

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 11/TT/2020**

**Coram:**

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

**Date of Order: 01.06.2020**

**In the matter of:**

Approval under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and truing-up of transmission tariff of 2014-19 period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff for 2019-24 period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 of Asset A: 400 kV D/C Raipur (existing) - Raipur Pooling Station (Durg) Transmission Line along with associated bays, Asset B: 400 kV D/C Raigarh Pooling Station (Near Kotra)-Raigarh (existing) Sub-Station Transmission Line along associated bays, Asset C: 765 kV D/C Raigarh Pooling Station (Near Kotra) - Raipur Pooling Station (Durg) Transmission Line along with associated bays, Asset D: 765/400 kV, 1500 MVA, ICT I with spare unit and 765 kV, 240 MVAR Bus Reactor with Spare unit at Raigarh Pooling Station (near Kotra) along with associated bays, Asset E: 765/400 kV, 1500 MVA, ICT II and 400 kV, 80 MVAR Bus Reactor at Raigarh Pooling Station (near Kotra) along with associated Bays and 765 kV, 3X80 MVAR, Shunt Reactor for 765 kV, D/C Raigarh Pooling Station (near Kotra) - Raipur Pooling Station (Durg) ckt.-1 charged as Bus Reactor along with associated bays, Asset F: 765/400 kV, 1500 MVA, ICT with Spare unit and 765 kV, 240 MVAR Bus Reactor with Spare unit at Raipur Pooling Station (Durg) along with associated bays, Asset G: 765/400 kV, 1500 MVA, ICT III at Raigarh Pooling Station (near Kotra) along with associated bays and Asset H: 765/400 kV, 1500 MVA, ICT IV at Raigarh Pooling Station (near Kotra) along with associated Bays & 765 kV, 3X80 MVAR, Shunt Reactor for 765 kV, D/C Raigarh Pooling Station (near Kotra)-Raipur Pooling Station (Durg) ckt.-II charged as Bus Reactor along with associated bays (hereinafter referred to as "Transmission Assets / Combined Asset") under establishment of Pooling Stations at Raigarh (Kotra) and Raipur for IPP Generation Projects in Chhattisgarh (Set A/ DPR -1) in Western Region (hereinafter referred to as "Transmission Project").



**And in the matter of:**

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

....Petitioner

**Vs**

1. Madhya Pradesh Power Management Company Ltd.  
Shakti Bhawan, Rampur  
Jabalpur - 482 008
2. Madhya Pradesh Power Transmission Company Ltd.  
Shakti Bhawan, Rampur  
Jabalpur - 482 008
3. Madhya Pradesh Audyogik Kendra  
Vikas Nigam (Indore) Ltd.  
3/54, Press Complex, Agra-Bombay Road, Indore - 452 008
4. Maharashtra State Electricity Distribution Co. Ltd.  
Hong Kong Bank Building, 3rd Floor  
M.G. Road, Fort, Mumbai - 400 001.
5. Maharashtra State Electricity Transmission Co. Ltd.  
Prakashganga, 6th Floor, Plot No. C-19, E-Block,  
Bandra Kurla Complex, Bandra (East) Mumbai - 400 051.
6. Gujarat Urja Vikas Nigam Ltd.  
Sardar Patel Vidyut Bhawan,  
Race Course Road, Vadodara - 390 007
7. Electricity Department  
Government of Goa, Vidyut Bhawan, Panaji,  
Near Mandvi Hotel, Goa - 403 001
8. Electricity Department  
Administration of Daman & Diu  
Daman - 396 210
9. DNH Power Distribution Corporation Limited  
Vidyut Bhawan, 66kV Road, Near Secretariat Amla,  
Silvassa - 396 230
10. Chhattisgarh State Power Transmission Co. Ltd.  
Office of the Executive Director (C & P)  
State Load Dispatch Building,  
Dangania, Raipur – 492 013



11. Chhattisgarh State Power Distribution Co. Ltd.  
P.O. Sunder Nagar, Dangania, Raipur  
Chhattisgarh - 492 013
12. Rajasthan Rajya Vidyut Prasaran Nigam Limited  
Vidyut Bhawan, Vidyut Marg, Jaipur - 302 005
13. Ajmer Vidyut Vitran Nigam Ltd.  
400 kV GSS Building (Ground Floor), Ajmer Road,  
Heerapura, Jaipur.
14. Jaipur Vidyut Vitran Nigam Ltd.  
400 kV GSS Building (Ground Floor), Ajmer Road,  
Heerapura, Jaipur.
15. Jodhpur Vidyut Vitran Nigam Ltd.  
400 kV GSS Building (Ground Floor), Ajmer Road,  
Heerapura, Jaipur.
16. Himachal Pradesh State Electricity Board  
Vidyut Bhawan  
Kumar House Complex Building II  
Shimla - 171 004
17. Punjab State Electricity Board  
The Mall, Patiala - 147 001
18. Haryana Power Purchase Centre  
Shakti Bhawan, Sector - 6  
Panchkula (Haryana) - 134 109
19. Power Development Department  
Government of Jammu & Kashmir  
Mini Secretariat, Jammu
20. Uttar Pradesh Power Corporation Ltd.  
(Formerly Uttar Pradesh State Electricity Board)  
Shakti Bhawan, 14, Ashok Marg,  
Lucknow - 226 001
21. Delhi Transco Ltd.  
Shakti Sadan, Kotla Road,  
New Delhi -110 002
22. BSES Yamuna Power Ltd.  
BSES Bhawan, Nehru Place,  
New Delhi



23. BSES Rajdhani Power Ltd,  
BSES Bhawan, Nehru Place,  
New Delhi
24. North Delhi Power Ltd.  
Power Trading & Load Dispatch Group  
CENNET Building, Adjacent To 66/11 kV Pitampura – 3,  
Grid Building, Near PP Jewellers  
Pitampura, New Delhi - 110034
25. Chandigarh Administration  
Sector - 9, Chandigarh.
26. Uttarakhand Power Corporation Ltd.  
Urja Bhawan, Kanwali Road  
Dehradun
27. North Central Railway  
Allahabad.
28. New Delhi Municipal Council  
Palika Kendra, Sansad Marg,  
New Delhi -110 002
29. Karnataka Power Transmission Corporation Ltd. (KPTCL),  
Kaveri Bhavan, Bangalore – 560 009
30. Transmission Corporation of Andhra Pradesh Ltd. (APTRANSCO),  
Vidyut Soudha, Hyderabad – 500 082
31. Kerala State Electricity Board (KSEB)  
Vaidyuthi Bhavanam  
Pattom, Thiruvananthapuram – 695 004
32. TANGEDCO  
NPKRR Maaligai, 800, Anna Salai  
Chennai – 600 002
33. Electricity Department  
Government of Pondicherry,  
Pondicherry - 605001
34. Eastern Power Distribution Company of Andhra Pradesh Limited  
(APEPDCL), P&T Colony, Seethmmadhara, Vishakhapatnam, Andhra  
Pradesh
35. Southern Power Distribution Company of Andhra Pradesh Limited  
(APSPDCL), Srinivasasa Kalyana Mandapam Backside,  
Tiruchanoor Road, Kesavayana Gunta,



- Tirupati - 517 501,  
Chittoor District, Andhra Pradesh
36. Central Power Distribution Company of Andhra Pradesh Limited  
(APCPDCL)  
Corporate Office, Mint Compound,  
Hyderabad - 500 063  
Andhra Pradesh
37. Northern Power Distribution Company of Andhra Pradesh Limited  
(APNPDCL)  
Opp. NIT Petrol Pump  
Chaitanyapuri, Kazipet,  
Warangal – 506 004  
Andhra Pradesh
38. Bangalore Electricity Supply Company Ltd.  
(BESCOM), Corporate Office  
K. R. Circle, Bangalore - 560 001  
Karnataka
39. Gulbarga Electricity Supply Company Ltd. (GESCOM)  
Station Main Road, Gulbarga  
Karnataka
40. Hubli Electricity Supply Company Ltd. (HESCOM)  
Navanagar, PB Road  
Hubli, Karnataka
41. MESCOM Corporate Office,  
Paradigm Plaza, AB Shetty Circle  
Mangalore - 575 001, Karnataka
42. Chamundeswari Electricity Supply Corporation Ltd. (CESC)  
# 927, L J Avenue Ground Floor,  
New Kantharaj URS Road Saraswatipuram  
Mysore - 570 009, Karnataka
43. R. K. M. Power Limited  
147, Gitanjali Nagar, Avanti Vihar,  
Sector-I, Raipur (C.G.) - 492004
44. Athena Chhattisgarh Power Pvt. Ltd.  
7-1-24 B Block, 5th Floor, "Roxana Towers",  
Greenlands, Begumpet, Hyderabad - 500016
44. Jindal Power Limited  
Post Box No. - 16,  
Kharsia Road, Raigarh - 496001



45. SKS Power Generation (Chhattisgarh) Ltd.  
501 B, Elegant Business Park, Andheri Kurla Road,  
J. B. Nagar, Andheri(E), Mumbai - 400059
46. Korba West Power Co. Ltd.  
2nd Floor, Centrum Plaza, Golf Course Road,  
Sector - 53, Gurgaon - 122002
47. KSK Mahanadi Power Company Ltd.  
8-2/293/82/A/431/A, Road No. 22, Jubilee Hills,  
Hyderabad - 500033
48. Bharat Aluminium Co. Ltd.  
Core - 6, Scope Office Complex,  
Lodi Road, New Delhi - 110003
49. Visa Power Ltd.  
HUL Building, 2nd Floor, 9,  
Shakespeare Sarani, Kolkata - 700071
50. GMR Chhatisgarh Energy Pvt. Ltd.  
10th Floor Tower, D Block,  
Knowledge Park, 4/1, Bannerghatta Road,  
Near Dairy Circle, Bangalore-560029
51. D. B. Power Ltd.  
Plot No. 813, Phase - V,  
Udyog Vihar, Gurgaon - 122016

...Respondents

**For Petitioner** : Shri Abhay Chaudhary, ED, PGCIL  
Shri J. Mazumdar, Chief GM, PGCIL  
Shri Akshay Kumar Verma, Senior GM, PGCIL  
Shri S.S. Raju, Senior GM, PGCIL  
Smt. Manju Gupta, Senior GM, PGCIL  
Shri V Srinivas, Senior GM, PGCIL  
Shri Zafrul Hasan, DGM, PGCIL  
Shri Amit Bhargava, GM, PGCIL

**For Respondents** : None

### **ORDER**

The present petition has been filed by Power Grid Corporation of India Ltd. ("PGCIL") for truing up of transmission tariff of combined assets including Asset A:



400 kV D/C Raipur (existing)-Raipur Pooling Station (Durg) Transmission Line along with associated bays, Asset B: 400 kV D/C Raigarh Pooling Station (Near Kotra)-Raigarh (existing) Sub-Station Transmission Line along associated bays, Asset C: 765 kV D/C Raigarh Pooling Station (Near Kotra)-Raipur Pooling Station (Durg) Transmission Line along with associated bays, Asset D: 765/400 kV, 1500 MVA, ICT I with spare unit and 765 kV, 240 MVAr Bus Reactor with Spare unit at Raigarh Pooling Station (near Kotra) along with associated bays, Asset E: 765/400 kV, 1500 MVA, ICT II and 400 kV, 80 MVAr Bus Reactor at Raigarh Pooling Station (near Kotra) along with associated Bays and 765 kV, 3X80 MVAR, Shunt Reactor for 765 kV, D/C Raigarh Pooling Station (near Kotra)-Raipur Pooling Station (Durg) ckt.-1 charged as Bus Reactor along with associated bays, Asset F: 765/400 kV, 1500 MVA, ICT with Spare unit and 765 kV, 240 MVAr Bus Reactor with Spare unit at Raipur Pooling Station (Durg) along with associated bays, Asset G: 765/400 kV, 1500 MVA, ICT III at Raigarh Pooling Station (near Kotra) along with associated bays and Asset H: 765/400 kV, 1500 MVA, ICT IV at Raigarh Pooling Station (near Kotra) along with associated Bays & 765 kV, 3X80 MVAR, Shunt Reactor for 765 kV, D/C Raigarh Pooling Station (near Kotra)-Raipur Pooling Station (Durg) ckt.-II charged as Bus Reactor along with associated bays (hereinafter referred to as “transmission assets/ Combined Asset”) under establishment of Pooling Stations at Raigarh (Kotra) and Raipur for IPP Generation Projects in Chhattisgarh (Set A/ DPR -1) in Western Region (hereinafter referred to as “transmission project”) for 2014-19 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) and tariff determination for 2019-24 tariff period under Central Electricity Regulatory Commission (Terms and



Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”).

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

*“1) Allow the addcap for 2014-19 tariff block as claimed as per Para 5 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 5 and 7 above.*

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

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

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

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

*7) Allow the petitioner to file a separate petition before Hon’ble Commission for claiming the overall security expenses and consequential IOWC on that security expenses as mentioned at para 9.6 above.*

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

*9) Allow the Petitioner to bill and recover GST on Transmission Charges separately from the respondents, if GST on transmission is levied at any rate in future. Further, any taxes including GST and duties including cess etc. imposed by any*



*statutory/Govt./municipal authorities shall be allowed to be recovered from the beneficiaries.*

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

3. The Respondents are distribution licensees, who are procuring transmission services from the Petitioner, mainly beneficiaries of Western Region.

### **Background**

4. The Investment Approval (IA) for the transmission project was accorded by the Board of Directors of the Petitioner vide Memorandum No. C/CP/Chhattisgarh-IPP dated 15.12.2010 with an estimated cost of ₹171952 lakh including an IDC of ₹10458 lakh (based on 3<sup>rd</sup> quarter, 2010 price level). The Petitioner, vide its Memorandum dated 24.2.2015, has submitted Revised Cost Estimates (RCE) of the project at an estimated cost of ₹179272 lakh including IDC of ₹9858 lakh. The scope of the project “under establishment of Pooling Stations at Raigarh (Kotra) and Raipur for IPP Generation Projects in Chhattisgarh (Set A/ DPR -1) in Western Region” is as under:-

#### **A. Transmission Lines:**

- i. Raigarh Pooling Station (Near Kotra) – Raipur Pooling Station  
765 kV D/C line: 250 km
- ii. Raigarh Pooling Station (Near Kotra) – Raigarh 400 kV D/C  
line: 6 km
- iii. Raipur Pooling Station – Raipur 400 kV D/C line: 30 km

#### **B. Sub-Stations:**

- i. Establishment of 765/400 kV, 4X1500 MVA Raigarh Pooling  
Station (Near Kotra)



ii. Establishment of 765/400 kV, 1X1500 MVA Raipur Pooling Station

iii. Bay extensions at Raigarh and Raipur existing Sub-Stations

5. The transmission project was scheduled to be put into commercial operation on or before 1.9.2013 as per the Investment Approval.

6. The date of commercial operation of the transmission elements covered under the instant transmission system is as under:-

Asset	COD	Remark
Asset A	1.4.2013	Covered in Petition No. 162/TT/2013 (order dated 18.6.2015) and Petition No. 49/TT/2016 (order dated 20.6.2016)
Asset B	1.5.2013	
Asset C	1.2.2014	
Asset D	1.6.2013	
Asset E	1.8.2013	
Asset F	1.12.2013	
Asset G	1.3.2014	
Asset H	1.11.2013	

7. The provisional tariff in respect of the above mentioned eight assets was approved vide order dated 9.9.2013 under Regulation 5(4) of the 2009 Tariff Regulations. The final tariff of the aforesaid assets from COD to 31.3.2014 was determined and allowed vide order dated 18.6.2015 in Petition No. 162/TT/2013. The tariff allowed vide order dated 18.6.2015 in Petition No. 162/TT/2013 was trued up and tariff for 2014-19 period for combined assets was determined vide order dated 20.6.2016 in Petition No. 49/TT/2016.

**Truing-up of Annual Fixed Charges for 2014-19 tariff period**

8. The details of the trued up transmission charges claimed by the Petitioner for the instant assets are as under:-



(₹ in lakh)

Combined Asset					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	8216.12	8499.65	8655.69	8715.50	8743.29
Interest on Loan	8941.58	8580.12	8055.90	7364.15	6702.90
Return on Equity	9594.03	9986.84	10175.45	10249.22	10308.79
Interest on working capital	738.19	749.49	749.56	741.05	732.32
O & M Expenses	2215.97	2289.44	2365.41	2444.05	2525.10
<b>Total</b>	<b>29705.89</b>	<b>30105.54</b>	<b>30002.01</b>	<b>29513.97</b>	<b>29012.40</b>

9. The details submitted by the Petitioner in support of its claim of true up Interest on Working Capital are as under:-

(₹ in lakh)

Combined Asset					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O & M Expenses	184.66	190.79	197.12	203.67	210.42
Maintenance Spares	332.40	343.42	354.81	366.61	378.77
Receivables	4950.98	5017.59	5000.34	4919.00	4835.40
<b>Total Working Capital</b>	<b>5468.04</b>	<b>5551.80</b>	<b>5552.27</b>	<b>5489.28</b>	<b>5424.60</b>
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
<b>Interest on working capital</b>	<b>738.19</b>	<b>749.49</b>	<b>749.56</b>	<b>741.05</b>	<b>732.32</b>

10. No comments or suggestions have been received from the general public in response to the notices published in the newspapers by the Petitioner in accordance with Section 64 of the Electricity Act, 2003 ("the Act"). The hearing in this matter was held on 26.2.2020.

11. M. P. Power Management Company Limited (MPPMCL), Respondent No. 1 has filed its reply vide affidavit dated 16.1.2020 and has raised the issues of inclusion of ₹168.21 lakh in capital cost upto 31.3.2014 and Additional Capitalization claimed after cut-off date. The Petitioner vide affidavit dated 25.2.2020 has filed its rejoinder in response to the reply filed by MPPMCL wherein the Petitioner has explained that the rationale behind the inclusion of ₹168.21 lakh in capital cost is in accordance with the APTEL's judgement dated 14.9.2019 in



Appeal No. 74 of 2017 which allowed the Petitioner to claim Initial spares on total project cost. Further, the Petitioner in its rejoinder has also submitted that the additional capitalization claimed after cut-off date is on account of Balance & Retention Payments. Uttar Pradesh Power Corporation Limited (UPPCL), Respondent No. 20 has filed its reply vide affidavit dated 5.2.2020 and has raised the issues of incorrect consideration of cumulative depreciation upto 31.3.2014, additional capitalization incurred after cut-off date and adjustment of floating rate of interest while calculating weighted average rate of interest. The Petitioner vide affidavit dated 25.2.2020 has filed its rejoinder in response to the reply filed by UPPCL wherein the Petitioner has mentioned that due to an inadvertent error, the cumulative depreciation upto 31.3.2014 was incorrectly reflected in Form 10A and that the Petitioner has submitted the revised Form 10A correcting the cumulative depreciation amount upto 31.3.2014 and has taken into account its impact in tariff calculations. The Petitioner has further filed its response regarding additional capitalization incurred after cut-off date and adjustment of floating rate of interest while calculating weighted average rate of interest stating that the details of additional capitalization incurred after the cut-off date has been submitted by Petitioner at Page 17-18 under Para 5.10 of the instant Petition. The Petitioner in its rejoinder has submitted that loan from SBI and ICICI and foreign funding has been deployed with respect to transmission assets in the instant petition and prayed to allow to bill and adjust the impact on Interest on Loan due to change in interest rate on account of floating rate of interest. BSES Rajdhani Power Ltd. (BRPL), Respondent No. 23 has filed its reply vide affidavit dated 11.2.2020 and has raised the issue of accrual IDC discharge being claimed as additional capitalization, effective rate considered for the calculation of RoE, calculation of



initial spares and use of Optical Ground Wire (OPGW) in the transmission assets covered in the instant petition. The Petitioner vide affidavit dated 25.2.2020 has filed its rejoinder in response to the reply filed by BRPL wherein the Petitioner has mentioned that the accrual IDC discharged is being claimed under Regulation 14(1)(i) of the 2014 Tariff Regulations. The Petitioner in its rejoinder has also stated the rationale behind claiming the initial spares of ₹168.21 lakh. Further, the Petitioner in its rejoinder has also clarified that no OPGW has been installed under the scope of the instant assets. The issues raised by MPPMCL, UPPCL and BRPL have been dealt in the respective paragraphs of this order. Having heard the representatives of the Petitioner and perused the material on record, we proceed to dispose of the petition.

### **Capital Cost**

12. The details of apportioned approved capital cost, capital cost as on 31.3.2014, and Additional Capital Expenditure incurred upto 31.3.2019 as claimed by the Petitioner for the Combined Asset are as under:

Asset Name	Approved Capital Cost As per FR	Approved Capital Cost As per RCE	Capital cost as on 31.3.2014	Additional capitalisation (claimed)					Total completion cost as on 31.3.2019 (claimed)
				2014-15	2015-16	2016-17	2017-18	2018-19	
Combined Asset	171952.19	179271.84	160174.14 <sup>#</sup>	6564.38	4230.00	2322.36	173.62	906.38	174370.78

# Capital cost as on 31.3.2014 - ₹159005.03 lakh as approved in Petition No.49/TT/2016

# Includes IDC of ₹1000.94 lakh discharged on cash basis during 2014-15 allowed in previous order dated 20.6.2016 in Petition No. 49/TT/2016.

# Includes excess disallowed spares of ₹ 168.20 lakh

The Commission vide order dated 20.6.2016 in Petition No. 49/TT/2016 had allowed the Capital Cost of ₹159005.03 lakh for the Combined Asset as opening Capital Cost as on 1.4.2014.



13. The Petitioner vide Auditor Certificates dated 31.7.2019 has submitted capital cost incurred upto 31.3.2014 and Additional Capital Expenditure incurred upto 31.3.2019. The Petitioner has claimed Capital Cost of ₹160174.14 lakh for Combined Asset as on 31.3.2014 after adding the accrued IDC of ₹1000.94 lakh allowed earlier in order dated 20.6.2016 in Petition No. 49/TT/2016 and excess disallowed initial spares of ₹168.21 lakh to the Capital Cost of ₹159005.01 lakh as on 31.3.2014, as was worked out by the Commission in order dated 20.6.2016 in Petition No. 49/TT/2016.

**Initial spares**

14. The Petitioner has claimed initial spares of ₹168.21 lakh which were disallowed as excess initial spares based on the exceeding ceiling limits of individual assets (A to H) in the order dated 20.06.2016 in Petition No. 49/TT/2016 and has prayed to revise the initial spares allowed earlier for the instant assets in light of the judgement of the Appellate Tribunal for Electricity (APTEL) dated 14.9.2019 in Appeal No.74 of 2017.

15. Based on the judgement of the APTEL dated 14.9.2019 in Appeal No. 74 of 2017, the Petitioner vide affidavit dated 31.10.2019 has submitted revised project cost of transmission line and sub-station of the Combined Asset for the purpose of computing allowable initial spares for 2009-14 period. The re-calculated working submitted by the Petitioner based on total project cost is as under:



Particulars	Estimated Completion Cost (A) (₹ in lakh)	Initial Spares claimed (B) (₹ in lakh)	Ceiling Limit (C) (in %)	Allowable Initial Spares Worked Out (₹ in lakh)	Excess [B-D] If B>D
				$D = [(A-B)*C/(100-C)]$	
TL	97754.00	722.19	0.75	733.24	0.00
SS	74239.78	1531.87	2.5	1864.31	0.00

16. MPPMCL in its reply dated 16.1.2020 has questioned the inclusion of excess disallowed initial spares of ₹168.21 lakh in the capital cost upto 31.3.2014 and stated that the expenditure disallowed needs to be audited and allowed only after prudence check by the Commission. BRPL in its reply dated 11.2.2020 has also questioned the claim of the Petitioner for excess disallowed initial spares and stated that the initial spares upto the ceiling limit were calculated element-wise based on the capital cost of the element in the individual asset in the order dated 20.06.2016 in Petition No. 49/TT/2016 and that the excess spares claimed may be disallowed. We have considered the submissions of the Petitioner, MPPMCL and BRPL. As per the APTEL's judgement dated 14.9.2019 in Appeal No. 74 of 2017, the Initial Spares are to be allowed as a percentage of the project cost as a whole as on the cut-off date. Regulation 3(29) of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as the "2009 Tariff Regulations") defines "project cost" as under:

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

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

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

18. It is observed that the Petitioner has rightly claimed the initial spares for the instant assets, which were put into commercial operation during the 2009-14 tariff period, as per the norms specified in the 2009 Tariff Regulations and has accordingly submitted the project cost details of transmission line and sub-station for the computation of allowable initial spares. Based on the submissions made by the Petitioner, the Commission has reworked the allowable initial spares as follows:

Particulars	Capital Cost as on 31.3.2014 allowed in order dated 20.06.2016 in Petition No. 49/TT/2016 (Including disallowed initial spares) (A) (₹ in lakh)	Add-cap claimed upto cut-off date per Auditor's Certificate dated 31.7.2019 (B) (₹ in lakh)	Accrual IDC discharged in 2014-15 allowed as add-cap (C) (₹ in lakh)	Total project cost upto cut-off date (D) = A+B+C (₹ in lakh)	Initial spares claimed (₹ in lakh)	Initial spares ceiling limit (%)	Initial spares allowable (₹ in lakh)	Initial spares to be allowed (₹ in lakh)	Excess initial spares disallowed (₹ in lakh)
TL	92196.37*	4842.65	597.08	97636.10	722.19	0.75	732.35	722.19	0.00
SS	62574.88#	7134.48	403.86	70113.22	1531.87	2.50	1758.50	1531.87	0.00

\* Includes excess disallowed spares of ₹ 9.74 lakh

# Includes excess disallowed spares of ₹ 158.46 lakh

19. Accordingly, as specified in the 2009 Tariff Regulations, initial spares are allowed as Additional Capitalization during 2014-15 for the Combined Asset as a percentage of the capital cost as on the cut-off date as per the judgement of APTEL dated 14.9.2019 in Appeal No. 74 of 2017 and it is as follows:-





(₹ in lakh)		
Particulars	TL	SS
Initial spares claimed in No. Petition 49/TT/2016 (A)	722.19	1531.87
(-) Excess initial spares disallowed vide order dated 20.9.2016 in Petition No.49/TT/2016 (B)	9.74	158.46
Initial spares allowed in order dated 20.6.2016 in Petition No. 49/TT/2016 C = (A - B)	712.45	1373.41
Initial spares allowable after reworking (D)	722.19	1531.87
Additional allowance of spares in 2014-19 E = (D-C)	9.74 (E1)	158.46 (E2)
<b>Total initial spares allowed ((E1) + (E2))</b>		<b>168.20</b>

**Interest During Construction (IDC) and Incidental Expenses During Construction (IEDC)**

20. The Petitioner has submitted the IDC discharge statement showing details of accrued IDC discharged upto COD, IDC discharged after COD upto 31.3.2014 and during 2014-15 period. The Petitioner has also submitted that the entire IEDC has been discharged as on COD for the said assets which have been combined into a single asset. The accrual IDC of ₹1000.94 lakh to be discharged during 2014-15 on cash basis was approved as Additional Capitalization vide order dated 20.6.2019 in Petition No. 49/TT/2016 while determining the tariff for 2014-19 period. The details of IDC discharged during 2014-15 have been submitted by the Petitioner in the instant petition.

21. BRPL has raised the issue of the claim of accrued IDC discharged on cash basis during 2014-15 and has stated that the same may be disallowed as there is no provision of claiming the accrual IDC as Additional Capitalization in the 2014 Tariff Regulations.



22. We have considered the submissions made by the Petitioner. We have noted that some IDC has been discharged on cash basis upto 31.3.2014 and remaining during 2014-15 period and the same was approved in order dated 20.6.2016 in Petition No. 49/TT/2016. Accordingly, the same has been considered as part of the Additional Capitalization in addition to the Additional Capitalization submitted as per the Auditor Certificate dated 31.7.2019 and is as shown below:

**(₹ in lakh)**

Asset No.	DOCO	IDC as per certificate	IDC Discharged upto 31.03.2014	IDC Discharged in 2014-15
Asset-A	1.4.2013	284.70	284.70	0
Asset-B	1.5.2013	291.09	291.09	0
Asset-C	1.2.2014	7357.52	6570.32	787.19
Asset-D	1.6.2013	284.50	284.50	0
Asset-E-I	1.8.2013	222.14	222.14	0
Asset-E-II	1.8.2013	171.44	171.44	0
Asset-F	1.12.2013	602.04	514.76	87.28
Asset-G	1.3.2014	349.41	252.16	97.25
Asset-H-I	1.11.2013	205.19	195.61	9.59
Asset-H-II	1.11.2013	122.29	102.66	19.63
<b>Total</b>		<b>9890.32</b>	<b>8889.38</b>	<b>1000.94</b>

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

23. The admissibility of Additional Capital Expenditure after date of commercial operation is to be dealt with in accordance with the provisions of Regulation 14(1) and 14(3) of the 2014 Tariff Regulations. The Petitioner has claimed the following Additional Capital Expenditure for the Combined Asset covered in the instant petition and has submitted the Auditor's Certificate in support of the same:-

**(₹ in lakh)**

Asset	Additional capitalisation (Claimed)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Combined Asset	6564.38	4230.00	2322.36	173.62	906.38

24. The Petitioner vide affidavit dated 25.2.2020 has submitted that the instant assets were put into commercial operation during 2009-14 tariff period for which tariff was allowed. Further, the Petitioner has submitted that the scope of works under the subject project comprises of transmission lines and sub-stations in line with Investment Approval and RCE. The said scope of works is executed through various packages e.g. Tower Package, Conductor Package, Insulator Package, Substation Package, Transformer Package etc. The Petitioner further submitted that the Additional Capitalization in the contextual assets beyond cut-off date is completely on account of balance and retention payment for works executed within the cut-off date. The Additional Capitalization within cut-off date has been claimed under Regulation 14(1)(i) and 14(1)(ii) of the 2014 Tariff Regulations whereas the same beyond cut-off date has been claimed under Regulation 14(3)(v) of the 2014 Tariff Regulations.

25. The Petitioner vide affidavit dated 25.2.2020 has also submitted the Additional Capitalization after cut-off date on account of works executed before cut-off date. The details of the same are furnished below:

Asset	Party	Package	Financial Year		
			2016-17	2017-18	2018-19
Asset A	JV of EMC & Amitasha	Tower Package	123.90		
	CGL	Substation Package	440.46	59.11	18.29
	Hardayal Singh Patel, Raipur	Misc. Civil works	14.33		
	Arti Construction, Durg		1.34		
	Vishwakarma Construction, Bhilai		3.53		
	Vaibhavi Enterprises		13.95		
	Jhajharia Nirman Pvt Ltd		16.99		
	A.K.GUPTA &CO		146.68		22.07
	R&R / IGS - RAIPUR PS				0.61
<b>Total</b>			<b>761.20</b>	<b>59.11</b>	<b>40.97</b>

Asset	Party	Package	Financial Year		
			2016-17	2017-18	2018-19
Asset B	TATA	Tower Package	97.14		
	Santosh Kumar Agarwal & Co.	Misc. Civil works	16.25	1.95	24.25
<b>Total</b>			<b>113.40</b>	<b>1.95</b>	<b>24.25</b>
Asset C	CGL	Sub-station Package		21.67	
	GPIL	Tower Package			272.91
	Indian Fruits Pvt. Ltd.	Tower Package			119.91
	Hind Aluminium	Tower Package			131.61
	JSK	Tower Package			303.15
<b>Total</b>				<b>21.67</b>	<b>827.58</b>
Asset D	TECHNO	Sub-station Package	15.77		
	JV CGL & CG	Auto Transformer Package	4.69		
	CGL	Substation Package	1.41		
	Alstom	CB Package	2.97	6.50	
<b>Total</b>			<b>24.83</b>	<b>6.50</b>	
Asset E1	JV CGL & CG	Auto Transformer Package	5.34		
	ALSTOM	CB Package	1.41		
<b>Total</b>			<b>6.75</b>		
Asset E2	CGL	Sub-station Package	0.04		
	ALSTOM	CB Package	6.34	5.91	
<b>Total</b>			<b>6.38</b>	<b>5.91</b>	
Asset F	CGL	Sub-station Package	171.09		
	JV of CGL & CG	Auto Transformer Package	7.43		
	TBEA	Reactor Package		41.35	
<b>Total</b>			<b>178.52</b>	<b>41.35</b>	
Asset G	ALSTOM	CB Package		6.65	



Asset	Party	Package	Financial Year		
			2016-17	2017-18	2018-19
<b>Total</b>				<b>6.65</b>	
Asset H1	JV CGL & CG	Auto Transformer Package	15.06		
	ALSTOM	CB Package	1.41		
<b>Total</b>			<b>16.47</b>		
Asset H2	TECHNO	Sub-station Package	15.70		
	ALSTOM	CB Package	5.64	30.48	
<b>Total</b>			<b>21.35</b>	<b>30.48</b>	

26. MPPMCL, UPPCL and BRPL in their replies have raised the issue of Additional Capitalization claimed beyond cut-off date and have stated that the same may be allowed after carrying out prudence check.

27. The cut-off date for the Assets A, B, D, E, F and H works out to be 31.3.2016 and for Assets C and G, the cut-off date is 31.3.2017.

28. We have considered the submissions made by the Petitioner. It is observed that the actual audited Additional Capitalization claimed by the Petitioner is on account of balance and retention payment for works executed within the cut-off date, accrual IDC discharged in 2014-15, undischarged spares and unexecuted/balance works. The same has been considered for computation of total capital cost as on 31.3.2019. The Additional Capitalization claimed for the period 2015-16 to 2018-19 is allowed under Regulation 14 (1)(i), 14(1)(ii) and Regulation 14(3)(v) of the 2014 Tariff Regulations. Further, we have considered Additional Capital Expenditure during 2014-15 considering the allowable initial spares of ₹168.20 lakh and IDC of ₹1000.94 lakh discharged on cash basis during 2014-15.

29. While truing up the tariff for 2014-19 period, it has been observed that the Petitioner has introduced IT assets under IT Equipment and Software sub-head in the Gross Block at the beginning of 1.4.2014 without changing total value of opening Gross Block and has further claimed additional capital expenditure towards the IT assets during 2014-19 period. While doing so, the Petitioner has not provided any justification for introducing IT Equipment and Software sub-head in the Gross Block at this stage. It is observed that the instant assets were put into commercial operation in 2009-14 period and the Petitioner did not include the IT assets in the Gross Block either at the time of determination and truing up the tariff of 2009-14 period or during determination of tariff of 2014-19 period and has suddenly come up with the inclusion of IT assets in the Gross Block during 2014-19 truing up in the instant petition. Based on the above facts and lack of relevant acceptable justification to substantiate the approach of the Petitioner for including IT assets in the Gross Block, we are not inclined to allow such inclusion of IT assets in the Gross Block as on 1.4.2014 and the same is disallowed. However, the ACE claimed towards the IT Assets in the instant Petition has been allowed and clubbed together with the Additional Capital Expenditure allowed for sub-station sub-head of the Gross Block.

30. The capital cost of ₹159005.03 lakh of the Combined Asset as on 31.3.2014 approved in order dated 20.6.2016 in Petition No. 49/TT/2016 has been considered as opening capital cost as on 1.4.2014 for truing up of tariff in accordance with Regulation 8 of the 2014 Tariff Regulations. The details of the earlier approved capital cost as on 31.3.2014 along with the breakup of sub-heads in Gross Block, considered for tariff computation is as under:-



**Combined Asset****(₹ in lakh)**

Particulars	Capital Expenditure as on 31.3.2014
Freehold Land	4401.98
Leasehold Land	0.00
Building and Civil Works	8894.93
Transmission Line	92186.63
Sub-Station Equipment	53134.68
PLCC	386.81
<b>Total</b>	<b>159005.03</b>

31. The details of ACE allowed is as follows:-

Combined Asset	Capital cost as on 31.3.2014	Additional Capitalization					Total capital cost including additional capitalization as on 31.3.2019
		2014-15	2015-16	2016-17	2017-18	2018-19	
As claimed	160174.13	6564.38	4230.00	2322.36	173.62	906.28	174370.78
Approved in this order	<b>159005.03</b> (160174.13 - 1000.94 - 168.21)	<b>7733.51</b> (6564.37 + 1000.94 + 168.20)	4230.00	2322.36	173.62	906.28	174370.78

32. Against the overall RCE approved capital cost of ₹179272 lakh, the project cost of the Combined Asset including additional capital expenditure is ₹174370.78 lakh which is within the RCE cost. Therefore, there is no cost over-run as per RCE.

**Debt-Equity Ratio**

33. The Petitioner has considered debt-equity ratio as 70:30 as on 31.3.2014 and for ACE during 2014-19 period. The debt-equity ratio of 70:30 has been considered for capital cost as on 31.3.2014 and ACE during 2014-19 tariff period



as provided under Regulation 19 of the 2014 Tariff Regulations. The same has been summarised as under:-

Combined Asset	As on 31.3.2014		As on 31.3.2019	
	Capital cost (₹ in lakh)	(%)	Capital cost (₹ in lakh)	(%)
Debt	111303.53	70.00	122059.58	70.00
Equity	47701.50	30.00	52311.20	30.00
<b>Total</b>	<b>159005.03</b>	<b>100.00</b>	<b>174370.78</b>	<b>100.00</b>

### **Interest on Loan (IOL)**

34. The Petitioner has claimed the IOL based on actual interest rates for each year during the 2014-19 period. The Petitioner has considered the weighted average rate of IoL on the basis of prevailing rates as on 1.4.2014 for respective loans. The Petitioner has submitted that the weighted average rate of IoL has been considered on the basis of rates prevailing as on 1.4.2014 and has prayed to consider floating rate of interest applicable during 2014-19 period, if any, during the truing up of tariff.

35. UPPCL has raised the Petitioner's claim to adjust the impact on IoL due to change in interest rate on account of floating rate of interest applicable during 2014-19 period and has stated that the Petitioner has already negotiated loan portfolios bearing fixed year rate of interest. Therefore, the apprehension of the Petitioner regarding imposition of floating rate of interest is premature.

36. We have considered the submissions made by the Petitioner and UPPCL. It is observed that the SBI loan, ICICI loan and foreign funding with respect to transmission assets in the instant petition have been deployed with floating interest rates. Accordingly, factoring in the impact of floating rate of interest, the IOL has



been worked out based on actual interest rate, in accordance with Regulation 26 of the 2014 Tariff Regulations.

37. The interest on loan has been worked out as detailed below: -

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

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

38. The details of IOL calculated are as follows:-

(₹ in lakh)

<b>Combined Asset</b>					
<b>Particular</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Gross Normative Loan	111303.53	116716.99	119677.98	121303.65	121425.18
Cumulative Repayments upto Previous Year	2413.87	10595.39	19063.85	27686.94	36369.19
Net Loan-Opening	108889.66	106121.60	100614.13	93616.71	85055.99
Additions due to Additional Capitalization	5413.46	2960.99	1625.67	121.53	634.40
Repayment during the year	8181.52	8468.46	8623.10	8682.25	8709.87
Net Loan-Closing	106121.60	100614.13	93616.71	85055.99	76980.52
Average Loan	107505.63	103367.87	97115.42	89336.35	81018.26
Weighted Average Rate of Interest on Loan (%)	8.314	8.305	8.302	8.254	8.289
<b>Interest on Loan</b>	<b>8938.17</b>	<b>8584.25</b>	<b>8062.71</b>	<b>7373.60</b>	<b>6715.24</b>

39. Accordingly, the IoL approved earlier, claimed by the Petitioner in the instant petition and trued up IoL allowed is shown in the table below:-

(₹ in lakh)

<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Approved earlier vide order dated 20.6.2016 in Petition No. 49/TT/2016	8940.47	8697.11	8292.88	7668.22	6918.81
As claimed by the Petitioner	8941.58	8580.12	8055.90	7364.15	6702.90
Allowed after truing up	8938.17	8584.25	8062.71	7373.60	6715.24



40. The variation in IOL in comparison to that claimed by the Petitioner is on account of consequential impact of decrease in depreciation on account of reduction in opening gross block as on 1.4.2014 during the 2014-19 tariff period.

**Return on Equity (RoE)**

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

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

42. The Commission in order dated 27.4.2020 in Petition No. 274/TT/2019 has arrived at the effective tax rate based on the notified MAT rates for the Petitioner and the same is given in the table below. The same MAT rates are considered for the purpose of grossing up of rate of RoE for truing up of the tariff of the 2014-19 tariff period in terms of the provisions of the 2014 Tariff Regulations.

<b>Year</b>	<b>MAT Rates (in %)</b>	<b>Grossed up ROE (Base Rate/1-t) (in %)</b>
2014-15	20.9605	19.610
2015-16	21.3416	19.705
2016-17	21.3416	19.705
2017-18	21.3416	19.705
2018-19	21.5488	19.758

43. Accordingly, the RoE allowed for the instant assets is as follows:-.



(₹ in lakh)

<b>Combined Asset</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Opening Equity	47701.50	50021.55	51290.55	51987.24	52039.32
Addition due to Additional Capitalization	2320.05	1269.00	696.69	52.08	271.88
Closing Equity	50021.55	51290.55	51987.24	52039.32	52311.20
Average Equity	48861.53	50656.05	51638.89	52013.28	52175.26
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50
Tax Rate applicable (%)	20.9605	21.3416	21.3416	21.3416	21.5488
Rate of Return on Equity (Pre-tax) (%)	19.610	19.705	19.705	19.705	19.758
<b>Return on Equity (Pre-tax)</b>	<b>9581.75</b>	<b>9981.77</b>	<b>10175.44</b>	<b>10249.22</b>	<b>10308.79</b>

44. The details of the RoE approved in the previous order, claimed by the Petitioner in the instant petition and trued up RoE allowed is shown in the table below:-

(₹ in lakh)

<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Approved earlier vide order dated 20.6.2016 in Petition No. 49/TT/2016	9559.76	9979.79	10322.99	10451.45	10451.45
As claimed by the Petitioner	9594.03	9986.84	10175.45	10249.22	10308.79
Allowed after truing up	9581.75	9981.77	10175.44	10249.22	10308.79

45. The variation in RoE in comparison to that claimed by the Petitioner is on account of variation in applicable MAT rate during the 2014-19 tariff period.

### **Depreciation**

46. The Petitioner has claimed depreciation considering gross block of ₹159173.18 lakh as on 31.3.2014 for Combined Asset and Additional Capitalization of ₹15197.57 lakh (including IDC of ₹1000.94 lakh) for Combined Asset. The Petitioner has also introduced IT assets in the Opening Gross Block as



on 1.4.2014 for the first time since COD and has further claimed depreciation for the IT Assets @ 15% for 2014-19 tariff period.

47. UPPCL in its reply dated 5.2.2020 has submitted that the Petitioner has considered incorrect cumulative depreciation upto 31.3.2014 which would further have impact on calculation of IoL and would affect the calculation of transmission charges for 2014-19 tariff period. The Petitioner in its rejoinder to the reply filed by UPPCL has submitted that due to an inadvertent error the cumulative depreciation upto 31.3.2014 was incorrectly reflected in Form 10A and that the Petitioner has submitted the revised Form 10A correcting the cumulative depreciation amount upto 31.3.2014 and has taken into account its impact in tariff calculations.

48. We have considered submissions of the Petitioner and UPPCL. It has been observed that the instant assets were put into commercial operation during the 2009-14 period and the tariff from the respective COD to 31.3.2014 was allowed vide order dated 18.6.2015 in Petition No. 162/TT/2013. Further, the tariff of the 2009-14 period was trued up and tariff for the 2014-19 period was allowed vide order dated 20.6.2016 in Petition No. 49/TT/2016. It is observed that the Petitioner did not claim any capital expenditure towards "IT Equipment" in the above said two petitions where tariff for the instant assets for the 2009-14 period was allowed, tariff of the 2009-14 was trued up and tariff for 2014-19 was determined, even though there was a clear provision in the 2009 and 2014 Tariff Regulations providing depreciation @ 15% for IT Equipment. Having failed to make a claim as per the 2009 Tariff Regulations, 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” @ of 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 upto 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 upto 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.

49. Depreciation has been computed considering capital expenditure as on 31.3.2014 and ACE approved for 2014-19 tariff period. The weighted average useful life of the assets has been considered as 30 years for all the assets in accordance with the above regulation. The details of the depreciation allowed for



the Combined Asset under Regulation 27 of the 2014 Tariff Regulations are as under:-

(₹ in lakh)

<b>Combined Asset</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Opening Gross Block	159005.03	166738.54	170968.53	173290.89	173464.50
Additional Capitalisation	7733.51	4229.99	2322.36	173.61	906.28
Closing Gross Block	166738.54	170968.53	173290.89	173464.50	174370.78
Average Gross Block	162871.79	168853.54	172129.71	173377.70	173917.64
Average Gross Block (90% depreciable assets)	162569.05	168540.22	171801.92	173043.13	173581.18
Average Gross Block (100% depreciable assets)	302.74	313.32	327.79	334.57	336.46
Rate of Depreciation (%)	5.02	5.02	5.01	5.01	5.01
Depreciable Value (excluding IT equipment and software) - 90%	142350.24	147719.47	150650.29	151767.38	152251.35
Depreciable value of IT equipment and software - 100%	302.74	313.32	327.79	334.57	336.46
Total Depreciable Value	142652.98	148032.78	150978.08	152101.94	152587.81
Remaining Depreciable Value	140239.11	137437.39	131914.23	124415.00	116218.62
<b>Depreciation</b>	<b>8181.52</b>	<b>8468.46</b>	<b>8623.10</b>	<b>8682.25</b>	<b>8709.87</b>

50. The details of the depreciation approved earlier, claimed by the Petitioner and trued up is shown in the table below:-

(₹ in lakh)

<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Approved earlier vide order dated 20.6.2016 in Petition No. 49/TT/2016	8180.07	8538.76	8800.18	8887.86	8887.86
As claimed by the Petitioner	8216.12	8499.65	8655.69	8715.50	8743.29
Allowed after truing up	8181.52	8468.46	8623.10	8682.25	8709.87

51. The variation in Depreciation in comparison to that claimed by the Petitioner is on account of reduction in gross block on account of disallowance of cost of disallowed initial spares of ₹168.21 lakh from the capital cost as on 31.3.2014. Further, the variation in depreciation in comparison to that claimed by the Petitioner

is also observed on account of disallowance of inclusion of IT assets in Gross Block as on 31.3.2014 as laid out at para 48 of the instant order which in turn has affected the computation of weighted average rate of depreciation considered for Gross Block.

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

52. The Petitioner has claimed O&M Expense as per Regulation 29(4)(a) of the 2014 Tariff Regulations for Combined Asset. It is observed that the claim made by the Petitioner is within the Norms specified in Regulation 29(4)(a) of the 2014 Tariff Regulations and the same is allowed for the 2014-19 period. The O&M Expenses allowed for Combined Asset is given here under:-

#### **Sub-Station Bays**

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Norm (₹ lakh/bay)</b>					
765 kV Bay	84.42	87.22	90.12	93.11	96.20
400 kV Bay	60.30	62.30	64.37	66.51	68.71
<b>Number of bays</b>					
765 kV Bay	13	13	13	13	13
400 kV Bay	14	14	14	14	14
O&M Expenses for 765 kV Bay	1,097.46	1,133.86	1,171.56	1,210.43	1,250.60
O&M Expenses for 400 kV Bay	844.20	872.20	901.18	931.14	961.94
<b>Total O&amp;M Expenses</b>	<b>1941.66</b>	<b>2006.06</b>	<b>2072.74</b>	<b>2141.57</b>	<b>2212.54</b>

#### **AC and HVDC Lines**

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Norm (₹ lakh/km)</b>					
D/C Bundled with 4 or more sub-conductor)	1.06	1.10	1.13	1.17	1.21
D/C Twin/Triple Conductor	0.71	0.73	0.76	0.78	0.81
<b>Line Length in km.</b>					
D/C Bundled with 4 or more sub-conductor)	239.843	239.843	239.843	239.843	239.843

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
D/C Twin/Triple Conductor	27.722	27.722	27.722	27.722	27.722
D/C Bundled with 4 or more sub-conductor)	254.71	263.11	271.74	280.86	290.21
D/C Twin/Triple Conductor	19.60	20.26	20.93	21.62	22.34
<b>Total O&amp;M Expenses</b>	<b>274.31</b>	<b>283.37</b>	<b>292.67</b>	<b>302.48</b>	<b>312.55</b>

(₹ in lakh)

Combined Asset					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Total O&amp;M Expenses Allowed</b>	<b>2215.97</b>	<b>2289.43</b>	<b>2365.41</b>	<b>2444.05</b>	<b>2525.09</b>

53. There is no variation in the O&M Expenses approved in order dated 20.6.2016, claim made by the Petitioner in this Petition and that trued up in the instant order.

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

54. The Petitioner is entitled to claim IWC as per Regulation 28(1)(c) of the 2014 Tariff Regulations. The components of the working capital and the Petitioner's entitlement to interest thereon are discussed hereunder:-

##### **(i) Maintenance Spares:**

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

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

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

##### **(iii) Receivables:**

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





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

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

55. The IWC allowed for the Combined Asset is shown in the table below:-

(₹ in lakh)

<b>Combined Asset</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
O & M Expenses	184.66	190.79	197.12	203.67	210.42
Maintenance Spares	332.40	343.41	354.81	366.61	378.76
Receivables	4942.41	5012.11	4995.94	4914.94	4831.80
Total	5459.47	5546.31	5547.87	5485.22	5420.99
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
<b>Interest on working capital</b>	<b>737.03</b>	<b>748.75</b>	<b>748.96</b>	<b>740.50</b>	<b>731.83</b>

56. The details of the IWC approved in earlier order, claimed by the Petitioner in the instant Petition and trued up IWC allowed in the instant order are shown in the table below:-

(₹ in lakh)

<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Approved earlier vide order dated 20.6.2016 in Petition No. 49/TT/2016	736.54	752.92	761.73	756.67	743.90
As claimed by the Petitioner	738.19	749.49	749.56	741.05	732.32
Allowed after truing up	737.03	748.75	748.96	740.50	731.83

57. The IWC has decreased in comparison to that claimed by the Petitioner on account of decrease in receivables due to decrease in RoE and depreciation on account of reduction in opening gross block as on 1.4.2014 and variation in ROE on account of applicable MAT rate during the 2014-19 tariff period.

## Annual Transmission Charges 2014-19

58. Accordingly, the annual transmission charges after truing up for the 2014-19 tariff period are as under:-

(₹ in lakh)

Combined Asset					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	8181.52	8468.46	8623.10	8682.25	8709.87
Interest on Loan	8938.17	8584.25	8062.71	7373.60	6715.24
Return on Equity	9581.75	9981.77	10175.44	10249.22	10308.79
Interest on Working Capital	737.03	748.75	748.96	740.50	731.83
O&M Expenses	2215.97	2289.43	2365.41	2444.05	2525.09
<b>Total</b>	<b>29654.43</b>	<b>30072.66</b>	<b>29975.62</b>	<b>29489.62</b>	<b>28990.82</b>

59. Accordingly, the comparison between Annual Transmission Charges as claimed by the Petitioner and approved after truing up is shown in the table below:-

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Annual Fixed Charges approved in order dated 20.6.2016 in Petition No. 49/TT/2016	29632.82	30258.02	30543.20	30208.25	29527.12
As claimed by the Petitioner	29705.89	30105.54	30002.01	29513.97	29012.40
Allowed after truing up	29654.43	30072.66	29975.62	29489.62	28990.82

60. The Annual Transmission Charges approved after truing up have reduced in comparison to that claimed by the Petitioner owing to variation in gross block wherein initial spares of ₹168.21 lakh have been allowed as add cap during the 2014-15 whereas petitioner has claimed the same as addition in opening gross block as on 1.4.2014. This has affected the computation of depreciation and RoE thereby also affecting the receivables for IWC. Further, the variation in depreciation in comparison to that claimed by the Petitioner is also observed on account of disallowance of inclusion of IT assets in Gross Block as on 31.3.2014 as laid out at

paragraph 48 of the instant order which in turn has affected the computation of weighted average rate of depreciation considered for Gross Block

### **Determination of Annual Fixed Charges for 2019-24 tariff period**

61. The transmission charges claimed by the Petitioner for 2019-24 tariff period is as follows:-

(₹ in lakh)					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Depreciation	8766.45	8748.43	8715.98	8715.98	8715.98
Interest on Loan	6008.11	5275.27	4549.41	3892.09	3245.91
Return on Equity	9825.09	9825.09	9825.09	9825.09	9825.09
Interest on Working Capital	590.82	588.41	585.04	583.61	581.25
Operation and Maintenance	5068.55	5244.44	5429.41	5623.85	5819.78
<b>Total</b>	<b>30259.02</b>	<b>29681.64</b>	<b>29104.93</b>	<b>28640.62</b>	<b>28188.01</b>

62. The Petitioner has claimed the following 'Interest on Working Capital' for the 2019-24 tariff period:-

(₹ in lakh)					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
O&M expenses	422.38	437.04	452.45	468.65	484.98
Maintenance Spares	760.28	786.67	814.41	843.58	872.97
Receivables	3720.37	3659.38	3588.28	3531.04	3465.74
<b>Total</b>	<b>4903.03</b>	<b>4883.09</b>	<b>4855.14</b>	<b>4843.27</b>	<b>4823.69</b>
Rate of Interest (%)	12.05	12.05	12.05	12.05	12.05
<b>Interest on Working Capital</b>	<b>590.82</b>	<b>588.41</b>	<b>585.04</b>	<b>583.61</b>	<b>581.25</b>

### **Capital Cost**

63. Regulation 19(3) and 19(5) of the 2019 Tariff Regulations provide as follows:-

*“19. Additional Capitalization*

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

*(a) Capital cost admitted by the Commission prior to 1.4.2019 duly trued up by excluding liability, if any, as on 1.4.2019;*

*(b) Additional Capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;*

*(c) Capital expenditure on account of renovation and modernisation as*



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

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

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

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

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

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

64. The Petitioner has claimed the capital cost of Combined Asset as ₹174370.73 lakh as on 31.3.2019.

65. The admitted trued up capital cost of ₹174370.78 lakh as on 31.3.2019 has been considered as the opening capital cost as on 1.4.2019 for determination of

tariff for 2019-24 tariff period in accordance with Regulation 19 of the 2019 Tariff Regulations.

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

66. The Petitioner has not claimed any Additional Capital Expenditure for 2019-24 tariff period for the Combined Asset in the instant petition.

### **Debt-Equity Ratio**

67. Clause (3), (4) and (5) of Regulation 18 of the 2019 Tariff Regulations provide as under:-

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

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

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

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

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

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



	<b>Capital Cost as on 1.4.2019 (in ₹ lakh)</b>	<b>(%)</b>	<b>Total Cost as on 31.3.2024 (in ₹ lakh)</b>	<b>(%)</b>
Debt	122059.58	70.00	122059.58	70.00
Equity	52311.20	30.00	52311.20	30.00
<b>Total</b>	<b>174370.78</b>	<b>100.00</b>	<b>174370.78</b>	<b>100.00</b>

## **Return on Equity**

69. Regulation 30 of the 2019 Tariff Regulations provide as under:-

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

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

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

*Provided further that:*

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

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

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

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

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

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

70. The Petitioner has submitted that MAT rate is applicable to the Petitioner's company. Accordingly, the MAT rate applicable during the 2018-19 has been considered for the purpose of RoE, which shall be trued up with actual tax rate in accordance with Clause (3) of Regulation 31 of the 2019 Tariff Regulations. The RoE has been worked out and allowed as follows:-

(₹ in lakh)

<b>Combined Asset</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Opening Equity	52311.20	52311.20	52311.20	52311.20	52311.20
Addition due to Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Closing Equity	52311.20	52311.20	52311.20	52311.20	52311.20
Average Equity	52311.20	52311.20	52311.20	52311.20	52311.20
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50
Tax Rate applicable (%)	17.472	17.472	17.472	17.472	17.472
Rate of Return on Equity (Pre-tax) (%)	18.782	18.782	18.782	18.782	18.782
<b>Return on Equity (Pre-tax)</b>	<b>9825.09</b>	<b>9825.09</b>	<b>9825.09</b>	<b>9825.09</b>	<b>9825.09</b>

### **Interest on Loan ("IOL")**

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

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

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

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

*(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year. (5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting adjustment for interest capitalized:*

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

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

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

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

72. The weighted average rate of IoL has been considered on the basis of rate prevailing as on 1.4.2019. The Petitioner has prayed that the change in interest rate due to floating rate of interest applicable, if any, during 2019-24 tariff period will be adjusted. Accordingly, the floating rate of interest, if any, shall be considered at the time of true up or next revision of tariff. By considering above, the IoL has been worked out in accordance with Regulation 32 of the 2019 Tariff Regulations. The details of the IoL has been worked out and allowed are as under:-

(₹ in lakh)					
<b>Combined Asset</b>					
<b>Particular</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Gross Normative Loan	122059.58	122059.58	122059.58	122059.58	122059.58
Cumulative Repayments upto Previous Year	45079.06	53844.78	62610.50	71376.22	80141.94
Net Loan-Opening	76980.52	68214.80	59449.08	50683.36	41917.64
Additions due to Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Repayment during the year	8765.72	8765.72	8765.72	8765.72	8765.72
Net Loan-Closing	68214.80	59449.08	50683.36	41917.64	33151.92
Average Loan	72597.66	63831.94	55066.22	46300.50	37534.78
Weighted Average Rate of Interest on Loan (%)	8.29	8.28	8.28	8.42	8.65
<b>Interest on Loan</b>	<b>6021.86</b>	<b>5288.30</b>	<b>4559.64</b>	<b>3898.34</b>	<b>3248.01</b>



## Depreciation

73. Clause (1), (2) and (5) of Regulation 33 of the 2019 Tariff Regulations provide as under:-

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

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

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

*(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.”*

74. IT equipment has been allowed as a part of the Gross Block for 2019-24 tariff period and the salvage value of IT equipment has been considered as nil, i.e. IT asset has been considered as 100 % depreciable. Further, the 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. The depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and accumulated depreciation up to 31.3.2019. As regards the accumulated



depreciation of IT Equipment up to 31.3.2019, the depreciation for IT Equipment has been considered at 5.28% from COD to 31.3.2019. The detailed calculations for depreciation for the transmission asset are worked out and allowed as follows:-

(₹ in lakh)

<b>Combined Asset</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Opening Gross Block	174370.78	174370.78	174370.78	174370.78	174370.78
Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	174370.78	174370.78	174370.78	174370.78	174370.78
Average Gross Block	174370.78	174370.78	174370.78	174370.78	174370.78
Average Gross Block (90% depreciable assets)	174034.32	174034.32	174034.32	174034.32	174034.32
Average Gross Block (100% depreciable assets)	336.46	336.46	336.46	336.46	336.46
Rate of Depreciation (%)	5.03	5.03	5.03	5.03	5.03
Depreciable Value (excluding IT equipment and software) - 90%	152658.90	152658.90	152658.90	152658.90	152658.90
Depreciable value of IT equipment and software - 100%	336.46	336.46	336.46	336.46	336.46
Total Depreciable Value	152995.36	152995.36	152995.36	152995.36	152995.36
Remaining Depreciable Value	107916.30	99150.58	90384.86	81619.14	72853.42
<b>Depreciation</b>	<b>8765.72</b>	<b>8765.72</b>	<b>8765.72</b>	<b>8765.72</b>	<b>8765.72</b>

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

75. Regulation 35 (3) and (4) of the 2019 Tariff Regulations provide as under:

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

<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
<i>Norms for sub-station Bays (₹ Lakh per bay)</i>					
765 kV	45.01	46.60	48.23	49.93	51.68
400 kV	32.15	33.28	34.45	35.66	36.91
220 kV	22.51	23.30	24.12	24.96	25.84
132 kV and below	16.08	16.64	17.23	17.83	18.46
<i>Norms for Transformers (₹ Lakh per MVA)</i>					
765 kV	0.491	0.508	0.526	0.545	0.564
400 kV	0.358	0.371	0.384	0.398	0.411
220 kV	0.245	0.254	0.263	0.272	0.282
132 kV and below	0.245	0.254	0.263	0.272	0.282
<i>Norms for AC and HVDC lines (₹ Lakh per km)</i>					
Single Circuit (Bundled Conductor with six or more sub-conductors)	0.881	0.912	0.944	0.977	1.011



<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Single Circuit (Bundled conductor with four sub-conductors)	0.755	0.781	0.809	0.837	0.867
Single Circuit (Twin & Triple Conductor)	0.503	0.521	0.539	0.558	0.578
Single Circuit (Single Conductor)	0.252	0.260	0.270	0.279	0.289
Double Circuit (Bundled conductor with four or more sub-conductors)	1.322	1.368	1.416	1.466	1.517
Double Circuit (Twin & Triple Conductor)	0.881	0.912	0.944	0.977	1.011
Double Circuit (Single Conductor)	0.377	0.391	0.404	0.419	0.433
Multi Circuit (Bundled Conductor with four or more sub-conductor)	2.319	2.401	2.485	2.572	2.662
Multi Circuit (Twin & Triple Conductor)	1.544	1.598	1.654	1.713	1.773
<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
±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)	2,563	2,653	2,746	2,842	2,942

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

Provided further that:

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



(3000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for  $\pm 800$  kV, Bishwanath-Agra HVDC bi-pole scheme; and

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

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

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

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

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

76. The O&M Expenses claimed by the Petitioner for the instant assets are as follows:-

#### Sub-station Bays

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Norm (₹ lakh/bay)</b>					
765 kV Bay	45.01	46.60	48.23	49.93	51.68
400 kV Bay	32.15	33.28	34.45	35.66	36.91
<b>Number of bays</b>					
765 kV Bay	13	13	13	13	13
400 kV Bay	14	14	14	14	14
O&M Expense for 765 kV Bay	585.13	605.80	626.99	649.09	671.84
O&M Expense for 400 kV Bay	450.10	465.92	482.30	499.24	516.74
<b>Total O&amp;M Expenses</b>	1035.23	1071.72	1109.29	1148.33	1188.58



## Transformer

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Norm (₹ lakh/MVA)</b>					
765 kV Transformer	0.49	0.51	0.53	0.55	0.56
<b>MVA Rating</b>	1500	1500	1500	1500	1500
<b>No. of Transformers</b>	5	5	5	5	5
O&M Expense for 765 kV Transformer	3682.50	3810.00	3945.00	4087.50	4230.00
<b>Total O&amp;M Expenses</b>	3682.50	3810.00	3945.00	4087.50	4230.00

## AC and HVDC Lines

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Norm (₹ lakh/km)</b>					
D/C Bundled with 4 or more sub-conductor)	1.32	1.37	1.42	1.47	1.52
D/C Twin/Triple Conductor	0.88	0.91	0.94	0.98	1.01
<b>Line Length in km.</b>					
D/C Bundled with 4 or more sub-conductor)	239.84	239.83	239.84	239.84	239.84
D/C Twin/Triple Conductor	27.72	27.72	27.72	27.72	27.72
D/C Bundled with 4 or more sub-conductor)	317.07	328.11	339.62	351.61	363.84
D/C Twin/Triple Conductor	24.42	25.28	26.17	27.08	28.03
<b>Total O&amp;M Expenses</b>	341.50	353.39	365.79	378.69	391.87

## PLCC

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Norm (% of Original Project Cost)</b>					
PLCC	2.00	2.00	2.00	2.00	2.00
<b>Original Project Cost</b>					
PLCC	466.51	466.51	466.51	466.51	466.51
<b>Total O&amp;M Expenses</b>	9.33	9.33	9.33	9.33	9.33

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Total O&amp;M Expenses Allowed</b>	5068.56	5244.44	5429.41	5623.85	5819.78



77. We have considered the submissions of the Petitioner. The O&M Expenses claimed by the petitioner are within norms and are allowed as claimed by the Petitioner.

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

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

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

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

*(i) Receivables equivalent to 45 days of annual fixed cost;*

*(ii) Maintenance spares @ 15% of operation and maintenance expenses including security expenses; and*

*(iii) Operation and maintenance expenses, including security expenses for one month.*

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

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

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

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

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

79. The Petitioner has submitted that it has computed interest on working capital for the 2019-24 period considering the bank rate as on 1.4.2019. The rate of interest on working capital considered is 12.05%.



80. The IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The rate of IWC considered is 12.05%. The components of the working capital and interest thereon have been worked as follows:-

(₹ in lakh)

<b>Combined Asset</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>201-22</b>	<b>2022-23</b>	<b>2023-24</b>
O & M Expenses	422.38	437.04	452.45	468.65	484.98
Maintenance Spares	760.28	786.67	814.41	843.58	872.97
Receivables	3722.00	3663.18	3595.79	3538.04	3472.21
<b>Total</b>	<b>4904.66</b>	<b>4886.88</b>	<b>4862.65</b>	<b>4850.28</b>	<b>4830.16</b>
Rate of Interest (%)	12.05	12.05	12.05	12.05	12.05
<b>Interest on working capital</b>	<b>591.01</b>	<b>588.87</b>	<b>585.95</b>	<b>584.46</b>	<b>582.03</b>

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

81. The transmission charges allowed for the instant transmission assets for the 2019-24 tariff period are summarised below:-

(₹ in lakh)

<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Depreciation	8765.72	8765.72	8765.72	8765.72	8765.72
Interest on Loan	6021.86	5288.30	4559.64	3898.34	3248.01
Return on Equity	9825.09	9825.09	9825.09	9825.09	9825.09
Interest on Working Capital	591.01	588.87	585.95	584.46	582.03
Operation and Maintenance	5068.56	5244.44	5429.41	5623.85	5819.78
<b>Total</b>	<b>30272.24</b>	<b>29712.42</b>	<b>29165.81</b>	<b>28697.46</b>	<b>28240.63</b>

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

82. The Petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses, in terms of Clause (1) of Regulation 70 of the 2019 Tariff Regulations. 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 Clause (1) of Regulation 70 of the 2019 Tariff Regulations.

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

83. The Petitioner has requested to allow it to bill and recover License fee and RLDC fees and charges, separately from the Respondents. The Petitioner shall be entitled for reimbursement of licence fee and RLDC fees and charges in accordance with Clause (4) and (3) of Regulation 70 of the 2019 Tariff Regulations.

### **Goods and Services Tax**

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

### **Security Expenses**

85. The Petitioner has submitted that security expenses for the instant assets are not claimed in the instant petition and it would file a separate petition for claiming the overall security expenses and the consequential Interest on Working Capital. 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 recovered from the beneficiaries on a yearly basis. We have considered the submissions of the Petitioner. Any application filed by the Petitioner in this regard will be dealt with in accordance with the appropriate provisions of the 2019 Tariff Regulations.

### **Capital Spares**

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

### **Sharing of Transmission Charges**

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

88. This order disposes of Petition No. 11/TT/2020.

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

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

