable Value	64073.85	64075.36	64075.36	64075.36	64075.36
<b>Combined Depreciation</b>	<b>3760.38</b>	<b>3760.47</b>	<b>3760.47</b>	<b>3760.47</b>	<b>3760.47</b>



(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>during the year</b>					
Cumulative Aggregate Depreciation at the end of the year	17492.58	21253.05	25013.52	28773.98	32534.45
Remaining Aggregate Depreciable Value at the end of the year	46581.27	42822.31	39061.84	35301.37	31540.90

19. Accordingly, the depreciation allowed vide order dated 29.8.2016 in Petition No. 34/TT/2015 and order dated 28.6.2016 in Petition No. 39/TT/2016 for the respective transmission assets, as claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Asset 1</b>					
Allowed vide order dated 29.8.2016 in Petition No. 34/TT/2015	4584.29	4588.16	4588.16	4588.16	4588.16
Claimed by the Petitioner based on truing up in the instant petition	4671.17	4779.48	4820.37	4820.37	4820.37
Approved after true-up in this order	4647.72	4756.03	4796.92	4796.92	4796.92
<b>Asset 2</b>					
Allowed vide order dated 28.6.2016 in Petition No. 39/TT/2016	6192.98	6207.47	6212.74	6212.74	6212.74
Claimed by the Petitioner based on truing up in the instant petition	6210.89	6248.97	6262.94	6262.94	6262.94
Approved after true-up in this order	6206.77	6244.84	6258.82	6258.82	6258.82
<b>Asset 3</b>					
Allowed vide order dated 29.8.2016 in Petition No. 34/TT/2015	1329.01	1334.57	1334.57	1334.57	1334.57
Claimed by the Petitioner based	1401.89	1408.96	1411.57	1411.57	1411.57



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
on truing up in the instant petition					
Approved after true-up in this order	1328.93	1336.02	1338.63	1338.63	1338.63
<b>Asset 4</b>					
Allowed vide order dated 29.8.2016 in Petition No. 34/TT/2015	456.30	464.88	464.88	464.88	464.88
Claimed by the Petitioner based on truing up in the instant petition	456.01	464.29	464.29	464.29	464.29
Approved after true-up in this order	456.01	464.29	464.29	464.29	464.29
<b>Asset 5</b>					
Allowed vide order dated 28.6.2016 in Petition No. 39/TT/2016	1417.02	1436.40	1436.40	1436.40	1436.40
Claimed by the Petitioner based on truing up in the instant petition	1431.41	1473.09	1482.67	1484.36	1484.36
Approved after true-up in this order	1431.42	1467.70	1470.20	1470.20	1470.20
<b>Asset 6</b>					
Allowed vide order dated 29.8.2016 in Petition No. 34/TT/2015	3760.29	3760.29	3760.29	3760.29	3760.29
Claimed by the Petitioner based on truing up in the instant petition	3779.91	3780.00	3780.00	3780.00	3780.00
Approved after true-up in this order	3760.38	3760.47	3760.47	3760.47	3760.47

**Interest on Loan (IoL)**

20. The Petitioner has claimed the Weighted Average Rate of IoL based on actual loan portfolio and rate of interest for the transmission assets. Accordingly, IoL has been calculated based on actual interest rate submitted by the Petitioner in



accordance with Regulation 26 of the 2014 Tariff Regulations. Trued-up IoL approved in respect of the transmission assets is as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Asset 1</b>					
Gross Normative Loan	61290.78	63138.78	64223.08	64223.08	64292.77
Cumulative Repayments up to Previous Year	12366.50	17014.22	21770.25	26567.17	31364.10
Net Loan-Opening	48924.28	46124.56	42452.83	37655.91	32928.67
Additions	1848.00	1084.30	0.00	69.69	0.00
Repayment during the year	4647.72	4756.03	4796.92	4796.92	4796.92
Net Loan-Closing	46124.56	42452.83	37655.91	32928.67	28131.74
Average Loan	47524.42	44288.69	40054.37	35292.29	30530.20
Weighted Average Rate of Interest on Loan (in %)	1.7618	2.1491	3.0331	3.4806	4.3564
<b>Interest on Loan</b>	<b>837.28</b>	<b>951.83</b>	<b>1214.91</b>	<b>1228.39</b>	<b>1330.02</b>
<b>Asset 2</b>					
Gross Normative Loan	82906.50	83551.84	83929.42	83929.42	83929.42
Cumulative Repayments up to Previous Year	9615.61	15822.38	22067.22	28326.04	34584.86
Net Loan-Opening	73290.89	67729.46	61862.20	55603.39	49344.57
Additions	645.34	377.59	0.00	0.00	0.00
Repayment during the year	6206.77	6244.84	6258.82	6258.82	6258.82
Net Loan-Closing	67729.46	61862.20	55603.39	49344.57	43085.75
Average Loan	70510.17	64795.83	58732.79	52473.98	46215.16
Weighted Average Rate of Interest on Loan (in %)	2.6805	2.8750	3.5824	3.9548	4.7643
<b>Interest on Loan</b>	<b>1890.03</b>	<b>1862.91</b>	<b>2104.02</b>	<b>2075.26</b>	<b>2201.84</b>
<b>Asset 3</b>					
Gross Normative Loan	19523.68	20085.94	20166.03	20166.03	20166.03
Cumulative Repayments up to Previous Year	3643.87	4972.80	6308.82	7647.45	8986.08
Net Loan-Opening	15879.81	15113.14	13857.21	12518.58	11179.95
Additions	562.26	80.09	0.00	0.00	0.00
Repayment during the year	1328.93	1336.02	1338.63	1338.63	1338.63
Net Loan-Closing	15113.14	13857.21	12518.58	11179.95	9841.32
Average Loan	15496.47	14485.17	13187.89	11849.26	10510.63
Weighted Average Rate of Interest on Loan (in %)	1.7438	2.0783	2.8989	3.3731	4.3679
<b>Interest on Loan</b>	<b>270.23</b>	<b>301.05</b>	<b>382.31</b>	<b>399.68</b>	<b>459.09</b>
<b>Asset 4</b>					
Gross Normative Loan	5893.66	6113.20	6113.20	6113.20	6113.20
Cumulative Repayments upto	1004.18	1460.19	1924.48	2388.77	2853.05



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Previous Year					
Net Loan-Opening	4889.48	4653.01	4188.72	3724.44	3260.15
Additions	219.54	0.00	0.00	0.00	0.00
Repayment during the year	456.01	464.29	464.29	464.29	464.29
Net Loan-Closing	4653.01	4188.72	3724.44	3260.15	2795.86
Average Loan	4771.25	4420.87	3956.58	3492.29	3028.00
Weighted Average Rate of Interest on Loan (in %)	2.0177	2.3438	3.1086	3.5859	4.5568
<b>Interest on Loan</b>	<b>96.27</b>	<b>103.62</b>	<b>122.99</b>	<b>125.23</b>	<b>137.98</b>
<b>Asset 5</b>					
Gross Normative Loan	18701.02	19601.18	19667.43	19667.43	19667.43
Cumulative Repayments upto Previous Year	2903.05	4334.47	5802.17	7272.36	8742.56
Net Loan-Opening	15797.97	15266.71	13865.26	12395.07	10924.87
Additions	900.16	66.25	0.00	0.00	0.00
Repayment during the year	1431.42	1467.70	1470.20	1470.20	1470.20
Net Loan-Closing	15266.71	13865.26	12395.07	10924.87	9454.67
Average Loan	15532.34	14565.98	13130.16	11659.97	10189.77
Weighted Average Rate of Interest on Loan (in %)	4.4523	4.6489	5.1273	5.3753	5.9872
<b>Interest on Loan</b>	<b>691.55</b>	<b>677.16</b>	<b>673.22</b>	<b>626.76</b>	<b>610.08</b>
<b>Asset 6</b>					
Gross Normative Loan	49834.05	49836.39	49836.39	49836.39	49836.39
Cumulative Repayments up to Previous Year	13732.20	17492.58	21253.05	25013.52	28773.98
Net Loan-Opening	36101.85	32343.81	28583.34	24822.87	21062.40
Additions	2.34	0.00	0.00	0.00	0.00
Repayment during the year	3760.38	3760.47	3760.47	3760.47	3760.47
Net Loan-Closing	32343.81	28583.34	24822.87	21062.40	17301.94
Average Loan	34222.83	30463.57	26703.11	22942.64	19182.17
Weighted Average Rate of Interest on Loan (in %)	2.5231	2.6583	3.3729	3.7733	4.6682
<b>Interest on Loan</b>	<b>863.47</b>	<b>809.80</b>	<b>900.66</b>	<b>865.69</b>	<b>895.46</b>

21. The details of IoL allowed vide order dated 29.8.2016 in Petition No. 34/TT/2015 and order dated 28.6.2016 in Petition No. 39/TT/2016 for the respective transmission assets, as claimed by the Petitioner in the instant petition and trued-up in the instant order is as follows:





(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Asset 1</b>					
Allowed vide order dated 29.8.2016 in Petition No. 34/TT/2015	782.96	729.13	653.62	578.22	502.94
Claimed by the Petitioner based on truing up in the instant petition	837.08	951.10	1213.11	1225.52	1325.42
Approved after true-up in this order	837.28	951.83	1214.91	1228.39	1330.02
<b>Asset 2</b>					
Allowed vide order dated 28.6.2016 in Petition No. 39/TT/2016	1867.08	1694.32	1511.48	1321.60	1135.94
Claimed by the Petitioner based on truing up in the instant petition	1889.97	1862.70	2103.67	2074.67	2200.95
Approved after true-up in this order	1890.03	1862.91	2104.02	2075.26	2201.84
<b>Asset 3</b>					
Allowed vide order dated 29.8.2016 in Petition No. 34/TT/2015	251.96	235.22	213.52	191.85	170.16
Claimed by the Petitioner based on truing up in the instant petition	269.59	298.77	377.02	391.08	444.76
Approved after true-up in this order	270.23	301.05	382.31	399.68	459.09
<b>Asset 4</b>					
Allowed vide order dated 29.8.2016 in Petition No. 34/TT/2015	89.55	82.15	72.66	63.30	54.08
Claimed by the Petitioner based on truing up in the instant petition	96.27	103.62	122.99	125.23	137.98
Approved after true-up in this order	96.27	103.62	122.99	125.23	137.98
<b>Asset 5</b>					
Allowed vide order dated	669.59	610.70	534.53	466.45	395.59



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
28.6.2016 in Petition No. 39/TT/2016					
Claimed by the Petitioner based on truing up in the instant petition	691.55	680.37	681.11	635.52	618.99
Approved after true-up in this order	691.55	677.16	673.22	626.76	610.08
<b>Asset 6</b>					
Allowed vide order dated 29.8.2016 in Petition No. 34/TT/2015	864.34	755.20	648.41	544.17	442.78
Claimed by the Petitioner based on truing up in the instant petition	863.23	809.03	899.02	863.11	891.36
Approved after true-up in this order	863.47	809.80	900.66	865.69	895.46

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

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

Year	Claimed effective tax (in %)	Grossed-up RoE [(Base Rate)/(1-t)] (in %)
2014-15	21.020	19.625
2015-16	21.380	19.715
2016-17	21.340	19.705
2017-18	21.340	19.705
2018-19	21.550	19.758

23. MPPMCL has submitted that the Petitioner has grossed-up RoE on the basis of actual taxes paid during 2016-17 and 2017-18. For 2018-19, it has been grossed-up on the basis of applicable rate of MAT, surcharge and cess. The Petitioner has not placed on record the assessment orders for 2016-17 and 2017-18. The Petitioner has not claimed the grossed-up RoE on the basis of actual taxes paid for the year 2018-



19. MPPMCL has further submitted that the Petitioner has not finalized its income tax assessment orders for the years 2016-17, 2017-18 and 2018-19. The Petitioner has not provided copy of assessment orders for 2014-15 and 2015-16. The Petitioner has also not submitted audited accounts in respect of actual taxes paid for 2016-17 and 2017-18.

24. In response, the Petitioner has submitted that the assessment orders for years 2014-15, 2015-16 and 2016-17 have been issued by the Income Tax Department and Income Tax returns for years 2017-18 and 2018-19 have been filed. The Petitioner has further submitted that the assessment order for the years 2014-15 and 2015-16 have already been filed in response to Technical Validation letter in Petition No. 20/TT/2020 which may be considered in the instant petition and copy of the assessment order for the year 2016-17 has been placed on record vide rejoinder affidavit dated 10.4.2021.

25. In view of the above, the Petitioner has submitted that grossed-up RoE (in %) and effective tax rate for 2014-19 tariff period has already been allowed by the Commission. Further, the Petitioner requested the Commission to allow its claim of the differential tariff on account of the trued-up RoE based on effective tax rate calculated as above and Income-tax assessment/ re-assessment for 2014-15, 2015-16, 2016-17, 2017-18 and 2018-19 on receipt of the respective assessment orders.

26. We have considered the submissions of the Petitioner and MPPMCL. The Commission vide order dated 2.2.2021 in Petition No. 312/TT/2020 has already dealt with the issue raised by MPPMCL. In terms of our findings in Petition No.



312/TT/2020, we do not find merit in the submissions by MPPMCL and the same are accordingly rejected.

27. The Commission vide order dated 27.4.2020 in Petition No. 274/TT/2019 had arrived at the effective tax rate for the Petitioner based on the notified MAT rates and the same is given in the table as follows:

<b>Year</b>	<b>Notified MAT rates (in %) (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

28. The MAT rates as allowed vide order dated 27.4.2020 in Petition No. 274/TT/2019 for the purpose of grossing up of rate of RoE for truing up of the tariff of the 2014-19 tariff period, in terms of the provisions of the 2014 Tariff Regulations is considered in the instant case which is as follows:

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

29. The Petitioner has claimed RoE for the 2014-19 period after grossing up the RoE of 15.50% with Effective Tax rates (based on MAT rates) of each year as per the above said Regulation. RoE is trued-up on the basis of MAT rate applicable in the respective years and is approved as follows:



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Asset 1</b>					
Opening Equity	26267.44	27059.44	27524.14	27524.14	27554.01
Additions	792.00	464.70	0.00	29.87	0.00
Closing Equity	27059.44	27524.14	27524.14	27554.01	27554.01
Average Equity	26663.44	27291.79	27524.14	27539.07	27554.01
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (in %)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (in %)	19.610	19.705	19.705	19.705	19.758
<b>Return on Equity</b>	<b>5228.70</b>	<b>5377.85</b>	<b>5423.63</b>	<b>5426.57</b>	<b>5444.12</b>
<b>Asset 2</b>					
Opening Equity	34157.30	34433.87	34595.70	34595.70	34595.70
Additions	276.57	161.82	0.00	0.00	0.00
Closing Equity	34433.87	34595.70	34595.70	34595.70	34595.70
Average Equity	34295.59	34514.78	34595.70	34595.70	34595.70
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (in %)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (in %)	19.610	19.705	19.705	19.705	19.758
<b>Return on Equity</b>	<b>6725.36</b>	<b>6801.14</b>	<b>6817.08</b>	<b>6817.08</b>	<b>6835.42</b>
<b>Asset 3</b>					
Opening Equity	8367.29	8608.26	8642.58	8642.58	8642.58
Additions	240.97	34.32	0.00	0.00	0.00
Closing Equity	8608.26	8642.58	8642.58	8642.58	8642.58
Average Equity	8487.78	8625.42	8642.58	8642.58	8642.58
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (in %)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (in %)	19.610	19.705	19.705	19.705	19.758
<b>Return on Equity</b>	<b>1664.45</b>	<b>1699.64</b>	<b>1703.02</b>	<b>1703.02</b>	<b>1707.60</b>
<b>Asset 4</b>					
Opening Equity	2525.85	2619.94	2619.94	2619.94	2619.94
Additions	94.09	0.00	0.00	0.00	0.00
Closing Equity	2619.94	2619.94	2619.94	2619.94	2619.94
Average Equity	2572.89	2619.94	2619.94	2619.94	2619.94
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (in %)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (in %)	19.610	19.705	19.705	19.705	19.758
<b>Return on Equity</b>	<b>504.54</b>	<b>516.26</b>	<b>516.26</b>	<b>516.26</b>	<b>517.65</b>



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Asset 5</b>					
Opening Equity	7882.26	8268.04	8296.43	8296.43	8296.43
Additions	385.78	28.39	0.00	0.00	0.00
Closing Equity	8268.04	8296.43	8296.43	8296.43	8296.43
Average Equity	8075.15	8282.24	8296.43	8296.43	8296.43
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (in %)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (in %)	19.610	19.705	19.705	19.705	19.758
<b>Return on Equity</b>	<b>1583.54</b>	<b>1632.01</b>	<b>1634.81</b>	<b>1634.81</b>	<b>1639.21</b>
<b>Asset 6</b>					
Opening Equity	21357.45	21358.45	21358.45	21358.45	21358.45
Additions	1.00	0.00	0.00	0.00	0.00
Closing Equity	21358.45	21358.45	21358.45	21358.45	21358.45
Average Equity	21357.95	21358.45	21358.45	21358.45	21358.45
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (in %)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (in %)	19.610	19.705	19.705	19.705	19.758
<b>Return on Equity</b>	<b>4188.29</b>	<b>4208.68</b>	<b>4208.68</b>	<b>4208.68</b>	<b>4220.00</b>

30. The details of RoE allowed vide order dated 29.8.2016 in Petition No. 34/TT/2015 and order dated 28.6.2016 in Petition No. 39/TT/2016 for the respective transmission assets, claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Asset 1</b>					
Allowed vide order dated 29.8.2016 in Petition No. 34/TT/2015	5263.09	5401.06	5401.06	5401.06	5401.06
Claimed by the Petitioner based on truing up in the instant petition	5232.70	5380.58	5423.63	5426.58	5444.12
Approved after true-up in this order	5228.70	5377.85	5423.63	5426.57	5444.12



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Asset 2</b>					
Allowed vide order dated 28.6.2016 in Petition No. 39/TT/2016	6708.66	6724.80	6730.68	6730.68	6730.68
Claimed by the Petitioner based on truing up in the instant petition	6730.51	6804.59	6817.08	6817.08	6835.42
Approved after true-up in this order	6725.36	6801.14	6817.08	6817.08	6835.42
<b>Asset 3</b>					
Allowed vide order dated 29.8.2016 in Petition No. 34/TT/2015	1666.20	1691.54	1691.54	1691.54	1691.54
Claimed by the Petitioner based on truing up in the instant petition	1665.73	1700.50	1703.02	1703.02	1707.60
Approved after true-up in this order	1664.45	1699.64	1703.02	1703.02	1707.60
<b>Asset 4</b>					
Allowed vide order dated 29.8.2016 in Petition No. 34/TT/2015	504.89	514.44	514.44	514.44	514.44
Claimed by the Petitioner based on truing up in the instant petition	504.93	516.52	516.26	516.26	517.65
Approved after true-up in this order	504.54	516.26	516.26	516.26	517.65
<b>Asset 5</b>					
Allowed vide order dated 28.6.2016 in Petition No. 39/TT/2016	1567.84	1589.94	1589.94	1589.94	1589.94
Claimed by the Petitioner based on truing up in the instant petition	1584.75	1638.89	1648.79	1650.68	1655.12
Approved after true-up in this order	1583.54	1632.01	1634.81	1634.81	1639.21
<b>Asset 6</b>					
Allowed vide order dated	4188.29	4188.29	4188.29	4188.29	4188.29



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
29.8.2016 in Petition No. 34/TT/2015					
Claimed by the Petitioner based on truing up in the instant petition	4191.50	4210.82	4208.68	4208.68	4220.00
Approved after true-up in this order	4188.29	4208.68	4208.68	4208.68	4220.00

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

31. Regulation 29(3) of the 2014 Tariff Regulations specifies the norms for O&M Expenses. The total O&M Expenses claimed by the Petitioner are as follows:

(₹ in lakh)

O&M Expenses claimed by the Petitioner					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset 1	1412.96	1459.95	1508.19	1558.42	1610.14
Asset 2	914.49	944.97	975.98	1008.69	1042.11
Asset 3	2194.92	2267.72	2343.08	2420.88	2501.08
Asset 4	844.20	872.20	901.18	931.14	961.94
Asset 5	426.59	441.00	455.71	470.70	486.37
Asset 6	1117.95	1155.48	1193.55	1233.30	1274.16

32. The Commission has considered the submissions made by the Petitioner. The O&M Expenses determined by the Commission vary slightly in some instances due to rounding. The O&M Expenses are allowed under Regulation 29(3) of the 2014 Tariff Regulations and are as follows:

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Asset 1</b>					
<b>Sub-station bays</b>					
400 kV bays					
Number of bays	13	13	13	13	13
Norms (₹ lakh/bay)	60.30	62.30	64.37	66.51	68.71
<b>Transmission line</b>					
400 kVD/C Parli (PG)-Wardha (PG) transmission line (Bundled 4 Sub-	336.94 kms				





Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Conductors (km)					
Norms (₹ lakh/km)	1.062	1.097	1.133	1.171	1.21
400 kV D/C Parli(PG)- Parli (MSETCL) line ( 4.958 KM) and 400 kV D/C Parli (PG)_Bhadravati (PG) line (78.667 KM) (Twin Conductor) (kms)	383.625 kms				
Norms (₹ lakh/km)	0.707	0.731	0.755	0.78	0.806
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>1412.95</b>	<b>1459.95</b>	<b>1508.20</b>	<b>1558.41</b>	<b>1610.13</b>
<b>Asset 2</b>					
<b>Sub-station bays</b>					
400 kV bays					
Number of bays	6	6	6	6	6
Norms (₹ lakh/bay)	60.30	62.30	64.37	66.51	68.71
<b>Transmission line</b>					
765 kV D/C Seoni-Wadha II transmission line and 765 kV Raipur-Wardha transmission line (D/C Bundled 4 Sub-Conductors (373.038 km)	373.038 kms				
Norms (₹ lakh/km)	1.062	1.097	1.133	1.171	1.21
765 kV Seoni-Wardha S/C Transmission line (Bundled 4 Sub-Conductors (258.29 km)	258.29 KM				
Norms (₹ lakh/km)	0.606	0.627	0.647	0.669	0.691
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>914.49</b>	<b>944.97</b>	<b>975.99</b>	<b>1008.68</b>	<b>1042.11</b>
<b>Asset 3</b>					
<b>Sub-station bays</b>					
400 kV bays					
Number of bays	28	28	28	28	28
Norms (₹ lakh/bay)	60.30	62.30	64.37	66.51	68.71
200 kV bays					
Number of bays	12	12	12	12	12
Norms (₹ lakh/bay)	42.21	43.61	45.06	46.55	48.1
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>2194.92</b>	<b>2267.72</b>	<b>2343.08</b>	<b>2420.88</b>	<b>2501.08</b>
<b>Asset 4</b>					



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Sub-station bays</b>					
400 kV bays					
Number of bays	14	14	14	14	14
Norms (₹ lakh/bay)	60.30	62.30	64.37	66.51	68.71
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>844.20</b>	<b>872.20</b>	<b>901.18</b>	<b>931.14</b>	<b>961.94</b>
<b>Asset 5</b>					
<b>Sub-station bays</b>					
400 kV bays					
Number of bays	4	4	4	4	4
Norms (₹ lakh/bay)	60.30	62.30	64.37	66.51	68.71
<b>Transmission line</b>					
Part of Ckt.-I of Korba-Birshinghpur transmission line and Part of Ckt.-II of Korba-Birshinghpur transmission line (D/C Twin Conductor 7.454 km)	7.454	7.454	7.454	7.454	7.454
Norms (₹ lakh/km)	0.707	0.731	0.755	0.78	0.806
Part of Ckt.-I and Ckt.-II of Korba-Birshinghpur transmission line, Balance portion of Ckt.-I of Korba-Birshinghpur transmission line and Balance portion of Ckt.-II of Korba-Birshinghpur transmission line (S/C Twin Conductor 445.828 km)	445.828	445.828	445.828	445.828	445.828
Norms (₹ lakh/km)	0.404	0.418	0.432	0.446	0.461
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>426.58</b>	<b>441.00</b>	<b>455.71</b>	<b>470.69</b>	<b>486.37</b>
<b>Asset 6</b>					
<b>Sub-station bays</b>					
400 kV bays					
Number of bays	11	11	11	11	11
Norms (₹ lakh/bay)	60.30	62.30	64.37	66.51	68.71
<b>Transmission line</b>					
400 kV Damoh-Bhopal Ckt-I & II D/C line, 400 kV D/C Birshinghpur-Damoh transmission line (Twin Conductor 441.285 km)	441.285	441.285	441.285	441.285	441.285
Norms (₹ lakh/km)	0.707	0.731	0.755	0.78	0.806
400 kV Damoh-Bhopal S/C transmission line (Twin Conductor 2.649 km)	2.649	2.649	2.649	2.649	2.649



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Norms (₹ lakh/km)	0.404	0.418	0.432	0.446	0.461
765 kV S/C Bina-Gwalior Ckt.-II transmission line (Bundled 4 Sub-Conductors (233.652 km)	233.652	233.652	233.652	233.652	233.652
Norms (₹ lakh/km)	0.606	0.627	0.647	0.669	0.691
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>1117.95</b>	<b>1155.49</b>	<b>1193.56</b>	<b>1233.31</b>	<b>1274.16</b>

33. The details of O&M Expenses allowed vide order dated 29.8.2016 in Petition No. 34/TT/2015 and order dated 28.6.2016 in Petition No. 39/TT/2016 for the respective transmission assets, claimed by the Petitioner in the instant petition and trued-up O&M Expenses are shown in the table below:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Asset 1</b>					
Allowed vide order dated 29.8.2016 in Petition No. 34/TT/2015	1412.95	1459.95	1508.20	1558.41	1610.13
Claimed by the Petitioner based on truing up in the instant petition	1412.96	1459.95	1508.19	1558.42	1610.14
Approved after true-up in this order	1412.95	1459.95	1508.20	1558.41	1610.13
<b>Asset 2</b>					
Allowed vide order dated 28.6.2016 in Petition No. 39/TT/2016	914.49	944.97	975.99	1008.68	1042.11
Claimed by the Petitioner based on truing up in the instant petition	914.49	944.97	975.98	1008.69	1042.11
Approved after true-up in this order	914.49	944.97	975.99	1008.68	1042.11
<b>Asset 3</b>					
Allowed vide order dated 29.8.2016 in Petition No. 34/TT/2015	2194.92	2267.72	2343.08	2420.88	2501.08



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Claimed by the Petitioner based on trueing up in the instant petition	2194.92	2267.72	2343.08	2420.88	2501.08
Approved after true-up in this order	2194.92	2267.72	2343.08	2420.88	2501.08
<b>Asset 4</b>					
Allowed vide order dated 29.8.2016 in Petition No. 34/TT/2015	844.20	872.20	901.18	931.14	961.94
Claimed by the Petitioner based on trueing up in the instant petition	844.20	872.20	901.18	931.14	961.94
Approved after true-up in this order	844.20	872.20	901.18	931.14	961.94
<b>Asset 5</b>					
Allowed vide order dated 28.6.2016 in Petition No. 39/TT/2016	426.58	441.00	455.71	470.69	486.37
Claimed by the Petitioner based on trueing up in the instant petition	426.59	441.00	455.71	470.70	486.37
Approved after true-up in this order	426.58	441.00	455.71	470.69	486.37
<b>Asset 6</b>					
Allowed vide order dated 29.8.2016 in Petition No. 34/TT/2015	1117.95	1155.49	1193.56	1233.31	1274.16
Claimed by the Petitioner based on trueing up in the instant petition	1117.95	1155.48	1193.55	1233.30	1274.16
Approved after true-up in this order	1117.95	1155.49	1193.56	1233.31	1274.16

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

34. IWC has been worked out as per the methodology provided in Regulation 28 of the 2014 Tariff Regulations and the trueed-up IWC approved for the transmission assets for the 2014-19 tariff period are as follows:



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Asset 1</b>					
O&M Expenses (O&M Expenses for 1 month)	117.75	121.66	125.68	129.87	134.18
Maintenance Spares (15% of O&M Expenses)	211.94	218.99	226.23	233.76	241.52
Receivables (Equivalent to 2 months of annual fixed cost)	2075.22	2146.91	2215.03	2226.67	2256.08
<b>Total Working Capital</b>	<b>2404.91</b>	<b>2487.57</b>	<b>2566.95</b>	<b>2590.30</b>	<b>2631.78</b>
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>324.66</b>	<b>335.82</b>	<b>346.54</b>	<b>349.69</b>	<b>355.29</b>
<b>Asset 2</b>					
O&M Expenses (O&M Expenses for 1 month)	76.21	78.75	81.33	84.06	86.84
Maintenance Spares (15% of O&M Expenses)	137.17	141.75	146.40	151.30	156.32
Receivables (Equivalent to 2 months of annual fixed cost)	2688.06	2708.21	2759.87	2760.72	2791.31
<b>Total Working Capital</b>	<b>2901.44</b>	<b>2928.70</b>	<b>2987.60</b>	<b>2996.08</b>	<b>3034.47</b>
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>391.69</b>	<b>395.37</b>	<b>403.33</b>	<b>404.47</b>	<b>409.65</b>
<b>Asset 3</b>					
O&M Expenses (O&M Expenses for 1 month)	182.91	188.98	195.26	201.74	208.42
Maintenance Spares (15% of O&M Expenses)	329.24	340.16	351.46	363.13	375.16
Receivables (Equivalent to 2 months of annual fixed cost)	942.48	967.75	995.88	1012.53	1037.54
<b>Total Working Capital</b>	<b>1454.63</b>	<b>1496.88</b>	<b>1542.60</b>	<b>1577.40</b>	<b>1621.13</b>
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>196.38</b>	<b>202.08</b>	<b>208.25</b>	<b>212.95</b>	<b>218.85</b>
<b>Asset 4</b>					
O&M Expenses (O&M Expenses for 1 month)	70.35	72.68	75.10	77.60	80.16
Maintenance Spares (15% of O&M Expenses)	126.63	130.83	135.18	139.67	144.29
Receivables (Equivalent to 2 months of annual fixed cost)	328.66	338.25	346.65	352.30	360.13
<b>Total Working Capital</b>	<b>525.64</b>	<b>541.76</b>	<b>556.93</b>	<b>569.57</b>	<b>584.58</b>
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>70.96</b>	<b>73.14</b>	<b>75.19</b>	<b>76.89</b>	<b>78.92</b>



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Asset 5</b>					
O&M Expenses (O&M Expenses for 1 month)	35.55	36.75	37.98	39.22	40.53
Maintenance Spares (15% of O&M Expenses)	63.99	66.15	68.36	70.60	72.96
Receivables (Equivalent to 2 months of annual fixed cost)	706.99	721.53	724.35	719.06	719.72
<b>Total Working Capital</b>	<b>806.53</b>	<b>824.43</b>	<b>830.68</b>	<b>828.89</b>	<b>833.21</b>
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>108.88</b>	<b>111.30</b>	<b>112.14</b>	<b>111.90</b>	<b>112.48</b>
<b>Asset 6</b>					
O&M Expenses (O&M Expenses for 1 month)	93.16	96.29	99.46	102.78	106.18
Maintenance Spares (15% of O&M Expenses)	167.69	173.32	179.03	185.00	191.12
Receivables (Equivalent to 2 months of annual fixed cost)	1699.12	1700.06	1722.24	1723.27	1737.46
<b>Total Working Capital</b>	<b>1959.97</b>	<b>1969.67</b>	<b>2000.74</b>	<b>2011.04</b>	<b>2034.77</b>
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>264.60</b>	<b>265.91</b>	<b>270.10</b>	<b>271.49</b>	<b>274.69</b>

35. The details of IWC allowed vide order dated 29.8.2016 in Petition No. 34/TT/2015 and order dated 28.6.2016 in Petition No. 39/TT/2016 for the respective transmission assets, as claimed by the Petitioner in the instant petition and trued-up in the instant order is as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Asset 1</b>					
Allowed vide order dated 29.8.2016 in Petition No. 34/TT/2015	322.74	327.36	328.29	329.32	330.45
Claimed by the Petitioner based on truing up in the instant petition	325.29	336.41	347.04	350.16	355.73
Approved after true-up in this order	324.66	335.82	346.54	349.69	355.29



(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Asset 2</b>					
Allowed vide order dated 28.6.2016 in Petition No. 39/TT/2016	390.46	388.87	386.63	384.07	381.64
Claimed by the Petitioner based on truing up in the instant petition	391.91	395.54	403.41	404.55	409.73
Approved after true-up in this order	391.69	395.37	403.33	404.47	409.65
<b>Asset 3</b>					
Allowed vide order dated 29.8.2016 in Petition No. 34/TT/2015	195.99	200.34	204.00	207.80	211.73
Claimed by the Petitioner based on truing up in the instant petition	198.07	203.73	209.81	214.43	220.20
Approved after true-up in this order	196.38	202.08	208.25	212.95	218.85
<b>Asset 4</b>					
Allowed vide order dated 29.8.2016 in Petition No. 34/TT/2015	70.82	72.61	73.99	75.43	76.92
Claimed by the Petitioner based on truing up in the instant petition	70.97	73.14	75.19	76.89	78.92
Approved after true-up in this order	70.96	73.14	75.19	76.89	78.92
<b>Asset 5</b>					
Allowed vide order dated 28.6.2016 in Petition No. 39/TT/2016	107.68	108.08	107.14	106.40	105.63
Claimed by the Petitioner based on truing up in the instant petition	108.91	111.65	112.93	112.80	113.38
Approved after true-up in this order	108.88	111.30	112.14	111.90	112.48
<b>Asset 6</b>					
Allowed vide order dated	264.61	264.17	263.81	263.61	263.53



(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
29.8.2016 in Petition No. 34/TT/2015					
Claimed by the Petitioner based on truing up in the instant petition	265.11	266.39	270.51	271.88	275.05
Approved after true-up in this order	264.60	265.91	270.10	271.49	274.69

### **APPROVED ANNUAL FIXED CHARGES FOR THE 2014-19 TARIFF PERIOD**

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

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Asset 1</b>					
Depreciation	4647.72	4756.03	4796.92	4796.92	4796.92
Interest on Loan	837.28	951.83	1214.91	1228.39	1330.02
Return on Equity	5228.70	5377.85	5423.63	5426.57	5444.12
Interest on Working Capital	324.66	335.82	346.54	349.69	355.29
O&M Expenses	1412.95	1459.95	1508.20	1558.41	1610.13
<b>Total</b>	<b>12451.32</b>	<b>12881.48</b>	<b>13290.20</b>	<b>13360.00</b>	<b>13536.48</b>
<b>Asset 2</b>					
Depreciation	6206.77	6244.84	6258.82	6258.82	6258.82
Interest on Loan	1890.03	1862.91	2104.02	2075.26	2201.84
Return on Equity	6725.36	6801.14	6817.08	6817.08	6835.42
Interest on Working Capital	391.69	395.37	403.33	404.47	409.65
O&M Expenses	914.49	944.97	975.99	1008.68	1042.11
<b>Total</b>	<b>16128.35</b>	<b>16249.23</b>	<b>16559.23</b>	<b>16564.31</b>	<b>16747.84</b>
<b>Asset 3</b>					
Depreciation	1328.93	1336.02	1338.63	1338.63	1338.63
Interest on Loan	270.23	301.05	382.31	399.68	459.09
Return on Equity	1664.45	1699.64	1703.02	1703.02	1707.60
Interest on Working Capital	196.38	202.08	208.25	212.95	218.85
O&M Expenses	2194.92	2267.72	2343.08	2420.88	2501.08
<b>Total</b>	<b>5654.91</b>	<b>5806.50</b>	<b>5975.29</b>	<b>6075.16</b>	<b>6225.26</b>
<b>Asset 4</b>					
Depreciation	456.01	464.29	464.29	464.29	464.29





(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Interest on Loan	96.27	103.62	122.99	125.23	137.98
Return on Equity	504.54	516.26	516.26	516.26	517.65
Interest on Working Capital	70.96	73.14	75.19	76.89	78.92
O&M Expenses	844.20	872.20	901.18	931.14	961.94
<b>Total</b>	<b>1971.99</b>	<b>2029.50</b>	<b>2079.91</b>	<b>2113.81</b>	<b>2160.78</b>
<b>Asset 5</b>					
Depreciation	1431.42	1467.70	1470.20	1470.20	1470.20
Interest on Loan	691.55	677.16	673.22	626.76	610.08
Return on Equity	1583.54	1632.01	1634.81	1634.81	1639.21
Interest on Working Capital	108.88	111.30	112.14	111.90	112.48
O&M Expenses	426.58	441.00	455.71	470.69	486.37
<b>Total</b>	<b>4241.97</b>	<b>4329.18</b>	<b>4346.07</b>	<b>4314.36</b>	<b>4318.34</b>
<b>Asset 6</b>					
Depreciation	3760.38	3760.47	3760.47	3760.47	3760.47
Interest on Loan	863.47	809.80	900.66	865.69	895.46
Return on Equity	4188.29	4208.68	4208.68	4208.68	4220.00
Interest on Working Capital	264.60	265.91	270.10	271.49	274.69
O&M Expenses	1117.95	1155.49	1193.56	1233.31	1274.16
<b>Total</b>	<b>10194.69</b>	<b>10200.35</b>	<b>10333.47</b>	<b>10339.64</b>	<b>10424.79</b>

37. Accordingly, the Annual Transmission Charges allowed vide order dated 29.8.2016 in Petition No. 34/TT/2015 and order dated 28.6.2016 in Petition No. 39/TT/2016 for the respective transmission assets, as claimed by the Petitioner in the instant petition and approved after truing-up in the instant order is as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Asset 1</b>					
Allowed vide order dated 29.8.2016 in Petition No. 34/TT/2015	12366.03	12505.66	12479.32	12455.18	12432.73
Claimed by the Petitioner based on truing up in the instant petition	12479.20	12907.52	13312.34	13381.05	13555.78
Approved after true-up in this order	12451.32	12881.48	13290.20	13360.00	13536.48



					(₹ in lakh)
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Asset 2</b>					
Allowed vide order dated 28.6.2016 in Petition No. 39/TT/2016	16073.68	15960.44	15817.52	15657.78	15503.11
Claimed by the Petitioner based on truing up in the instant petition	16137.77	16256.77	16563.08	16567.93	16751.15
Approved after true-up in this order	16128.35	16249.23	16559.23	16564.31	16747.84
<b>Asset 3</b>					
Allowed vide order dated 29.8.2016 in Petition No. 34/TT/2015	5638.07	5729.37	5786.70	5846.62	5909.07
Claimed by the Petitioner based on truing up in the instant petition	5730.20	5879.68	6044.50	6140.98	6285.21
Approved after true-up in this order	5654.91	5806.50	5975.29	6075.16	6225.26
<b>Asset 4</b>					
Allowed vide order dated 29.8.2016 in Petition No. 34/TT/2015	1965.75	2006.28	2027.15	2049.19	2072.26
Claimed by the Petitioner based on truing up in the instant petition	1972.38	2029.77	2079.91	2113.81	2160.78
Approved after true-up in this order	1971.99	2029.50	2079.91	2113.81	2160.78
<b>Asset 5</b>					
Allowed vide order dated 28.6.2016 in Petition No. 39/TT/2016	4188.73	4186.12	4123.71	4069.88	4013.94
Claimed by the Petitioner based on truing up in the instant petition	4243.21	4345.00	4381.21	4354.06	4358.22
Approved after true-up in this order	4241.97	4329.18	4346.07	4314.36	4318.34
<b>Asset 6</b>					
Allowed vide order dated	10195.48	10123.44	10054.36	9989.67	9929.05



(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
29.8.2016 in Petition No. 34/TT/2015					
Claimed by the Petitioner based on trueing up in the instant petition	10217.70	10221.72	10351.76	10356.97	10440.57
Approved after true-up in this order	10194.69	10200.35	10333.47	10339.64	10424.79

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

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

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

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	18174.54	18038.27	18038.27	18038.27	18038.27
Interest on Loan	4841.54	3934.92	3046.41	2172.54	1319.42
Return on Equity	19373.19	19373.19	19373.19	19373.19	19373.19
Interest on Working Capital	875.92	870.54	865.77	861.53	855.94
O&M Expenses	5472.02	5663.05	5860.77	6065.73	6275.89
<b>Total</b>	<b>48737.21</b>	<b>47879.97</b>	<b>47184.41</b>	<b>46511.26</b>	<b>45862.71</b>

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

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	456.00	471.92	488.40	505.48	522.99
Maintenance	820.80	849.46	879.12	909.86	941.38
Spares					
Receivables	5992.28	5903.01	5817.26	5734.26	5638.86
<b>Total Working</b>	<b>7269.08</b>	<b>7224.39</b>	<b>7184.78</b>	<b>7149.60</b>	<b>7103.23</b>



(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Capital</b>					
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
<b>Interest on Working Capital</b>	<b>875.92</b>	<b>870.54</b>	<b>865.77</b>	<b>861.53</b>	<b>855.94</b>

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

41. The Petitioner has claimed E-COD of the Combined Asset as 5.12.2011. Based on the trued-up admitted capital cost and actual COD of all the transmission assets, E-COD has been worked out as follows:

<b>Computation of effective COD</b>						
Asset	CO D	Admitted Capital Cost as on 31.3.2019	Number of days from last COD	Weightage of the cost (in %)	Weighted days	Effective COD (Latest COD – Total weighted Days)
Asset 1	1.8.2011	91846.77	397	26.46	105.06	<b>3.12.2011</b>
Asset 2	31.8.2012	118525.12	0	34.15	0.00	
Asset 3	1.9.2011	28808.61	366	8.30	30.38	
Asset 4	1.10.2011	8733.14	336	2.52	8.45	
Asset 5	20.2.2012	27963.86	193	8.06	15.55	
Asset 6	1.3.2011	71194.84	550	20.51	112.82	
<b>Total</b>		<b>347072.34</b>		<b>100.00</b>	<b>272.26</b>	

42. E-COD is used to determine the lapsed life of the project as a whole, which works out as 7 (seven) 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)**

43. The Combined Asset may have multiple elements such as land, building, transmission line, sub-station and PLCC and each element may have a different span of life. Therefore, the concept of WAL has been used as the useful life of the project as whole.



44. WAL has been determined based on the admitted capital cost of the individual elements excluding freehold land as on 31.3.2019 and their respective life as stipulated in the 2019 Tariff Regulations. The element-wise life as it was defined in the 2014 Tariff Regulations prevailing at the time of actual COD of the individual transmission 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 33 years shown as follows:

Particulars (1)	Combined Cost (₹in lakh) (2)	Life in Years (3)	Weighted Cost (₹in lakh) (4) = (2)x(3)	Weighted Average Life of Asset (in years) (5) = (4)/(2)
Building	7915.51	25	197887.65	<b>32.67 years, rounded off to 33 years</b>
Transmission line	268944.80	35	9413068.11	
Sub-station	65103.61	25	1627590.30	
PLCC	1927.02	15	28905.30	
IT Equipment and Software	1235.04	6.67	8233.61	
<b>Total</b>	<b>345125.98</b>	<b>0</b>	<b>11275684.97</b>	

45. WAL as on 1.4.2019 as determined above is applicable prospectively (i.e. for the 2019-24 tariff period onwards) and no retrospective adjustment of depreciation in previous tariff period is required to be done. As discussed above, E-COD of the Combined Asset is 3.12.2011 and the lapsed life of the project as a whole works out as 7 years as on 1.4.2019 (i.e. the number of completed years as on 1.4.2019 from E-COD). Accordingly, the WAL has been used to determine the remaining useful life as on 31.3.2019 to be 26 years.

### **Capital Cost**

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

***“19. Capital Cost: (1) The Capital cost of the generating station or the transmission system, as the case may be, as determined by the Commission after prudence check***



*in accordance with these regulations shall form the basis for determination of tariff for existing and new projects.*

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

- (a) The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;*
- (b) Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;*
- (c) Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period;*
- (d) Interest during construction and incidental expenditure during construction as computed in accordance with these regulations;*
- (e) Capitalised initial spares subject to the ceiling rates in accordance with these regulations;*
- (f) Expenditure on account of additional capitalization and de-capitalisation determined in accordance with these regulations;*
- (g) Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the date of commercial operation as specified under Regulation 7 of these regulations;*
- (h) Adjustment of revenue earned by the transmission licensee by using the assets before the date of commercial operation;*
- (i) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*
- (j) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of the generating station but does not include the transportation cost and any other appurtenant cost paid to the railway;*
- (k) Capital expenditure on account of biomass handling equipment and facilities, for co-firing;*
- (l) Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;*
- (m) Expenditure on account of fulfilment of any conditions for obtaining environment clearance for the project;*
- (n) Expenditure on account of change in law and force majeure events; and*
- (o) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.*

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

- (a) Capital cost admitted by the Commission prior to 1.4.2019 duly trued up by excluding liability, if any, as on 1.4.2019;*
- (b) Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;*
- (c) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*



- (d) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;
- (e) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal up to the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and
- (f) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.

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

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

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

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

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

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

- (c) In case of hydro generating stations, any expenditure incurred or committed to be incurred by a project developer for getting the project site allotted by the State Government by following a transparent process;
- (d) Proportionate cost of land of the existing project which is being used for generating power from generating station based on renewable energy; and
- (e) Any grant received from the Central or State Government or any statutory body or authority for the execution of the project which does not carry any liability of repayment."

47. The Petitioner has claimed capital cost of ₹347340.81 lakh as on 31.3.2019 for the Combined Asset. The Commission has considered ₹347072.34 lakh as the



opening capital cost as on 1.4.2019 for determination of tariff in accordance with Regulation 19 of the 2019 Tariff Regulations.

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

48. The Petitioner has not claimed any ACE in the 2019-24 tariff period.

### **Debt-Equity Ratio**

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

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

*Provided that:*

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

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

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

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

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





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

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

(5) Any expenditure incurred or projected to be incurred on or after 1.4.2019 as may be admitted by the Commission as ACE 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.”

50. The debt and equity considered for the purpose of computation of tariff for the 2019-24 tariff period is as follows:

Funding	Capital Cost as on 1.4.2019 (₹ in lakh)	(in %)	Capital Cost as on 31.3.2024 (₹ in lakh)	(in %)
Debt	244005.23	70.30	244005.23	70.30
Equity	103067.11	29.70	103067.11	29.70
<b>Total</b>	<b>347072.34</b>	<b>100.00</b>	<b>347072.34</b>	<b>100.00</b>

### Depreciation

51. 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 project or element thereof including communication project. In case of the tariff of all the units of a generating station or all elements of a transmission project including communication project 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 project 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 project, 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 project, weighted average life for the generating station of the transmission project shall be applied. Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis.

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



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

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

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

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

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

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

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

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

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

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

52. We have considered the submissions of the Petitioner. WAROD has been worked out at Annexure VII taking into account the depreciation rates of assets as specified in the 2019 Tariff Regulations. The depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and accumulated depreciation up to 31.3.2019. The depreciation allowed in respect of the Combined Asset for the 2019-24 tariff period is as follows:



(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Depreciation</b>					
Opening Gross Block	347072.34	347072.34	347072.34	347072.34	347072.34
ACE	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	347072.34	347072.34	347072.34	347072.34	347072.34
Average Gross Block	347072.34	347072.34	347072.34	347072.34	347072.34
Freehold Land	1946.36	1946.36	1946.36	1946.36	1946.36
Weighted average rate of Depreciation (WAROD) (in %)	5.25	5.25	5.25	5.25	5.25
Balance useful life of the asset (Year)	26	25	24	23	22
Lapsed life at the beginning of the year (Year)	7	8	9	10	11
Aggregate Depreciable Value	310736.89	310736.89	310736.89	310736.89	310736.89
<b>Combined Depreciation during the year</b>	<b>18209.37</b>	<b>18209.37</b>	<b>18209.37</b>	<b>18209.37</b>	<b>18209.37</b>
Cumulative Aggregate Depreciation at the end of the year	151603.32	169812.69	188022.06	206231.44	224440.81
Remaining Aggregate Depreciable Value at the end of the year	159133.57	140924.19	122714.82	104505.45	86296.08

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

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

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

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

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

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



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

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

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

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

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

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

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	244005.23	244005.23	244005.23	244005.23	244005.23
Cumulative Repayments upto Previous Year	133393.95	151603.32	169812.69	188022.06	206231.44
Net Loan-Opening	110611.28	92401.91	74192.54	55983.17	37773.80
Additions	0.00	0.00	0.00	0.00	0.00
Repayment during the year	18209.37	18209.37	18209.37	18209.37	18209.37
Net Loan-Closing	92401.91	74192.54	55983.17	37773.80	19564.42
Average Loan	101506.59	83297.22	65087.85	46878.48	28669.11
Weighted Average Rate of Interest on Loan (in %)	4.7905	4.7432	4.6925	4.6340	4.5743
<b>Interest on Loan</b>	<b>4862.67</b>	<b>3950.95</b>	<b>3054.25</b>	<b>2172.35</b>	<b>1311.41</b>



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

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

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

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

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

*Provided further that:*

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

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

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

*a) rate of return on equity shall be reduced by 0.25% in case of failure to achieve the ramp rate of 1% per minute;*

*b) an additional rate of return on equity of 0.25% shall be allowed for every incremental ramp rate of 1% per minute achieved over and above the ramp rate of 1% per minute, subject to ceiling of additional rate of return on equity of 1.00%:*

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

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



(i.e. income from business other than business of generation or transmission, as the case may be) shall be excluded for the calculation of effective tax rate.

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

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

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."

56. The Petitioner has submitted that MAT rate is applicable to the Petitioner's company. Accordingly, MAT rate applicable in 2019-20 has been considered for the purpose of RoE which shall be trued-up with actual tax rate in accordance with



Regulation 31(3) of the 2019 Tariff Regulations. RoE allowed for the Combined Asset is as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity	103067.11	103067.11	103067.11	103067.11	103067.11
Additions	0.00	0.00	0.00	0.00	0.00
Closing Equity	103067.11	103067.11	103067.11	103067.11	103067.11
Average Equity	103067.11	103067.11	103067.11	103067.11	103067.11
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472	17.472
Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782	18.782
<b>Return on Equity</b>	<b>19358.06</b>	<b>19358.06</b>	<b>19358.06</b>	<b>19358.06</b>	<b>19358.06</b>

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

57. The O&M Expenses claimed by the Petitioner for the Combined Asset for the 2019-24 tariff period are as follows:

(₹ in lakh)					
Name of the Asset	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Transmission line</b>					
S/C Twin Conductor (Length: 448.477 km)	225.58	233.66	241.73	250.26	259.21
D/C Twin Conductor (Length: 832.364 km)	733.33	759.11	785.75	813.22	841.52
S/C Bundled 4 Sub-Conductors (Length: 491.942 km)	371.42	384.20	397.98	411.76	426.52
D/C Bundled 4 Sub-Conductors (Length: 709.978 km)	938.59	971.24	1005.33	1040.83	1077.04
<b>Sub-station bays</b>					
76 Numbers of 400 kV bays	2443.40	2529.28	2618.20	2710.16	2805.16
12 Numbers of 220 kV bays	270.12	279.60	289.44	299.52	310.08
<b>Transformers</b>					
400 kV (4X315 MVA ICT MVA)	451.08	467.46	483.84	501.48	517.86
<b>PLCC (2% of ₹396.80 lakh)</b>	<b>38.50</b>	<b>38.50</b>	<b>38.50</b>	<b>38.50</b>	<b>38.50</b>
<b>Total O&amp;M Expenses</b>	<b>5472.02</b>	<b>5663.05</b>	<b>5860.77</b>	<b>6065.73</b>	<b>6275.89</b>

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



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

<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
<b>Norms for sub-station Bays (₹ Lakh per bay)</b>					
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
<b>Norms for Transformers (₹ Lakh per MVA)</b>					
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
<b>Norms for AC and HVDC lines (₹ Lakh per km)</b>					
Single Circuit (Bundled Conductor with six or more sub-conductors)	0.881	0.912	0.944	0.977	1.011
Single Circuit (Bundled conductor with four sub-conductors)	0.755	0.781	0.809	0.837	0.867
Single Circuit (Twin & Triple Conductor)	0.503	0.521	0.539	0.558	0.578
Single Circuit (Single Conductor)	0.252	0.260	0.270	0.279	0.289
Double Circuit (Bundled conductor with four or more sub-	1.322	1.368	1.416	1.466	1.517
Double Circuit (Twin & Triple Conductor)	0.881	0.912	0.944	0.977	1.011
Double Circuit (Single Conductor)	0.377	0.391	0.404	0.419	0.433
Multi Circuit (Bundled Conductor with four or more sub-conductor)	2.319	2.401	2.485	2.572	2.662
Multi Circuit (Twin & Triple Conductor)	1.544	1.598	1.654	1.713	1.773
<b>Norms for HVDC stations</b>					
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





<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
<i>±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)</i>	2,563	2,653	2,746	2,842	2,942

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

*Provided further that:*

- i. the operation and maintenance expenses for new HVDC bi-pole schemes commissioned after 1.4.2019 for a particular year shall be allowed pro-rata on the basis of normative rate of operation and maintenance expenses of similar HVDC bi-pole scheme for the corresponding year of the tariff period;*
- ii. the O&M expenses norms for HVDC bi-pole line shall be considered as Double Circuit quad AC line;*
- iii. the O&M expenses of ±500 kV Mundra-Mohindergarh HVDC bipole scheme (2000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ±500 kV Talchar-Kolar HVDC bi-pole scheme (2000 MW);*
- iv. the O&M expenses of ±800 kV Champa-Kurukshetra HVDC bi-pole scheme (3000 MW) shall be on the basis of the normative O&M expenses for ±800 kV, Bishwanath-Agra HVDC bi-pole scheme;*
- v. the O&M expenses of ±800 kV, Alipurduar-Agra HVDC bi-pole scheme (3000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ±800 kV, Bishwanath-Agra HVDC bi-pole scheme; and*
- vi. the O&M expenses of Static Synchronous Compensator and Static Var Compensator shall be worked at 1.5% of original project cost as on commercial operation which shall be escalated at the rate of 3.51% to work out the O&M expenses during the tariff period. The O&M expenses of Static Synchronous Compensator and Static Var Compensator, if required, may be reviewed after three 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.”*

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

60. The O&M Expenses have been worked out as per the norms specified in the 2019 Tariff Regulations and are as follows:

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Sub-station bays</b>					
400 kV					
Number of bays	76	76	76	76	76
Norms (₹ lakh/bay)	32.15	33.28	34.45	35.66	36.91
220 kV					
Number of bays	12	12	12	12	12
Norms (₹ lakh/bay)	22.51	23.3	24.12	24.96	25.84
<b>Transformers</b>					
400 kV (4X315 MVA)	1260	1260	1260	1260	1260



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Norms (₹ lakh/MVA)	0.358	0.371	0.384	0.398	0.411
<b>Transmission line</b>					
S/C Twin Conductor (km)	448.477	448.477	448.477	448.477	448.477
Norms (₹ lakh/km)	0.503	0.521	0.539	0.558	0.578
D/C Twin Conductor (km)	832.364	832.364	832.364	832.364	832.364
Norms (₹ lakh/km)	0.881	0.912	0.944	0.977	1.011
S/C Bundled 4 Sub-Conductors (km)	491.942	491.942	491.942	491.942	491.942
Norms (₹ lakh/km)	0.755	0.781	0.809	0.837	0.867
D/C Bundled 4 Sub-Conductors (km)	709.978	709.978	709.978	709.978	709.978
Norms (₹ lakh/km)	1.322	1.368	1.416	1.466	1.517
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>5433.50</b>	<b>5624.57</b>	<b>5822.27</b>	<b>6027.21</b>	<b>6237.39</b>

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

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

#### ***“34. Interest on Working Capital***

(1) ...

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

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

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

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



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

“3. Definitions ...

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

62. The Petitioner has submitted that it has computed IWC for the 2019-24 period considering the SBI Base Rate plus 350 basis points as on 1.4.2019. The Petitioner has considered the rate of IWC as 12.05%. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. Rate of Interest considered is 12.05% (SBI 1 year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20, whereas, RoI for 2020-21 onwards has been considered as 11.25% (SBI 1-year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points). The components of the working capital and interest allowed thereon are as follows:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses (O&M Expenses for 1 month)	452.79	468.71	485.19	502.27	519.78
Maintenance Spares (15% of O&M Expenses)	815.03	843.69	873.34	904.08	935.61
Receivables (Equivalent to 45 days of annual fixed cost)	5992.44	5912.35	5825.61	5741.65	5645.29
<b>Total Working Capital</b>	<b>7260.25</b>	<b>7224.75</b>	<b>7184.14</b>	<b>7148.00</b>	<b>7100.69</b>
Rate of Interest (in %)	12.05	11.25	11.25	11.25	11.25
<b>Interest on Working Capital</b>	<b>874.86</b>	<b>812.78</b>	<b>808.22</b>	<b>804.15</b>	<b>798.83</b>

### Annual Fixed Charges of the 2019-24 Tariff Period

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



(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	18209.37	18209.37	18209.37	18209.37	18209.37
Interest on Loan	4862.67	3950.95	3054.25	2172.35	1311.41
Return on Equity	19358.06	19358.06	19358.06	19358.06	19358.06
Interest on Working Capital	874.86	812.78	808.22	804.15	798.83
O&M Expenses	5433.50	5624.57	5822.27	6027.21	6237.39
<b>Total</b>	<b>48738.47</b>	<b>47955.74</b>	<b>47252.17</b>	<b>46571.15</b>	<b>45915.06</b>

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

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

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

65. The Petitioner has prayed for reimbursement of licence fee in accordance with Regulation 70(4) of the 2019 Tariff Regulations for the 2019-24 tariff period. The Petitioner has also prayed for recovery of RLDC fee and charges in accordance with Regulation 70(3) of the 2019 Tariff Regulations for the 2019-24 tariff period. The prayed of the Petitioner is allowed in terms of the 2019 Tariff Regulations.

#### **Goods and Services Tax**

66. The Petitioner has submitted that if GST is levied at any rate and at any point of time in future on transmission of electricity, the same shall be borne and additionally paid by the Respondent(s) to the Petitioner and the same shall be charged and billed separately by the Petitioner. Further, additional taxes, if any, are to be paid by the Petitioner on account of demand from Government/Statutory authorities, the same may be allowed to be recovered from the beneficiaries.



67. MPPMCL has submitted that the demand of the Petitioner is premature and need not be considered. In response, the Petitioner has submitted that under the CGST Act, 2017 has been implemented w.e.f. 1.7.2017. The Govt. of India has exempted the charges of transmission of electricity vide Notification No. 12/2017-Central Tax (Rate) dated 28.6.2017 at Sl. No. 25 under the heading 9969 "Transmission or distribution of electricity by an electric transmission or distribution utility" by giving applicable GST rate Nil. Hence, the transmission charges as indicated at in the instant petition are exclusive of GST. Further, if GST is levied at any rate and at any point of time in future on charge of transmission of electricity, the same shall be borne and additional paid by the Respondent(s) to the Petitioner and the same shall be charged and billed separately by the Petitioner. Further additional taxes, if any are to be paid by the Petitioner on account of demand from Government/ Statutory authorities the same may be allowed to be recovered from the beneficiaries.

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

### **Security Expenses**

69. 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 shall be



filed on a yearly basis on the basis of the actual expenses of previous year subject to true-up at the end of the year on actual expenses. The Petitioner has submitted that the difference, if any, between the estimated security expenses and actual security expenses as per the audited accounts may be allowed to be recovered from the beneficiaries on a yearly basis.

70. 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 said petition has already been disposed of by the Commission vide order dated 3.8.2021. Therefore, the Petitioner's prayer in the instant petition for allowing it to file a separate petition for claiming the overall security expenses and consequential IWC has become infructuous.

### **Capital Spares**

71. The Petitioner has sought reimbursement of capital spares at the end of tariff block. The Petitioner's claim, if any, shall be dealt with in accordance with the provisions of the 2019 Tariff Regulations.

### **Sharing of Transmission Charges**

72. With effect from 1.7.2011, sharing of transmission charges for inter-State transmission systems was governed by the 2010 Sharing Regulations. However, with effect from 1.11.2020, the 2010 Sharing Regulations has been repealed and sharing of transmission charges is governed by the provisions of the 2020 Sharing Regulations. Accordingly, the liabilities of DICs for arrears of transmission charges determined through this order shall be computed DIC-wise in accordance with the



respective Tariff Regulations and shall be recovered from the concerned DICs through Bills under Regulation 15(2)(b) of the 2020 Sharing Regulations. Billing, collection and disbursement of transmission charges for subsequent period shall be recovered in terms of provisions of the 2020 Sharing Regulations as provided in Regulation 57 of the 2019 Tariff Regulations.

73. To summarise:

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

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
AFC (Asset 1)	12451.32	12881.48	13290.20	13360.00	13536.48
AFC (Asset 2)	16128.35	16249.23	16559.23	16564.31	16747.84
AFC (Asset 3)	5654.91	5806.50	5975.29	6075.16	6225.26
AFC (Asset 4)	1971.99	2029.50	2079.91	2113.81	2160.78
AFC (Asset 5)	4241.97	4329.18	4346.07	4314.36	4318.34
AFC (Asset 6)	10194.69	10200.35	10333.47	10339.64	10424.79

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

(₹ in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
48738.47	47955.74	47252.17	46571.15	45915.06

74. Annexure-I to Annexure-VII given hereinafter shall form part of the order.

75. This order disposes of Petition No. 356/TT/2020 in terms of the above discussion and findings.

**sd/-**  
**(Pravas Kumar Singh)**  
**Member**

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

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

**sd/-**  
**(P. K. Pujari)**  
**Chairperson**





<b>Petition No.:</b>	<b>356/TT/2020</b>
<b>Period</b>	<b>2014-19 Tariff</b>

## Annexure I (Asset 1)

2014-19 Capital Expenditure	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	ACE (₹ in lakh)				Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)					
		2014-15	2015-16	2017-18	Total			2014-15	2015-16	2016-17	2017-18	2018-19	
Land - Freehold	73.11	-	-	99.55	99.55	172.66	-	-	-	-	-	-	-
Land - Leasehold	-	-	-	-	-	-	3.34%	-	-	-	-	-	-
Building Civil Works & Colony	2220.44	235.00	-	-	235.00	2455.44	3.34%	78.09	82.01	82.01	82.01	82.01	82.01
Transmission Line	74616.76	2278.05	1410.00	-	3688.05	78304.81	5.28%	3999.91	4097.27	4134.49	4134.49	4134.49	4134.49
Sub Station	10009.86	126.95	139.00	-	265.95	10275.81	5.28%	531.87	538.89	542.56	542.56	542.56	542.56
PLCC	396.80	-	-	-	-	396.80	6.33%	25.12	25.12	25.12	25.12	25.12	25.12
IT Equipment (Incl. Software)	241.24	-	-	-	-	241.24	5.28%	12.74	12.74	12.74	12.74	12.74	12.74
<b>Total</b>	<b>87558.22</b>	<b>2640.00</b>	<b>1549.00</b>	<b>99.55</b>	<b>4288.55</b>	<b>91846.77</b>		<b>4647.72</b>	<b>4756.03</b>	<b>4796.92</b>	<b>4796.92</b>	<b>4796.92</b>	<b>4796.92</b>
<b>Average Gross Block (₹ in lakh)</b>								<b>88878.22</b>	<b>90972.72</b>	<b>91747.22</b>	<b>91797.00</b>	<b>91846.77</b>	
<b>Weighted Average Rate of Depreciation</b>								<b>5.23%</b>	<b>5.23%</b>	<b>5.23%</b>	<b>5.23%</b>	<b>5.22%</b>	

<b>Petition No.:</b>	<b>356/TT/2020</b>
<b>Period</b>	<b>2014-19 Tariff</b>

## Annexure II (Asset 2)

2014-19 Capital Expenditure	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	ACE (₹ in lakh)		Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)				
		2014-15	2015-16			2014-15	2015-16	2016-17	2017-18	2018-19
Land - Freehold	-	-	-	-	-	-	-	-	-	-
Land - Leasehold	-	-	-	-	3.34%	-	-	-	-	-
Building Civil Works & Colony	113.62	25.43	27.05	166.10	3.34%	4.22	5.10	5.55	5.55	5.55
Transmission Line	101532.27	827.80	380.16	102740.23	5.28%	5382.76	5414.65	5424.68	5424.68	5424.68
Sub Station	15002.84	68.68	132.20	15203.72	5.28%	793.96	799.27	802.76	802.76	802.76
PLCC	372.76	-	-	372.76	6.33%	23.60	23.60	23.60	23.60	23.60
IT Equipment (Incl. Software)	42.31	-	-	42.31	5.28%	2.23	2.23	2.23	2.23	2.23
<b>Total</b>	<b>117063.80</b>	<b>921.91</b>	<b>539.41</b>	<b>118525.12</b>		<b>6206.77</b>	<b>6244.84</b>	<b>6258.82</b>	<b>6258.82</b>	<b>6258.82</b>
<b>Average Gross Block (₹ in lakh)</b>						<b>117524.76</b>	<b>118255.42</b>	<b>118525.12</b>	<b>118525.12</b>	<b>118525.12</b>
<b>Weighted Average Rate of Depreciation</b>						<b>5.28%</b>	<b>5.28%</b>	<b>5.28%</b>	<b>5.28%</b>	<b>5.28%</b>

<b>Petition No.:</b>	<b>356/TT/2020</b>
<b>Period</b>	<b>2014-19 Tariff</b>

### Annexure III (Asset 3)

2014-19 Capital Expenditure	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	ACE (₹ in lakh)			Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)				
		2014-15	2015-16	Total			2014-15	2015-16	2016-17	2017-18	2018-19
Land - Freehold	1190.47	583.23	-	583.23	1773.70	-	-	-	-	-	-
Land - Leasehold	-	-	-	-	-	3.34%	-	-	-	-	-
Building Civil Works & Colony	4742.33	138.00	42.86	180.86	4923.19	3.34%	160.70	163.72	164.43	164.43	164.43
Transmission Line	-	-	-	-	-	5.28%	-	-	-	-	-
Sub Station	20571.77	82.00	69.50	151.50	20723.27	5.28%	1088.35	1092.35	1094.19	1094.19	1094.19
PLCC	635.84	-	2.05	2.05	637.89	6.33%	40.25	40.31	40.38	40.38	40.38
IT Equipment (Incl. Software)	750.57	-	-	-	750.57	5.28%	39.63	39.63	39.63	39.63	39.63
<b>Total</b>	<b>27890.97</b>	<b>803.23</b>	<b>114.41</b>	<b>917.64</b>	<b>28808.61</b>		<b>1328.93</b>	<b>1336.02</b>	<b>1338.63</b>	<b>1338.63</b>	<b>1338.63</b>
<b>Average Gross Block (₹ in lakh)</b>							<b>28292.59</b>	<b>28751.41</b>	<b>28808.61</b>	<b>28808.61</b>	<b>28808.61</b>
<b>Weighted Average Rate of Depreciation</b>							<b>4.70%</b>	<b>4.65%</b>	<b>4.65%</b>	<b>4.65%</b>	<b>4.65%</b>

Petition No.:	356/TT/2020
Period	2014-19 Tariff

### Annexure IV (Asset 4)

2014-19 Capital Expenditure	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	ACE (₹ in lakh)	Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)				
		2014-15			2014-15	2015-16	2016-17	2017-18	2018-19
Sub Station	8116.79	313.63	8430.42	5.28%	436.85	445.13	445.13	445.13	445.13
PLCC	302.72	-	302.72	6.33%	19.16	19.16	19.16	19.16	19.16
<b>Total</b>	<b>8419.51</b>	<b>313.63</b>	<b>8733.14</b>		<b>456.01</b>	<b>464.29</b>	<b>464.29</b>	<b>464.29</b>	<b>464.29</b>
<b>Average Gross Block (₹ in lakh)</b>					<b>8576.33</b>	<b>8733.14</b>	<b>8733.14</b>	<b>8733.14</b>	<b>8733.14</b>
<b>Weighted Average Rate of Depreciation</b>					<b>5.32%</b>	<b>5.32%</b>	<b>5.32%</b>	<b>5.32%</b>	<b>5.32%</b>

<b>Petition No.:</b>	<b>356/TT/2020</b>
<b>Period</b>	<b>2014-19 Tariff</b>

## Annexure V (Asset 5)

2014-19 Capital Expenditure	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	ACE (₹ in lakh)		Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)				
		2014-15	2015-16			2014-15	2015-16	2016-17	2017-18	2018-19
Land - Freehold	-	-	-	-	-	-	-	-	-	-
Land - Leasehold	-	-	-	-	3.34%	-	-	-	-	-
Building Civil Works & Colony	353.28	17.50	-	370.78	3.34%	12.09	12.38	12.38	12.38	12.38
Transmission Line	22249.79	1088.30	81.91	23420.00	5.28%	1203.52	1234.41	1236.58	1236.58	1236.58
Sub Station	3894.83	180.14	12.73	4087.70	5.28%	210.40	215.49	215.83	215.83	215.83
PLCC	85.38	-	-	85.38	6.33%	5.40	5.40	5.40	5.40	5.40
IT Equipment (Incl. Software)	-	-	-	-	5.28%	-	-	-	-	-
<b>Total</b>	<b>26583.28</b>	<b>1285.94</b>	<b>94.64</b>	<b>27963.86</b>		<b>1431.42</b>	<b>1467.70</b>	<b>1470.20</b>	<b>1470.20</b>	<b>1470.20</b>
<b>Average Gross Block (₹ in lakh)</b>						<b>27226.25</b>	<b>27916.54</b>	<b>27963.86</b>	<b>27963.86</b>	<b>27963.86</b>
<b>Weighted Average Rate of Depreciation</b>						<b>5.26%</b>	<b>5.26%</b>	<b>5.26%</b>	<b>5.26%</b>	<b>5.26%</b>

<b>Petition No.:</b>	<b>356/TT/2020</b>
<b>Period</b>	<b>2014-19 Tariff</b>

## Annexure VI (Asset 6)

2014-19  Capital Expenditure	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	ACE (₹ in lakh)	Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)				
		2014-15			2014-15	2014-15	2015-16	2016-17	2017-18
Transmission Line	64476.42	3.34	64479.76	5.28%	3404.44	3404.53	3404.53	3404.53	3404.53
Sub Station	6382.69	-	6382.69	5.28%	337.01	337.01	337.01	337.01	337.01
PLCC	131.47	-	131.47	6.33%	8.32	8.32	8.32	8.32	8.32
IT Equipment (Incl. Software)	200.92	-	200.92	5.28%	10.61	10.61	10.61	10.61	10.61
<b>Total</b>	<b>71191.50</b>	<b>3.34</b>	<b>71194.84</b>		<b>3760.38</b>	<b>3760.47</b>	<b>3760.47</b>	<b>3760.47</b>	<b>3760.47</b>
<b>Average Gross Block (₹ in lakh)</b>					<b>71193.17</b>	<b>71194.84</b>	<b>71194.84</b>	<b>71194.84</b>	<b>71194.84</b>
<b>Weighted Average Rate of Depreciation</b>					<b>5.28%</b>	<b>5.28%</b>	<b>5.28%</b>	<b>5.28%</b>	<b>5.28%</b>

<b>Petition No.:</b>	<b>356/TT/2020</b>
<b>Period</b>	<b>2019-24 Tariff</b>

## Annexure VII (Combined Asset)

2019-24  Capital Expenditure	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Admitted Capital Cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)				
				2019-20	2020-21	2021-22	2022-23	2023-24
Land - Freehold	1946.36	1946.36	-	-	-	-	-	-
Land - Leasehold	-	-	3.34%	-	-	-	-	-
Building Civil Works & Colony	7915.51	7915.51	3.34%	264.38	264.38	264.38	264.38	415.29
Transmission Line	268944.80	268944.80	5.28%	14200.29	14200.29	14200.29	14200.29	14110.36
Sub Station	65103.61	65103.61	5.28%	3437.47	3437.47	3437.47	3437.47	3415.70
PLCC	1927.02	1927.02	6.33%	121.98	121.98	121.98	121.98	101.10
IT Equipment (Incl. Software)	1235.04	1235.04	15.00%	185.26	185.26	185.26	185.26	185.26
<b>Total</b>	<b>347072.34</b>	<b>347072.34</b>		<b>18209.37</b>	<b>18209.37</b>	<b>18209.37</b>	<b>18209.37</b>	<b>18209.37</b>
<b>Average Gross Block (₹ in lakh)</b>				<b>347072.34</b>	<b>347072.34</b>	<b>347072.34</b>	<b>347072.34</b>	<b>347072.34</b>
<b>Weighted Average Rate of Depreciation</b>				<b>5.25%</b>	<b>5.25%</b>	<b>5.25%</b>	<b>5.25%</b>	<b>5.25%</b>